

# 112<sup>th</sup> Avenue Corridor Plan

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# INTRODUCTION

## PLAN AREA

The 112th Avenue Corridor is a north-south principal arterial just east of Interstate 205 (I-205) in the City of Vancouver. The portion of the corridor that is the subject of this planning effort follows 112th Avenue from NE 4th Street on the south to NE 33rd Street on the north and from I-205 on the west to a varied one to five blocks from 112th Avenue to the east (see Figure 1 below). The planning area encompasses portions of three active neighborhood associations – Fircrest, Image, and Landover-Sharmel and one inactive neighborhood association, Kevanna Park. There is a small residential area west of 112th that is not part of a neighborhood association, but is included in the plan area.

NOTE: Although the names of 112th Avenue and 18th and 28th Streets each begin with northeast (NE), this plan for brevity and ease of reading purposefully leaves off the NE from each street name.

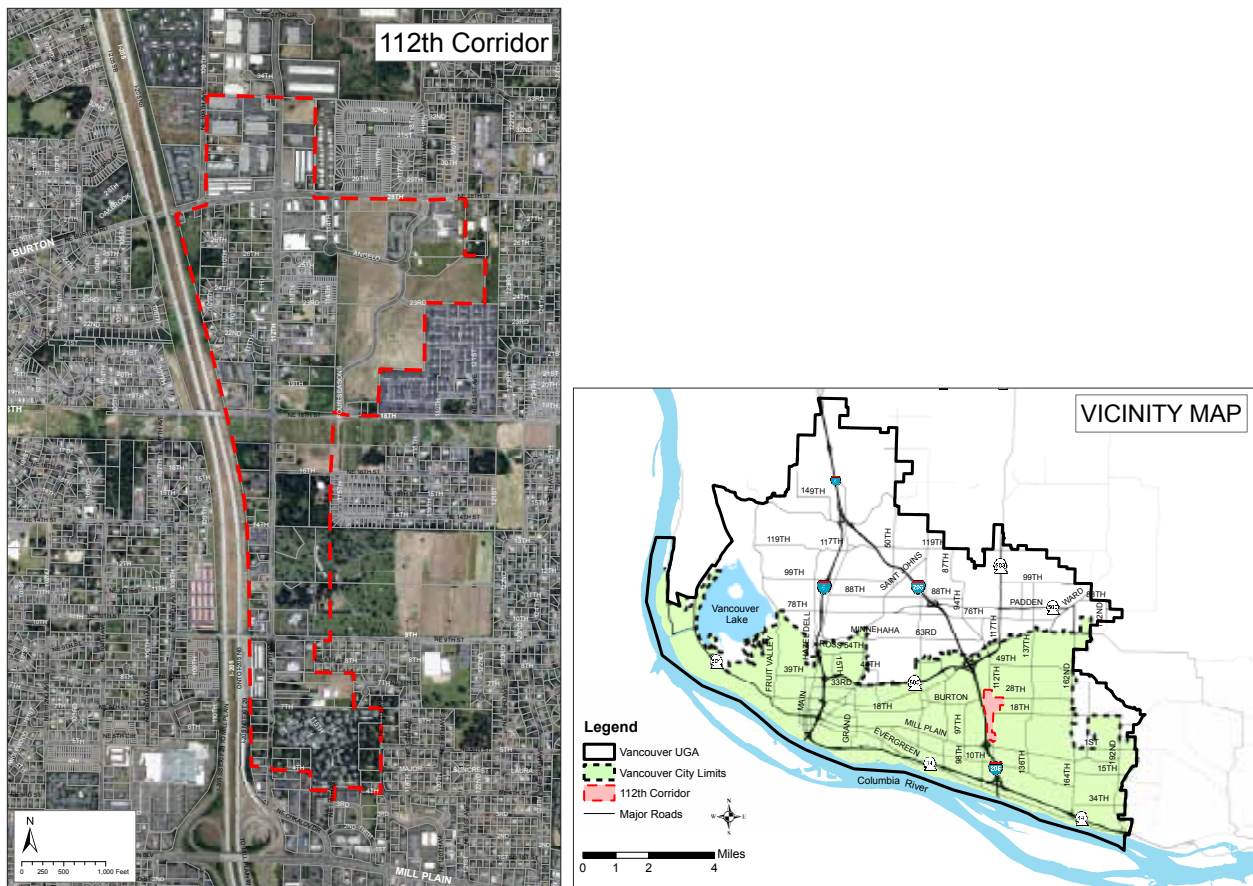


Figure 1. Vicinity Map and Plan Boundary Map

## PURPOSE

The City of Vancouver’s Comprehensive Plan calls for subarea planning and identifies 112th Avenue Corridor as an area where focused planning for urban growth and services should occur. By initiating the 112th Avenue Corridor Plan the city with input from community residents, businesses and agencies will address the growth and change the area will soon face.

## INTRODUCTION

In the near future, the Washington State Department of Transportation's (WSDOT) 18th Street second phase of the split-diamond I-205 interchange project will be constructed. Numerous private development proposals that are on hold with the market slow down will reappear as the market picks up. In the more distant future, proposed projects include 1) WSDOT's Phase III of the I-205 Interchange at 28th Street completing the split-diamond I-205 project and 2) a potential transit station to be located near I-205 in the vicinity of 18th and 28th Streets serving local and bi-state commuters.

This Plan's challenge is to incorporate these major transportation facilities and private developments in a way that supports transit service and enhances the distinctive characteristics and livability of the plan area. It is not too soon to meet this challenge. The WSDOT 18th Street interchange and connector project is slated to begin construction in 2015. The proposed private development on hold because of the national recession and market slow down is expected to revive, possibly modified, as the economy improves. Economists predict that there will be a high demand in the immediate future and over the long term for attached housing such as apartments and town homes.

## PLANNING PROCESS

The 112th Avenue Corridor Plan was developed following an extensive planning process. The process included compiling information on existing conditions in the study area to create a "baseline" for future planning, actively engaging property owners, agencies, businesses, and interested citizens, and soliciting advice from urban design professionals.

City staff and consultants held three public workshops to seek input from the 112th Avenue community to identify planning goals, challenges and opportunities, determine a preliminary plan concept, and review and comment on the preferred concept. At the workshops, participants evaluated existing conditions, answered questions, participated in a brainstorming session, identified challenges and opportunities, and took part in a mapping exercise to explore what features and activities would they like to see in the 112th Subarea within the next 10 to 20 years. Later in the summer four additional public open houses were held to review and comment on a draft conceptual site plan, design guidelines, and draft plan text and policy.

Throughout the planning period, information was made available and public comment opportunities were provided through emails, newsletters, and postings to the project website. Neighborhood meeting presentations were made before the Image, Landover-Sharmel, Fircrest Neighborhood Associations and the Vancouver Neighborhood Alliance. City staff attended and displayed planning maps and concepts at the Landover-Sharmel July 16th picnic.

All written comments received regarding the draft Subarea Plan and implementation strategies were provided to the Planning Commission.



*112th Avenue Corridor Plan workshops*



# PLAN CONTEXT

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## SURROUNDING AREA CHARACTERISTICS

By far the most dominant land use surrounding the plan area is single family residential. These suburban single family neighborhoods located east and west of the plan area were built between 1970 and 1990.

To the north of 28th street is one of the City's more significant industrial employment corridors that includes a wide range of light industrial users from smaller businesses housed within "tech/flex" buildings to the large silicon wafer manufacturer SEH America, Inc. This employment corridor influences the future growth and character of the plan area providing nearby jobs to an urban center population. Additional significant employment can be found to the east of the plan area, Evergreen School District offices and schools, Micropump, US Digital, and public services to name only a few.

To the south of the plan area is the Mill Plain Blvd/Chaklov commercial destination with a diversity of businesses and services provided, and to the north is the Orchards commercial area and Westfield Mall. The plan area incorporates three important east-west connections that pass over or under I-205 – 9th Street, 18th Street, and 28th Street.

## PLAN AREA CHARACTERISTICS

### Land Use

In the past, 112th Avenue was named N.E. Ellsworth and surrounding it were single family houses on acreage or large lots, small farms, agricultural fields, and open space with large stands of trees. As commonly occurs through the years, urban growth replaced some large residential lots, farms, fields, and stands of trees with subdivisions, businesses, schools and industry. Yet uniquely, this plan area continues to noticeably retain some of these historic characteristics – mature trees, open space at the Evergreen Memorial Gardens, and a successful urban farm, Joe's Place farm.

Although housing remains the dominant land use today, a transition from older single family homes on large lots to newer developments of single-family attached and multifamily housing or office/commercial began several years ago. Specific areas markedly display this transition – South of 18th Street on both the west and east sides of 112th Avenue are several new commercial developments: the Four Seasons mixed-use site includes newly completed commercial and senior housing projects with proposals of future office and multifamily housing projects; and just south of 28th Street adjacent to 112th Avenue is the new 49 home Maxwell Manor townhouse neighborhood.

Nearly all of the property within the plan area is privately owned; the few exceptions include a City of Vancouver water tower, a Clark Public Utility substation and the Bonneville Power Administration's high-voltage transmission line corridor.



Examples of new housing in plan area

There are a couple of land uses along the corridor that give the plan area a special identity – the Evergreen Memorial Gardens and Joe’s Place Farm.

**Evergreen Memorial Gardens:** In the early 1950s, a Texan named Anderson, began establishing a network of cemeteries in smaller cities of the West. He acquired 40 acres in Clark County and created the Evergreen Memorial Gardens Cemetery. Within a few years the Waterhouse family purchased the cemetery. In 1968, Willard J. Carlson, of Spokane Washington, was hired to promote and further develop the cemetery. Within a few years Mr. Carlson purchased the cemetery from the Waterhouse family. Over the years the Carlson family expanded the cemetery to include a full service funeral chapel and crematory; the only one to this day in Clark County with the combination of cemetery, funeral chapel and crematory. (Source: Evergreen Memorial Gardens Web Page, [www.evergreenmemorialgardens.com](http://www.evergreenmemorialgardens.com))



Evergreen Cemetery

**Joe’s Place Farm:** Joe Beaudoin began planting his first orchard when he was 14 years old. With no equipment he borrowed the neighbor’s horse to cultivate the fields. As a junior in high school, he grew strawberries and sold them to 2 local stores, 2 drive-in restaurants, and at his own roadside stand on NE Ellsworth (now named NE 112th Avenue). In 1957 Joe earned his State Farmers Degree from Washington State University, but didn’t fully apply his farming degree for several years, instead managing a local furniture store.

Returning to farming in 1974, he and his family built their house on 5 acres, and grew corn and tomatoes that they sold by the boxes from their garage. Unable to keep up with the demand, they began to expand by purchasing additional acreage and leasing larger nearby properties. Today, Joe’s farm has expanded to cover nearly 80 acres and Joe and his family continue to sell their locally grown fruits and vegetables from the farm store located just behind their 1974 home. (Source: Interview April 27, 2011 with Joe and Gayle Beaudoin)



Joe's Place Farm

## Access and Circulation

### Future Significant Transportation Projects

The Washington State Department of Transportation's (WSDOT) I-205 access project was planned many years ago. The first phase (the 112th Avenue connector from I-5 Northbound south of Mill Plain) of this interchange project was completed in 2010. Future phases will add a split diamond interchange at 18th and 28th Streets. The south half of the future split diamond interchange is funded and scheduled for design and construction, but the northern half that includes the collector-distributor roads between 18th and 28th Streets and the I-205 northbound-on and southbound-off ramps are not funded at this time.

In preparation for the future 18th Street interchange, the City of Vancouver is currently upgrading 18th St. at the 112th Avenue intersection with additional vehicle capacity and pedestrian and bicycle facilities. Future phases of the 18th Street corridor improvement will include extension of the corridor to 87th Avenue on the west side of I-205 to provide access to nearby neighborhoods and the Southwest Washington Medical Center/Peacehealth Hospital, and reconstruction and urban upgrade to the 18th Street corridor all the way east to 192nd Avenue. Those future project phases are unfunded at this time.

In the recently completed Regional High Capacity Transit Plan for Clark County, the Southwest Washington Regional Transportation Council (RTC) included a recommendation for a future transit station in the vicinity of 112th Avenue and the planned new split-diamond interchange at 18th and 28th Streets. This facility would likely be designed to serve both nearby residents as well as park and ride traffic. While no detailed planning has been completed, the location of a park and ride is an important consideration for local land use and transportation planning in the 112th Avenue Corridor.

### 112th Avenue

112th Avenue is partially improved to urban arterial standard. Recent major improvement projects include: the 28th Street and 18th Street intersections completed with frontage improvements (curb, gutter, sidewalks, bike lanes) and the southernmost end of the corridor was upgraded with completion of the I-205 northbound 112th Avenue off-ramp, the first phase of the WSDOT I-205 access improvements described above.



Improved 28th/112th intersection

## PLAN CONTEXT

Additionally, development along sections of the corridor, for example the office buildings on the west side of 112th Avenue just north of 9th Street or the commercial development on the southeast corner of 28th Street and 112th Avenue have included frontage improvements along the parcels being developed.



Examples of newer commercial development street frontages

Although portions of 112th Avenue have recently been improved with public projects and private development, much of 112th is built to less than full urban standard. Frontage improvements are spotty or substandard in places and corridor right-of-way width is inconsistent and lacking in several locations. For example, sections of 112th south of 18th Street lack adequate lane width, sidewalks, and bike lanes. The Evergreen Memorial Garden's 112th Avenue frontage does not have any sidewalk and existing right-of-way is between 50 and 60 feet wide.

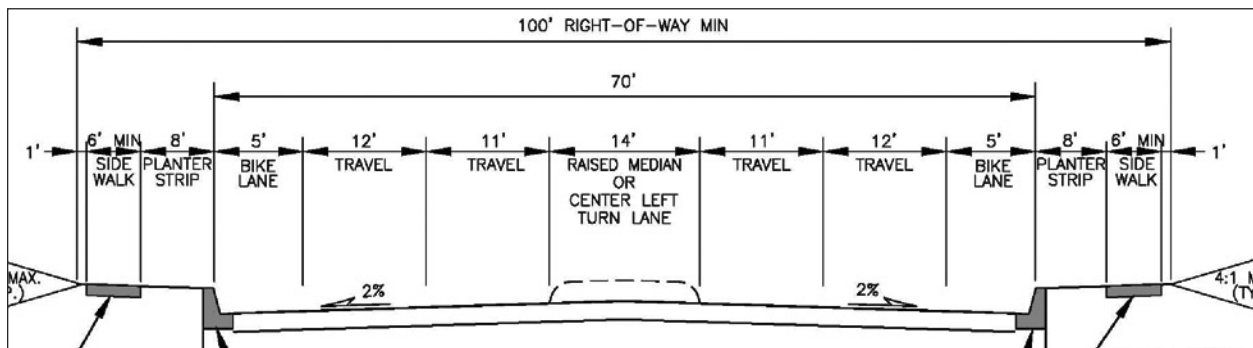


Figure 2. Vancouver's principal arterial standard includes 100 feet of right-of-way, 11 and 12 foot travel lanes, a 14 center turn lane, bike lanes and detached sidewalks.



Areas of 112th Avenue with narrow sidewalk or no sidewalk



### 112th Avenue Corridor Traffic Safety Project

The Washington State Corridor Safety Program identified 112th Avenue as a corridor safety project in 2009. The Corridor Safety Program works to reduce collisions on roadways using low-cost, near-term solutions through the use of partnerships with engineering, enforcement, education, and emergency services. The program is locally coordinated, which includes invitation to local leadership to chair steering committee meetings, requires local government, interested citizens, businesses, schools and any other agencies that have a vested interest in the safety of their roadways. The Project will come to an end September 2011 and will deliver a summary report that includes:

- Short median installation and I-205 ramp signal installation at Chkalov Drive mid block between NE 2nd Street and I-205 off-ramp;
- Striping of north bound to westbound left-turn striping modified to reduce queue length at Mill Plain Boulevard/Chkalov Drive;
- Left-turn signal upgraded to protected (green arrow) phasing at Chkalov Drive/Fred Meyer traffic signal;
- Radar sign installed between Chkalov Drive and NE 7th Street; and 18th Street intersection widened and upgraded.

### Bus Service

Today there is little direct public transit service for the 112th Avenue corridor and plan area. Two local-service routes pass through the plan area on NE 28th Street on one-half hour headways between 6:30 AM and about 9:00 PM.

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# MARKET STRATEGY

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(Source: The Leland Consulting Group Market Strategy Report Appendix A)

## STUDY INFLUENCE AREA

Leland Consulting Group, completed a market strategy report for the 112th Avenue Corridor highlighting several key opportunities and challenges that will shape what is possible in the corridor over the next 10 to 20 years. The report uses a larger study area than the subarea plan boundary in order to provide a broader picture of the influence area. This larger market area encompasses the entirety of 4 neighborhood association boundaries – Kevanna Park, Image, Landover-Sharmel, and Fircrest. (Refer to Appendix A)

## MARKET TRENDS

### Demographic Shifts

Nationwide, the baby boomer generation is now beginning to enter their retirement years. At the same time, younger generations (namely “Generation Y”) are entering the housing market. Both are expected to drive significant demand for multifamily housing. Further, while growth in the region has slowed due to the economy, growth will return, driven by natural growth as well as renewed in-migration.

### New Households

The vast majority of new households being formed during the next decade and beyond will be singles, couples, and seniors according to Harvard University’s Joint Center for Housing Studies. These are the types of households most likely to locate in urban, transit-oriented development, and infill locations - and thus to purchase goods and services, and support retailers in these neighborhoods.

### Mixed-use Centers are the Wave of the Future

Demographic and market trends indicate that mixed-use urban centers with good pedestrian and transit access will be the most desirable places for development in the future. Both the baby boomers and Generation Y share a desire for quality over quantity, a sense of community and place, and a desire to live in more urban environments.

“A whopping 88 percent of generation Y wants to live in an urban setting, according to a survey by Robert Charles Lesser & Company. Factor in rising gas prices - which make drivable suburbs more expensive - rising suburban poverty and the difficulty of selling houses on once-exclusive cul-de-sacs, and suburban appeal erodes further.” (Source: New Urban Network)

Combined, these two generations will greatly impact how cities evolve over the next 20 years, driving more demand for infill in urbanized areas and significantly increasing the demand for multifamily housing. Deliberate planning and urban design to make quality places with a sense of community and place will increase the attractiveness and livability of future urban development.

### Livability is an Economic Development Draw

The quality of life of a community is a major factor in business location. Whereas, in previous years employees moved to be close to their jobs, a new paradigm is emerging where it is the employers who move in order to be close to the talented workers they need to be successful. More and more, those workers are mobile and choose to live in communities with quality physical environments, outdoor recreation opportunities, cultural amenities, accessible transportation options, good schools, and mixed-use urban centers. Deliberate planning and urban design will help create successful quality urban communities that both employees and employers desire.

## OPPORTUNITIES

### Future Transit Station

The Southwest Washington Regional Transportation Council (RTC) completed a Clark County High Capacity Transit (HCT) System Study in December 2008. The Study builds from the proposed bi-state Columbia River Crossing Project connecting downtown Vancouver to the Portland MAX system. Four Corridors were evaluated - I-5/Highway 99, Fourth Plain, I-205, and Mill Plain Blvd. The RTC Steering Committee approved the 4 corridor system plan strategy, policies and recommended corridor elements. The study states that HCT in the I-205 corridor will serve both internal Clark County trips and bi-state trips. The study also identifies a future transit station in the plan area along I-205.

### Significant nearby Employment

The market area has a significant amount of employment. Based on 2008 numbers, approximately 7,800 people work in the study area. Manufacturing is the strongest employment base with other significant employment in wholesale and retail trade, accommodation and food services, administration and support, waste management and remediation, and health care and social assistance. Several major high-tech manufacturing facilities are located in the market area, including facilities operated by US Digital, Micropump, and SEH America. It is widely known that silicon wafer manufacturer SEH America, Inc. is considering a major expansion of its facility.

### Good Access

Well located within the region the planning area has generally good access that will be improved with a new I-205 interchange, is adjacent to a significant employment corridor, and is near many major destinations. With two new planned I-205 interchanges, the plan area's accessibility will make it an increasingly desirable place to be, particularly for housing.

### Housing

While national and local economic conditions have largely halted residential development plans over the past couple years, Leland Consulting Group's market analysis indicates strong demand for housing, particularly attached housing such as apartments and townhomes. Housing demand is anticipated to be particularly strong over the long term due to a combination of the area's employment, accessibility, and demographics. Development opportunity sites, especially those along 112th are most likely to redevelop as housing due to these market pressures.

### Walkable Mixed-use Urban Center and Corridor

To the extent that the subarea plan accommodates and encourages a transit-oriented walkable mixed-use urban center and corridor, it will be better positioned to thrive and attract investment in the future. In the context of a suburban location such as the 112th Corridor, mixed-use development does not necessarily need to imply vertically mixed uses (multiple uses in a single structure), but could include multiple uses on the same site or on adjacent sites.

### New Commercial

Given the strong retail presence along Mill Plain and Fourth Plain Boulevards and at the Four Seasons shopping center, opportunities for new retail are likely to be limited. Some additional retail and services will be needed within the study area to support the anticipated new housing development. Smaller-scale and neighborhood-serving uses could include restaurants, personal services, coffee shops, child care, medical offices, financial services, and general office spaces.

# SUBAREA CONCEPT

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## PLAN GOALS

- Unique neighborhood characteristics and assets such as Evergreen Memorial Gardens, Joe’s Place farm, and large canopy trees continue to identify the community.
- Single-family neighborhoods are preserved and enhanced.
- The future I-205 interchange and transit station are carefully integrated into the urban center.
- New developments are coordinated and integrated into a cohesive well-designed walkable urban center.
- Transit-supportive developments are designed to promote a sense of place with a diversity of housing types, a mix of uses, welcoming gathering places, and enhanced pedestrian amenities.
- East-west roadway and trail connections, common open spaces, and coordinated development between 18th and 28th Streets create a pedestrian-friendly neighborhood setting.
- 112th Avenue is enhanced as a safe, pedestrian friendly, multimodal corridor.

## CONCEPT OVERVIEW

The concept focuses on design options for the improvement of 112th Avenue corridor and areas that are anticipated for new development, particularly sites between NE 18th and 28th Streets. The concept diagram shown in Figure 3 on page 16 is intended as a design framework that visually depicts the key features for an integrated land use and transportation plan meeting the community’s expressed goals listed above.

The 112th Avenue Corridor Subarea is envisioned as a walkable (connected, safe, and comfortable) community. The primary street, 112th Avenue, as well as its adjacent developments will provide for safe pedestrian, bicycle and vehicle travel, allowing connectivity to services, jobs, housing, and amenities along the corridor. To achieve walkability future development will incorporate interconnected streets and trails, diverse housing choices, mix of uses, gathering places, and enhanced pedestrian amenities. The future I-205 interchanges and the potential transit station will also be integrated into the fabric of the area and support walkability.

Walkable neighborhoods provide connectivity, safety, and comfort. Connectivity is how easily residents of all ages and abilities can walk within their neighborhood to community assets. Safety is the provision of a route between walking points that avoids the risk of physical harm. Separation between the pedestrian and or bike and vehicular traffic is an important factor in safety. Comfort is both the physical and aesthetic accommodations that make walking an enjoyable experience. The amount of trees and landscaping, architectural design, public art or other interests are key components in comfortable walkways. Private development frontages along streets also play a key role in comfort and safety by maintaining good visibility between uses and the street and providing visible building entries.

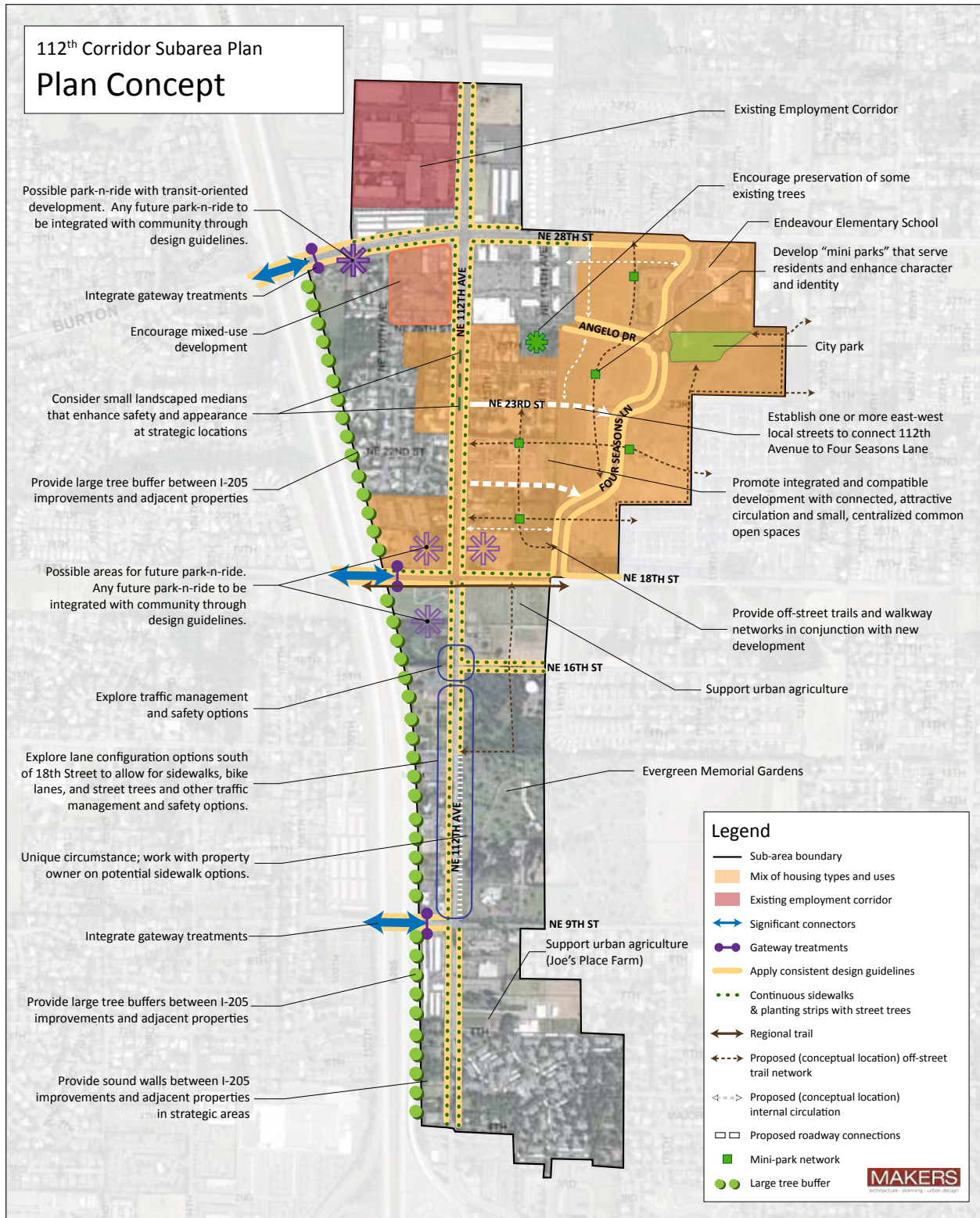


Figure 3. 112<sup>th</sup> Corridor Subarea Plan Concept

## KEY FEATURES

Key Features of the Concept include:

- A network of streets, sidewalks, and off-street trails that connect to current and future developments on adjacent properties to improve both pedestrian and vehicular circulation.
- Small gathering spaces (mini-parks, plazas) incorporated into new development serving as a visual and functional amenity to the immediate surrounding area. The gathering spaces may vary from open lawn, community gardens, natural areas, and hard surface plazas.
- Integrated and compatible development edges. While fenced edges might be appropriate along some property lines, consider more integrated approaches such as a shared pathway or common drive along an internal property line.
- Large tree buffer between I-205 improvements and adjacent properties.
- Any future transit station to be integrated with the community through design guidelines.
- Lane configuration options south of 18th Street on 112th Avenue to allow for bike lanes, sidewalks, street trees, and other traffic management and safety options.
- Consistent design guidelines that provide for pedestrian-friendly façades - both for residential and non-residential uses.
- Gateway features that can be integrated to the streetscape and/or private development at highly visible locations.
- Small landscaped medians along 112th Avenue that enhance safety and appearance at strategic locations.
- A core network of urban arterials for auto and freight access and circulation.

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### Single Family Residential

While single family uses and zoning predominate areas surrounding the subarea, there is only one single family zoned area within the subarea. Located between I-205, 112th Avenue, and 18th and 28th Streets (see Figure 4, Zoning Map), the homes within this well established neighborhood were nearly all built in the 1970s and early 80s.

This plan proposes to maintain the existing single family residential zone located in its boundaries, except that the single family R-9 zoning located along 28th Street and east of 112th Avenue may be reconsidered to accommodate a transit station with transit oriented development. Additionally, the plan proposes urban design strategies to help improve the transition between more intense compact development and the single family neighborhoods.

### Multi-family Residential

Shifting demographics and market changes favor more housing choices and quality compact development. Economic trends and existing opportunities point to the continuation of primarily residential development with limited retail and office uses. (See Market Study, Appendix A) Currently, multi-family housing is the dominant land use zone in the plan area. However, the current R-18 zone, the most prominent designation in the sub-area, has proven to offer limited mix of housing choices.

To better ensure availability of a mix of housing types to meet expected demand, compact walkable development that supports a transit-oriented urban center and flexibility for those properties with challenging sites to develop, this plan proposes a diverse mixture of R-18, R-22, and R-30 zoning designations.

Additionally, the City of Vancouver Code allows for limited mixed use development pursuant to the design requirements of the Mixed Use code within all of the multifamily zones. This flexibility is beneficial to both property owners wishing to develop and to the community in reaching the plan's goals for an integrated well connected walkable community.

### Commercial

A neighborhood retail node named Four Seasons is located at 28th Street and 112th Avenue. Future growth at this intersection is challenged by competition along the Mill and Fourth Plain corridors and the presence of two corner gas stations, an electrical substation and mini-storage warehouses on the north side of 28th Street. These uses limit the ability of the area to achieve a critical mass of commercial development without significant changes of use and/or relocation. Therefore, the type of retail and commercial uses that are likely in this area will continue to be smaller-scale and neighborhood serving.

In either case, the vacant land due east of the Four Seasons shopping center is the most likely to develop as commercial before any redevelopment occurs elsewhere in the vicinity.

Based on the physical constrictions of the commercial properties north of 28th Street, this plan recommends rezoning several parcels zoned Mixed Use within the Four Seasons master plan to the Community Commercial designation. This rezone would extend the existing commercial a bit further east and benefit from the 28th Street access and visibility. It would provide for a few more small scale neighborhood commercial services located within walking distance of the future higher density housing projects and existing single family neighborhoods surrounding the plan area.

### Industrial

This plan values the opportunity to enhance the existing employment lands and to provide a choice of housing to be located near the 112th Avenue employment corridor. The plan retains the industrial zoned properties within its boundaries.

## Future Transit Station

As discussed under the Market Strategy opportunities, the Southwest Washington Regional Transportation Council's Clark County High Capacity Transit (HCT) System Study identifies a future park and ride facility to be located somewhere in the vicinity of 18th Street and 28th Street and I-205.

The study found that while the design of a good HCT system is critical, it is not enough to ensure successful HCT project implementation. A well designed set of HCT facilities needs to be complimented by transit-supportive densities, a mix of land use, transit-oriented pedestrian environment, parking management strategies, and transit-oriented urban design.

This plan sets the stage for compact transit-oriented development through a proposed mix of land use, housing density, pedestrian amenities and urban design within the larger context of the plan area. However, it will be necessary in the future as C-Tran determines the specific location for the proposed transit station that the criteria to maximize the opportunity to develop as a mixed-use node on adjacent and/or nearby land be employed. Additionally, the zoning of selected property will need to be reconsidered to accommodate a future transit center.

Transit park and ride stations are currently only allowed in commercial and industrial zones. Once a final location is identified, C-TRAN should initiate a zone change request with the City. At that time, the City will have the opportunity to evaluate how a park and ride could best be integrated into the subarea.

## Special Uses and Features

Uniquely, this plan area continues to retain some of its historic characteristics – mature trees particularly in the Fircrest neighborhood, open space at the Evergreen Memorial Gardens, and a successful urban farm, Joe's Place farm. These amenities are valued by the community and as the plan area continues to transition to more intense compact development it will be important to protect these amenities.

**Evergreen Memorial Gardens, Inc.:** The Evergreen Memorial Gardens is a locally owned and independently operated business by both second and third generations of the Willard Carlson family. While the cemetery's historic interest, aesthetic open space and large tree canopy adds significantly to the character of the community, its unique local business plan that provides a cemetery with full service funeral chapel and crematory and employs 27 full-time and 5 part-time employees is a significant amenity to the City of Vancouver.

**Joe's Place Farms:** Today, Joe's farm has expanded to cover nearly 80 acres, employs 5 full-time, 10 full-time/seasonal, and approximately 30 temporary employees annually. As an urban agriculture business that grows and sells local fruits and vegetables, retention of Joe's Place farm is important to the character of the neighborhood and as an amenity to the City of Vancouver.



(left) Joe's Place Farms, (right) Evergreen Memorial Gardens

**Large Canopy Trees:** The plan area south of 18th Street is within the boundary of the Fircrest Neighborhood Association. As the Fircrest name proclaims, trees are one of the more important physical characteristics of the neighborhood. The City of Vancouver recognizes the benefits of mature trees. Such benefits include increased property values, improved air quality, and control of rainfall runoff to name only a few. While some trees unfortunately need to be removed because of new urban projects or ill health, the city's goal is to limit removal because of the impacts on the neighborhoods, quality of life, and environment. To help achieve this goal, the City has a Tree Conservation Ordinance that pertains to all land use zones except for single family that meet the exemption requirements. The ordinance protects trees from unnecessary removals and requires replacement.



*Preservation of large canopy trees is desired*

This plan encourages the preservation of existing trees where appropriate and seeks opportunities for planting new trees. One such opportunity is along the east side of the future I-205 Interchange project. This plan recognizes that properly designed and maintained roadsides complement the functions of the roadway, integrate the roadway facility into the surrounding landscape, and provide social and environmental benefits to vehicle occupants and communities adjacent to roadsides.

Another opportunity is the existing stand of large evergreens located on a property just south of the Four Seasons shopping center (identified on the Concept Plan, Figure 3). Upon future development proposals, the City's Community Development Department and Forester should work collaboratively with the property owners of parcel #162742012 to preserve this stand of trees. The conceptual site plan (see Figure 7 on page 27) shows an example of how a portion of this wooded area could be developed, while setting aside a healthy stand of the trees as permanent open space. The site plan also shows how some of the larger rows of evergreen trees along the perimeter of several properties could be maintained and integrated as an amenity to the development and the larger neighborhood. Such mature trees provide character and identity to the development and provide obvious environmental benefits.

## ACCESS AND CIRCULATION

### **I-205 Split Diamond Interchange**

Construction of the 18th/28th Street split diamond interchange will affect the plan area on several levels. It will increase accessibility to residences, retail opportunities, and the 112th Avenue employment corridor north of the plan area. Completion of the interchange will also change traffic patterns in and around the neighborhood. Today, access from the south is provided primarily by 112th Avenue from Mill Plain. In the future that access will be provided at 18th Street and 28th Street. This change in traffic patterns will likely lighten the traffic load on 112th Avenue south of 18th Street.

## Future Transit Station

Although this plan does not identify the best location for a potential future transit station, it does identify important considerations for locating one, and provides policies on how it could best be integrated into the neighborhood. Locations around the 18th and 28th Street intersections were evaluated for operational efficiency and as a potential transit-oriented development site. Refer to Figure 3, Concept Plan, for potential transit center locations.

**18th Street Locations:** The identified locations near the 18th Street Intersection may work with detailed planning, however access and operations would be challenging. And, these locations may be difficult to integrate with the neighborhood and provide little opportunity for a mixed-use transit oriented development. Potentially, a park and ride facility may be a good near-term option in the vicinity of the 18th Street Interchange, provided access challenges can adequately be addressed.

**28th Street Location:** This location was evaluated as a likely location to integrate a transit center with surrounding land uses. With completion of the north half of the split diamond interchange, a 28th Street transit station would provide easy freeway access to Portland-bound commuters traveling from the north. Looking at the subarea as a whole, the 28th Street area is probably a better location for a transit station with transit oriented development. But the uncertainty of future funding to finish the north half of the split diamond interchange renders investment in a transit station in that area imprudent at this time. However, the long term opportunity for a transit center in the 28th Street vicinity should be considered. As it is likely to be more than a decade before the 28th Street Interchange is completed, the long term market conditions may provide greater opportunity to integrate transit oriented development with structured parking as land values increase over time.

## 112th Avenue South of 18th Street

The portion of 112th Avenue south of 18th Street presents a significant future transportation challenge for the plan area, because it does not have adequate public right-of-way to accommodate a full urban principal arterial standard roadway. Moreover, frontage improvements such as sidewalks are spotty and pedestrian roadway crossings are few and far between. The plan presents two alternative roadway configurations on the following page that attempt to provide roughly the same functionality as a full-standard principal arterial roadway, but at a slightly lower level of service for each travel mode because of right-of-way constraints.

These configuration concepts on the following page show how a reduced-section roadway could provide mobility and safety within the anticipated available roadway. They are illustrative rather than exclusive and attempt to balance corridor right-of-way constraints with future traffic needs. Strategy 1 widens the roadway to five lanes with reduced lane widths and no planter strip. Strategy 2 includes a reduced roadway to four lanes meeting city arterial lane standards. This includes two northbound lanes, one southbound lane, and one center turn lane. The imbalanced geometry is based on current/future link volumes. Further analysis is needed to confirm operations associated with mid-block connections and merging from the 18th Street improvements.



112th Avenue south of 18th Street presents a significant challenge due to the poor pedestrian facilities and limited right-of-way.



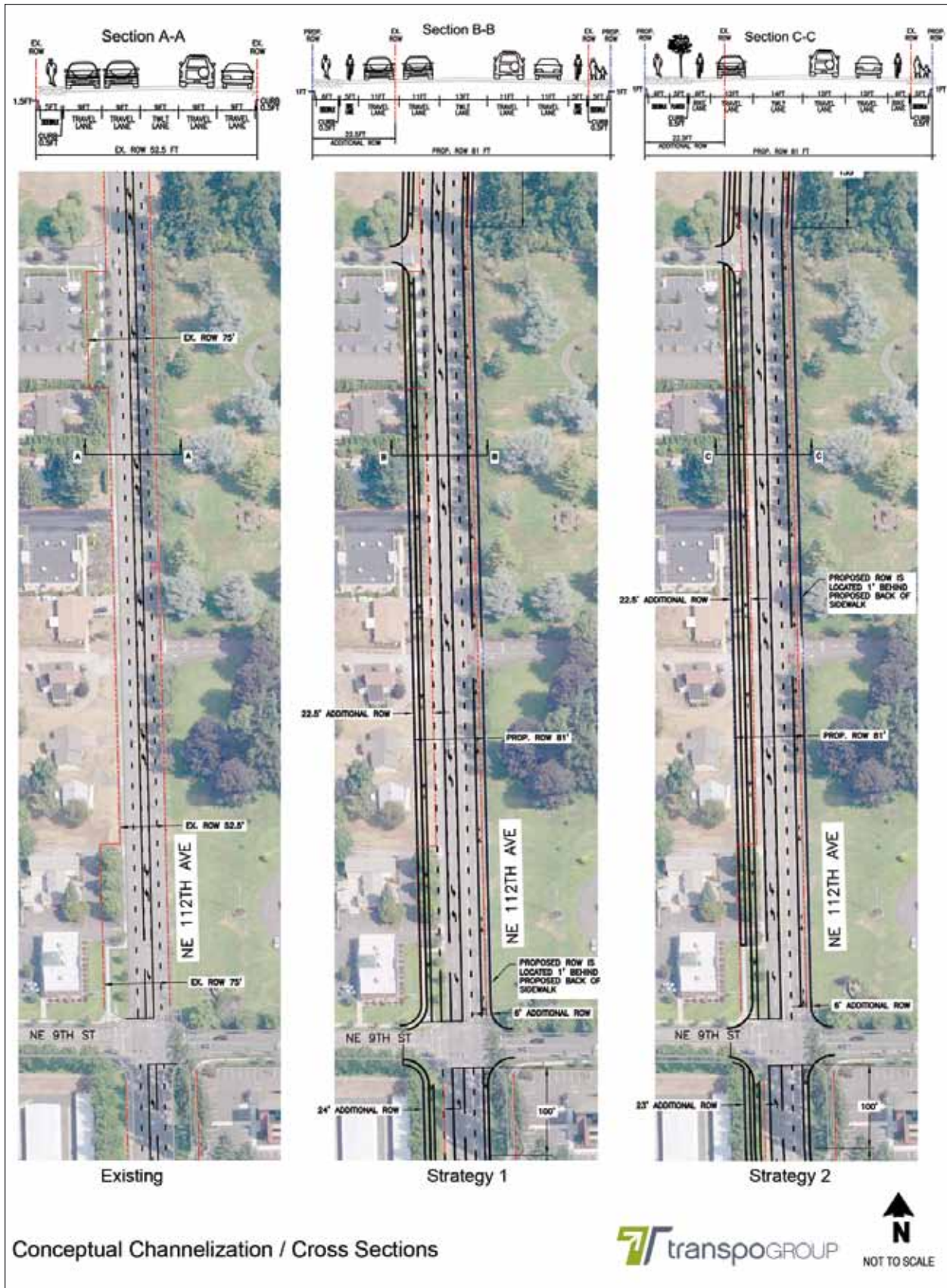


Figure 5. Striping strategy #1 and striping strategy #2



## Evergreen Memorial Gardens Frontage

The 112th Avenue frontage at Evergreen Memorial Garden presents a unique challenge. Grave sites begin at approximately 12 feet behind the existing face of curb. Therefore, location of any future sidewalk on that portion of the corridor would be subject to a strict constraint. Any change to the frontage would have to maintain or enhance the existing character of Evergreen Memorial Gardens in order for Evergreen to fulfill its solemn commitment to the deceased and surviving to provide a serene environment. The roadway sections in this plan identify a simple 5 foot attached sidewalk and buffer sufficient to maintain Evergreen Memorial Garden's environment. Specific cross sections provide potential design options to preserve a respectful space between the burials and any future sidewalk.

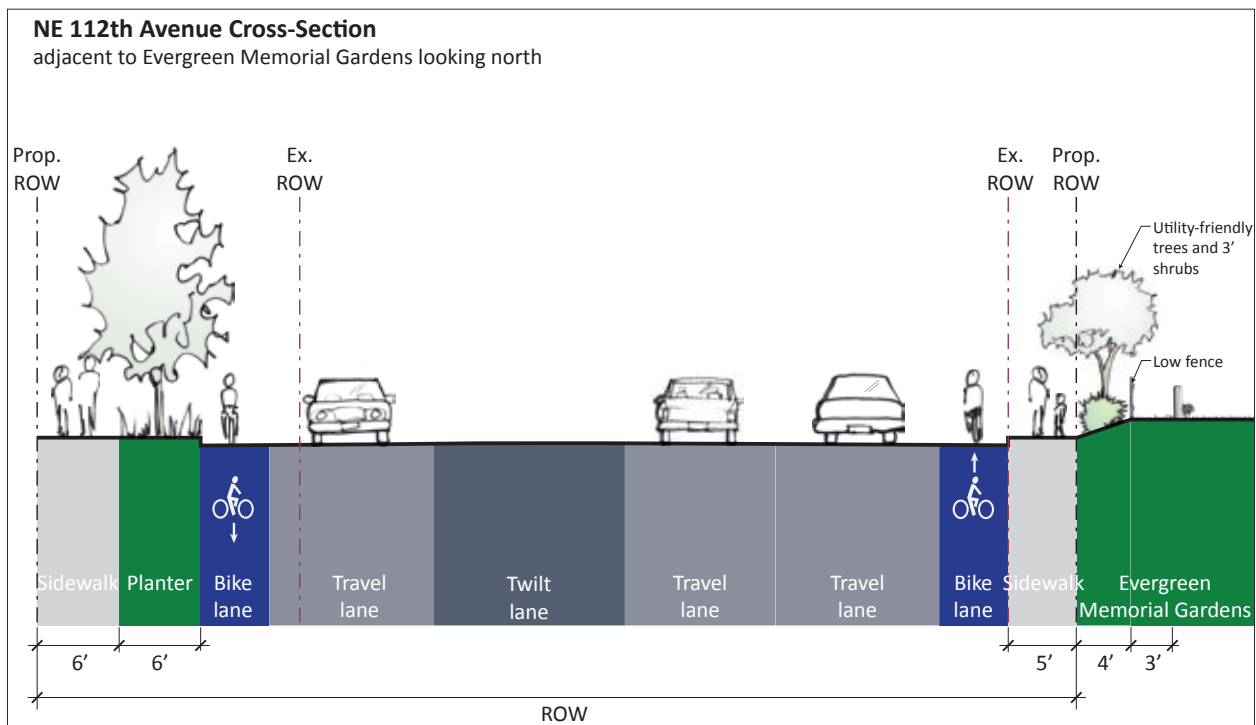


Figure 6. A potential cross-section of future 112th Avenue improvements — measurements to be verified

## Needed Improvements

The plan identifies needed street improvements that would provide enhanced safety, connectivity, access and circulation efficiency, and walkability. The following list of improvements if completed would help fulfill the subarea plan's concept, envisioned character, goals and policies.

- Complete 112th Avenue corridor between 18th Street and 28th Street, providing convenient access between the neighborhood on the west to the east side of 112th. This should include pedestrian crossings where appropriate, a continuous sidewalk network, and a continuous bike lane network.
- Construct one signalized intersection on 112th Avenue between 18th and 28th Streets; located to provide access to the areas both east and west of 112th Avenue and to promote efficient traffic operations on 112th.
- Implement context-sensitive design solutions on 112th Avenue south of 18th Street to preserve neighborhood amenities and character while providing principal arterial functionality.
- Create attractive, convenient and safe walkways for pedestrians including roadway crossings, curb ramps, textured crosswalk paving, pedestrian signals and refuges where appropriate, landscaping and intersection median barriers.

- Improve bicycle route safety and connectivity across and along 112th Avenue and through the entire corridor.
- Complete pedestrian and automobile network connections between 112th Avenue and Four Seasons Lane to meet the intent illustrated in the plan concept map.
- Complete planned improvements to the 18th Street corridor east and west of I-205, including the regional trail component on the south side of 18th Street.
- Complete the 28th Street corridor from 142nd to 162nd Avenue.
- Complete the 18th/28th Street split-diamond interchange project, including the collector-distributor roads between 18th and 28th Street and the north ½ of the diamond interchange at 28th Street.
- Explore traffic management options at 16th and 112th.

## FUTURE DEVELOPMENT CONCEPTUAL SITE PLAN

With considerable vacant and underutilized land on the east side of 112th Avenue between 18th and 28th Streets, the planning team crafted a site plan and a phasing plan to illustrate how the area could develop over the next twenty years consistent with the goals and policies of this plan.

It is important to note that the site plan and phasing plan illustrations are examples only, and show one of many ways that development could occur consistent with plan policy. Nevertheless, it's critical to communicate how the plan could be carried out over time – particularly showing how the different phases and sites could be integrated with each other, rather than isolated.

While there are vested development applications calling for townhomes and office development on a number of properties, those projects are on hold due to current market conditions. Since there is a very real possibility that owners could submit a revised plan for the sites in the future to accommodate changing market conditions, the site plan illustrates an updated development concept.

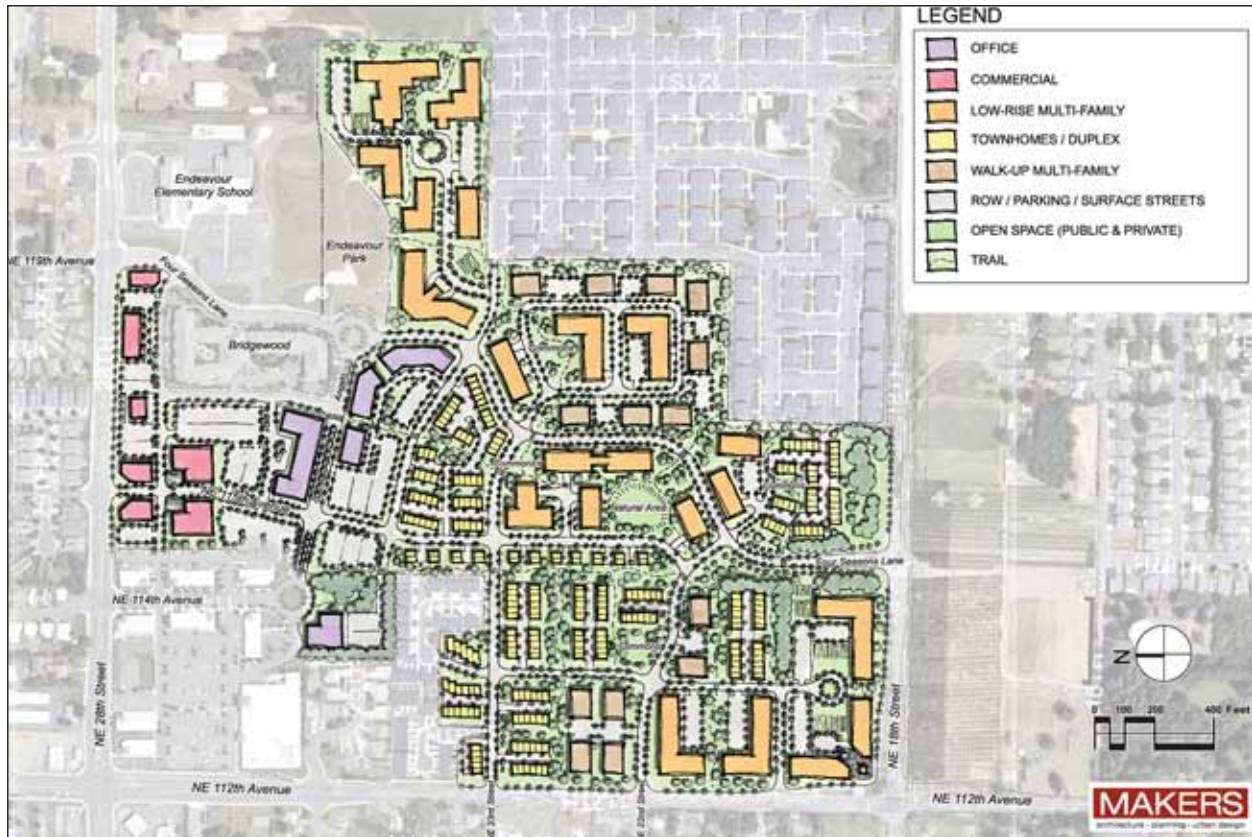


Figure 7. Future development conceptual site plan. This graphic illustrates an example of how the area could be developed over the next twenty years consistent with the community's vision, proposed zoning, and the design guidelines.

### Phasing of New Development

Since development is likely to be phased over a period of time, Figure 8 below illustrate examples for first and second phases of development. Depending on market conditions the first phase could be within the next five-ten years, while the second phase could be between five and fifteen years. Figure 7 illustrates full buildout after twenty years.



Figure 8. Example conditions after Phase 1: 0-5 years (left image) and Phase 2: 5-10 years (right image)

### Mixture of Housing Types and Uses

The site plan includes a mixture of housing types, office uses, and neighborhood scaled retail developments. Housing types include town homes, walk-up apartments, and senior housing – all of which exist on developed sites within the area now. The proposed mix of housing is expected to accommodate the current and projected market demographics and conditions. With future phased development, the site plan anticipates housing styles that use land efficiently providing a more generous amount of land for open space and trails. One future housing style is low-rise apartments with two or three floors of housing over one floor of parking. Such parking could be built at grade or below grade depending on site conditions and anticipated rents/sales prices. Since most or all of the parking is accommodated within or under the building, more of the site can be used for open space, rather than surface parking.



*The site plan assumes a combination of walkup apartments (left), town homes (center), and low-rise apartment buildings.*

Commercial uses are integrated in the northern half of the site plan. This includes a continuation of small scale retail, expected to develop in phases along 28th Street and office development centralized along Angelo Drive. In early phases, both uses are expected to be accommodated by surface parking. In later phases, some or most of the parking for office uses might be accommodated within or under buildings. If the market proves weak for office uses, some of these sites may develop as multifamily residential.





Figure 9. Land use and design concept for future development

### Connectivity: Street and Internal Drives

Enhancing local connectivity is one of the major objectives of the plan, particularly as this area is developed. The site plan shows a combination of new public streets, private internal drives, and trails that would enhance vehicular, pedestrian, bicycle, and transit access. The site plan shows an extension of 23rd Street eastward to connect with Four Seasons Lane. To the south, 22nd Street also connects 112th Avenue with Four Seasons Lane. Perhaps just as important, private internal streets provide good connectivity, including a north-south roadway east of 112th Avenue and a whole grid of small internal streets on the Four Seasons property. These roadways will reduce vehicular pressure on the arterial streets by providing more options to get around. They will also enhance access to the commercial portion of the Four Seasons site by those future residents north of 18th Street and east of 112th Avenue.



New streets and internal roadways should follow the lead of Four Seasons Drive (left image) and Angelo Lane by providing consistent street trees and planting strips. The image on the right is a good example of an alley providing vehicular access to town homes.



## Trails and Open Space

**Trails:** The vacant and under developed nature of this area provides a tremendous opportunity to create an extensive and connected trail system. While the concept map in Figure 9 on page 29 shows conceptual trail routes, the site plans herein show how a network of trails can actually be integrated with development. Figure 10 highlights a grid of trails that criss-cross the area. Like the uses themselves, these trails would be phased in over time in conjunction with development. Some of the trails are central focal points for developments, while other trails are arranged around the perimeter of developments and expanded over time.

As the photo of Endeavour Park (page 31) shows, a trail separating developments can be a much more attractive option for the neighborhood than simply fencing off each property individually, as has been the pattern in the region over the past few decades. The form and design of these trails could range from 5-foot concrete walkways constructed between buildings, a wider 12-foot asphalt multi-purpose trail (perhaps longer routes connecting park spaces where more bicycle use is anticipated), or gravel/soft-surface where usage is expected to be lighter and/or there is a desire for a nature-type trail.

The context that surrounds these trails are particularly important to their use and safety, thus the site plan aligns these trails in locations that would be visible from nearby residential units or public streets. Over time, such a trail system will be a significant selling point for the area and likely increase demand for housing units and property values.



Figure 10. Illustrating the off-street trail network in the site plan example plus trail design and context examples (right)

**Open Space:** The site plan shows a variety of ways that open space can be integrated into new development. The existing four acre Endeavour Park provides for large open space recreation, thus newly created open spaces are proposed to be much smaller.



Endeavour Park



These smaller spaces would largely serve the immediate development and could be designed with features and amenities for use by adjacent residents. Some spaces could feature children's play areas, others may include garden plots available to local residents, small sports courts, open lawns for informal recreational activities, or simply enhanced natural areas intended for passive recreation.

The spaces intended for active use are all in central, visible locations – adjacent to streets and/or trails and containing uses that face the space to enhance safety. Some spaces are strategically located to protect existing natural features, such as the heavily wooded area southwest of Angelo Lane, and the hillside area north of 18th Street.



Examples of the types of small open spaces that were envisioned in the site plan example.

### Safe and Attractive Streetscapes

The site plan continues the attractive tree-lined streetscape theme from Four Seasons Lane and Angelo Drive to the new street connections and internal roadways and trails throughout the area. The planting strips with trees separate vehicular traffic from pedestrians, provide a consistent visual character, and offer obvious environmental benefits. The site plan extends the street tree concept to internal walkways and drives, as well, which enhances the residential setting.

Public safety was identified as a major concern throughout the process. The design guidelines crafted together with this plan emphasize Crime Prevention through Environmental Design (CPTED) techniques. The CPTED principles emphasize natural surveillance and natural access control, which maximize visibility to public spaces and limits the opportunity for crime by taking steps to clearly differentiate between public space and private space respectively. To enhance natural surveillance, the guidelines promote uses that include entries that are visible from the street, provide a minimum amount of windows on facades, and minimize the extent of blank walls adjacent to streets and trails. For natural access control, the guidelines promote the use of semi-private open space adjacent to ground level units. This is particularly important in buildings where ground level buildings are adjacent to streets and trails.



*Illustrating good private development frontage examples. The right image illustrates an example of both natural surveillance and natural access control. The courtyard includes a pathway, but the spaces adjacent to the units are designed as semi-private open space.*



## Integrated Design

One of the primary goals of the site plan example is to show how individual developments can be integrated with each other, rather than walled-off internalized developments. Road and trail connections discussed above are perhaps the most important features to be integrated. The key to successful integration, particularly where adjacent sites are vacant or under-developed is to plan ahead and assume the adjacent site(s) will be developed at some point. For example, roads and trails would be laid out to allow for their extension in the future. Sometimes, discussions with adjacent property owners can lead to shared facilities for mutual advantages. Examples could include a shared alley along a property line that serves units on both properties. Or it could include a trail along a property line, as mentioned above. Planning these features ahead of time will eventually benefit both developments and the community as a whole.



Figure 11. Illustrating how individual developments could be integrated over time with collaborative site planning. Example phases over twenty years.

## DESIGN GUIDELINES

A successful community that incorporates good urban design standards will in turn enhance quality of life for all urban residents and economic benefit to 112th Avenue land owners and businesses.

The most memorable communities that endure as great places to live and centers of commerce have common qualities that can inform new development. These successful communities include:

- A connected network of tree lined streets and internal roadways;
- Welcoming development frontages that add visual interest and safety to streets and sidewalks;
- Buildings of complementary architectural style and scale that lend a sense of cohesiveness;
- Attractive and centralized places for people to meet, congregate, and recreate; and
- The community has a cohesive network of parks, open spaces, and trails.

These qualities and the design goals mentioned herein are incorporated into a set of design standards and guidelines for the 112th Avenue Corridor, which will apply to new commercial, multifamily, and mixed-use development. Design standards and guidelines are perhaps the best tools available to help shape development consistent with the community’s vision. They demonstrate a commitment to a design framework that emphasizes walkability; attractive compact development; an integrated open space, trail, street and sidewalk network; health and safety; aesthetics and low impact development techniques. They also provide a higher level of predictability as to what can happen on adjacent properties, which is desirable to potential investors (developers, property owners, and prospective homeowners in new developments).



*Attractive density with trail, open space/ low impact development*

## PLAN DISTRICT APPROACH

The Vancouver Municipal code allows for the creation of a Plan District to meet the unique characteristics and needs of a plan area. The 112th Corridor Plan District will include use and development standard requirements and urban design and interconnectivity design guidelines that implement the goals and policies of the 112th Corridor Plan.

## LAND USE POLICIES

### General

- LU-1. Provide a unique urban community that offers a diversity of housing choices within a walkable distance of a local commercial center where people can shop, find needed services and entertainment.
- LU-2. Ensure the future success of a transit station by providing shopping opportunities and higher density residential uses within the subarea. Concentrate these uses within walking distance of the transit station.



- LU-3. Provide a variety of housing types within an attractive and integrated compact urban form of development.
- LU-4. Provide opportunities for a limited amount of new commercial development.
- LU-5. Promote pedestrian-oriented retail integrated with office and/or residential.
- LU-6. Recognize existing single family developments and provide for adequate screening from new development where appropriate.
- LU-7. Provide an attractive and integrated open space, sidewalk, and trail network to support health and well being through enhanced recreation, aesthetics and quality pedestrian experiences throughout the 112th Corridor Plan area.
- LU-8. Ensure that all new development provides internal streets, adequate circulation and pedestrian walkways that provide non-motorized connections to adjacent development and that meet the intent of the illustrated street and pedestrian network.
- LU-9. Promote viable transportation alternatives by developing a comprehensive path and trails system to and within the subarea which interconnects neighborhoods with shopping, parks and recreation, work, and schools.
- LU-10. Promote convenient vehicular circulation without negatively impacting the pedestrian environment and visual character of the area.
- LU-11. As development projects are proposed the city shall require coordinated planning to ensure at a minimum adequate access and efficient internal circulation that provides walkable block lengths (eliminates super block development patterns) and is integrated into the city street system, an integrated open space and trail network, and compatible development and appropriate buffers or screening.
- LU-12. Encourage the preservation of mature tree stands located within the plan area and find opportunities to establish new tree plantings.
- LU-13. The City shall partner with WSDOT to provide a consistent, coordinated, proactive approach to the restoration of roadsides along I-205. Coordinate with the WSDOT Regional Landscape Architect and Vancouver's City Forester on the revegetation of buffers using native plants to reflect the regional landscape following the WSDOT Roadside Manual.
- LU-14. The City shall work with WSDOT to ensure provision of sound walls between I-205 improvements and adjacent properties where deemed necessary.
- LU-15. The City shall work with development proposals to secure tree tracts along the east side of I-205 through the means of conservation easements, covenants or otherwise.
- LU-16. When development proposals are submitted for parcel 162742012, the City should work with the applicant to preserve the existing stand of large evergreen trees as noted in the Plan Concept in Figure 3 on page 16.

## Future Transit Station

- LU-17. Explore the feasibility of transit-oriented development (TOD) at the transit station. Where it is determined that transit-oriented development is not feasible in the near term, consider designs that might allow for TOD integration in the future within or on adjacent sites.
- LU-18. The City shall work with C-TRAN to ensure that any future transit station site selection criteria include: the ability to maximize the opportunity to develop as an integrated well-connected pedestrian-friendly

mixed-use node (transit center) on adjacent and/or nearby land.

- LU-19. Following a collaborative site selection process with C-TRAN, the City, and public, initiate any necessary zone change request upon the final site selection of the transit park and ride facility.
- LU-20. Ensure any future transit station is integrated into the subarea by developing a comprehensive path and trails system to and within the park and ride which interconnects neighborhoods and shopping and job sites.
- LU-21. Provide landscaping as a key identity element of a future transit station, utilizing large tree canopy and low maintenance plants.
- LU-22. Employ CPTED principles in the design of the transit station.

## Urban Design

- LU-23. Design standards and guidelines should be established to direct new development in a way that is consistent with the 112th Corridor Plan Concept.
- LU-24. Provide design guidelines that address façade articulation and architectural scale to reduce the perceived scale of large buildings and add visual interest and promote architectural diversity.
- LU-25. Provide designs that emphasize visible front entries and transparent window areas (to allow for residents to keep an eye on the activity on the street for safety). Avoid layouts where blank fences or walls face the street and layouts where private garages are the dominant visual features along streets.
- LU-26. Locate and design service elements and utility meters to minimize negative aesthetic impacts.
- LU-27. Emphasize human scale, façade articulation, fine detailing, quality building materials, and an inviting appearance in new buildings.
- LU-28. Promote the use of distinctive design treatments at highly visible locations including street corners.
- LU-29. Utilize and maintain landscaping as a key identity element of the development. Also, use landscaping to enhance streetscapes, accommodate natural drainage techniques to the extent possible, soften building edges, and enhance open spaces. Employ a range of plant materials that add multi-season interest, reduce ongoing maintenance costs, and are relatively drought tolerant.
- LU-30. Promote “green” designs and practices that minimize environmental impacts and energy use.
- LU-31. Work cooperatively with WSDOT to include distinctive design treatments for the future pedestrian I-205 over and under passes located at 9th, 18th, and 28th Streets.

## Special Features

- LU-32. Encourage the preservation and economic vitality of Joe’s Place Farm.
- LU-33. Encourage the preservation of mature tree stands located within the plan area and find opportunities to establish tree plantings.
- LU-34. Work collaboratively with the owners of the Evergreen Memorial Gardens Cemetery to reach a mutually agreed design solution for a future NE 112th Ave. sidewalk fronting the width of the Cemetery. The sidewalk design shall address at the least the preservation of a private respectful space between the burials and the sidewalk and appropriate tree and shrub plantings.

## ACCESS AND CIRCULATION POLICIES

- AC-1. Continue to focus investments on corridor safety enhancements.
- AC-2. Implement context-sensitive design solutions on 112th Avenue to preserve neighborhood amenities and character while providing principal arterial functionality.
- AC-3. Create attractive, convenient and safe walkways for pedestrians including roadway crossings, curb ramps, textured crosswalk paving, pedestrian signals and refuges where appropriate, landscaping and intersection median barriers.
- AC-4. Improve bicycle route safety and connectivity across and along 112th Avenue and through the entire corridor to connect residential, retail, commercial and industrial land uses.
- AC-5. Local and collector streets should be internally connected to allow for off-arterial cross-circulation and to provide multiple local access points to the surrounding arterial roadway network.
- AC-6. Each development proposal should include a local circulation plan demonstrating how the on-site connections and roadways proposed for the underlying development will fit in with the overall network and achieve system connectivity.
- AC-7. Locate off-street parking and auto-oriented land uses behind or on the side of the street face in order to create an interesting urban street front.
- AC-8. Minimize driveway access directly to arterials, encourage shared driveways, and prohibit direct driveway access to arterial roadways where local roadway access is possible.
- AC-9. Minimize industrial truck traffic on residential streets.
- AC-10. Encourage development of compact mixed land uses that can be effectively served by transit and that allow shorter trips by non-auto travel modes to likely urban destinations.
- AC-11. Encourage integration of a future potential park and ride within the neighborhood by providing for multimodal access and with complementary land uses.
- AC-12. C-TRAN should explore direct access to WSDOT's collector-distributor I-205 system for a transit station.
- AC-13. As new development projects are proposed at 16th and 112th, ensure traffic calming design is employed at the western entrance of the existing single family development.
- AC-14. Implement the needed improvements listed under "Needed Improvements" starting on page 25.

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## 112<sup>th</sup> Corridor Subarea Plan Project Memorandum

Date 22 March 2011

To Sandra Towne, City of Vancouver

From Chris Zahas, Leland Consulting Group

CC Bob Bengford, Makers

Subject 112<sup>th</sup> Corridor Subarea Plan Market Strategy

Project No. 5136

### Executive Summary

The purpose of this report is to summarize existing market conditions and future opportunities in the 112<sup>th</sup> Avenue Corridor (the corridor) in order to support the subarea planning process. While a subarea plan is in part an aspirational document, one that articulates how the community would like to grow over time, it must reflect real market conditions and trends if it is to be successfully implemented. The findings discussed in this report will be used to identify what is likely to be achievable from a market perspective and to inform implementation actions that might be needed to shape and achieve the community's desired outcome.

The corridor is a north-south minor arterial in the City of Vancouver, just west of I-205. The portion of the corridor that is the focus of the subarea planning effort roughly follows 112<sup>th</sup> Avenue from 4th Street to the south and 33rd Street to the north and from I-205 on the west and a varied one to five blocks from 112<sup>th</sup> to the east (see Figure 1). The planning area encompasses portions of three active neighborhood associations – Fircrest, Image, and Landover-Sharmel and one inactive neighborhood association, Kevanna Park. There is a small residential area west of 112<sup>th</sup> that is not part of a neighborhood association. Because the corridor itself is somewhat small, this market strategy report uses a study area (the study area) encompassing all four neighborhood association areas (including the area without a neighborhood association) in order to provide a broader picture of the influence area that will shape what is possible. The study area does not include any areas west of I-205 because it is assumed that most people west of I-205 do not typically travel east into the corridor.

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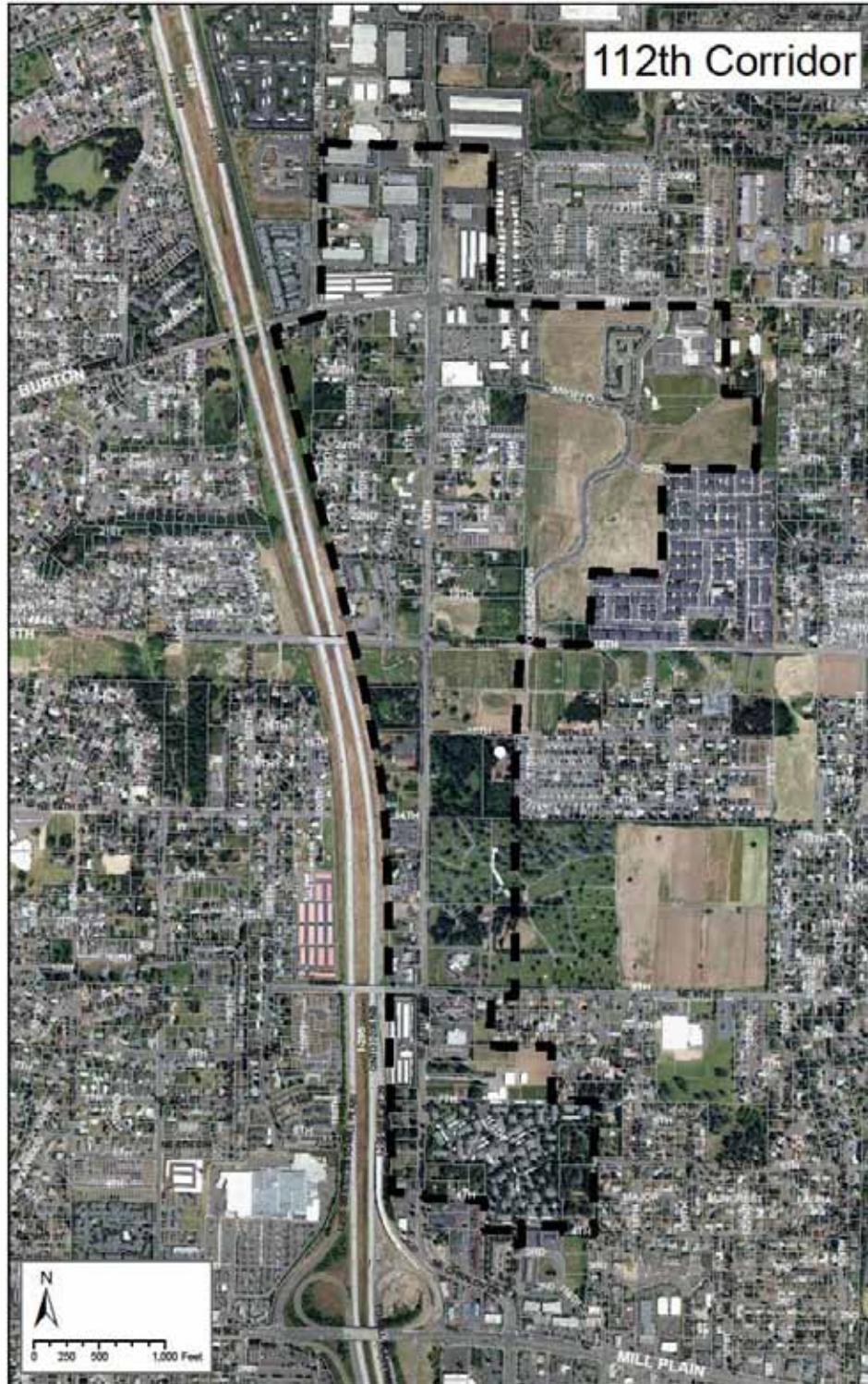
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Figure 1. 112<sup>th</sup> Corridor



Source: Makers, City of Vancouver

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Figure 2. Study Area Neighborhoods (Highlighted in Blue)



Source: City of Vancouver

The report summarizes existing conditions and key trends in the following areas:

- Demographics
- Employment
- Retail Market
- Residential Market
- Planned Development

## KEY FINDINGS

A snapshot of the key findings from the analysis includes:

- **The study area is a family environment:** The study area is characterized by more family-based households (two or more related people living together), a younger median age, and a larger under-20 population than the city as a whole.
- **Incomes are higher:** Median household incomes in the area are slightly higher than those citywide.
- **Demographic shifts are coming:** Nationwide, the baby boomer generation is now beginning to enter their retirement years. At the same time, younger generations (namely “Generation Y”) are entering the housing market. Both are expected to drive significant demand for multifamily housing such as apartments. Further, while growth in the region has slowed due to the economy, growth will return, driven by natural growth as well as renewed in-migration.
- **Senior housing is growing:** While there are only a couple of senior housing developments in place today, proposed projects and overall market trends indicate that there will be much more senior housing in the future.

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- **Retail dominates at the edges:** Retail services are dominated by the commercial strips at the north (Fourth Plain) and south (Mill Plain) ends of the corridor. The Four Seasons grocery/shopping center is centrally located between Fourth Plain and Mill Plain. Very few new retail projects in the corridor have been announced.
- **Large employment base:** The corridor and areas just north and east of the study area have a significant amount of employment, particularly high technology and manufacturing.
- **Good access:** The study area is well located within the region, has generally good access, and is near many major destinations. For these reasons, it is likely to continue to be a strong location for housing.

## MARKET STRATEGY FOR THE 112<sup>TH</sup> CORRIDOR

The above snapshot and the detailed findings in this report highlight several key opportunities and challenges that will shape what is possible in the corridor over the next 20 years. The key implications of these conditions and the emerging market strategy for the subarea plan are as follows:

- **Housing in high demand:** The demand for housing, particularly attached housing such as apartments and townhomes will be strong, even in the immediate future, but especially over the long term. Development opportunity sites, especially those along 112<sup>th</sup> are most likely to redevelop as housing.
- **Limited retail along 112<sup>th</sup>:** Given the strong retail presence along Mill Plain and Fourth Plain boulevards and at the Four Seasons shopping center, there will only be limited opportunities for new retail along 112<sup>th</sup>. Since Mill Plain and Fourth Plain are generally close enough to 112<sup>th</sup> to meet the market demand of residents, most retail needs can be satisfied by existing retail centers.
- **Some new retail and services will still be supportable:** Although new retail development will be limited, some additional retail and services will be needed somewhere in the study area to support the new housing. Locally-serving uses that would serve residents could include restaurants, personal services (hair salons, dry cleaners), coffee shops, child care, medical offices, and financial services. Much of this demand can likely be accommodated in existing commercial centers with current vacancies or on vacant commercially-zoned land. Given the good access, size of parcels, and good visibility, the area around 28<sup>th</sup> Street and 112<sup>th</sup> Avenue is the most likely location of new commercial space. Coupled with the mixed-use vision for the Four Seasons development, commercial uses such as medical offices, financial services, and other small-scale commercial uses are also possible. The intersection of 18<sup>th</sup> and 112<sup>th</sup>, especially once 18<sup>th</sup> has direct access to I-205, is another potential location for commercial uses, however the steep slopes of the sites at this intersection will make access difficult.
- **Mixed-use centers are the wave of the future:** Demographic and market trends indicate that mixed-use urban centers with good pedestrian and transit access will be the most desirable places for development in the future. To the extent that the subarea plan accommodates and encourages this type of development, it will be better positioned to thrive and attract investment in the future. The location of any future park

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and ride facility should be coordinated to maximize the opportunity to develop a mixed-use node on adjacent and/or nearby land. In the context of a suburban location such as the 112<sup>th</sup> Corridor, mixed-use development does not necessarily need to imply vertical mixed uses (multiple uses in a single structure), but could include multiple uses on the same site or on adjacent sites.

- **Redevelopment will require an implementation strategy:** Several areas near 112<sup>th</sup> Avenue and 28<sup>th</sup> Street are zoned for commercial or mixed uses, but currently have other uses in place today (such as mini-storage and an electrical substation). Other barriers to mixed-use development include the presence of gas stations at key corners and limited pedestrian connectivity. Given the pattern of existing uses and parcelization (multiple ownerships), it is likely that some intervention or incentives will be needed to transition properties to new uses. Implementation actions could include pedestrian and road improvements that enhance connectivity and access to key sites, zoning that provides bonuses or other benefits for mixed-use projects, and the provision of public parking (which reduces development costs).

The remainder of the report provides detailed findings about demographic and market conditions impacting the area that contributed to the identification of the market strategy.



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## Demographics

### NATIONAL TRENDS

Several national trends will impact the future development potential of the corridor. These include:

- The oldest of the baby boomer generation turns 65 this year (2011). Over the next 20 years, America's over-65 population will more than double.
- Generation Y (also known as the echo boomers), which encompasses youth born approximately between 1982 and 2000, is the largest generational group in the United States with approximately 80 million people.
- Both the baby boomers and Generation Y have similar consumer preferences. They both share a desire for quality over quantity, a sense of community and place, and a desire to live in more urban environments. Combined, these two generations will greatly impact how cities evolve over the next 20 years, driving more demand for infill in urbanized areas and significantly increasing the demand for multifamily housing.
- Livability is an economic development draw. Particularly for the technology and knowledge-based industries that will comprise most job growth in the future, the quality of life of a community is a major factor in business location. Whereas in previous years employees moved to be close to their jobs, a new paradigm is emerging where it is the employers who move in order to be close to the talented workers they need to be successful. More and more, those workers are mobile and choose to live in communities with quality physical environments, outdoor recreation opportunities, cultural amenities, accessible transportation options, good schools, mixed-use urban centers, and other amenities.
- The vast majority of new households being formed during the next decade and beyond will be singles, couples, and seniors according to Harvard University's Joint Center for Housing Studies. These are the types of households most likely to locate in urban, transit oriented development, and infill locations—and thus to purchase goods and services, and support retailers in these neighborhoods.

### LOCAL TRENDS

An overview of key demographic characteristics in the study area<sup>1</sup> is provided below.

#### Population and Households

- In 2010, as shown in Table 1, the study area's (four neighborhoods) population was estimated at 14,786, or approximately nine percent of the total population of the City of Vancouver (170,265)<sup>2</sup>.

<sup>1</sup> For the purpose of the analysis of local demographic trends, the corridor market area encompasses all property within the Kevanna Park, Image, Landover-Sharmel and Fircrest neighborhood association boundaries. It also encompasses property north of NE 18th Street, south of NE 28th Street, east of 1-205 and west of 112th Avenue, an area that is currently not served by a neighborhood association (see Figure 2).

<sup>2</sup> Data for 2010 are estimates provided by ESRI Business Analyst. Neighborhood-level 2010 Census data will not be available until summer 2011.

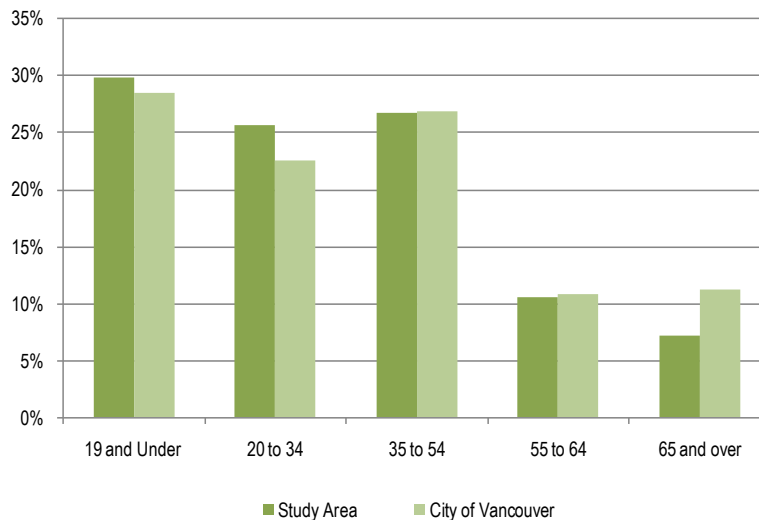


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- Several population and household characteristics indicate that the study area's population is relatively young and family focused. These include:
  - A median age of 31.7 relative to 34.3 citywide.
  - A high percentage of family households (67 percent). Family households are those with two or more related individuals such as parents with children, a married couple, or a single parent with a child.
  - A slightly higher average household size of 2.7 relative to 2.5 citywide.
  - A relatively high percent of households with related children – 38 percent compared to 35 percent citywide.
  - In 2010, youth ages 19 and under comprised 30 percent of the population. Young adults ages 20 to 34 comprised 26 percent of the population.
  - Retirement age seniors ages 65 and over comprised only seven percent of the study area population in 2010, relative to 11 percent citywide.

**Figure 3. Population by Age (2010 estimate)**



Source: ESRI Business Analyst, U.S. Census, Leland Consulting Group

- Despite the relatively small senior population in the study area today, as more members of the baby boomer generation enter retirement age in the next decade, seniors are anticipated to comprise a larger share of the population. At the local level, as explained in more detail in the Planned Development section of this report, two large-scale residential developments in the study area are expected to add up to 220 units of housing targeted to seniors, including independent and assisted living facilities and managed care facilities. In addition to projects specifically oriented to seniors, up to 360 units of attached single-family housing (e.g., townhomes, condominiums, etc.) are also planned for the study area. Such projects typically appeal to smaller one- and two-person households, including empty nesters and retirees.

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- Estimated at \$61,581, the study area’s median household income was more than \$5,000 higher than the median household income citywide (\$56,297) in 2010 (see Table 1). However, the discrepancy between the study area’s per capita income (\$26,108) and the City’s per capita income (\$25,706) was much smaller, which is explained by the higher percentage of households with children (i.e., non-wage earners) in the study area and by the slightly lower percentage of one- and two-person households.

**Table 1. Population and Household Characteristics**

Population/Household Characteristic	Study Area	City of Vancouver
Population, 2010 (est)	14,786	170,265
Households, 2010 (est)	5,569	67,052
Average Household Size, 2010 (est)	2.7	2.5
Percent 1 and 2 Person Households, 2000	58%	61%
Percent Family Households, 2010 (est)	66%	63%
Median Age, 2010 (est)	31.7	34.3
Median Household Income, 2010 (est)	\$61,581	\$56,297
Per Capita Income, 2010 (est)	\$26,108	\$25,706

Source: ESRI and Leland Consulting Group

## Employment Trends

The study area is both a place where workers live (and commute to jobs elsewhere) as well as an employment area in its own right. This section of the report summarizes key findings about the types of jobs that are present in the area and the employment profiles of the residents who live there.

### CORRIDOR JOB PROFILE

Key findings about the jobs in the area (irrespective of where the worker lives) include:

- Approximately 7,800 people work in the study area.
- The study area has a strong manufacturing employment base. As shown in Table 2, below, approximately 26 percent of all jobs were in this sector in 2008, the latest year for which data is available.
- Several major high-tech manufacturing facilities are located in the study area, including facilities operated by US Digital, Micropump, and SEH America, the study area’s largest employer (see Figure 4).
- Jobs in the retail, accommodation, and food service industries (a single category) are another major source of employment in the study area. A combined 22 percent of all jobs in the area were in this sector in 2008.
- As shown in Figure 4, the study area has two major retail employment concentrations where I-205 intersects with Mill Plain Boulevard and Fourth Plain Boulevard. Due to their high visibility, convenient access to regional transportation routes, and high

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volumes of traffic, these locations are ideal for retail and commercial services such as restaurants, lodging, and other uses.

- Other industries with significant employment in the study area include the administration, support, waste management and remediation category, which comprise 11 percent of all jobs in the area and wholesale trade, with eight percent of study area jobs.
- Key drivers for job growth include overall population growth in the region as well as the area's central location and good access to I-205. The area will be even more competitive upon completion of the I-205 access improvements and the potential future construction of a new park and ride facility in the area.

**Table 2. Study Area Jobs by Industry, 2008**

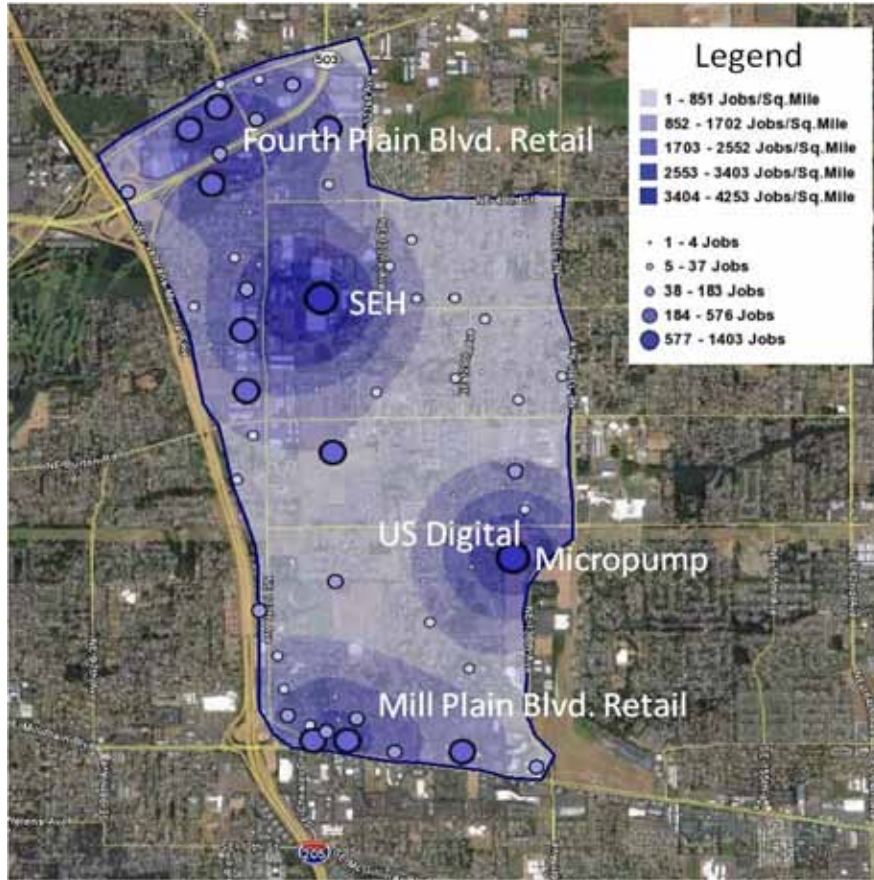
NAICS Industry Sector	Count	Share
Agriculture, Forestry, Fishing and Hunting	6	0%
Mining, Quarrying, and Oil and Gas Extraction	0	0%
Utilities	10	0%
Construction	421	5%
Manufacturing	2,061	26%
Wholesale Trade	652	8%
Retail Trade	713	9%
Transportation and Warehousing	67	1%
Information	21	0%
Finance and Insurance	306	4%
Real Estate and Rental and Leasing	104	1%
Professional, Scientific, and Technical Services	280	4%
Management of Companies and Enterprises	27	0%
Administration & Support, Waste Management and Remediation	877	11%
Educational Services	86	1%
Health Care and Social Assistance	538	7%
Arts, Entertainment, and Recreation	3	0%
Accommodation and Food Services	1,013	13%
Other Services (excluding Public Administration)	269	3%
Public Administration	415	5%
<b>Total</b>	<b>7,869</b>	<b>100%</b>

Source: U.S. Census Bureau – 2008 Local Employment Dynamics Data

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Figure 4. Study Area Employment Concentrations, 2008



Source: U.S. Census Bureau, Google Earth

## EMPLOYMENT PROFILE OF STUDY AREA RESIDENTS

### KEY FINDINGS:

- Many residents in the study area hold retail and service jobs. In 2008, 12 percent of study area residents worked in retail trade while 9 percent (or a combined 18 percent) worked in the educational services and accommodation and food services industries.
- Although 26 percent of all jobs in the study area are manufacturing jobs, only 11 percent of study area residents have manufacturing jobs (which could be located anywhere in the region).
- The health care and social assistance industry, which is anticipated to expand regionally and nationally as the baby boomer generation enters retirement age and the demand for healthcare services increases, employed 11 percent of study area residents in 2008.
- As shown in Table 4, more than half of study area residents (52 percent) work in Clark County. Among residents employed in Clark County, the vast majority (35 percent) worked close to home in Vancouver.

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- Approximately 32 percent of study area residents commute to work across the river in the Portland Metro area, excluding Clark County. Of those, 21 percent work in the City of Portland. This commuter population could benefit from improved access to I-205 and enhanced express bus routes (via a park and ride).

**Table 3. Study Area Resident Employment by Industry (2008)**

NAICS Industry Sector	Count	Share
Agriculture, Forestry, Fishing and Hunting	47	1%
Mining, Quarrying, and Oil and Gas Extraction	8	0%
Utilities	28	1%
Construction	385	7%
Manufacturing	597	11%
Wholesale Trade	338	6%
Retail Trade	635	12%
Transportation and Warehousing	236	5%
Information	103	2%
Finance and Insurance	175	3%
Real Estate and Rental and Leasing	103	2%
Professional, Scientific, and Technical Services	255	5%
Management of Companies and Enterprises	65	1%
Administration & Support, Waste Management and Remediation	321	6%
Educational Services	448	9%
Health Care and Social Assistance	578	11%
Arts, Entertainment, and Recreation	79	2%
Accommodation and Food Services	463	9%
Other Services (excluding Public Administration)	229	4%
Public Administration	167	3%
<b>Total</b>	<b>5,260</b>	<b>100%</b>

Source: U.S. Census Bureau – 2008 Local Employment Dynamics Data



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Table 4. Where Study Area Residents Work (2008)

	Count	Share
Vancouver city, WA	1,824	35%
Portland city, OR	1,095	21%
Seattle city, WA	175	3%
Camas city, WA	104	2%
Orchards CDP, WA	95	2%
Gresham city, OR	92	2%
Five Corners CDP, WA	77	2%
Beaverton city, OR	76	1%
Hazel Dell North CDP, WA	70	1%
Hazel Dell South CDP, WA	70	1%
All Other Locations	1,582	30%
<b>Total</b>	<b>5,260</b>	<b>100%</b>
Clark County Subtotal	2,743	52%
Portland Metro Area Subtotal <sup>1/</sup>	1,670	32%

<sup>1/</sup> Includes employment within Multnomah, Washington and Clackamas Counties in Oregon; excludes employment in Clark County, Washington.

Source: U.S. Census Bureau – 2008 Local Employment Dynamics Data

## Retail Market Profile

Retail opportunities will be driven by their response to the fundamentals of retail market potential:

- **Visibility.** Thousands of customers must pass and see the site on a daily basis. In urban areas, retailers look for corners and areas with high pedestrian and transit. Along urban arterials and in suburban areas, daily traffic volumes of approximately 20,000 are desirable for national retailers.
- **Accessibility.** The space must be very easy to get to; daily shopping or convenience retail should be on the way home (right) side of the street.
- **Central location vis-a-vis target markets.** The target market will vary depending on the type of retail, but in any case, the location should be central to that market area. For example, grocery anchored centers should be within approximately one mile of 10,000 residents.
- **Manageable competitive environment.** Most retailers will avoid an area if competitors are already located there. The exact opposite can be true, however, when retailers offer complementary products, making the area a destination for comparison shopping.
- **Demographic match.** Retailers choose sites located near their —target market customers.
- **Anchor tenants.** Retail developments are often —anchored by one tenant (for example, a supermarket) who then attracts other tenants.
- **Sense of place, safety, cleanliness.** This is particularly important to encouraging pedestrian activity.

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- **Contiguity.** Urban retail must be continuous, or many shoppers will stop and turn back. Empty storefronts, parking lots, and non-retail uses can create breaks in contiguity.
- **Parking capacity.** In an area where on-street parking is unlikely to be feasible, it will be important that retail sites have adequate interior parking.

## KEY FINDINGS:

- As shown in Figures 5 to 7, the study area has two main retail concentrations, one at the north end along Fourth Plain Boulevard and the second at the south end along Mill Plain Boulevard. Both locations have convenient access to I-205, high visibility and high volumes of drive-by traffic. They also feature a critical mass of retail and commercial services and comparison shopping opportunities that are attractive to consumers, particularly among value and price conscious shoppers.
- There is a smaller neighborhood retail node at 28<sup>th</sup> and 112<sup>th</sup> that is anchored by a Safeway supermarket. Future growth in this area is challenged by the presence of an electrical substation and mini-storage warehouses on the north side of 28<sup>th</sup>. These uses limit the ability of the area to achieve a critical mass of commercial development without significant changes of use and/or relocation. Therefore, the type of retail and commercial uses that are likely in this area will continue to be smaller-scale and neighborhood serving. In either case, the vacant commercial site due east of the Safeway (at the northern edge of the Four Seasons development) is likely to develop as commercial and mixed-use before any redevelopment occurs elsewhere in the vicinity. In addition to retail, potential uses could include medical offices, financial services, and small flexible office spaces.
- All three retail areas have most retail development on the south side of the street, which is the “going home” side, a positive attribute for retail success.
- Due to several factors, including the study area’s abundant existing retail options, competition from Oregon, a relatively high citywide vacancy rate, and the fact that retail is already concentrated in locations that fulfill the requirements needed for it to succeed, the opportunity for new retail development along 112<sup>th</sup> is anticipated to be very limited.

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**Figure 5. Retail Context (Mill Plain Boulevard to 28th Avenue)**



Source: Google Earth and Leland Consulting Group

**Figure 6. Retail Context (28th Avenue)**



Source: Google Earth and Leland Consulting Group

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Figure 7. Retail Context (49<sup>th</sup> Street to Fourth Plain Boulevard)



Source: Google Earth and Leland Consulting Group

## Residential Market Profile

As noted earlier, most new development in the corridor over the next 20 years is likely to be in housing. Currently, the study area is characterized by a diverse range of housing types and affordability levels, as described below.

- As shown in Table 5, in 2010, the study area had a similar proportion of homeowners (45 percent) and renters (47 percent) and a slightly lower homeownership rate than the City (49 percent).
- As shown in Table 6, in February 2011, study area median home values, which ranged from \$124,700 in Kevanna Park to as much as \$161,400 in Landover-Sharmel, were lower than the citywide median home value (\$169,000). It should be noted that these values are impacted by the housing market slowdown and could change significantly as the market recovers.
- In addition to families, the study area is anticipated to attract a growing number of seniors with unique needs and housing preferences with respect to form, price, amenities and other characteristics. This trend is supported by the fact that several hundred units of attached senior housing are planned for the study area.



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**Table 5. Housing Characteristics**

Housing Characteristic	Study Area	City of Vancouver
Housing Units, 2010 (estimate)	6,057	72,123
Owner Occupied Housing Units	45%	49%
Renter Occupied Housing Units	47%	44%
Vacant Housing Units	8%	7%
Housing Units by Units in Structure, 2000		
1-unit, Detached	55%	56%
1 to 4 units, Attached	10%	17%
5 to 9 units, Attached	13%	8%
10 or more units, Attached	13%	17%
Mobile Home	3%	3%
Other	1%	0%

Source: ESRI and Leland Consulting Group

**Table 6. Median Home Value Data - Feb. 2011**

Housing Data	Fircrest	Image	Kevanna Park	Landover-Sharmel	Vancouver
Current Median Home Value	\$148,400	\$148,000	\$124,700	\$161,400	\$169,200
Current Median Home Value per Square Foot	\$118	\$115	\$102	\$104	\$119
Change in Median Home Value over Prior Year	-13.4%	-13.4%	-22.2%	-11.0%	-9.4%

Source: Zillow and Leland Consulting Group

## Planned Development

This section of the report summarizes the most current information on planned development in the study area identified in the December 2010 Draft 112<sup>th</sup> Corridor Plan Existing Conditions overview.

- As shown in Table 7, a total of 734 housing units are planned in or within close proximity to the corridor.
- The majority of planned units (584) are associated with developments whose status has been updated relatively recently, in 2009 or later (this includes planned development at the Four Seasons project). However, 150 housing units are associated with planned developments whose status has not been updated for over two years, most likely due to the market slowdown. Thus, there is some uncertainty as to when these projects will be built and, if so, whether they will reflect the most recent proposals or will be something entirely different.
- Attached single-family residences, of which 360 are planned for the study area, comprise the majority of planned housing units.
- A reported 220 units are planned for large senior and assisted living projects. One of these projects, Burton Ridge, is a 172-unit senior Veteran's Housing Administration



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project that will include a mix of independent and assisted living units as well as units within a “memory care” facility targeted to individuals with Alzheimer’s and other memory loss conditions.

- While a significant amount of residential development is planned for the study area, planned non-residential development is relatively limited. As shown in Table 8, an estimated 72,000 square feet of non-residential development is planned for the study area, the majority of which has not had a status update since pre-2009.
- While the largest planned non-residential development identified for the study area is a 35,000 square foot expansion of the Salvation Army facility at 1500 NE 112<sup>th</sup> Avenue, it is widely known that silicon wafer manufacturer SEH America, Inc. is considering a major expansion of its facility. Located in the industrial area east of 112<sup>th</sup> Avenue, north of 28<sup>th</sup> Street and south of 49<sup>th</sup> Street, the facility is adjacent to multiple undeveloped properties with the potential to accommodate an expansion.

**Table 7. Planned Residential Development**

Housing Types	Status Update	Status Update
	Pre-2009 <sup>1/</sup>	2009 or later <sup>2/</sup>
Detached single-family	106	4
Attached single-family	44	360
Senior / Assisted - attached	-	220
<i>Unit subtotals</i>	<i>150</i>	<i>584</i>
<b>Total units</b>		<b>734</b>

<sup>1/</sup> Includes projects with most recent status update prior to 2009.

<sup>2/</sup> Includes projects with most recent status update in 2009 or later.

Source: City of Vancouver and Leland Consulting Group

**Table 8. Planned Non-Residential Development**

Development Type	Status Update	Status Update
	Pre-2009 <sup>1/</sup>	2009 or later <sup>2/</sup>
Retail	11,000 <sup>3/</sup>	13,000
Other Commercial	35,000	unknown
Industrial	13,250	
<i>Subtotal</i>	<i>59,250</i>	<i>13,000</i>
<b>Total</b>		<b>72,250</b>

<sup>1/</sup> Includes projects with most recent status update prior to 2009.

<sup>2/</sup> Includes projects with most recent status update in 2009 or later.

<sup>3/</sup> Square footage for the proposed Walgreens at 11200 NE 28<sup>th</sup> Avenue is estimated at 11,000 square feet, the typical retail square footage occupied by Walgreens in a neighborhood setting.

Source: City of Vancouver and Leland Consulting Group

## MEMORANDUM

<b>Date:</b>	May 24, 2011	<b>TG:</b>	10220.00
<b>To:</b>	Phil Wuest, City of Vancouver		
<b>From:</b>	Michael Swenson Scott Lee		
<b>cc:</b>	Bob Bengford, Makers		
<b>Subject:</b>	112th Avenue Traffic Analysis Summary		

This memorandum summarizes the traffic analysis and primary findings of the work prepared by Transpo in support of the 112th Avenue Subarea Corridor Plan. The scope of the traffic analysis focused on the following areas:

- Reviewed future transit center locations and opportunities/constraints associated with each
- Reviewed traffic forecast along the 112th Corridor and immediate vicinity.
- Prepared alternative roadway cross sections for 112th, south of 18th Street focusing along the section near the cemetery

### Transit Center Siting Summary

In the 2030 High Capacity Transit Plan for Clark County, a transit hub or transit oriented development was identified along the I-205 and 112th Avenue Corridors. The locations evaluated in this review included:

- South side of Burton Road between I-205 and 112th Avenue
- North side of 18th Street between I-205 and 112th Avenue
- Southwest and southeast quadrants of the NE 18th Street/112th Avenue intersection
- West side of 112th Avenue, south of existing BPA easements

Summary graphics were prepared for the February 8, 2011 public workshop (see attached). The following provides a summary of the access and development considerations associated with each location.

**Table 1. Transit Oriented Development Siting Summary**

Location	Access Considerations	Considerations
South side of Burton Road between I-205 and 112th Avenue	Access is possible from either Burton Road or 112th Avenue could be feasible	Potential for Transit Oriented Development in consideration of adjacent land uses Existing street network that could be utilized for access
Northwest and northeast quadrants of the NE 18th Street/112th Avenue intersection	Access could be from NE 18th Street or NE 112th Avenue. The access points along 112th Avenue would likely be in close proximity to the NE 18th Street/NE 112th Avenue intersection making full access challenging depending on queuing at this intersection. Direct transit access into the transit hub from I-205 frontage roads would be desirable for efficient transit operations, but would require special FHWA approval.	Transit facility is isolated from complementary land uses, limiting TOD potential

<p>Southeast and southwest quadrants of the NE 18th Street/112th Avenue intersection</p>	<p>Access could be from NE 18th Street or NE 112th Avenue. The access points along 112th Avenue would likely be in close proximity to the NE 18th Street/NE 112th Avenue intersection making full access challenging depending on queuing at this intersection. Direct transit access into the transit hub from I-205 frontage roads would be desirable for efficient transit operations, but would require special FHWA approval.</p>	<p>Transit facility is isolated from complementary land uses, limiting TOD potential Development may be limited due to BPA easements and related development restrictions</p>
<p>West side of 112th Avenue, south of existing BPA easements</p>	<p>Transit access may be feasible direct to/from proposed NB off-ramp Access for general purpose would be feasible from 112th Avenue</p>	<p>Transit facility is isolated from complimentary land uses, limiting TOD potential</p>

In addition to the transit center review, the effects of a 400 stall park-and-ride facility located near the intersection of 112th Avenue / 18th Street were reviewed. Consistent with the transit center siting summary, the access points to the park-and-ride may be restricted depending on the location relative to the intersection. Based on a 400 stall facility, the intersection volumes at 112th Avenue / 18th Street would increase traffic volumes by up to three percent. Assuming intersection improvements outlined in the *I-205/Mill Plain Interchange to NE 18th Street Project*, the intersection is anticipated to operate at LOS C and LOS D during future 2030 weekday AM and PM peak hour, respectively. Based on the minimal increase in total entering traffic volumes, intersection operations are not anticipated to degrade below acceptable levels of service during the weekday AM and PM peak hour. The impacts of the intersection are ultimately influenced by the nature of the TOD project, market draw, and site access.

## Traffic Forecasting Review

Traffic forecasts from the *I-205/Mill Plain Interchange to NE 18th Street Project* were reviewed to access the impacts from the proposed I-205 northbound off and southbound on ramps at 18th Street, the widening of the 18th Street bridge to a seven-lane cross section, and intersection improvements at the intersection of 18th Street / 112th Avenue.

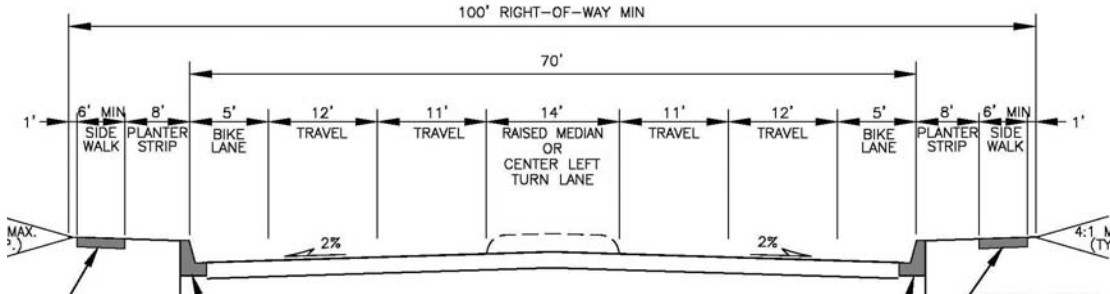
The construction of on/off-ramps to/from NE 18th Street reduces congestion on Mill Plain Road as well as 112th Avenue near Mill Plain Road during both the AM and PM peak hour. North of Mill Plain Road traffic volumes on 112th Avenue are forecasted to decrease both northbound and southbound during the weekday PM peak hour by approximately 350 vehicles northbound and 160 vehicles southbound. During the weekday AM peak hour northbound traffic volumes increase by 55 vehicles and southbound traffic volumes decrease by 440 vehicles.

Intersection volumes at 18th Street / 112th Avenue increase during the weekday AM and PM peak hour by 410 vehicles and 360 vehicles, respectively. South of 18th Street traffic volumes on 112th Avenue are forecasted to decrease both northbound and southbound during the weekday PM peak hour by approximately 305 vehicles northbound and 150 vehicles southbound. During the weekday AM peak hour northbound traffic volumes increase by 115 vehicles and southbound traffic volumes decrease by 445 vehicles.

## 112th Avenue Street Section Options

The City’s principal arterial street standard calls for 100 feet of right-of-way (ROW), as illustrated in the standard street section diagram below. This amount of ROW may not be available along the entire corridor, especially between 9<sup>th</sup> and 18<sup>th</sup> Streets. The conceptual striping plans presented in

this report incorporate each of the functions provided for in the City’s street standard, but with a reduced footprint.



Conceptual striping plans were developed for the section of 112th Avenue in the vicinity of the Evergreen Memorial Gardens. Right of way in this section is limited on the east side of the road in consideration of the constraints related to burial plots on the cemetery grounds. The purpose of this exercise was to develop conceptual plans that identified street section options that maximized the expansion of the roadway (limited to sidewalks only) on the east and evaluated impacts to properties on the west side of 112th Avenue.

**Traffic Volume Considerations**

A review of traffic volumes forecasted along 112th Avenue between 18th Street and 9th Street during 2030 build conditions was completed to determine if the number of travel lanes along this stretch of roadway could be reduced. Roadways qualifying for reductions in travel lanes typically have traffic volumes of 20,000 vehicles (~10,000 per direction) or less per day. Based on the projected daily<sup>1</sup> and peak hour volumes along 112th Avenue during 2030 build conditions, the southbound travel lanes would be a candidate for a reduction from two travel lanes to one travel lane.

**Operations Assessment**

To check the reasonableness of a lane reduction along 112th Avenue, a level of service analysis was completed at 112th Avenue / 9th Street intersection under 2030 build conditions. With the reduction of lanes southbound the approach to 112th Avenue / 9th Street would reduce from two southbound through lanes to one southbound through lane. Analysis using Synchro 7.0 shows 112th / 9th Street is expected to operate at LOS B during the 2030 weekday AM and PM peak hour. This analysis assumes that all channelization improvements identified in the *I-205/Mill Plain Interchange to NE 18th Street Project* have been completed and no lane reductions occur at this location. Additional detailed traffic analysis would have to be conducted by the City Traffic Engineer prior to any potential lane configuration modifications.

**Street Section Options**

The street section options developed are described below. Both options described below assume a nominal expansion of the ROW on the east to accommodate a sidewalk only.

Option 1 – This option includes a 5 lane cross-section on 112th Avenue, assuming recent ROW dedications on the west side of 112th Avenue established the western limit of the ROW dedication

<sup>1</sup> ADT was derived based on the assumption the weekday PM peak hour represents eight percent of the ADT.

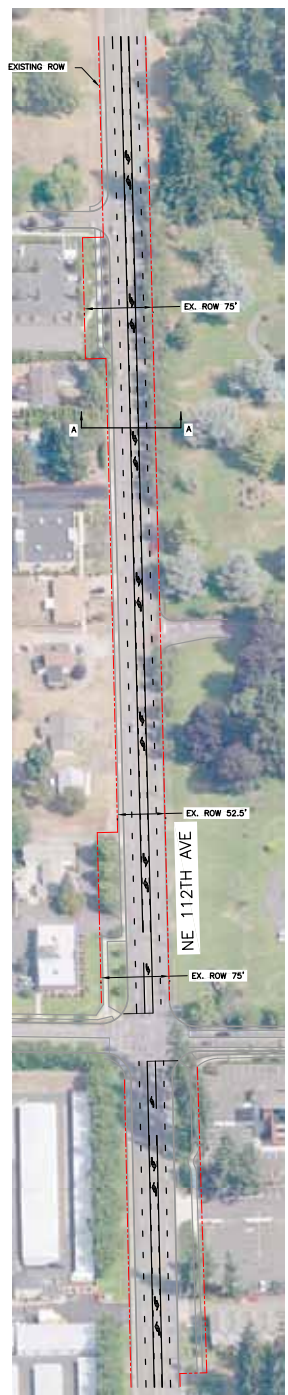
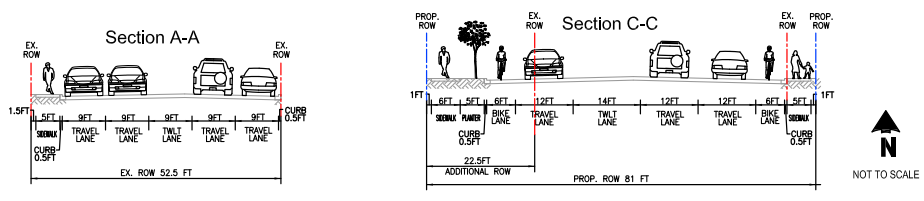
for future parcels. Several recent projects have been developed and the likelihood of redevelopment in the near future is minimal. To accommodate the 5 lane section (inclusive of sidewalks), the planter strip was removed and the lane widths reduced in this section.

Option 2 - This option includes a 4 lane cross-section with northbound and southbound bike lanes as well as a planter on the west side of 112th Avenue, resulting in a detached sidewalk. This assumes recent ROW dedications on the west side of 112th Avenue are established from ROW dedication for future parcels. With the detached sidewalk, the pedestrian environment is improved by increasing the distance between the traveled way and pedestrians.

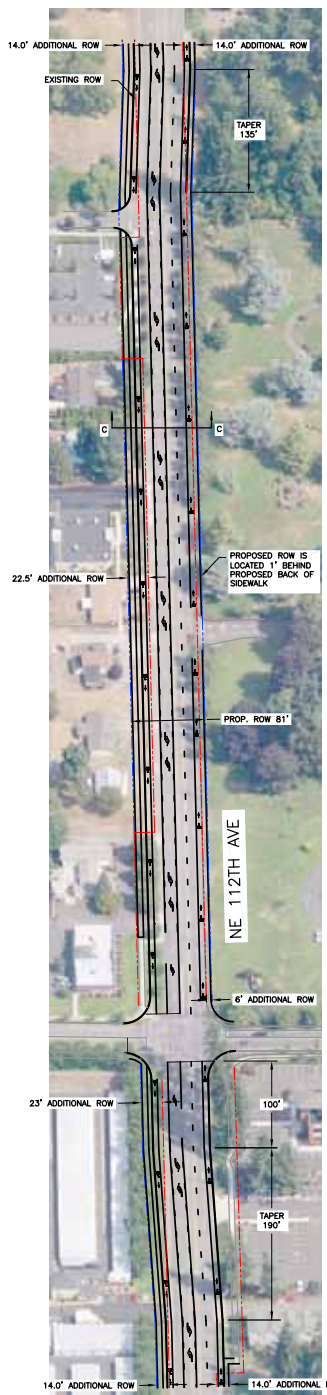
The four lane section includes 2 northbound travel lanes, one southbound travel lane, and a center two-way left-turn lane. While the analysis generally supports the imbalanced geometry, the consistency and lane merging at the NE 18th intersection needs to be reviewed in more operational detail. This geometry is also based on the future conditions with the I-205 18th interchange improvements. The striping plan assumes full City arterial improvements with respect to the section including lane widths.







Existing



Option 2

- Reduced roadway to 4 lanes meeting city arterial lane standards.
- Accommodated within right-of-way associated with recent development.
- Imbalanced geometry is based on current/future link volumes. Further analysis needed to confirm operations associated with mid-block connections and merging from the 18th Street improvements.

Conceptual Channelization / Cross Sections

112th Corridor Subarea Plan - Vancouver, WA  
 M:\10\10220 112th Corridor Subarea Plan\CAD\Conceptual Striping.dwg<P>Daniel Lai 5/24/2011 10:37 AM

FIGURE 2



# 112<sup>TH</sup> Corridor Subarea Plan

## Illustrated Site Plan Example & Assumptions

The 112<sup>th</sup> Corridor Subarea Planning Team prepared an example site plan illustrating how a key area of the subarea could be developed consistent with the plan's vision. The site plan is focused on the properties on the east side of NE 112<sup>th</sup> Avenue between NE 18<sup>th</sup> and 28<sup>th</sup> Streets. Areas that are illustrated with new development are either vacant or under developed per current zoning.

The site plan on the following page emphasizes the following overarching concepts and elements:

- Mixture of housing types that accommodates the area's demographic diversity and responds to predicted future market demand.
- A hierarchy of connected streets that allow for good circulation and reduce pressure on surrounding arterials.
- An integrated and connected trail system that promotes walking and enhances the residential setting.
- A network of usable open spaces that serve the development and add character and identity.
- How to integrate individual developments with surrounding developments to provide a more efficient use of land, share amenities, and enhance the residential setting.
- How to configure buildings, parking areas and open spaces that enhance the character and safety of streets and create focal points of activity.

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Figure 1. Illustrated Site Plan



Figure 2.

Site plan sub-areas



Site Plan Land Use Statistics

SITE AREA (see Site Area Key map)	NET AREA SF*	NET ACRES*	CURRENT ZONING	PROPOSED ZONING	COM. SF (retail & office)	DWELLING UNITS BY TYPE					TOTAL UNITS	DWELLING UNITS/ ACRE
						CONGREGATE CARE	2 over 1	3 over 1	WALK-UPS	TOWNHOMES		
1	67,022	1.54	R-18	R-18	0	0	0	0	0	19	19	12.35
2	151,806	3.48	R-18	R-22	0	0	0	0	0	46	46	13.20
3	359,142	8.24	R-18	R-22	0	0	0	63	56	32	151	18.31
4	159,398	3.66	R-18	R-22	0	0	46	0	0	20	66	18.04
5	195,031	4.48	R-18	R-22	0	0	92	0	0	0	92	20.55
6	385,519	8.85	R-18/MX	COM	120,350	0	0	0	0	0	0	0.00
7**	457,657	10.51	R-18	R-22	127,575	0	20	132	0	78	230	21.89
8***	185,514	4.26	R-18	R-22	0	0	16	28	0	41	85	19.96
12	410,689	9.43	R-18	R-30	0	85	0	183	0	0	268	28.43
13	433,662	9.96	R-18	R-30	0	0	0	132	96	6	234	23.50
14	78,035	1.79	R-18	MX	23,200	0	0	0	0	0	0	0.00
<b>TOTALS</b>	<b>2,883,476</b>	<b>66.20</b>			<b>271,125</b>	<b>85</b>	<b>174</b>	<b>538</b>	<b>152</b>	<b>242</b>	<b>1,191</b>	

\*area calculations exclude existing public rights-of-way  
 \*\*area calculations exclude office (195,076sf) and open space areas (70,270sf)  
 \*\*\*area calculations exclude open space area adjacent to NE 18th Street (51,888sf)



## Site Plan Development Assumptions

### Townhouses

- Average floorplate 20'x35'
- Average 1,600sf living space,
- Units range from 15-25' wide, average 20' wide
- 1-2 car garage on ground floor with 2 floors above
- 2-3 bedrooms
- Private open space in rear averaging 15x25'
- Typical internal access 20' wide with 5-10' drive/entry
- Planting strip/tree for each unit



*Left image – example of townhouses from street; Right image includes townhouses from private internal court; note planting strips in front of each unit.*

### Lowrise Apartments

- Average floorplate 65' wide and variable length
- In-building parking at grade or partially subgrade
- Two-three floors of apartments over parking
- Some open surface level parking with most buildings
- Average unit size 1,000sf
- Assume actual units vary from 600-1,500sf



*Lowrise apartment example. In this example, parking is below grade. It's assumed that parking would occupy the first floor or a floor partially below grade.*

## Walkup Apartments

- Building size/layout based on Mission Hills complex
- Building floorplates average 65' x 85'
- Buildings are two-three floors
- Units are served by surface parking
- Average unit size 1,000sf
- Assume actual units vary from 600-1,500sf



*Walk-up apartment examples – Mission Hills building on the left. Image on the right shows a good example with landscaping.*

## Commercial

- Building sizes and widths vary from 3,000-10,000 sf
- One drive-through restaurant is included
- All commercial uses are served by surface parking lots
- Building fronting on the new internal street (115<sup>th</sup>) have pedestrian-friendly facades (see example below)



*Left image includes pedestrian-oriented facades along internal street. Right image shows another mixed-retail building.*

## Office Buildings

- Floorplates are 80-100' wide
- Parking includes some combination of below grade, at-grade in-building, and surface parking
- Two-floor of office uses above one parking level



*Office building examples*

## Streets and Internal Roads

- NE 115<sup>th</sup> Ave in the commercial area features two lanes and on-street parking between intersections; On-street parking is not included in the office area
- Through streets in the residential areas have on-street parking on one side (NE 115<sup>th</sup> Ave, NE 22<sup>nd</sup> & 23<sup>rd</sup> Streets). Bicycle lanes are on opposite sides of street.
- Other private internal roads generally do not include parallel parking.
- Sidewalks, street trees, and planting strips are included on all public and private internal streets, except townhouse auto courts and surface parking lots feature shared auto/ped space.

## Trail Corridors

- Most trails look and function like internal sidewalks, about 5' wide; Some of the longer, centralized trails connecting larger open spaces maybe wider (8-10') to allow for pedestrians and bicycle use.
- Trail corridors between buildings usually have 5-10' of landscaping on each side, then about 10-15' of semi-private open space for individual townhouse/apartment units in the adjacent uses. These spaces are separated from the trails by low level fencing and/or low hedges.



*Trail examples*