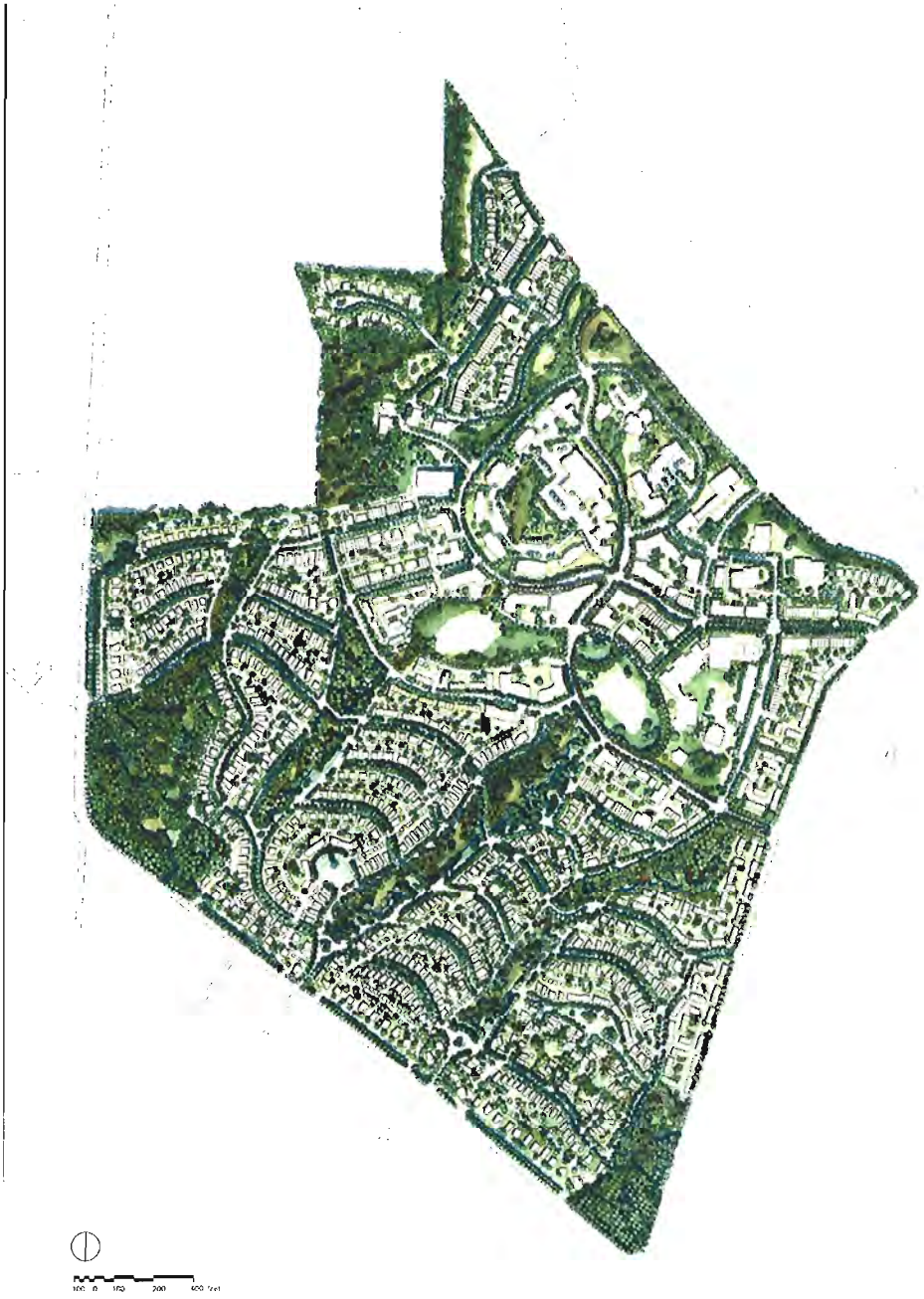
Sustainable Fairview

Mobility Plan

March 22, 2005



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Fairview Mobility Plan
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Introduction

"Fairview will secure Oregon's place as a pioneer in the development of sustainable communities."

10. Green Corridors for People and Other Living Things
Wide, green corridors will be a signature feature of the new Fairview community, connecting hundreds of front porches to a network of pathways. This will accomplish a complex layering of habitat, natural watercourses, community garden sites, play areas, walking and bike trails, and narrow low speed streets.

11. Transit Close at Hand SUSTAINABLE FAIRVIEW believes deeply in the value of transit as a fundamental component of a sustainable Fairview community, as well as a more sustainable Salem region. Fairview's "Main Street" - the central north-south transportation axis - will be a prime example of that commitment. Main Street will be no more than a six minute walk from any residence in the community. It is anticipated that Cherriots will provide bus service from a number of local stops and the Village Center on a regular basis.

12. An Interconnected Street System
Fairview's Main Street will be connected to the rest of the site by a web of interconnected streets, where the lack of cul-de-sacs means more direct travel, less travel time and less congestion on major thoroughfares. Streets exiting Fairview will be aligned with adjacent neighborhoods, assuring a high degree of connectivity to the rest of the city. This, in conjunction with residents' ability to gain many daily necessities by foot, bicycle or bus, will also reduce unnecessary fuel consumption.

13. Walking Every Day Fairview will be a walkable community in all respects. Sidewalks will line both sides of each street. Within minutes, you can reach any of the neighborhood parks for recreation or socializing. Broad greenways provide tranquil access to the village center where you may work, shop, conduct business or just pass through on your daily fresh air circuit. A community designed around walking is more

Sustainable Fairview Associates, LLC (Sustainable Fairview) is made up of Salem residents with experience in business, research, and development. They have come together as an LLC to demonstrate a marketable and sustainable vision for the re-development of the Fairview training center.

The Fairview Master Plan was adopted by the City of Salem in 2003 and it is consistent with Oregon's most forward-thinking visions and goals for sustainable development. From its inception in 2001, Sustainable Fairview Associates (Sustainable Fairview) used the Governor's Quality Development Objectives, the City of Salem's long range planning effort, Salem Futures, and the Governors Sustainability Executive Order as guidelines for its development program.

Project decisions and values have been based on four years of analysis, planning and public input. Community charrettes and numerous public forums were used to both inspire and refine the elements of the plan to be innovative, yet practical and economically exciting for the city in which we live. The Fairview plan has precipitated a new look at Salem's planning and zoning ordinances and aspires to be a model for facilitating new development patterns that create a strong sense of place and community.

A list of Guiding Principle provided the basis for a multi-disciplinary and multi-stakeholder Fairview Sustainable Community Design Charette held in October 2002. The Transportation and Movement Principles (10-13) and key Ecological Principles (6,7 and 8) (see Green Street Performance Measures sidebar) deal specifically with multi-modal safety and efficiency as well as integration of the private and public rights-of-way with land use development and on-site storm water management.

Background

A community's transportation system can both shape its character and affect its vitality. Although the privately owned automobile will continue to define American culture, automobile use can work against sustainability. The transportation vision for Sustainable Fairview includes autos and other internal combustion powered vehicles, but pledges to reduce auto emissions, fossil fuel use, and lane-miles of asphalt, and to increase the health of the community by fostering the development and use of other transportation systems.

On that basis, the transportation strategy for Sustainable Fairview will seek to minimize the environmental impact of road systems and reduce vehicle trips to and within the site and rests on the following principles:

- Maximize the accessibility to civic amenities (schools, library, and community services), employment, retail shopping, recreation, and other community events by non-vehicular travel
- Provide access for vehicles, but design and operate the on-site transportation system to give priority to pedestrians, bicycles, and transit services
- Make transportation systems flexible enough to adapt to new technologies.
- Reduce impact of street infrastructure on receiving fresh water systems by 90% compared to conventional systems

Based on those principles, the key components of the transportation system are:

- Interconnected streets and pathways designed to follow topographic contours and to connect all elements of the community.
- Mixed-use, high-density commercial and business enterprises at The Center that are populated enough to warrant the availability of public transit.
- An internal bicycle and walkway system connecting all facets of the community.
- A main street through Sustainable Fairview to provide access for all modes of transportation. The main street will emphasize movement through The Center and will be the main transit corridor.
- A network of green low impact streets that will reduce storm water run-off, heat absorption, and vehicle speeds.
- Traffic-calming features built into the street network to reduce vehicle speeds and to improve pedestrian/bicycle safety.
- High-capacity transit corridors that are easily accessible to all households and businesses. The main street will be the on-site corridor. Pringle Road and Battle Creek Road will be the off-site corridors.

The Code adopted by the City requires that a Transportation and Mobility Plan be created to address the following:

- Street Plan
- Transit Plan
- Pedestrian and Bicycle Plan
- Transportation Demand Management Plan

This plan also incorporates the sustainability goals for Sustainable Fairview by including a section on Green Street Performance Measures.

A. Street Plan

The purpose of this section is to describe how the Sustainable Fairview street plan achieves the objectives of the City of Salem's Transportation System Plan and Street Design Guidelines, Storm water Management Plan and Sustainable Fairview's Transportation and Movement Principles. The placement of streets on Figure One is conceptual and will be addressed in the refinement plans.

City of Salem Street Design Standard Objectives

- Be consistent with the Salem Revised Code and Salem Transportation System Plan;
- Be of adequate design to handle the traffic needs of the City of Salem;
- Provide design guidance criteria to the private sector of streets within the City of Salem;
- Establish rights-of way widths, improvement requirements, and construction and design standards for the City of Salem street classifications;
- Be designed in a manner to allow economical future maintenance; and
- Require the use of materials to ensure a minimum practical street design life of 20 years for arterials and collectors and 25 years for locals.

There are several important elements of the street plan that were incorporated in order to meet the City's goals of decreasing Vehicle Miles Traveled and increasing the Non-Single Occupant Vehicle trip mode split including (see sidebar);

- A high level of street connectivity within the development and to the surrounding existing street system increases travel routes and pedestrian access,
- Sidewalks are required on all streets except the alleys,
- Traffic calming tools may be used for safe crossing opportunities, and
- All households are located within a ¼ mile walking distance of an existing or proposed transit line along collector routes.

The visual appearance of streets significantly influences the sense of place within a community. Streets in sustainable Fairview will stitch together neighborhoods and help to establish the visual identity of the community. The streets in Sustainable Fairview will have the following features:

- Streets may be narrow, to increase land availability for development, landscaping, structures, natural areas, sidewalks, and foot paths; to reduce storm water impacts to receiving fresh water systems; and to encourage multiple and more sustainable modes of transportation.
- Narrow streets will promote the appearance of a village and have low visual impact on the environment.
- Storm water swales may be located adjacent to the streets and should improve water quality, simulate natural drainage conditions, and create community aesthetics.

A Traffic Impact Analysis, conducted by Kittelson and Associates, in Summer 2004 has analyzed the impacts of the development on the adjacent public street system. Specific off-site mitigation requirements are discussed in the report.

Any proposed frontage road design will be considered at the refinement plan stage.

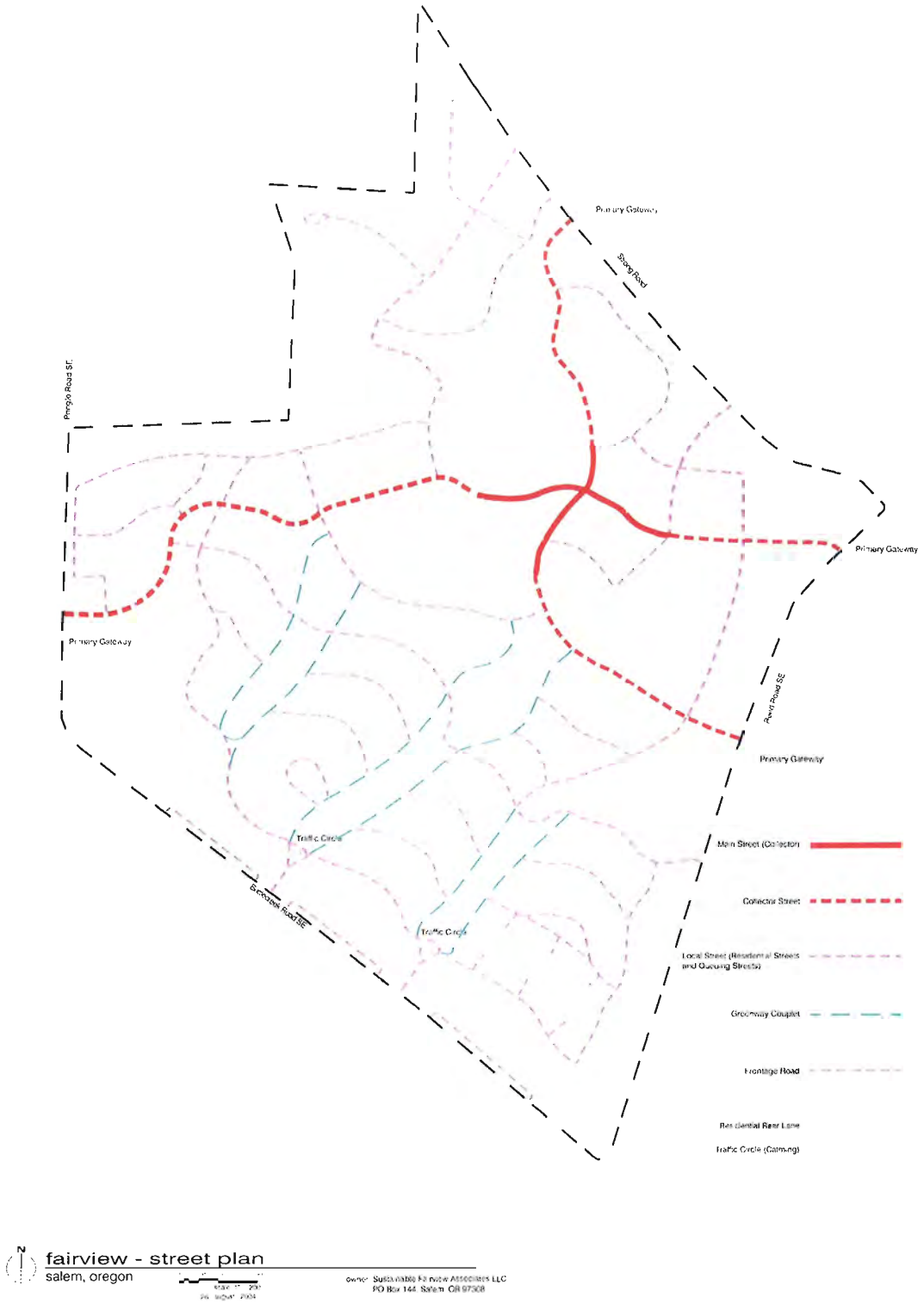

Figure One – Conceptual Street Plan

Street Design Guidelines

The street hierarchy serving this development is shown in Figure One as the following and will be the basis of discussion for this section;

- Main Streets (Collector),
- Residential (Local),
- Queuing (Local),
- Residential Couplet (Local),
- Alleys

Primary Gateways

The Primary Gateways are shown on the map with grey triangles and their designation serves several important functions including;

- Act as attractive entry points into the development with landscaping and other entry point amenities.
- Focus sub-regional traffic away from the local street intersections to the collectors.
- Promote alternative intersection treatment.

There are 4 specific intersections where these design standards may apply;

- Pringle/Battlecreek Road and the northern collector.
- Reed Road intersection with the collector street to the north.
- Second Reed Road intersection with collector.
- Strong Road and the middle collector intersection.

Collector Street System

The purpose of the collector system within the development is to serve as the main access routes for the employment areas and village main streets within the development. Provision has also been made for an E-W collector that has been called out in the City of Salem TSP and allows for sub-regional movement through the development. The collectors will accommodate external trips accessing the site from adjacent neighborhoods.

City of Salem Street Classification System – Street System Element of the TSP

Collector Road
"Primarily distributes traffic between neighborhoods, activity centers and the arterial street system. Secondarily provides access to property."

These streets must safely accommodate all modes including but not limited to vehicular, fire truck, transit, bike and pedestrian access.

The pavement section design of collector streets shall be consistent throughout the development and shall be addressed in the first refinement plan which includes a collector street.

The E-W Collector has been sited within the development to allow for sub-regional trips from Pringle Road to Reed Road. This means that adjacent neighborhoods on the east will have easy access to the Village Center as well as employment and shopping areas to the west of the development. This design helps reinforce the Village Center as the core as well as allow for trips to access points beyond the boundaries of the development. To aid travelers, way finding signs may be proposed.

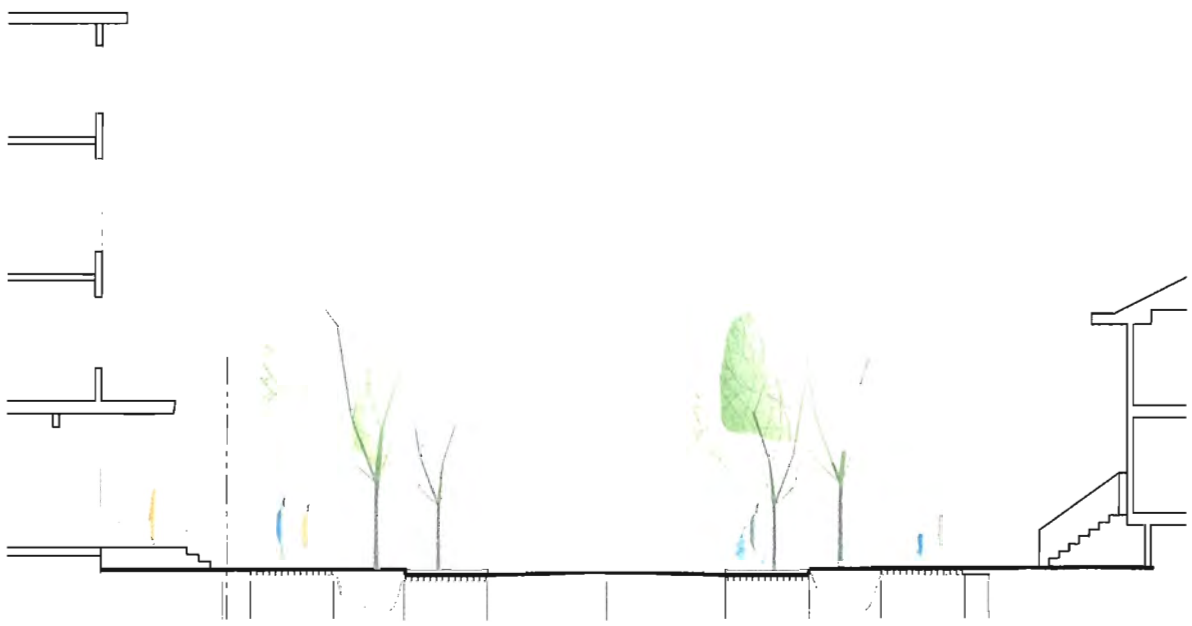

Figure 2 – Conceptual Main Street Parallel Parking

Main Streets

The Main Streets are located along the Collectors within the Village Center. The land uses bordering Main Street may feature higher density mixed uses and may require more space for parking, truck and bus service, and vehicle turning movements than other areas in Sustainable Fairview. These street types may use street trees, streetlights, pavement textures, and other streetscapes to incorporate sustainable practices and create a unique sense of place

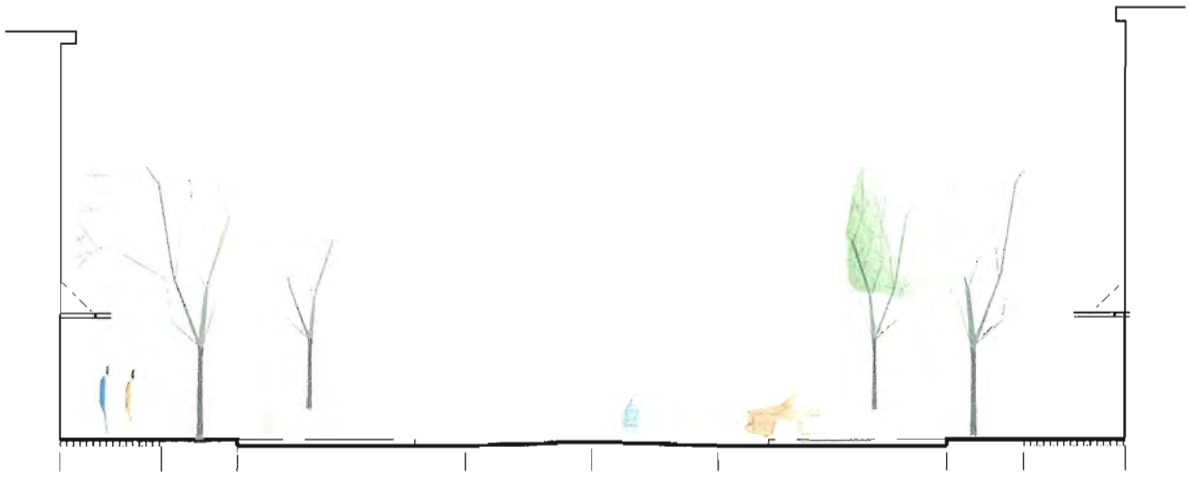

Figure 3 – Conceptual Main Street Diagonal Parking

Local Streets

Residential Streets

A two-way calmed street configuration that serves circulation needs within neighborhoods and provides access to streets that connect to other neighborhoods and the main street. The majority of the traffic on these streets will be local residents or visitors accessing their homes within the development.

Residential Street cross sections occur where streets connect across the community and to surrounding streets.

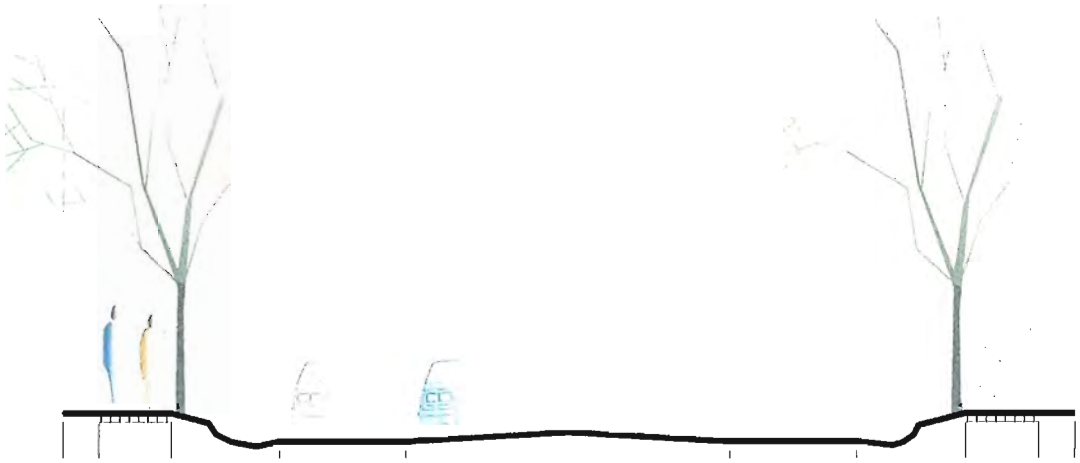

Figure 4 – Conceptual Residential Street

Queuing Streets

Queuing Streets account for a portion of residential streets at Fairview and may be used in areas of detached homes. Oncoming cars yield to allow for two-way traffic. Continuous street side parking on both sides of the street allows for higher land use efficiency, as fewer cars need to be stored on lots.

Parked cars also protect pedestrians on sidewalks from injury. Sidewalks on both sides insure that pedestrian orientation of the project is maintained. Trees provide shade for pedestrians, storm water uptake and provide a further barrier protecting pedestrians from cars.

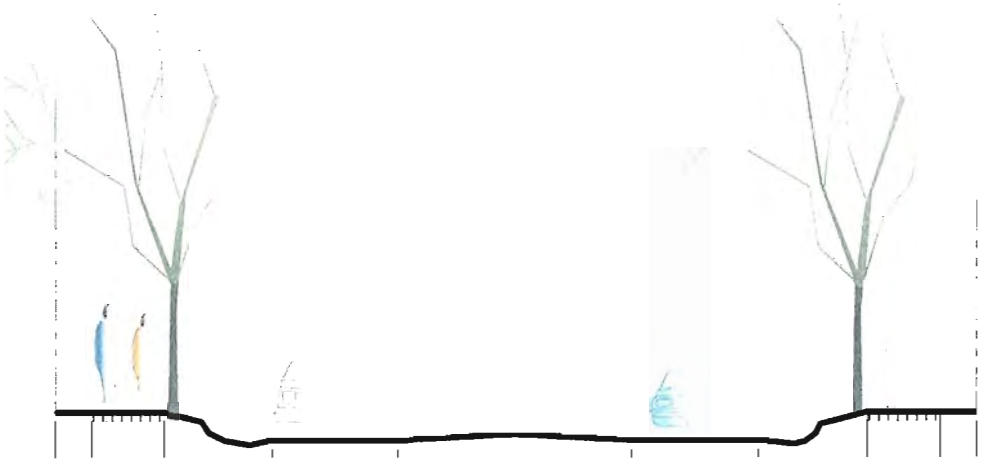

Figure 5 – Conceptual Queuing Street

Greenway Residential Couplets and Frontage Roads

The residential couplet sits astride most greenway verges and provides a signature feature of Sustainable Fairview. It is analogous to the commonly encountered divided parkway road type, with a green element separating the two travel lanes. Couplets may be used in Medium and Low Intensity areas where opportunities exist for high yields of ecological services within the right-of-way.

Required turns are accomplished by occasional transverse connections at intersecting roadways. Parking may be allowed on the housing side of the street. Sidewalks are included on both sides, with the greenway walk allowed to migrate into the greenway as opportunities arise. Rainwater infiltration occurs on both sides but primarily on the greenway side.

The frontage roads are also one-way road that provides access for those properties in Low Intensity areas that front on the surrounding road network. Frontage Street access shall meet minimum intersection spacing requirements.

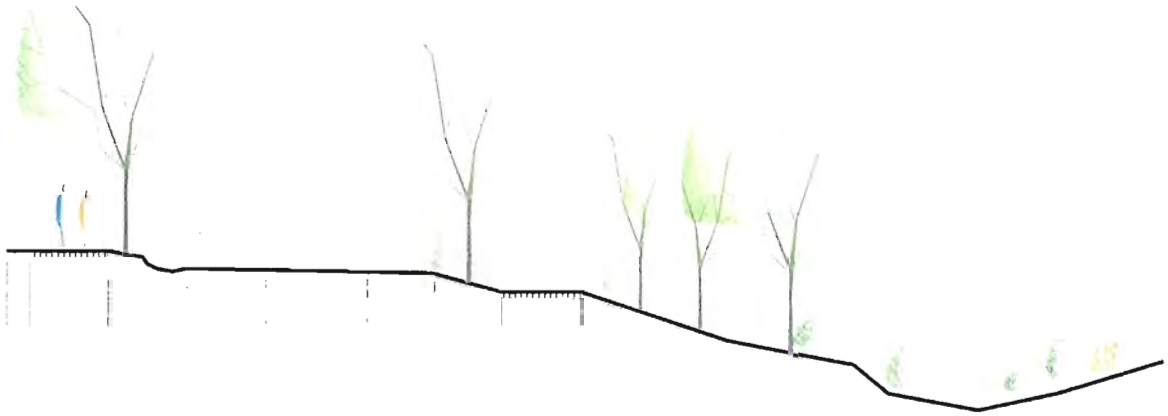

Figure 6 – Conceptual Greenway Couplet

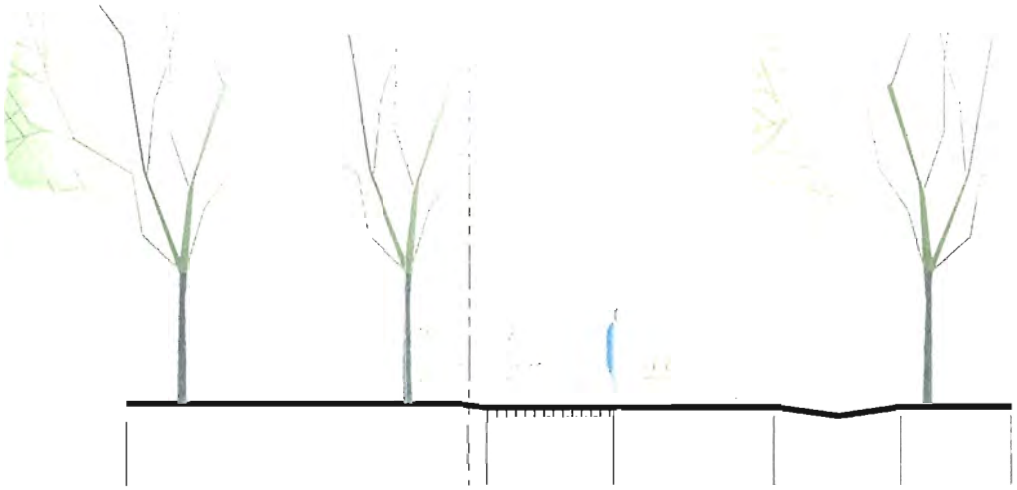

Figure 7 – Conceptual Frontage Road

Roundabouts

Round-a-bout design and signage shall follow the design guidelines as stated in the U.S. Department of Transportation-Federal Highway Administration's ***Roundabout: An Informational Guide (Publication No. FHWA-RD-00-067).*** Roundabouts will be allowed as traffic control measures as city standards allow.

Alleys

Residential Rear Lane

Most parcels in Sustainable Fairview are served by alleys or lanes. Lanes provide a secondary access for utilities and public service vehicles while keeping the streets free of driveways and garages. At Sustainable Fairview a low impact alley section will be proposed. Alleys are designed for very slow speeds. Swales along alley edges may be considered for water quality and drainage for large storms.

Alleys can not be used as primary access to individual properties including multi-family buildings. This does not mean that driveways are allowed onto all local streets, it means the front of the house will be toward the local road rather than the alley. Alleys can't take direct access off of an arterial street.

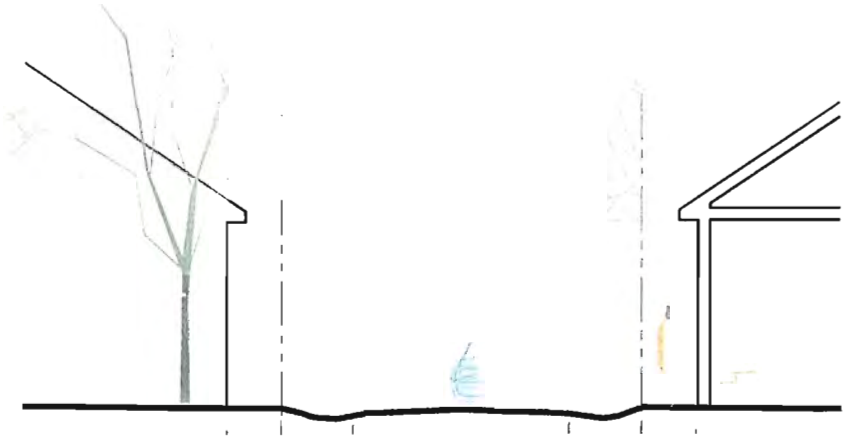

Figure 8 – Conceptual Rear Lane.

B. Transit Plan

Transit will be an important element to link Sustainable Fairview to the community. It will be an important way for the area to provide multi-modal options for external trips to and from the development.

Bus stop locations shall follow Salem-Keizer Transit's bus stop location guidelines and will be located near major intersections to provide access to safe crossing areas.

Figure 9 shows the two main routes that are proposed to serve the development: Route 22 on the west and Route 7 (extension) on the east. These two routes may provide convenient transit access and improve connections to downtown Salem shopping and employment as well as transfers to other routes for other parts of the region.

West Sustainable Fairview Transit Coverage

As identified in the proposed Salem Futures Centers and Corridors Plan, Pringle Road is a "Priority Transit Corridor" for the future. This future enhanced service of Route 22 may serve the lower density households on the west edge of the development. This route may serve about half of the land area which contains the lower density residential portion of the development along Pringle and Battlecreek Roads.

East Sustainable Fairview Transit Coverage

There is a potential to route Line 22 across the development on an E-W routing to the Village Center to decrease walking distances for all residents including elderly and disabled. This possibility should be considered at the point of extending the Line 22 into the development.

The proposed extension of Route 7 into the development may cover the other half of the area that contains higher density housing and employment lands. The extension within the development may also need a safe layover point or transit center located near but not within the Village Center.

The Salem-Keizer Transit's Strategic Business Plan: Short Range Element (July 22, 2004) indicates that in FY 2007 there may be an improvement in the peak hour frequencies to 15 minutes along Route 7 "to accommodate increases in ridership".

Acknowledging the development of Phases 1 & 2 within the next 5 years of the Sustainable Fairview, an extension of Line 7 from Strong Road into the development would provide service to the higher density housing and job sites. Transit service on this route can be phased as follows;

- By 2007, extend Route 7 into the development at the same time the proposed increase in frequencies in the peak period would take place.
- By 2010, designate Route 7 as a "Priority Transit Corridor" in the City of Salem Transportation System Plan and increase service with high capacity transit (bus, streetcar or bus rapid transit) route with 15-minute all day everyday

Figure 9 – Conceptual Transit Plan

C. Bicycle/Pedestrian Circulation Plan

The objective of the bike and pedestrian circulation plan is to create a comprehensive system of pedestrian facilities that increases the percentage of trips made by walking or bicycling and reduces the number of pedestrians injured in collisions.

Sidewalks and bike lanes within the street Rights-Of-Ways (ROW) may provide the majority of the non motor vehicle access within the development.

Off-street Hiking Paths

The proposed network of off-street pathways in Figure 10 attempts to connect the residential areas with the natural spaces, parks, schools, and Village Center. The placement of the pathways in the attached plan are conceptual and would need to be designed into the final design of any proposed development.

These pathways may complement the on-street facilities and will meet TSP Policy 2.4 - Connecting Trail Network by developing pathways for pedestrians along the stream corridors, in the parks, around the circumference of the development. The paths may be located between homes and buildings as well as around the circumference of the development.

Hiking paths can vary in width depending on the existing topographic and environmental constraints (See Appendix E for cross section). Hiking paths should take into account issues like drainage, erosion, slope, presence of waterways, vegetation, riparian and habitat areas, environmental requirements and regulations.

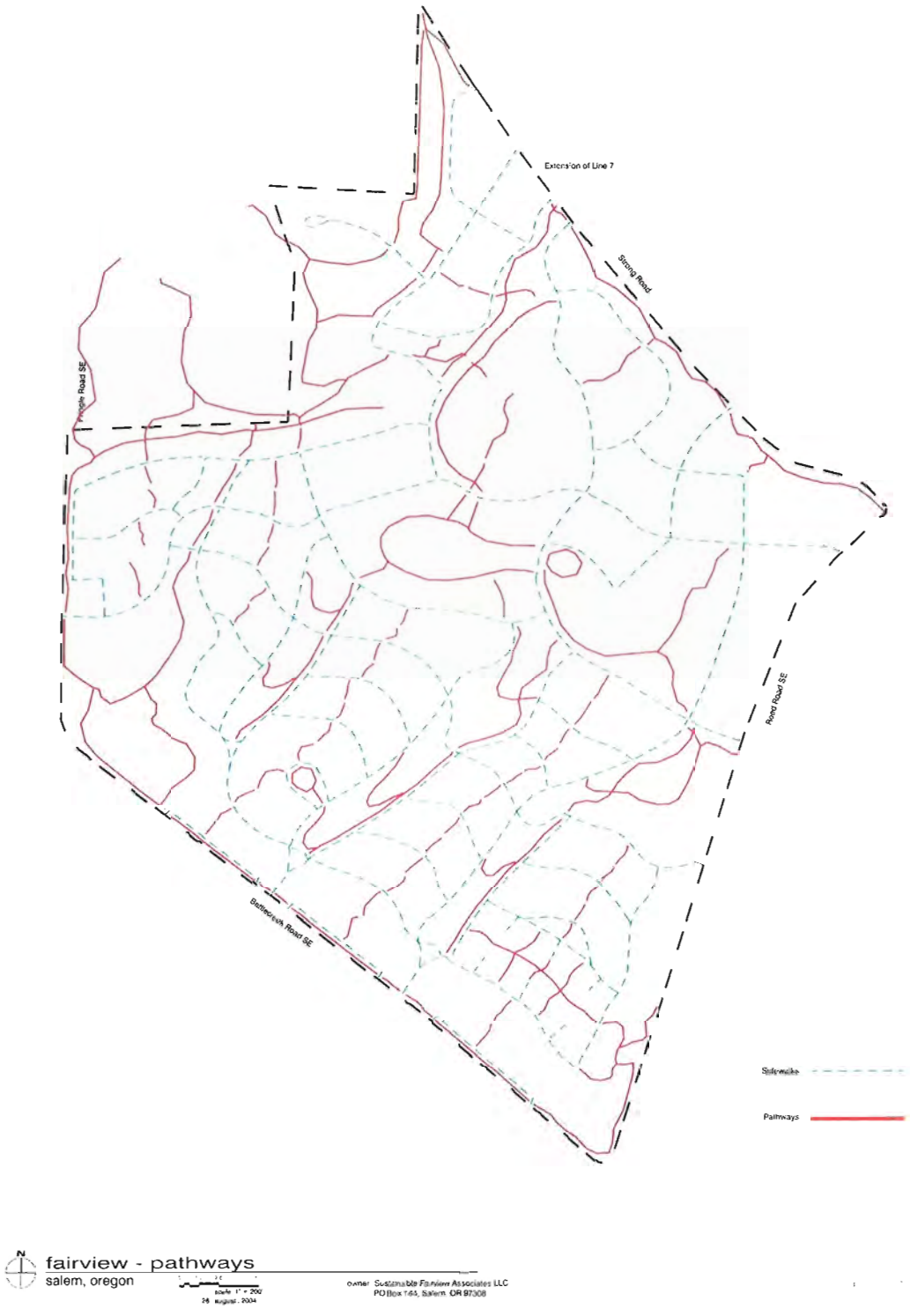

Figure 10 – Conceptual Off-Street Pathway Plan

D. Transportation Demand Management Programs

The goal for this development is to aid the City of Salem in their goals to reduce Single Occupant Vehicle trips to, from and within the development. The stated goal by Sustainable Fairview for non-single occupant vehicle (non-SOV) trips is 40% of total trips within 10 years and 55% within 20 years.

The targeted increases in non-SOV travel increase over 20 years also assumes:

- Frequent Bus or High Capacity Transit service
- A large number of households within walking distance of frequent on-site and off-site transit
- On-site work centers (whether within in the home or employer- approved worksites throughout Sustainable Fairview.

There are several overlapping elements that have been put in place in order to achieve the Non-SOV mode split goal for this development.

Transportation Demand Management Program – employers in the area may create a volunteer-based non-profit Transportation Management Association that would coordinate work trips with the City of Salem and Cherriots to determine strategies to promote shared ride and the use of transit, walking, biking, work schedule changes and telecommuting. Funding for these programs can come as demonstration project funding from the region or state and then work toward financial independence over a 5-10 year period.

Land Use Incentives – due to mixed-use development of the site there are several opportunities to create choice for travel or eliminating trips altogether. First, there may be Live/Work units built to accommodate those who work out of their homes. Second, there may be a high density residential component within walking distance of the employment area. And third, due to the industry's ability to access the Village Center, less employees may have to leave the development for errands or to buy lunch.

Transportation System Incentives – due to the safe environment and the proximity of the land uses, non-vehicular modes may be safe alternatives to the single occupant vehicle. Streets may be narrow, to increase land availability for development, landscaping, structures, natural areas, sidewalks, and foot paths, and to encourage multiple and more sustainable modes of transportation.

E. Green Streets

Sustainable Fairview Goals

6. Respect the Landscape
The Sustainable Fairview plan will work with, not against, the existing landscape. Large forest blocks and wetland will be preserved and, indeed, expanded over time. The more pronounced ridgetops yield to slopes and watercourses that will be reserved for gentle recreation, habitat and flow of rain water. These hillsides all draw towards the Village Center, so it becomes the focus for social activity as well as an ecological hub - where nature and built environments coalesce around mutual accommodation and benefit.

7. Zero Impact to the Regional Watershed
Pringle Creek flows through the Fairview site and the Sustainable Fairview plan will result in its improved value as a natural habitat. The site's capacity to deal naturally with storm water runoff will also enhance the watershed in general. Likewise, lower infrastructure costs for parcels, roads and public green spaces will reduce impacts on the environment in general and the watershed in particular.

8. Layer the Systems
Sustainable Fairview aims to integrate all systems at all levels and across all categories. As mentioned above, for example, storm water mitigation strategies are layered into and integrated in recreational, habitat and transportation systems. Likewise, business and commerce are layered with residential uses to create a complete community. Other systems layering may include district heating and ecological sanitary systems.

Sustainable Fairview is committed to development that integrates best land use and transportation practices with natural resource protection and conservation – particularly in areas of water, waste and energy management.

Water management infrastructure begins with the natural landscape and preservation of the site's natural hydrology and existing drainage patterns in particular. Before and after development, water will flow naturally form the elevated terrain along Battle Creek Road along four roughly parallel corridors in the Village Center area south of the Crescent and ultimately to Pringle Creek at the north.

The opportunity afforded by these natural drainage patterns is amplified by storm water sensitive planning, design and engineering practices through the plan's developed areas and create additional opportunities to naturally cleanse and infiltrate runoff before entering natural drainages.

Key elements of the storm water management infrastructure include:

- Sufficient public open space located and set aside to accommodate natural drainage and infiltration functions,
- An infiltration performance requirement for the site
- A natural and naturalized system of surface swales and streams to return clean water to receiving waters during large storms
- Street networks that reduce disruption of steep slopes and natural drainages,

City of Salem Stormwater Management Objectives

- Protect the safety and security of persons and property by safely conveying all volumes of water from sources upstream to approved storm facilities downstream, preventing the uncontrolled or irresponsible discharge of stormwater onto adjoining public or private property.
- Maintain and improve the water quality in and the beneficial uses of Salem's urban waterways, lakes, wetlands and other natural drainage resources.
- Establish a stormwater detention program consisting of regional and local facilities.
- Implement a surface water quality facility program reflecting the requirements associated with the NPDES Municipal Stormwater Permit, the Endangered Species Act, DEQ TMDL Program and the water quality needs of Salem's urban waterways.
- Minimize erosion
- Construct facilities which are safe and economical to maintain and which maximize practical design life.
- Provide for orderly development by creating points of disposal and adequate capacity for future development upstream.
- Substantially maintain the runoff characteristics of the original undeveloped drainage basin.
- Public open space, streets, and street networks that accommodate the conveyance and infiltration of water form developed areas to natural drainage ways, and
- Development standards that reduce areas of impervious surface and connectivity among impervious surfaces in the developed areas.

Appendix A
Sustainable Fairview Principles

1. Economic and Social Diversity
The residential character at Fairview will be as varied as the landscape. We envision housing for at least 1,700 residents. The housing types – from small efficiency units to single-family homes on large lots - will suit many different kinds of people at different stages in their lives as well as different income levels.

2. Create a Village Center
As the name suggests, the Village Center would draw its energy from the various human activities taking place there: living, shopping, working, studying and playing. But the vision includes lots of open area, too. The Village Center will feature dramatic green spaces - manicured playfields and natural habitat that will add beauty and provide important functions in watershed management.

3. Reuse and Retrofit
Sustainable Fairview intends to adapt and reuse as many existing buildings as is feasible, particularly on the 100 year-old "crescent campus" (see site plan). Other infrastructure may also be retrofitted for future use. The water system, for example, could be expanded. That would reduce the reliance on the city's municipal water system. Likewise, the existing roadway network may be able to serve future needs in the community.

4. Create Local Employment
Some of the existing and new buildings will be suitable for business development and perhaps even light industrial use. The ultimate objective for this community plan is to create as many jobs on-site as there are households. Creating that many jobs locally will dramatically reduce transportation impacts that a development of this size might otherwise have on the surrounding roads.

5. Building Efficiencies by Building "Green"
The Master Plan envisions minimum energy standards for all buildings on-site, regardless of who builds them. Once constructed or retrofit, those buildings should likewise be cost effective and energy efficient in all ways, aiming to reduce the resources and energy necessary to operate and maintain them.

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9. Close the Cycle of Energy and Material Flows
Layering the systems, as described above, will tighten the cycle of resource flows on-site. Rain water will recharge the aquifer below. Green wastes from the site can be composed. Waste heat from commercial activities can be diverted to adjacent residential use. On-site geothermal energy can reduce building operating costs. A recycling and composting facility on-site would be an ideal partner in this respect.

10. Green Corridors for People and Other Living Things
Wide green corridors will be a signature feature of the new Fairview community, connecting hundreds of front porches to a network of pathways. This will accomplish a complex layering of habitat, natural watercourses, community garden sites, play areas, walking and bike trails, and narrow low speed streets.

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