Grandis Pond
on the 49th parallel
Blaine, Washington

Master Plan

October 2014

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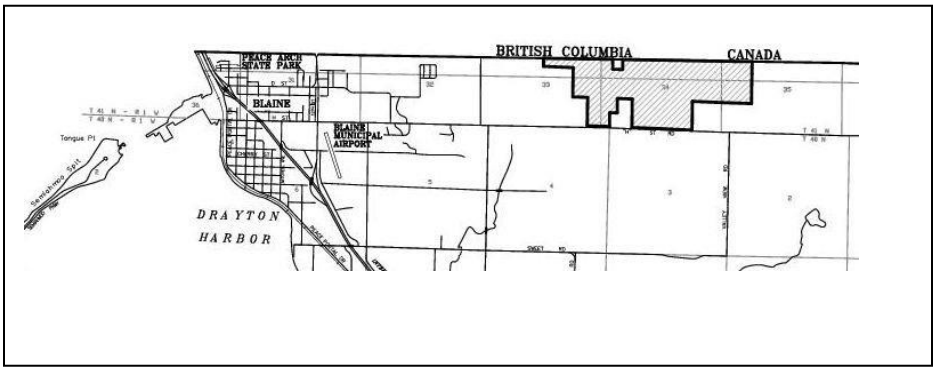
1. GRANDIS POND CONCEPT

BACKGROUND

In the State of Washington, Urban Growth Policy Goals include the prevention of sprawl and inefficiencies in development patterns. As such, infill development and increased density within existing city limits to meet growing population demand are the highest priority.

The applicant, Grandis Pond, LLC, is proposing to develop a Planned Unit Development (PUD) in Blaine, Washington within Sections 33 and 34, Township 41 North, Range 1 East, and W.M. in Whatcom County. The development site is approximately 440 acres and is located one mile east of Harvey Road, between the north side of 'H' Street Road and the Canadian border.

The Grandis Pond site is within the existing Blaine city limits. It was previously annexed with the intent of a low-density residential golf course community that was never realized. The existing property is natural, and unimproved at present.



The proposed Grandis Pond PUD is designed to include single-family lots, cottage homes, duplex/paired housing units, multi-family housing units and mixed-use buildings, for a total of 1,013 residential units. In addition, approximately 48,000 square feet of commercial building space is proposed. Grandis Pond has 240 acres of extensive recreational trails, parks and preserved open space and environmentally sensitive areas. Along with the houses and other buildings, the development is proposed to include paved roadways with sidewalks and trails, a public safety facility, water and sanitary sewer mains, dry utilities, and stormwater management facilities.

The Grandis Pond PUD project site lies within the City of Blaine's East Blaine Neighborhood's Planned Residential Zone. The intent of this zone as indicated in Blaine Municipal Code ("BMC") 17.42.010 is to:

> *"…promote an orderly transition from a rural to residential development, to encourage land uses and associated densities which will be complementary with existing rural densities, while allowing reasonable transition uses of the properties. In addition, it is the intent of this zone to provide the opportunity for the development of building sites which will maximize the efficient use of both energy and land use by allowing an option for clustering of residential lots.*

The BMC further states "…*flexibility of residential unit types, density and mix is allowed in order to provide major open space systems and to retain the wetlands, streams, aquifer*

recharge areas, and wildlife habitat corridors in as natural a state as possible. The performance standards in the zone require the preparation of a planned unit development for the development to achieve the flexibility of residential unit types and commercial accessory uses, and to provide a guide to phasing any future project."

DEVELOPMENT CONCEPT

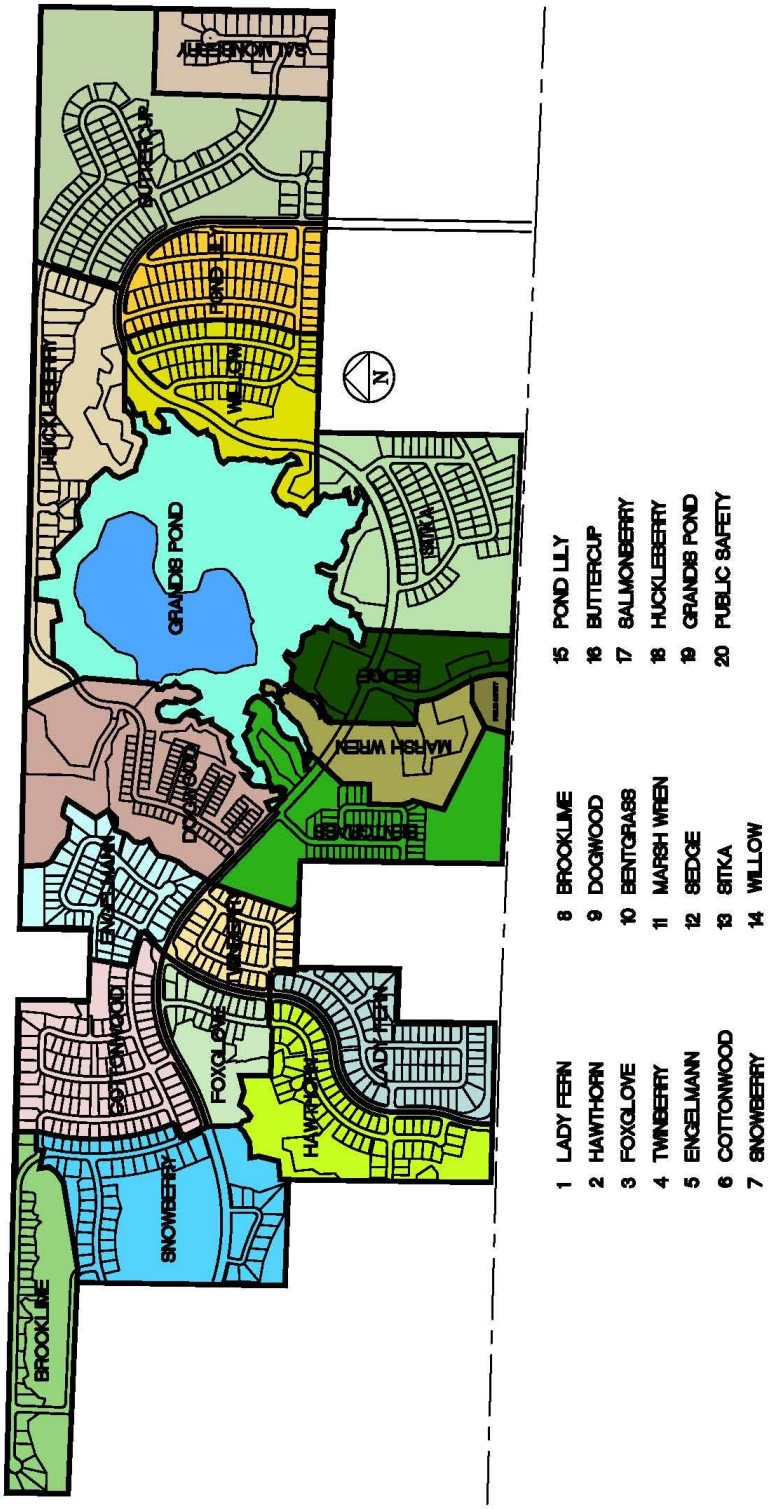
The BMC guidance led to the development of the Grandis Pond PUD Master Plan based on the following key principles:

1. Sensitivity to the environment and the on-site critical areas is a priority.
2. Utilization of Low-Impact Development strategies will be aggressively implemented.
3. A mix of housing types, including smaller, energy efficient homes will be provided.
4. Diversity of population; local retirees, young families and Canadian commuters will be encouraged.
5. A focus on convenient access to natural areas, open spaces and trails will be promoted.
6. Calming traffic to preserve and enhance smaller quieter neighborhoods by providing narrower streets.

The Grandis Pond LLC owners held several "Design Charrettes", to gain input on the development program from public officials, adjacent property owners, real estate professionals and planning and engineering consultants. It was made clear by the attendees that the current trend in urban areas of Whatcom County is the promotion and development of an increasing density of housing and offering a variety of housing types. This means that much of the new housing in urban areas in Whatcom County will be multi-story attached residences and condominiums. There will also be a significant growth in smaller families and associated home sizes. The real estate community feels there is a growing and un-met demand for a more affordable single family, detached home. Not all homebuyers want attached housing. As construction costs rise, this could only happen if homes and lots are decreased in size to lower costs. Along with this, would be a need for more open space, recreation and walkability. Preservation and access to the natural beauty of the northwest was very important.

As a result of the PRD/PUD guidance and the feedback from charrettes Grandis Pond LLC will offer a variety of housing types and density in neighborhoods where open spaces and natural systems will be respected and protected.

The Grandis Pond Planned Unit Development (PUD) is anticipated to be constructed in phases with full build out taking as long as 20 years to achieve and will be completed in five Development Areas and 18 separate phases.



Neighborhood Index **Illustration #1**

2. GRANDIS POND EXISTING CONDITIONS

PHYSICAL SETTING

The subject property is approximately 440 acres of unimproved land and has never been developed, other than logging and gravel extraction activities. It is 3.5 miles east of the Blaine City center. There are gently rolling hills and drainage courses on site that support local habitat and there are regional views in all directions.

This land area has over 9,000 lineal feet (1.7 miles) along the Canadian International Border and "0" Avenue in British Columbia, Canada. This border has no physical fence or significant topographic separation. However, it is monitored very closely by the US Border Patrol via technological and physical surveillance. The International Border crossing with Canada is within 4 miles of the project.

The site is currently wooded with a network of old logging roads. The northeastern portion of the study area is the site of historic gravel extraction. Two maintained gravel roads access the site from H Street Road. A third logging road (known as the Old Mill Logging Road) enters the property from the west.

Western Area:
The western area is approximately 150 acres of woods and wetlands. The overall site topography slopes to the west with average slopes between 2% to 12%. The wetland delineation report prepared by Cantrell & Associates, Inc. (C&A) identifies the southwestern portion of this area as being within the Dakota Creek Watershed and the remainder as being in the Little Campbell River Watershed.

Central Area:
The approximately 240 acre central portion of the site consists of a combination of woods, wetlands, and a 16 acre pond. The pond drains through a ravine to the northwest and is one of the headwaters to Jacobson Creek. A ridge along the western boundary separates this portion of the site from the Western Area. Topography generally slopes towards the pond in the center of the site. Slopes average from 3% to 7% along the west side of the area and 10% to 20% along the east side of the area. The wetland delineation report prepared by C&A identifies this area as lying within the Little Campbell River Watershed.

Northeast Area:
The Northeast Area consists of approximately 50 acres of a combination of woods and wetlands. Topography in this area slopes primarily to the central wetland and then north to an infiltration pit remaining from the gravel mining. Slopes average between 2% and 12%. A small portion of this area along the very eastern property boundary slopes to the east, and the very northeast corner slopes to the northwest. The wetland delineation report prepared by C&A identifies the eastern area as being within the Little Campbell River Watershed.

The August 2005, Priority Habitats & Species Report separated the character of the on-site vegetation into four main communities. Wetland vegetation consisted of many types of wetland species such as cattail, hardhack, red alder, salmonberry and slough sedge, among others. Evergreen forested wetland buffers represent some of the most mature vegetation communities within the project site and include western red cedar and Douglas fir trees. The recently harvested forestland was characterized by regenerating vegetation dominated by red alder saplings, vine maple, red elderberry, and salmonberry. Medium aged deciduous

forest contain a canopy dominated by medium-aged red alder and sparse western red cedar, Douglas fir, paper birch, big leaf maple, bitter cherry and salmonberry, among others.

The conclusion of these reports indicate a low likelihood of any sensitive, threatened, endangered or candidate wildlife species having primary associations with this area.

There are numerous critical areas of wetland environments and an open pond of approximately 16 acres with a 3'-5' depth. The master plan goal is to preserve all of those areas of environmental quality at this location for the community.

EXISTING ZONING LAND USE

Grandis Pond will meet the intent of the existing zoning by promoting an orderly transition from rural to residential development.

This property was annexed to the City as a Planned Residential Zone, as defined under BMC 17.42. The PRD zone allows for alternatives to standard development standards, in order to accommodate a unique land parcel and conditions for current market and environmental standards. This flexibility will maximize the efficient use of both energy and land use by allowing for clustering of residential lots, per BMC 17.62.050. Additionally, this will create a mix of residential unit types, density and commercial accessory uses, in order to *"…provide major open space systems and to retain the wetlands, streams, aquifer recharge areas and wildlife corridors in as natural a state as possible…".* The purpose is similar to the approach in BMC 17.48 for Planned Unit Development District.

SURROUNDING LANDUSE

The East Blaine subarea consists of 1,182 acres and contains an estimated 101 residential units and one church. Eight of the residential units are mobile homes, two are located in a duplex, and three are located in a triplex. Most of the residences are located in the western portion of the subarea on platted parcels and are served by city water and septic tanks. There are approximately 500 additional platted parcels which are undeveloped and the remainder of the land is in five to ten acre tracts.

The surrounding area is zoned Planned Residential Zone with a Planned Unit Overlay.

EXISTING TRANSPORTATION NETWORK

The roadway network in the vicinity of the project was inventoried. Intersection geometry data recorded in the field in April and August 2005. Roadways that will be particularly impacted by the development are described below.

'H' Street is an east-west arterial with one 12-foot travel lane in each direction and one- to four-foot gravel or grass shoulders. It extends from downtown Blaine at its western terminus east to SR 539. In the project vicinity it has a 45-mph speed limit. The speed limit east of the project drops to 35 mph, and the speed limit west of Harvey Road drops to 35 mph and then drops to 25 mph west of Odell Street. The primary land use along this corridor is residential with level of development changing from rural to suburban as you drive west from Valley View Road to Odell Street. There is no curb, gutter, and sidewalk along 'H' Street in the vicinity of the project site. There is curb and gutter west of Odell Street and sporadic

sidewalk east of Odell Street as well. The vertical alignment of 'H' Street consists of rolling terrain.

Valley View Road is a north-south local street which forms a T intersection from the south with 'H' Street. It has one 12-foot travel lane in each direction and one- to two-foot gravel or grass shoulders. Its approach to 'H' Street is controlled by a "STOP" sign.

Harvey Road is a north-south local street which forms two offset T intersections with 'H' Street. The north approach is located several hundred feet west of the south approach. It has one 12-foot travel lane in each direction and two-foot gravel or grass shoulders. The approaches to 'H' Street are controlled by "STOP" signs.

Odell Street is a north-south collector street which forms a T intersection from the south with 'H' Street. It has one 12-foot travel lane in each direction and along with curb, gutter, and sidewalk along both sides of the street. Its approach to 'H' Street is controlled by a "STOP" sign and includes a left-turn lane and a right-turn lane.

SR 543 is a north-south arterial that serves as the truck crossing for the United States/Canada border. In the project vicinity the road is being rebuilt as described in the following section, but currently consists of two northbound 12-foot travel lanes (one for general-purpose and one truck-only lane), and one southbound lane. The intersection with 'H' Street is signalized and the geometry consists of two northbound 12-foot travel lanes; one for general-purpose, and one truck-only lane. The southbound approach consists of a left-turn lane and a shared through/right-turn lane. The eastbound and westbound approaches each consist of one right-turn lane, one through lane, and one left-turn lane. There is curb, gutter, and sidewalk along the north and south sides of 'H' Street in the vicinity of SR 543 but only ten-foot paved shoulders along SR 543.

Sweet Road is a two-lane, east-west roadway located south of the site. It curves into Valley View Road and extends to the north. The east approach of the Sweet Road/Stadsvold Road intersection is stop-controlled while the west and south legs are free flow, forming the through movements.

Stadsvold Road is a two-lane roadway that extends in a north-south direction within the study area. Whatcom County has requested that its intersection with Sweet Road be analyzed because it is part of a travel route vehicles would take to access I-5 southbound at Birch Bay-Lynden Road.

No transit routes travel in the vicinity of the project site. The nearest route is the 70x, which runs between Blaine and Bellingham on I-5, and stops at Blaine City Hall on 'H' Street.

3. GRANDIS POND GENERAL PLAN ELEMENTS

3.1 LAND USE

The underlying land use designation for the Grandis Pond project area is the Planned Residential Development Zone. When the Planned Unit Development concept is used in this regulatory framework, it allows for highly innovative development solutions that create livable neighborhoods while preserving the natural setting.

The land use development concept for Grandis Pond meets and promotes the following goals from the City of Blaine's Comprehensive Plan.

Land use goals:
GOAL 2: To maintain the small town character of the City of Blaine, while allowing sufficient growth in the population and tax base to help finance infrastructure, public services and amenities.

GOAL 4: To protect the scenic beauty, water quality, wildlife habitat areas, open spaces and cultural resources which contribute to the quality of life and give the Blaine area a rural character.

Housing goals:
GOAL 1: To encourage the development of a variety of housing types and prices, including an adequate supply of housing in a price range affordable to employees at available jobs in Blaine and housing which meets the needs of senior citizens.

GOAL 7: To encourage the development of affordable housing within the City without sacrificing public safety or the ability to provide needed public services and utilities.

Planned Residential Development Zone

Permitted Uses (Per BMC 17.42.020, applicable to the proposed project and as modified)

A. Single-family detached dwellings
B. Single-family attached dwellings
C. Modular Homes (per IRC Codes and Design Standards)
D. Public and community facilities including police and fire stations, libraries, community centers
E. Recreation facilities and other similar non-commercial uses such as community centers may be allowed in any residential neighborhood
F. Neighborhood Commercial/ retail uses, per BMC with the following proposed changes:
    a. Maximum 12,000 gsf./Bldg. (BMC Max 8000 sf). And no single use max. size
    b. The commercial buildings need to be accessed from a public road, but they are not required to front on public roads. This is providing for maximum flexibility of walkability, scale and master plan layout for preservation of sensitive land areas.
G. One ADU (as defined by City of Blaine) per single-family detached residence per BMC

H. Multi-Family Residences: This is a new PUD use in order to provide for a variety of market rate housing and maintain density while preserving sensitive environmental and open space areas.

I. Noncommercial neighborhood parks

Accessory Uses (Per BMC 17.42.030)

J. Garages, home occupations, and other accessory uses in PR Zone

Maximum Density, Minimum Lot Size (BMC 17.42.050)

The maximum average density shall be 4 units per gross acre, over the whole project, per BMC excluding density bonuses per Ordinance. Actual densities proposed vary considerable due to the extraordinary amount of open space and critical areas on the property. Densities are noted on plans in terms of gross overall land area, net of critical delineation (wetland) areas, and net usable lot areas. (see plans)

Building Setbacks, Height and Lot Width

All properties will be developed under the Planned Unit Development and have setbacks, heights and lot widths as noted on the following illustrations for each building type. Illustrations to follow:

3. GRANDIS POND GENERAL PLAN ELEMENTS

3.2 TRANSPORTATION

The Grandis Pond development concept furthers the following goal from the City of Blaine's Comprehensive Plan.

GOAL 1: Promote convenient, accessible, safe and environmentally responsible multi-modal transportation for residents, employers and employees, visitors and commerce.

3.2.1. Vehicular

The total development has been estimated to generate about 1,044 trips in the PM peak hour on a typical weekday. Volumes were counted at five intersections in the vicinity of the proposed project. These intersections were analyzed to determine their existing level of service (LOS). A two percent constant growth rate was then applied to existing volumes in order to project future baseline conditions for the years of completion for the five proposed development areas – 2016 (Area 1), 2020 (Area 2), 2024 (Area 3) and 2026 (Areas 4 and 5). LOS analysis was performed for baseline and with-project conditions in each of these years.

Assuming the full development of the Grandis site and the existing road system, all but one of the intersections analyzed operate at a LOS D or better for all phases of the project (assuming completion of the current road widening project on SR 543 in the fall of 2008). The one intersection below LOS D is Valley View Road and 'H' Street which operates at LOS F with project trips in 2024 and 2026. However, assuming the City's proposed Motts Hill Parkway, connecting N. Harvey Road, the Grandis site, and H Street at the east end of the Grandis site is constructed by 2024, the LOS at this intersection would likely improve to LOS D in both 2024 and 2026. This improvement is due to the diversion of project trips from 'H' Street to the new parkway. Without the new parkway, some mitigation will be needed at this intersection by 2024.

The community design charrettes and current trends indicate a very strong desire of homeowners to calm traffic throughout residential areas. The highest quality and valued residential areas in Whatcom County have very small street dimensions to slow traffic and add a sense of quality and community. Low Impact Development Concepts as exhibited in Technical Guidance Manual for Puget Sound, produced by Puget Sound action Team in 2005, is a model to be used road and drainage improvements.

Collector Road:

> Collector roads act as primary linkages for vehicular access throughout the Master Plan. A major entry and collector road through the project should allow for connectivity to adjacent properties and access to neighborhoods. No private home lots should have direct frontage access to this road to improve traffic movement through the project. To mitigate the size of the collector road, a center, landscaped boulevard will be utilized to soften the impact and allow for water treatment in continuous rain gardens.

Public transportation and school buses are anticipated to have a circulation route along this road to access the neighborhoods and reduce vehicle trip generation.

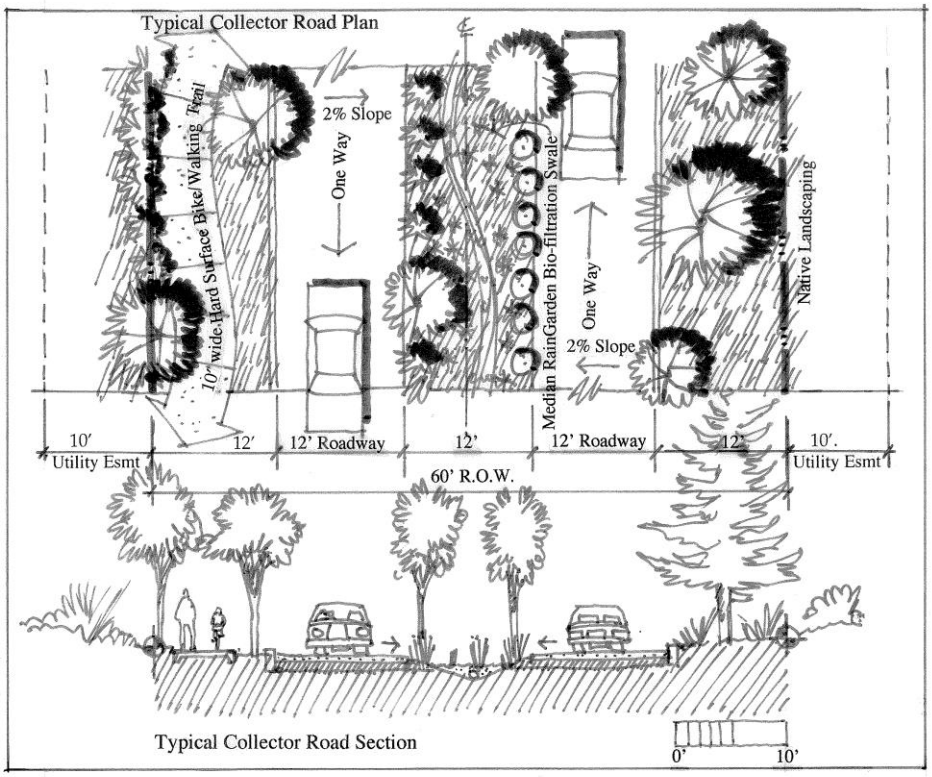
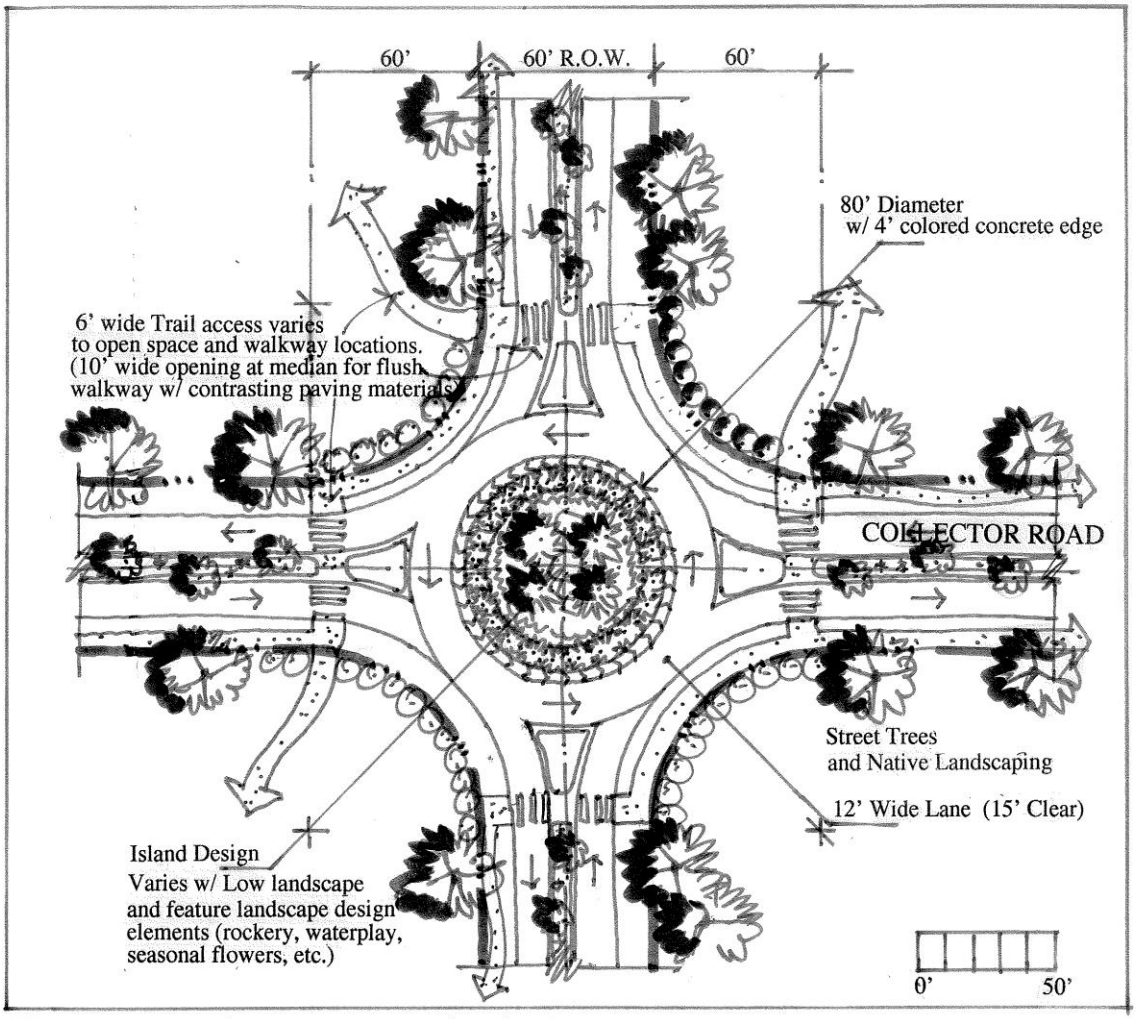


Illustration #2



Typical Roundabout

Illustration #3

Local Access Roads:

Local streets should be narrower resulting in slower speeds and less traffic. Narrow street dimensions are a desired quality of residential streets. In addition, it is a desire to minimize impervious surface area and water treatment requirements. This desire has to be balanced with the need for emergency access (fire, police, etc.) and additional parking for special activity occasions. Alley access was explored to avoid driveways along the main roads, but it actually increased impervious surface area. The goal is to achieve homes where garages are not dominant and there are areas for additional off street parking with a minimal street section.

The solution was to provide a 28’ wide road section, including an 8’ wide parallel parking strip along one side to allow for adequate emergency requirements and additional parking. All garages shall be setback from the front face of houses to allow for a minimum of 2 additional parking stalls, in addition to the one or two off street stalls in a garage for each home. With the garages set back a minimum of 10’ from the front of the home, this allows for a maximum 12’ wide curb cut on the street to minimize large driveway aprons on the street for better walkability.

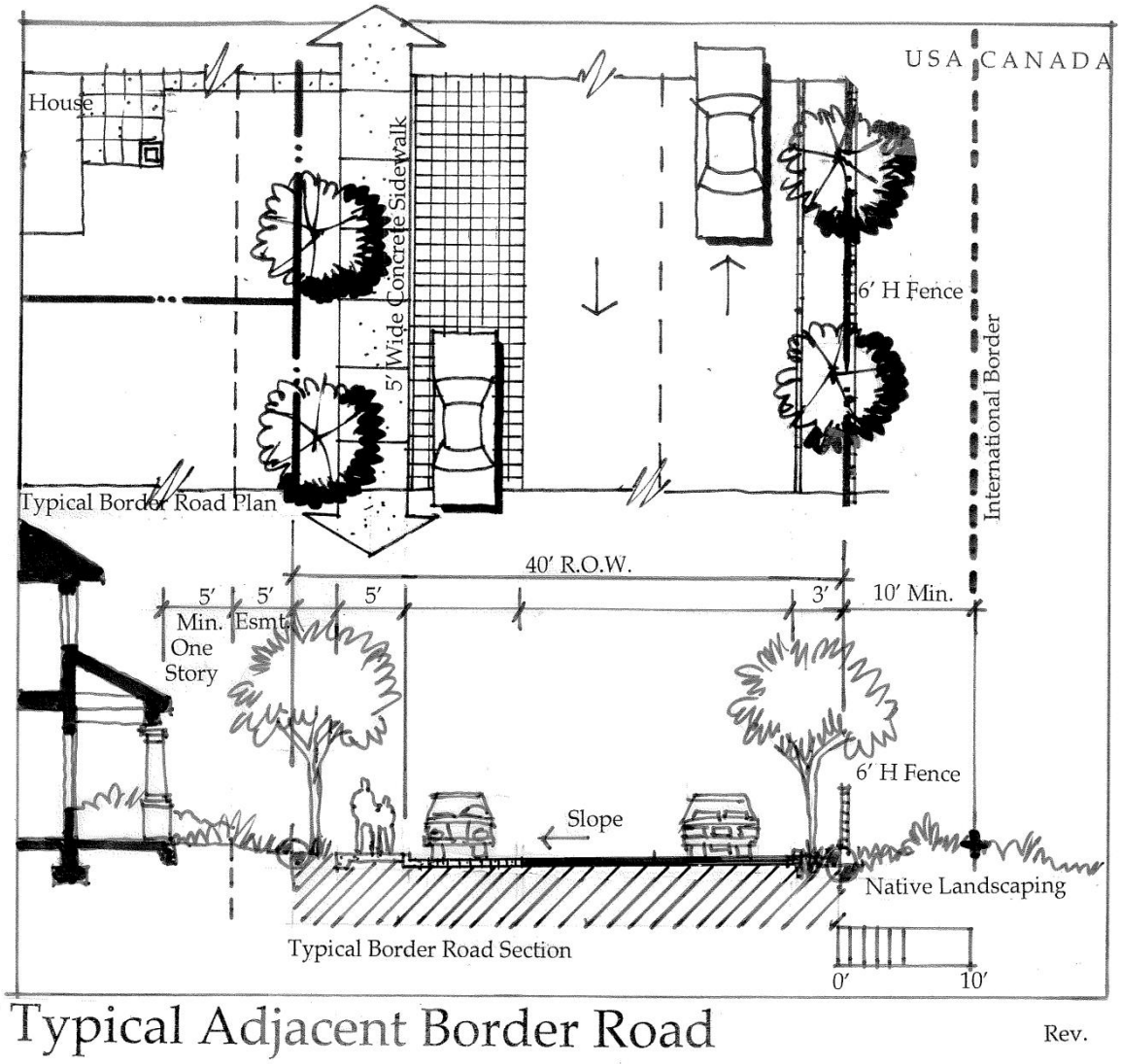
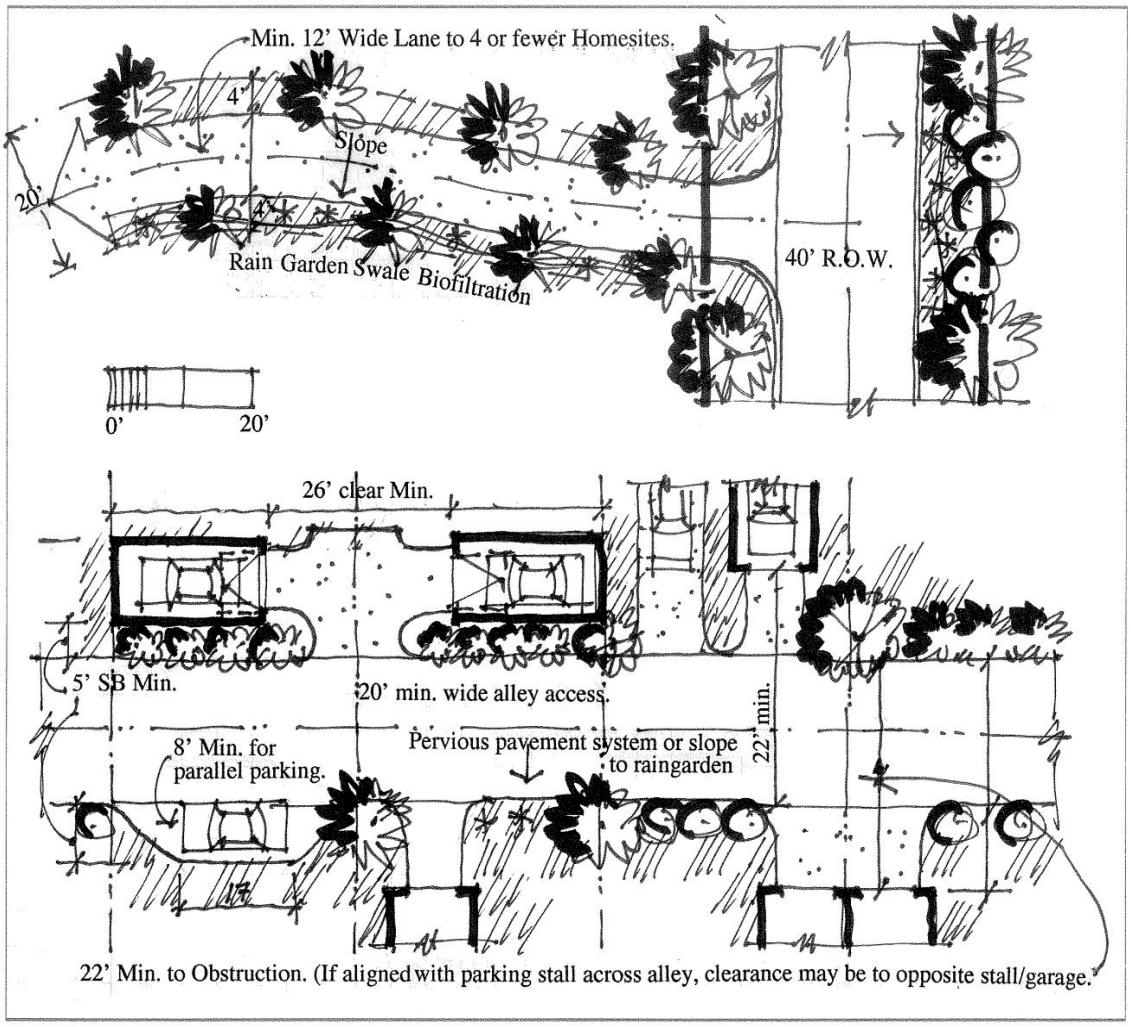


Illustration #4



Alleys & Easement Driveways

Illustration #5

Off /On Street Common Parking Areas:

Common community parking areas are located in various locations throughout the project. The project generally emphasizes walkable, connectivity with trails throughout. However, sometime certain, popular open space areas may need additional, close parking stalls to provide closer access to these open space areas. These are located near larger active parks, the Cottage Home (Dogwood neighborhood) and the open pond and central wetland. The parking standards will meet the design requirements as outlined below.

Off Street Parking (Per BMC 17.42.070 and/or as modified for PUD below.)

Space Dimensions:
Parking spaces for all cars shall be at least 9 feet wide and 17 feet long as measured for perpendicular spaces (ninety degrees) with a minimum of 22' aisle width required. No compact stall sizes are permitted. ADA stalls numbers and sizes will be as required by current code standards.

The approved dimensions for parking facilities in Grandis Pond vary from the current BMC requirement of min. 8.5' x 19' stall. Number of Spaces Required:
(In the case of a mixed use project, the Planning Director may utilize shared parking analysis, based on current data from nationally recognized studies, or detailed analysis for a specific traffic study.)

All parking space requirements will be as required in Appendix B of the BMC 17.124 or as modified herein. The residential requirements are modified in order to reduce the impervious surface area of roadways for an increased quality of neighborhoods and to decrease the presence of garages along the public roads.

Single Family Detached Residential:
Three on-site parking spaces, combined garage and driveway. Minimum 1 fully enclosed space. Stalls may have tandem alignment. Reduction to two spaces permitted through administrative review when street design includes parking on one side (minimum) and three on-site parking spaces are infeasible due to lot size or configuration.

Multi-Family Residences:

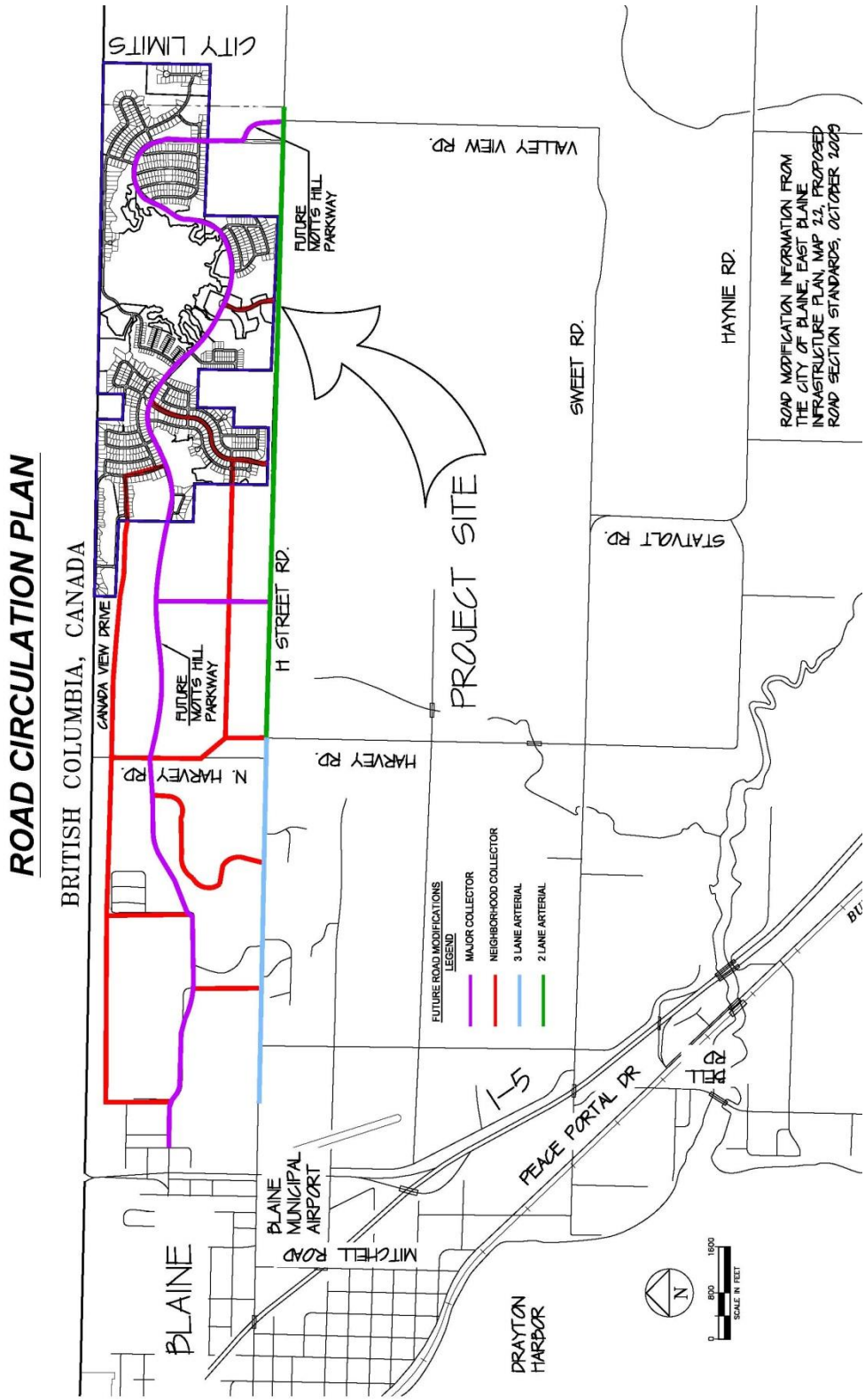
1 space/ Studio

1.5 Spaces/ 1 & 2 BR Unit

2.0 Spaces / 3 BR Unit

If more than 3 BR; 1 space/1.5BR's min.

In the future, Whatcom Transportation Authority (WTA) may extend public transportation services to serve the site. Providing access to public transportation would encourage alternative transportation use within and around the Grandis Pond development. Public transit would likely reduce the number of vehicular trips made each day, ultimately reducing car emissions.



Traffic circulation map illustrating connection to East Blaine area with Motts Hill Parkway taking traffic load off H Street.

Illustration #6

3.2.2 Non-vehicular Circulation

Walking on trails in a natural environment is one of the top activities of residents. The Master Plan supports an extensive array of trail connectivity throughout the development and to future City/County trail connections. Low impact development strategies should be utilized in the design and drainage control of all circulation patterns. There will be a 10' wide area, or easement that can be utilized for brush clearing centered on each trail concept. There are generally three types of trails:

Paved Trails:

These are generally near roads and allow for multiple modes of activities including bicycling, jogging, rollerblading, strollers, etc.

Unpaved Trails:

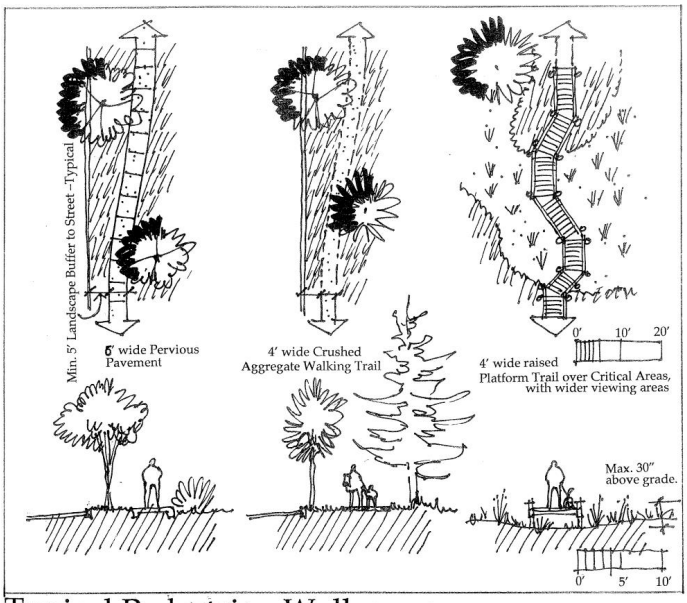
Crushed limestone and other natural materials will be utilized to meander through natural environments and park areas throughout the project.

Platform Trails:

Raised boardwalk trails would occur near existing trail corridors that pass through or near sensitive wetland habitats. These trails are intended to be no more than 30" above grade at any point to avoid handrails requirements and preserve the connection to nature. These trails utilize many existing site trail systems and provide connectivity between random upland areas.

Road Crosswalks:

All designated crosswalk locations to be textured with contrasting paving materials (In color and material; colored concrete, pavers, etc.) and shall include appropriate safety signage.



Typical Pedestrian Walkways

Illustration #7

3. GRANDIS POND GENERAL PLAN ELEMENTS

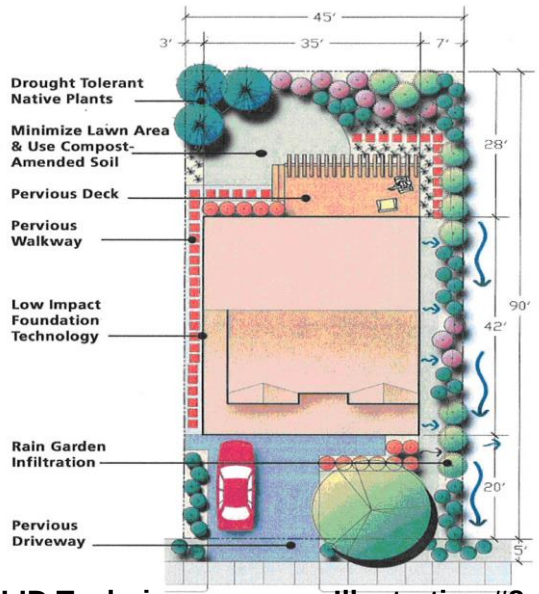
3.3 Stormwater Management

The stormwater drainage/retention system for the Grandis Pond project will be designed and implemented to meet the following goal from the City of Blaine Comprehensive Plan.

GOAL 3: To develop and maintain stormwater retention, collection and treatment system which provides adequate drainage for land within the City of Blaine and meets applicable state and federal standards.

The source of runoff from the developed site will be stormwater from impervious surfaces such as roofs, driveways, roads and parking areas. In general, the approach to stormwater runoff water quality treatment and flow control is to incorporate Low Impact Development techniques wherever practical and is discussed in detail in the *Preliminary Stormwater Site Plan* prepared by David Evans and Associates, April 2007. Proposed road widths have been narrowed to minimize pollution generating surfaces. The roads and parking areas will be sloped to direct runoff to rain garden and bioinfiltration swales located in the center median in the main boulevards and along one side of the road in local access streets. In areas where infiltration is possible, the rain gardens and bioinfiltration swales will discharge directly to the ground below. In areas where infiltration is possible for low intensity storms, overflow catch basins will be installed that permit treatment and infiltration of the water quality flows and that bypass the higher flows to detention facilities. In areas where infiltration is not practical, rain gardens and bioinfiltration swales with underdrains, traditional wet detention ponds, and other techniques will be evaluated to determine the most practical management alternatives.

Runoff from non-pollution generating areas, such as roofs, will also be infiltrated where soil conditions make this practical. Based on site specific soil information these infiltration systems can include individual detention structures at each home or regional facilities. In areas where infiltration is not practical, traditional detention ponds and other techniques will be evaluated to determine the most practical management alternatives.



Typical LID Techniques Illustration #8

The project will utilize a system of interpretive signs and monuments near sensitive areas to prevent any human encroachment. The HOA will also need to have an educational program in place to inform residents about the environment, safety and to stay away from sensitive environmental and storm water treatment areas. This should also include environmental-friendly pest and insect control strategies, implemented by the HOA. Enforcement of these safety concepts will be handled by the HOA for private property areas, and the City of Blaine for public systems (i.e. storm water and treatment areas).

The Grandis Pond conveyance system will include stormwater culverts that will allow off site runoff presently crossing into the Grandis Pond site to continue to pass through. Runoff from any development in these off site areas is assumed to be treated and detained prior to entering the Grandis Pond system and the Grandis Pond stormwater management facilities will be sized accordingly. Please refer to the Preliminary Stormwater Site Plan for the connection points from offsite influent flow.

Stormwater that does not infiltrate into the ground and is directed to a stormwater treatment feature and will be dispersed into wetland buffers where additional infiltration and natural treatment will occur before discharging into wetlands.

As mentioned above, the stormwater drainage design and patterns are sized and located to maximize use of Low Impact Development concepts and the natural course of drainage on site. Smaller, detention ponds are located throughout the project. All drainage basins will be designed with slopes to avoid fencing to create a more natural environment. Appropriate signage and interpretive signage will be utilized. In locations where a fence is unavoidable, a fence meeting the design standards described elsewhere must be utilized. (See Civil Design Drawings)

Water quality concepts are one of the key elements driving the design of the master plan. The project will have no impact on existing aquifer systems. The goal in all of the drainage patterns is to control the water to mimic the natural conditions of the site before development as much as possible. All of the improvements are designed to treat stormwater from the site with natural systems.

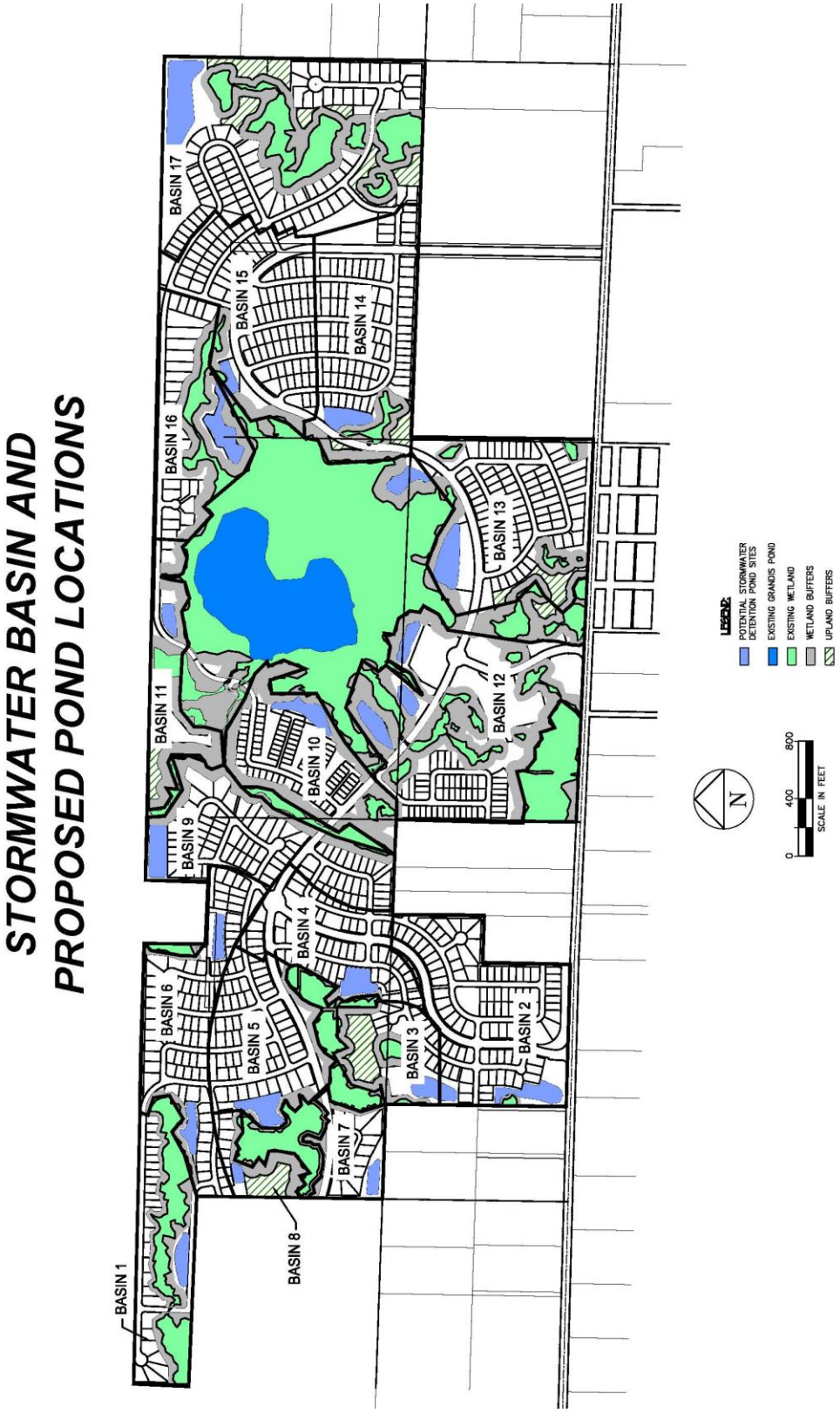


Illustration #9

3. GRANDIS POND GENERAL PLAN ELEMENTS

3.4 OPEN SPACE

The development has an abundance of preserved open space and natural areas, beyond the improved areas of home sites and landscape buffers.

3.4.1 Wetlands and Buffers

The October 8, 2006, Critical Areas Assessment Report by Cantrell & Associates, Inc., identifies 52 wetlands, one of which includes a 16 acre pond and 11 drainages within the project area. The wetlands range in size from approximately 487 square feet to approximately 2,389,035 square feet. One of the wetlands includes and is associated with Jacobson Creek, a tributary to Little Campbell River. The total wetland area is approximately 94.5 acres. Although many of the wetlands were connected by hydraulic soils to other wetlands or drainages, they were separated according to their differing characteristics and each wetland and drainage is individually described in the Critical Areas Assessment Report. Some wetlands were found to lack surface hydrologic connections to streams or other wetlands. In places, streams and wetlands follow or overflow into remnant roadbeds (Cantrell & Associates, 2006).

Mitigation will be phased in order to correspond with the phased wetland and buffer impacts. A conceptual mitigation plan has been prepared by David Evans & Associates, Inc. and Cantrell and Associates, Inc. The plan includes mitigation for wetland and wetland buffer impacts. The mitigation plan is designed to evaluate the existing functions and values of the wetlands/buffers and establish mitigation measures to maintain those functions and values.

It is the intent for the project to have a natural and open feeling to the environment from developed areas. There is no plan for fencing around any wet areas. The project will utilize a system of interpretive signs and monuments near sensitive areas to prevent any human encroachment. The HOA will also need to have an educational program in place to inform residents about the environment, safety and to stay away from sensitive environmental and storm water treatment areas. This should also include environmental-friendly pest and insect control strategies, implemented by the HOA. Enforcement of these safety concepts will be handled by the HOA for private property areas, and the City of Blaine for public systems (i.e. storm water and treatment areas).

3.4.2 Landscaping and Landscape Buffers Where existing vegetation is not an adequate buffer, planting of native evergreen trees and shrubs shall be a primary means of achieving the screening and density requirements.

Vegetation Density: Intent is to provide a dense evergreen visual buffer to adjacent properties within 2 years via shrubs at 4’ o.c. and trees at approx. 8’ o.c. (including existing) from Plant list on pages 25 & 26, to achieve a 50 percent visual screening in the lower 10 feet of the vegetation column by year two after planting. All buffers and parks to use a mix of tree, shrub and groundcover plant materials from page 25 & 26.

Project Perimeter:	20’ minimum landscape, 30’ min Bldg. setback.
International Border:	10’ development setback, minimum, to the Border
H Street:	50’ minimum. Maintain existing trees
Water Detention Ponds:	10’ minimum to any residential property line
Wetlands:	Native, undisturbed setbacks vary. See Plan. Any enhancements due to wetland disturbance to follow guidelines established in Cantrell & Associates Wetland Report (Plant list noted below and wetland enhancements in referenced report)
Parkway Collector Road:	10’ minimum to private lot lines
Conservation Easements:	Native, undisturbed areas vary

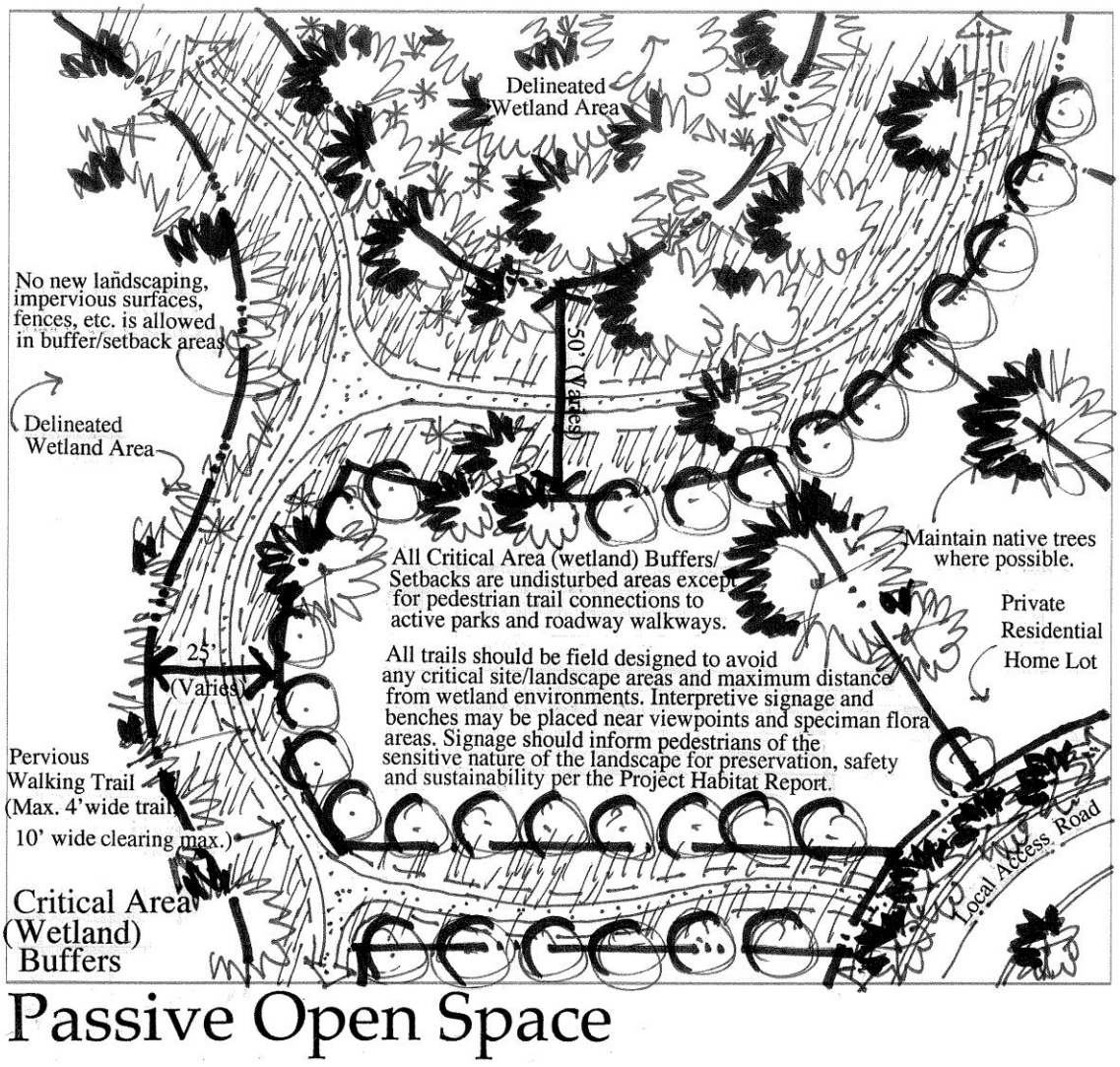
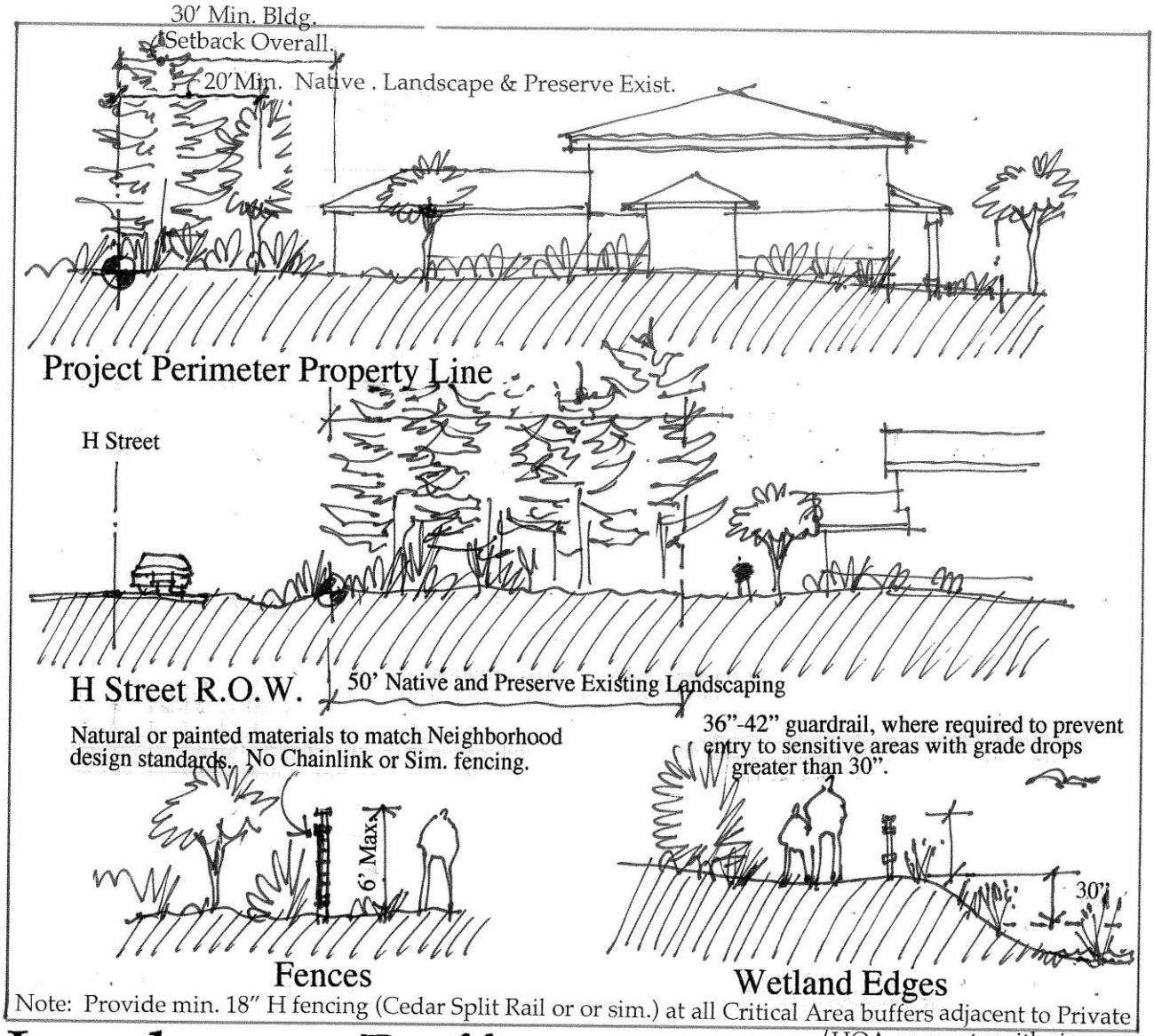


Illustration #10



Landscape Buffers

Illustration #11

Typical Landscape Materials List

The following is a list of typical plant materials to be used throughout the project. Final Design of each non-private area will be required to have a design by a registered Landscape Architect. This list is a general guide only where native plants are encouraged but not required. The intent is to provide for a natural looking landscape design primarily using native species to this area. The final design submittal may vary somewhat from this list, as long as the intent is met. Any plant species known to be invasive or having a tendency to spread unchecked in natural areas shall be avoided (Ex. English ivy or Butterfly bush).

Trees Botanical / Common name

Acer circinatum / Vine Maple
Acer rubrum / Arnstrong Maple
Acer Rubrum/ October Glory Maple
Amelancher Canadensis /Shadblow Serviceberry
Cercidiphyllum Japonicum / Katsura Tree
Chamaecyparis Nootkatensis "Pendula" /Weeping Nootka False Cypress
Cupressocyparis Leylands / Leylandi Cypress
Pinus Nigra /Austrian Black Pine
Pinus Sylvestris /Scotch Pine
Pseudotsuga Menziesii / Blue Douglas Fir
Stewartia Pseudocamelua / Japanese Stewartia
Styrax Japonicus / Japanese Snowbell
Thuj Plicata / Western Red Cedar

Shrubs

Arbutis Unedo "Compacta' / Dwarf Strawberry Tree
Berberis Thunbergii "crimson Pygmy" / Same
Cornus stolonifera / Redosier Dogwood
Escallonia Rubra / Red Escallonia
Euonymous Alatus 'compactus' / Compact Burning Bush
Hydrangea Macrophylla 'nikko blue' / Nikko Blue Hydrangea
Iris siberica 'silver edge' / Siberian Iris
Lavandula Angustfolia / English Lavender
Liriope Muscan 'big blue' / Big Blue Lilyturf
MiscanthusSimensis 'Gracillimus' / Manden Grass
Myrica Californica / Pacific Wax Myrtle
Nandina Domestica 'Harbour Dwarf' / Dwarf Heavenly Bamboo
Osmanthus Delawayi / Delawayi Csmanthus
Phlok Subulata 'pink' / Pink moss phlox
Pieris Japonica /mountain fire' / Mountain firew pieris
Pinus Mugo Pumilio / Dwarf Mugo pine
Rhododenron 'Dora Amateis' / Rhododendron
Rosmarinius Officinalis / Rosemary
Sarcococca Hookerana Humlis / Small Hookeri
Symphoricarpos Albus / Common white snowberry
Taxus media 'Hicksa' / Hicks Yew
Thuja Occidentalis 'emerald' / Emerald Arbovitae
Vaccinium Ovatum / Evergreen Huckleberry
Viburnum Davidii / David Viburnum

Groundcover

37% Polystichuim Muntum / Western Sword Ferry
33% Mahonia Nervosa / Longleaf Mahonia
30% Gaultheria Shallow / Salal
60% Vinca Minor / Dwarf Periwinkle
40% Polystichuim Muntum / Western Sword Ferry
Fragaria Childensis / Ornamental Strawberry
Turf Hydroseed / Drought tolerant Fescue blend seed

TABLE#1

TREES	BOTANICAL NAME	COMMON NAME
	ACER CIRCINATUM	VINE MAPLE
	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG RED MAPLE
	ACER RUBRUM 'OCTOBER GLORY' TM	OCTOBER GLORY MAPLE
	AMELANCHIER ALNIFOLIA	SERVICEBERRY
	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE
	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING NOOTKA FALSE CYPRESS
	CUPRESSOCYPARIS LEYLANDII	LEYLANDI CYPRESS
	PINUS NIGRA	AUSTRIAN BLACK PINE
	PINUS SYLVESTRIS	SCOTCH PINE
	PSEUDOTSUGA MENZIESII GLAUCA	BLUE DOUGLAS FIR
	STEWARTIA PSEUDOCAMELLIA	JAPANESE STEWARTIA
	STYRAX JAPONICUS	JAPANESE SNOWBELL
	THUJA PLICATA	WESTERN RED CEDAR

SHRUBS	BOTANICAL NAME	COMMON NAME
	ARBUTUS UNEDO 'COMPACTA'	DWARF STRAWBERRY TREE
	BERBERIS THUNBERGII 'ATROPURPUREA'	RED LEAF JAPANESE BARBERRY
	CORNUS STOLONIFERA 'BAILEYI'	BAILEY RED TWIGGED DOGWOOD
	ESCALLONIA RUBRA	RED ESCALLONIA
	EUONYMUS ALATUS 'COMPACTUS'	COMPACT BURNING BUSH
	HYDRANGEA MACROPHYLLA 'NIKKO BLUE'	NIKKO BLUE HYDRANGEA
	IRIS SIBIRICA 'SILVER EDGE'	SIBERIAN IRIS
	LAVANDULA ANGUSTIFOLIA	ENGLISH LAVENDER
	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF
	MISCANTHUS SINENSIS 'GRACILLIMUS'	MAIDEN GRASS
	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE
	NANDINA DOMESTICA 'HARBOUR DWARF'	DWARF HEAVENLY BAMBOO
	OSMANTHUS DELAVAYI	DELAVAYI OSMANTHUS
	PHLOX SUBULATA 'PINK'	PINK MOSS PHLOX
	PIERIS JAPONICA 'MOUNTAIN FIRE'	MOUNTAIN FIRE PIERIS
	PINUS MUGO MUGO	DWARF MUGO PINE
	RHODODENDRON X 'DORA AMATEIS'	DORA AMATEIS RHODODENDRON
	ROSMARINUS OFFICINALIS	ROSEMARY
	SARCOCOCCA HOOKERANA HUMILIS	SWEET BOX
	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY
	TAXUS X MEDIA 'HICKSII'	HICKS YEW
	THUJA OCCIDENTALIS 'EMERALD'	EMERALD ARBORVITAE
	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY
	VIBURNUM DAVIDII	DAVID VIBURNUM

GROUND COVERS	BOTANICAL NAME	COMMON NAME
	34% POLYSTICHUM MUNITUM 33% MAHONIA REPENS EVERGREEN 33% GAULTHERIA SHALLON	WESTERN SWORD FERN CREEPING MAHONIA SALAL
	60% VINCA MINOR 40% POLYSTICHUM MUNITUM	COMMON PERIWINKLE WESTERN SWORD FERN
	FRAGARIA CHILOENSIS	BEACH STRAWBERRY
	TURF HYDROSEED	DROUGHT TOLERANT FESCUE BLEND

NOTE; PLANT SYMBOLS SHOWN ARE ILLUSTRATIVE ONLY. FINAL LANDSCAPE PLANS MAY HAVE DIFFERENT LEGEND & SYMBOLS WITH SIZES & QUANTITIES

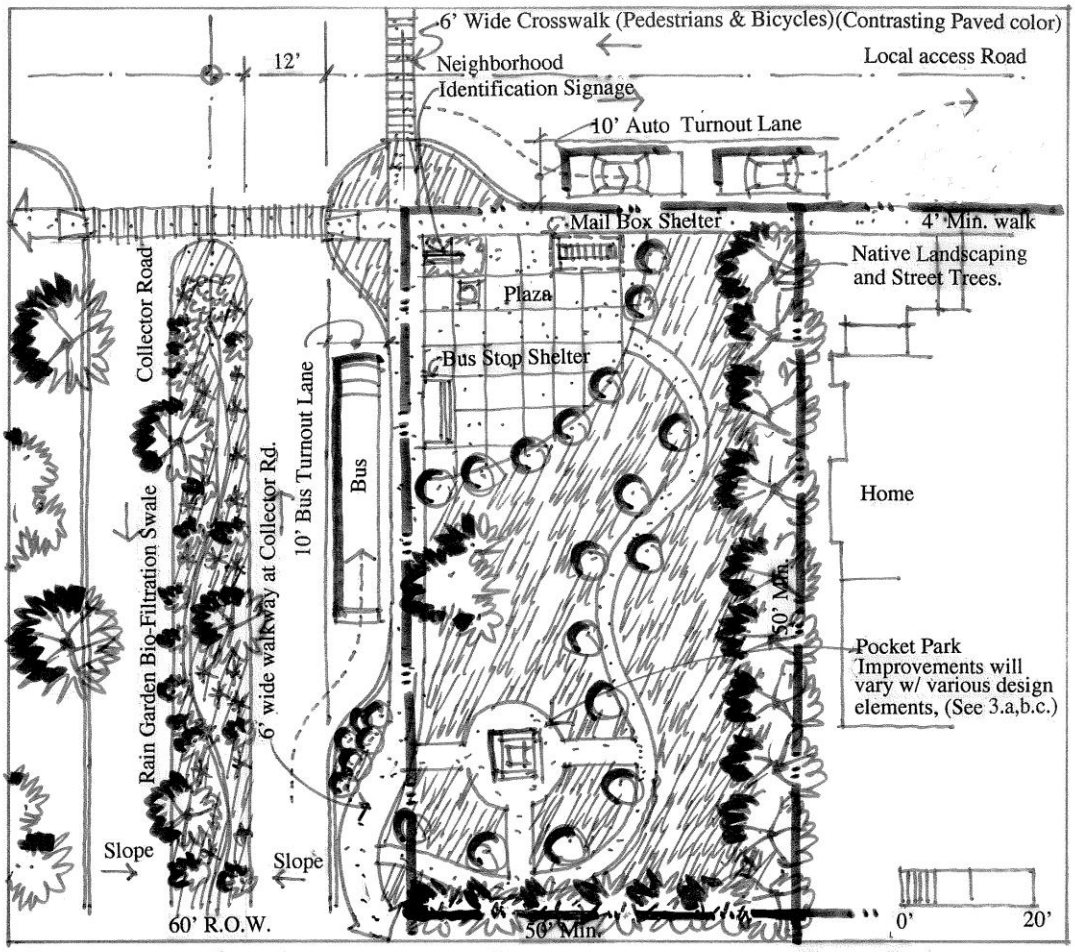
Typical Landscape Plant List

TABLE #1

3. GRANDIS POND GENERAL PLAN ELEMENTS

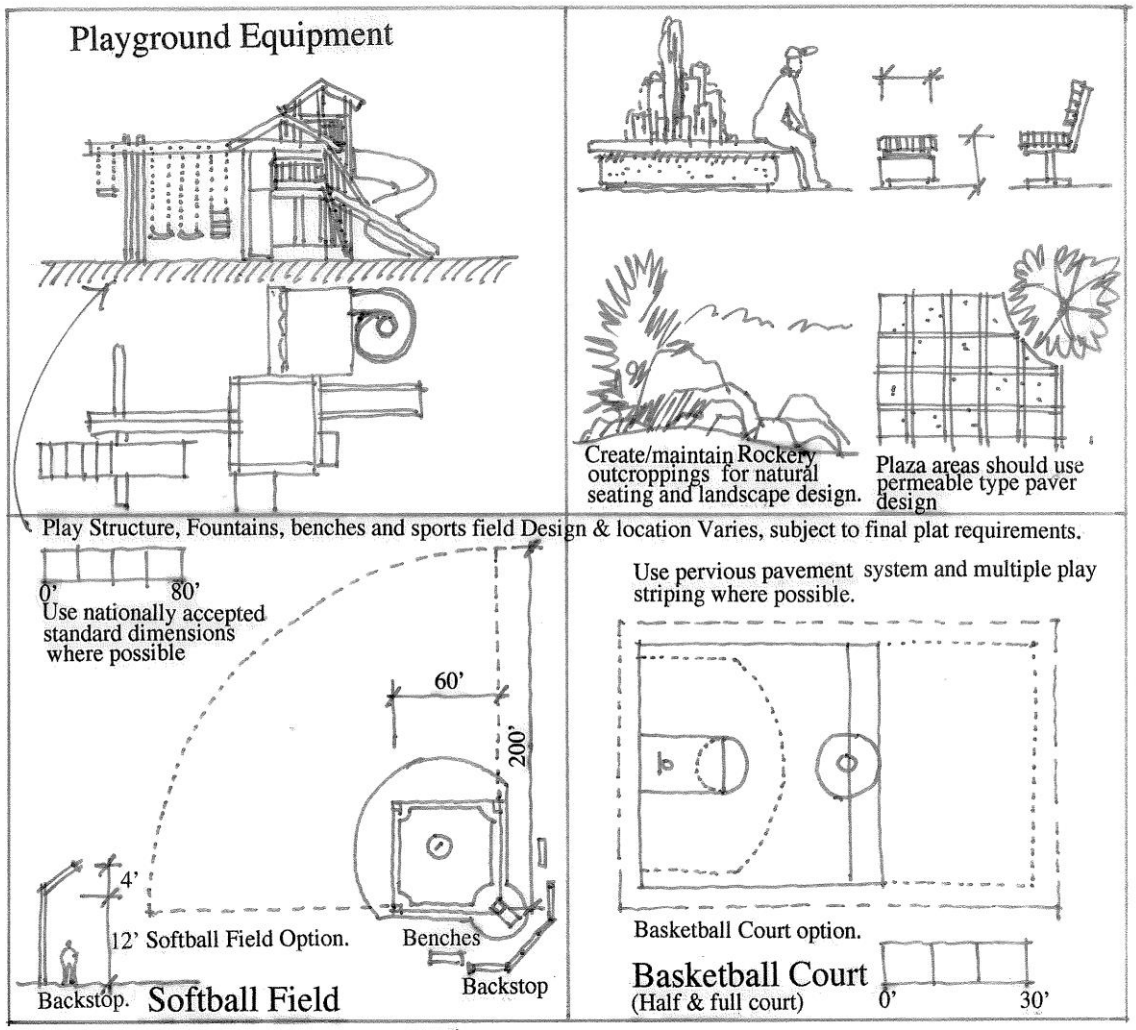
3.5 RECREATION

All neighborhoods have direct access to pocket parks, larger, active recreation areas and trails throughout the project to get near natural wetland habitats. Every neighborhood will have a “Neighborhood Commons Park” along the Collector Road. This park will be intended as a gathering place for the neighborhood, with a mail and public transportation stop. All park areas are designed for private use, with access via walking trails from the neighborhoods. The goal with the master plan is preservation and enhancement of the natural environment. It is anticipated that park areas will be improved according to the specific needs/age groups in the neighborhood. However, the future HOA could elect to improve some of these areas for activities as long as the spirit of the development is maintained for the residences. Every Neighborhood could have a community center building if the Developer or HOA deemed it a desirable amenity.



Typical(Neighborhood)Commons Park

Illustration #12



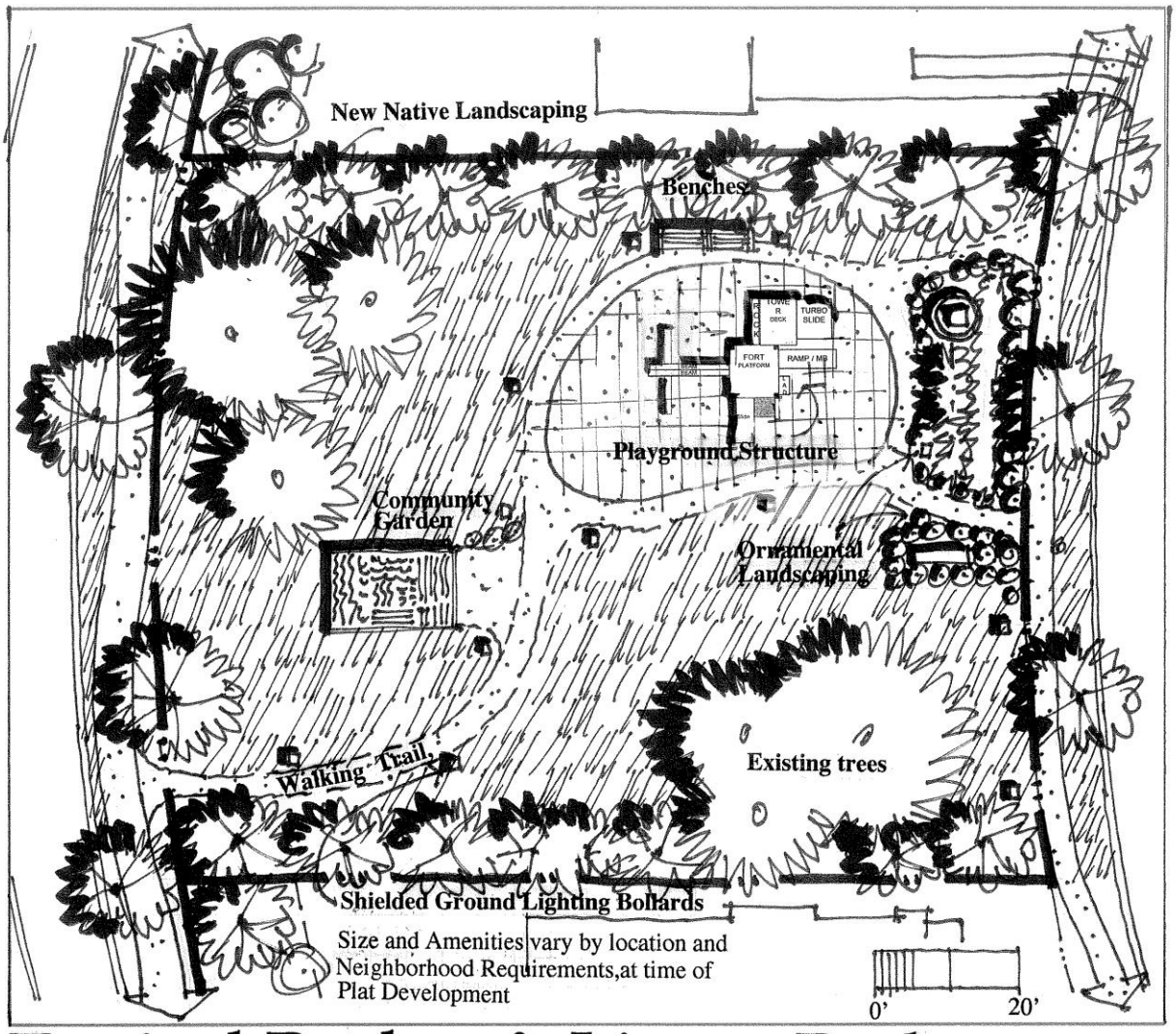
Park Design Elements

Illustration #13

The design includes several onsite recreational opportunities that are designed to mitigate impacts. An extensive on-site trail system has been designed as part of the project to provide pedestrian connections between neighborhoods and potential connections to existing trails within the City of Blaine. The trail system will provide passive recreation opportunities to residents of Grandis Pond that wish to experience the natural beauty of the area. The trails will be developed prior to final plat approval and will be maintained by the Homeowner's Association in accordance with the Grandis Pond Covenants, Conditions and Restrictions. (See Grandis Pond Neighborhood Narrative Description.)

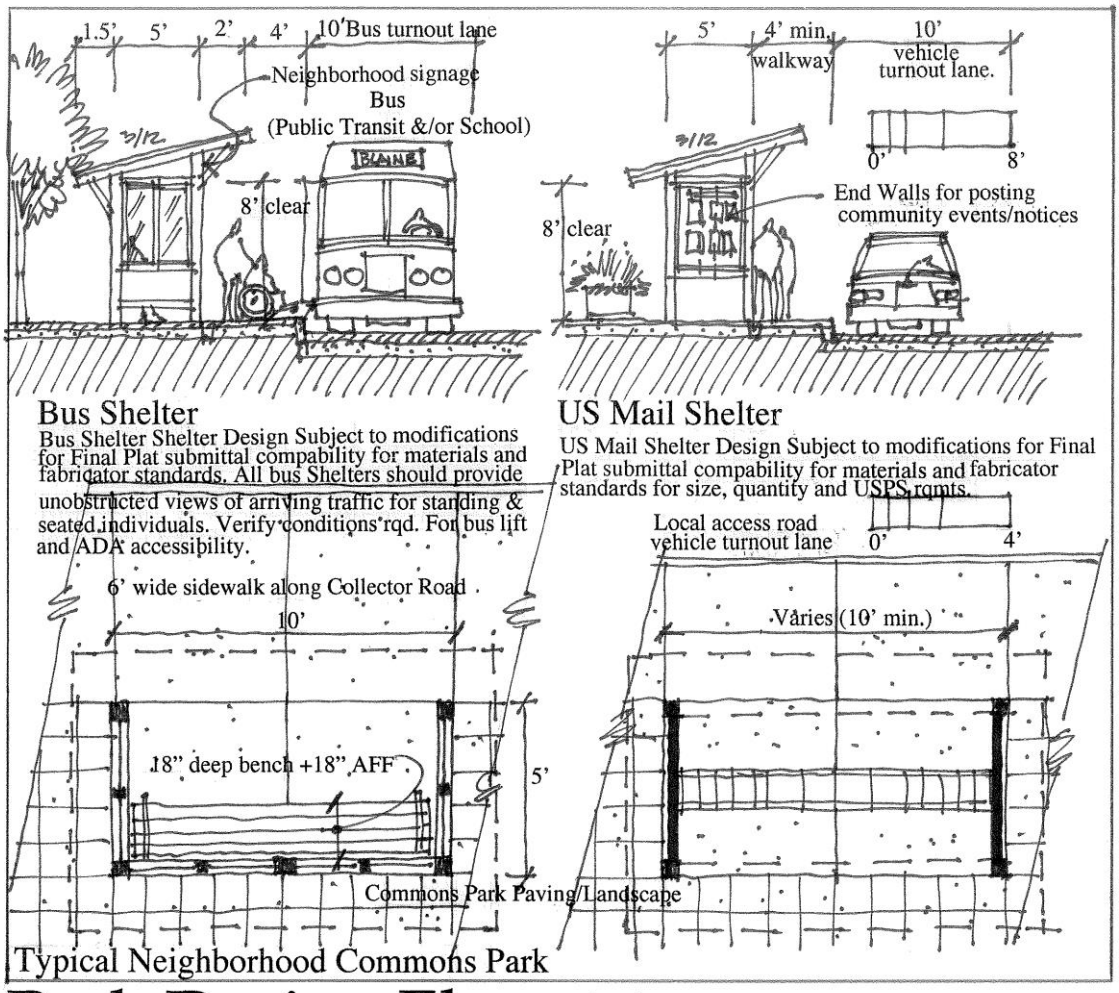
The project proposal also includes several pocket and linear parks. The pocket parks are located strategically throughout the development near primary intersections, neighborhood centers and trailheads. The pocket parks are designed to be gathering places and may include benches, trailheads, parking, playground equipment, court & field sports, mailbox centers and informational kiosks. These areas will also be constructed upon final plat approval and will be maintained by the Homeowner's Association in accordance with the Grandis Pond Covenants, Conditions and Restrictions.

The development may eventually include a community center(s) for community gatherings and social events.



Typical Pocket & Linear Parks

Illustration #14



Park Design Elements

Illustration #15

3. GRANDIS POND GENERAL PLAN ELEMENTS

3.6 SOCIO-ECONOMIC

The Grandis Pond project will house a significant number of Blaine residents and will create a number of new jobs during build-out. The size of the residential and employee population are projected on the basis of the number of residential units and commercial development.

It is anticipated that Grandis Pond will attract a broad range of income groups, age groups and family sizes. It should be recognized that the market for housing will change over the course of complete project build out. Various uncertainties exist for total residential population at build out. For example, a significant number of "empty-nesters" are expected to be part of given phases of the project. In Washington State, the number of residents over age 65 is growing rapidly. U.S. Census figures indicate a 15.1%* increase between 1990 and 2000 compared to 12% nationwide. Joint Center for Housing at Harvard University indicates a 53% increase in the number of senior households by 2020 compared to 2000. If that projection is applied to Washington State, the result would be 708,400 household with at least one person 65 and older by 2020. Census data indicate there are almost 600,000 households that included seniors aged 60 or above, almost 37% lived alone. For seniors aged 75 and above, there were almost 240,000 households with 47% of these live-alone households.

* Housing Washington's Seniors-A Profile: Population by Age Group

Age Group	1990 WA	1995 WA	2005WA
Under 5 years	366,780	394,306	395,158
5-9 years	371,093	425,909	391,946
10-14 years	377,662	434,836	428,257
15-19 years	322,711	427,968	420,054
20-24 years	351,680	390,185	436,604
25-34 years	855,188	841,130	839,812
35-44 years	803,763	975,087	946,032
45-54 years	501,543	845,972	941,950
55-64 years	**380,984**	**496,580**	**663,051**
55-59 years	191,602	285,505	383,409
60-64 years	189,382	211,075	279,642
65 & older	**575,288**	**662,148**	**683,774**
65-74 years	336,034	337,166	361,100
75-84 years	182,953	240,897	245,118
85 years & over	56,301	84,085	77,556

Given these uncertainties total population at build-out in year 2027 is likely to be 1,292 family age households (based on 2.51 persons per household) and 772 residents in adult/senior households (based on 1.5 persons per household) for a total of 2064 resident population at build-out.

Using the Whatcom County figure of 30% (the number of public school aged children in the average household,) Grandis Pond is likely to have 387 school age children at build-out. Whatcom County population projections and distribution estimates the City of Blaine population to increase by 3,163 residents by the year 2022.

The senior resident population will require Whatcom Transit Authority and other public service transportation to extend specialized transportation to East Blaine as development occurs. It should be noted that the City of Blaine has the lowest population per acre of land in Whatcom County, which causes city services per capita to be a higher cost than more highly dense cities. For example, 1.09 people per acre of land in Blaine compared to 2.82 in Everson, 3.54 in Lynden, 3.94 in Bellingham and an average of 2.37 in all Whatcom County incorporated areas.

Build-out will likely take 17 years following the construction of all services to the Grandis Pond site, which is expected to take 2 to 3 years after P.U.D. and Preliminary Plat approval, (includes sewer, water upgrade, turn lanes, gas & power). Based on 1,013 units, it is anticipated that approximately 60 units (one neighborhood), per year will be ready for occupancy. This compares to the build-out of Semiahmoo and Cordata which have exceeded 20 year timeframe. The average sales for the entire Birch Bay / Blaine area between 2004-2006 was 180 vacant land sales.

According to Whatcom County Real Estate Research Report, City of Blaine issued the following building permits from 2000 to 2005:

Year	# of Permits
2000	28
2001	34
2002	44
2003	71
2004	119
2005	121

The difficult economic impact to quantify is the potential sales to the Canadian resident. In spite of production constraints, housing starts are forecast to rise in the Lower Mainland of B.C. by 11% to 21,000 units in 2007.

Today, three quarters of housing starts are of the multiple unit variety. The average price per single detached home in Vancouver, B.C. in 2007 is $740,000 (CND$) and Abbotsford at $460,000 and similar high prices in Surrey/Delta area could increase the demand for cross-border activity.

In 2006, the municipality of Surrey issued 4,861 building permits and population growth in Surrey/White Rock is expected to increase between 2005 and 2025 by 235,420, a 53% increase. Housing is expected to increase by 96,439 units in the same period. If border issues and crossing becomes more convenient, housing/lot sales could increase in Whatcom County.

The cost impact of providing services to the Grandis Pond site, including infrastructure, financing, service and impact fees will have a direct bearing on the overall success of the project, including the timeline for build-out. The following is a preliminary engineering estimate prepared by Cascade Engineering Group, P.S. Inc:

Cost of Grandis Pond for On-Site Infrastructure for Preliminary Plat and (403 lots) & All Off-Site Utility Costs (sewer/water/power):

On Site Infrastructure Costs Per Lot

*** Boulevard Costs:**		**$2,626,900**
	Lineal feet:	4,783
	Cost/Foot:	$550
*** Internal Road Costs:**		**$8,836,400**
	Lineal Feet:	17,800
	Cost/Foot:	$500
Ancillary Costs:		**$865,200**
	Trail	12, 935 lineal feet
	Pond	17,792 square feet
	Park Landscaping	146,774 square feet
	Subtotal cost per lot:	***$30,500***
Engineering Costs/Lot 10% of Project:		$1,300
Subtotal On Site Cost/Lot Preliminary Plat Only:		**$31,800**

**Off Site Infrastructure Costs

Sewer:	$983,600
Water:	$534,100
Power:	$673,200
	$2,190,900
Total # Grandis Pond Lots:	1,013
Subtotal Off Site Cost/Lot Entire PUD:	**$2,200**

Grand Total On + Off Site Infrastructure Costs Per Lot Est: **$34,000**

**** Above Road Work Estimates Include:***

EARTHWORK	**ROADWAY**	**DRAINAGE**
Clearing and Grubbing	Gravel Base	Storm Pipe (or ditch)
Stripping	C.S.T.C.	Select Backfill
Excavation	Cl. "B" A.C. Pavement	Catch Basins
Embankment	Curb and Gutter	
Rock Excavation	Concrete Sidewalk	
Retaining Wall/Rockery		
WATER	**SEWER**	**OTHER WORK**
Water Pipe	Sewer Pipe	Utility Trenching and Electric
Select Backfill	Sewer Depth (extra depth)	Street Lighting
Fire Hydrant	Select Backfill	Signs and Pavement Markings
Manholes	Roadside Landscaping	

***** Above Off Site Infrastructure Costs Involve:***

Sewer: From I-5 truck crossing to Grandis Pond via East Maple Ridge & Motts Hill Parkway
Water: Harvey Road booster pump & 12" main from Harvey Road reservoir to Grandis Pond via Motts Hill Parkway
Electrical: Cable on H St from Odell to Vista Terrace; & conduit, vaults & cable from H St-Vista Terrace to Grandis Pond via Motts Hill Parkway

Estimates were developed and provided for illustrative purposes only. Neither the City of Blaine nor Grandis Pond LLC make any guarantees, implied or otherwise, related to actual costs of development.

3. GRANDIS POND GENERAL PLAN ELEMENTS

3.7 UTILITIES

The utilities designed and implemented for Grandis Pond meet the following Comprehensive Plan goals;

GOAL 3: To develop and maintain stormwater retention, collection and treatment system which provides adequate drainage for land within the City of Blaine and meets applicable state and federal standards.

GOAL 7: To protect the water quality in the Drayton Harbor Watershed.

This project will have full access to a complete utility access system for sewer, water, natural gas, electricity, cable and Internet access. The project could utilize emerging technologies for local area network, wireless connectivity, etc., as they become available. See Civil Design for full explanations of proposed designs.

Utility illustrations to follow:

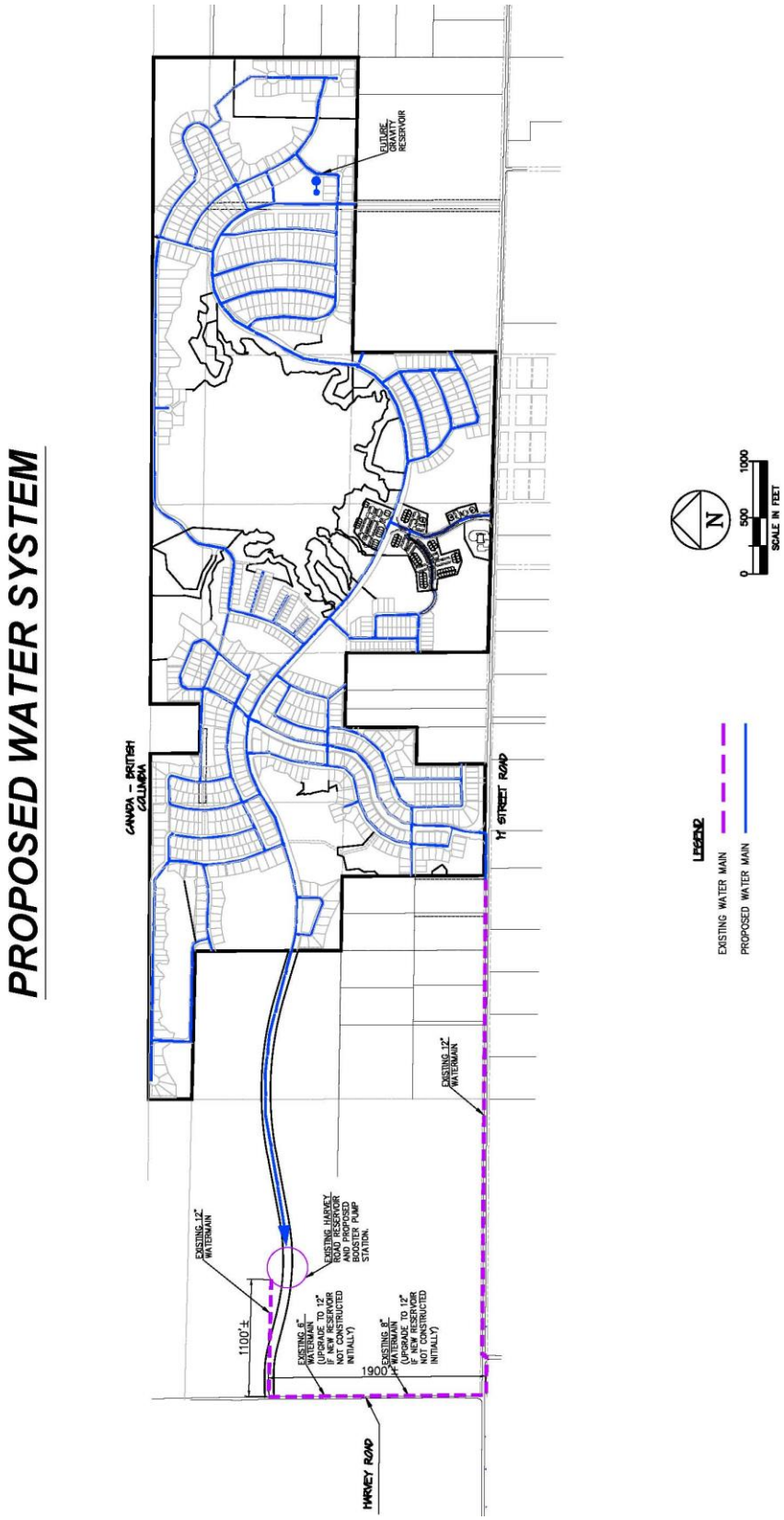


Illustration #16

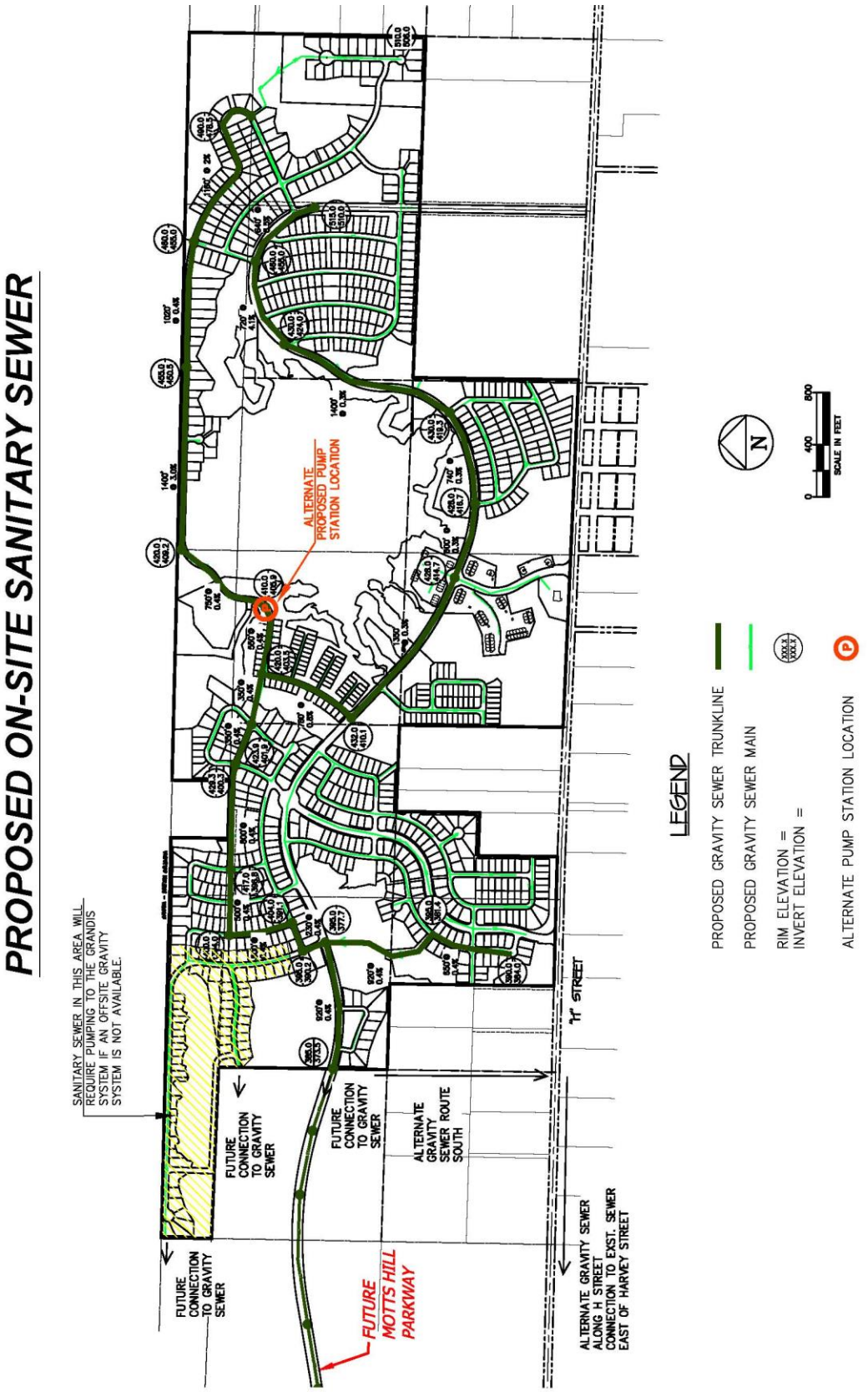


Illustration #17

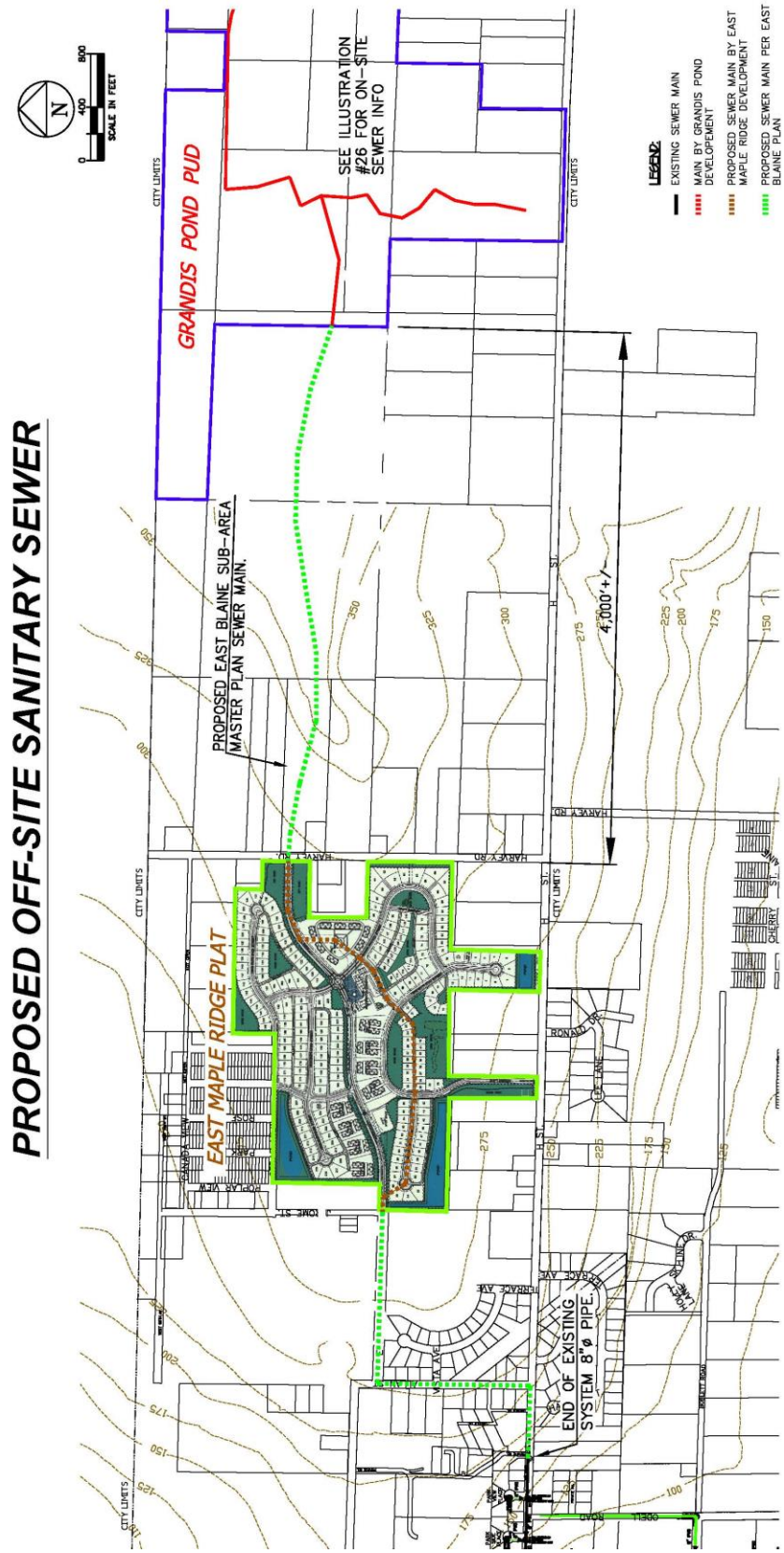


Illustration #18

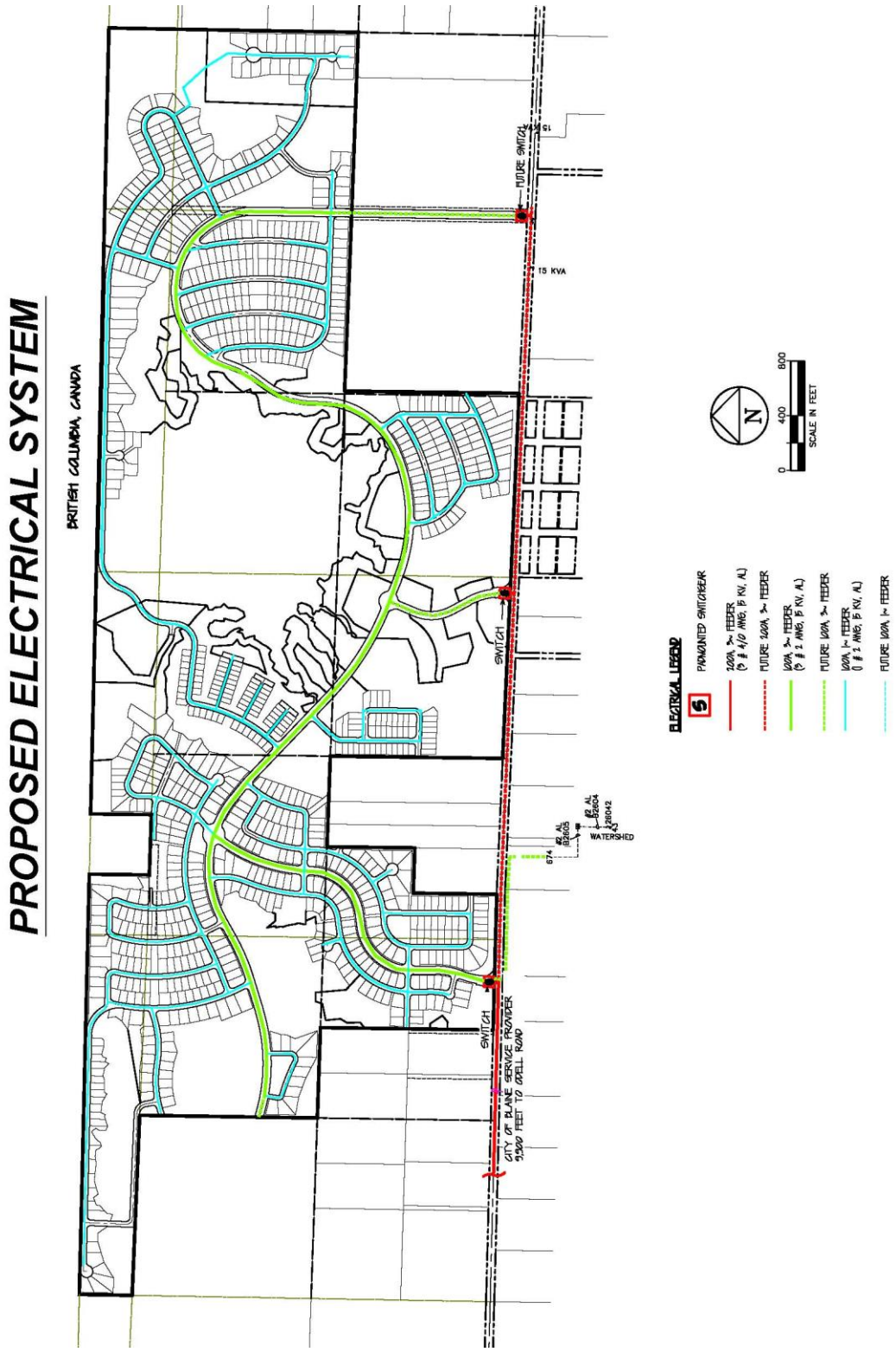


Illustration #19

3. GRANDIS POND GENERAL PLAN ELEMENTS

3.8 COMMUNITY SERVICES

Community services required and utilized by Grandis Pond will be provided so in a fashion to enhance the following Comprehensive Plan goal.

GOAL 9: Insure that essential public facilities are developed in a manner consistent with and respectful of Blaine's character and consistent with requirements of state law.

This master planned community anticipates utilization of existing public services, including police, fire, EMS, school and library, currently available through the City of Blaine. Land area has been allocated for a future public safety facility on H Street, as population of the project increases. The project has a centrally located commercial area that may have a community use building for the Home Owners Association ("HOA") located here. However, neighborhood community buildings may be included in any neighborhood as determined by the developer and/or the HOA. This community building could act as a temporary sales center during development.

Currently, there is a challenge for the City of Blaine Police Department to efficiently patrol all geographic ends of the City with current staffing levels. The Grandis Pond project will allow for a police outpost facility and/or consider provisions for private security, as determined and approved by the HOA.

Crime Prevention through Environmental Design ("CPTED")

The Grandis Pond development will utilize accepted CPTED standards for lighting, visibility, landscaping, etc.

Overview:

- Crime Prevention through Environmental Design is the proper design and effective use of the built environment in order to reduce the fear and incidence of crime, and improve the quality of life.

- CPTED involves the design of a physical space so that it enhances the needs of the intended users. This emphasis on design and use deviates from the traditional "target hardening" approach to crime prevention.

- Owners, managers and community users have a joint responsibility to report to the police all suspicious activities and criminal occurrences; without this, the effectiveness of CPTED is minimized. Establishing and maintaining partnerships between the quality of life issues, make for a safer environment and a more productive community.

- For CPTED to be successful, it must be understandable and practicable for the normal users of the space. The normal users are more familiar with the local area and have a vested interest (their own well-being) in ensuring their immediate environment operates properly.

International Border

The Canadian Border is unfenced and open. Residents of Blaine have lived next to this Border for many years without incident. However, conditions and security needs change and development near this edge needs to be regularly monitored by authorities. The Border has, and will continue to have, electronic surveillance of this corridor and along H Street.

Currently, the International Border Commission requires a three meter (10 ft.) clearance zone on each side of the Border. All development and access to the border needs to be coordinated with the latest requirements from the US Homeland Security, the US Border Patrol and the City of Blaine Police Department. There is currently no requirement for direct security vehicle access to this border. Where the development abuts the border, it will have the following treatment as per illustration #20 below:

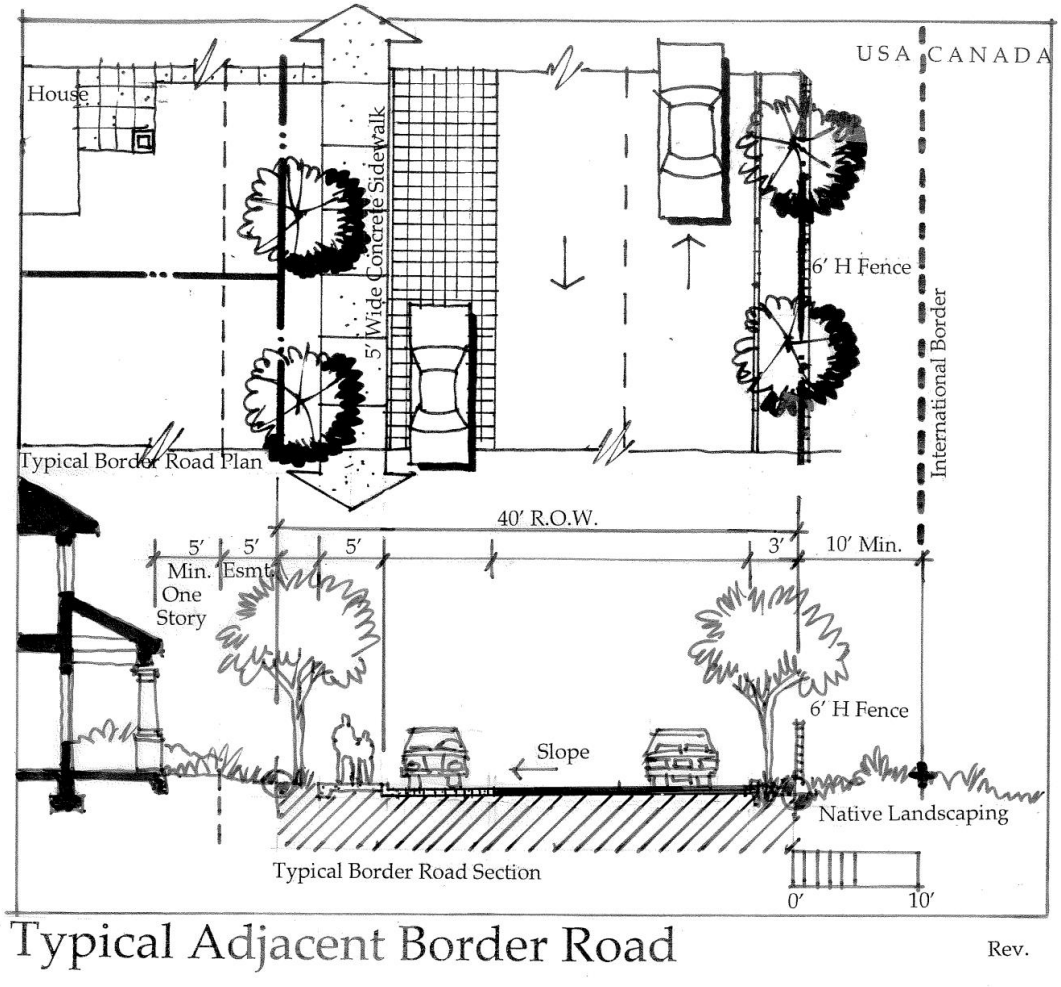


Illustration #20

3. GRANDIS POND GENERAL PLAN ELEMENTS

3.9 DESIGN STANDARDS

Design standards proposed for the Grandis Pond development will meet the following goals of the City of Blaine Comprehensive Plan.

Housing

GOAL 3: To beautify and improve the livability of residential neighborhoods in the city.

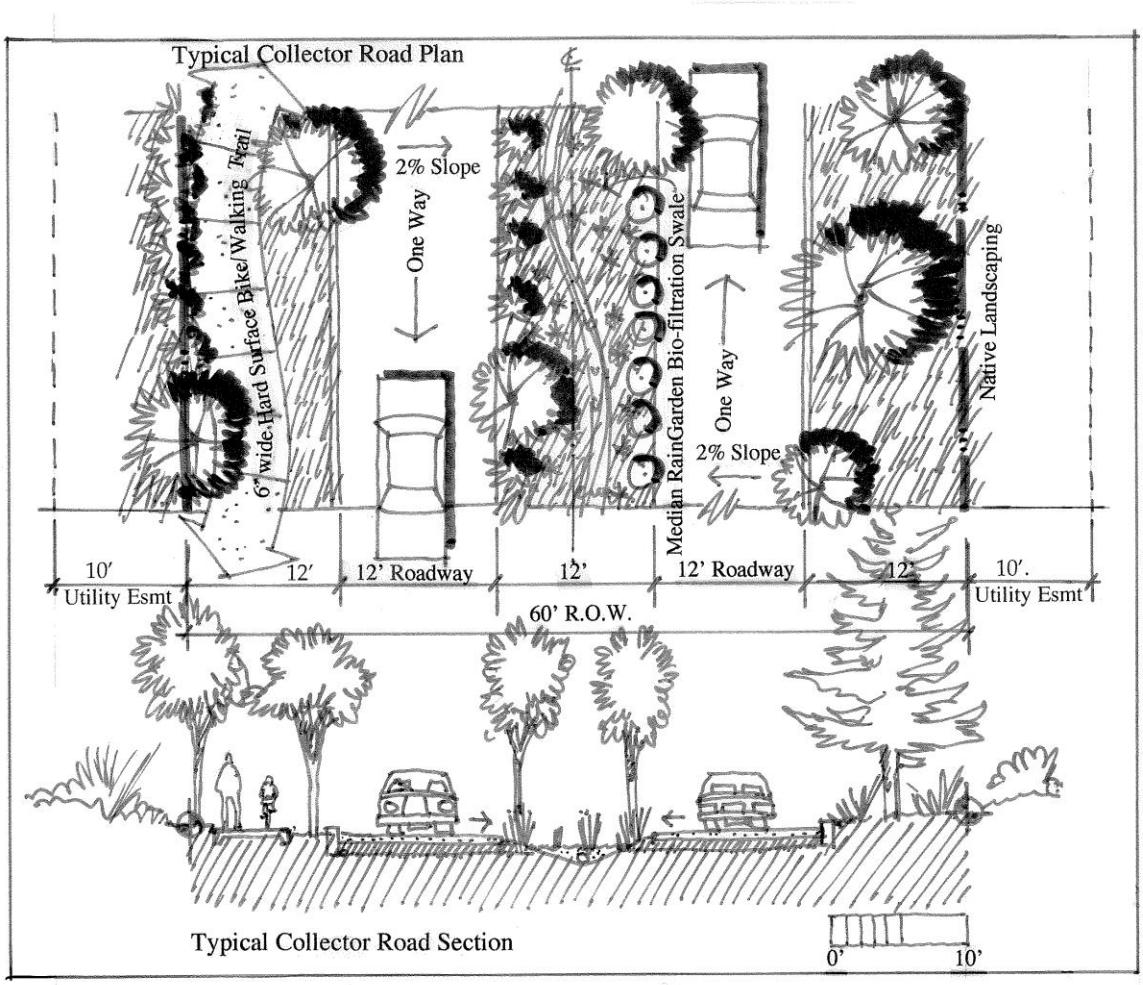
Land use

GOAL 4: To protect the scenic beauty, water quality, wildlife habitat areas, open spaces and cultural resources which contribute to the quality of life and give the Blaine area a rural character.

Specified quantities conform to existing BMC standards unless modified below. All new buildings are subject to Review approval by a Design Review Committee to be established by the HOA.

Public Roads Standards

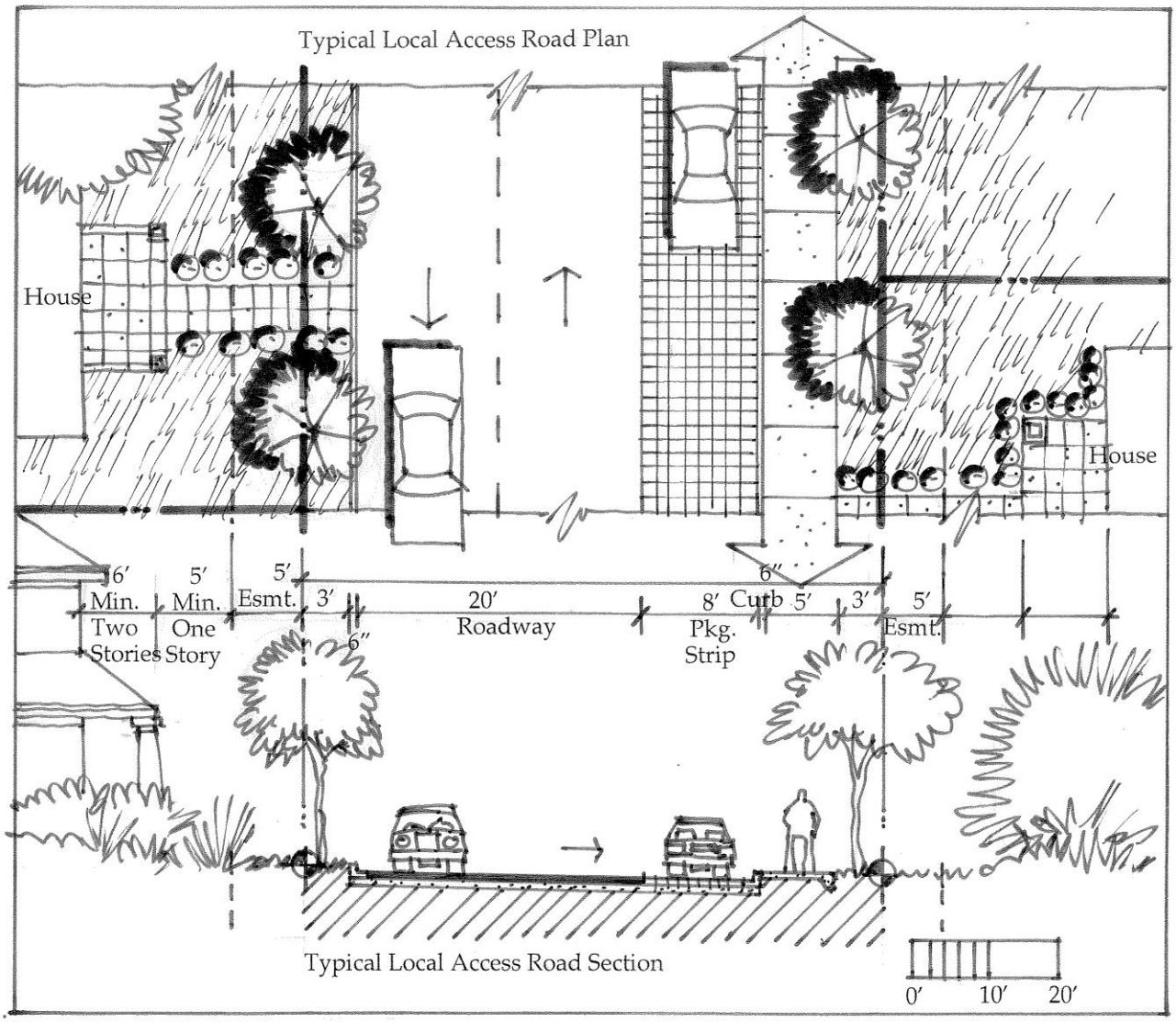
Collector Road:	60’ ROW, 12’ wide paved lanes each way with 12’ wide landscaped rain garden boulevard separation. (10’ wide utility easement on each of R.O.W.)
Local Access Road:	40’ ROW, 28’ paved road section (Incl. 8’ parking Strip 1 side) (5’ Utility Easement next to R.O.W. adjacent to development)
Adjacent Border Road:	40’ ROW, 20’ paved road section (Incl. 8’ parking Strip 1 side) (5’ Utility Easement next to R.O.W. adjacent to development)
Alleys & Easement Driveways:	Min. 20’ wide paved Road section
Typical Roundabout:	180’ x 180’ w/ Landscaped Island (see exhibits)
Private Driveway:	12’ minimum paved section at Roadway w/ L.I.D. design



Typical Collector Road

Rev.

Illustration #21



Typical Local Access Road

Rev.

Illustration #22

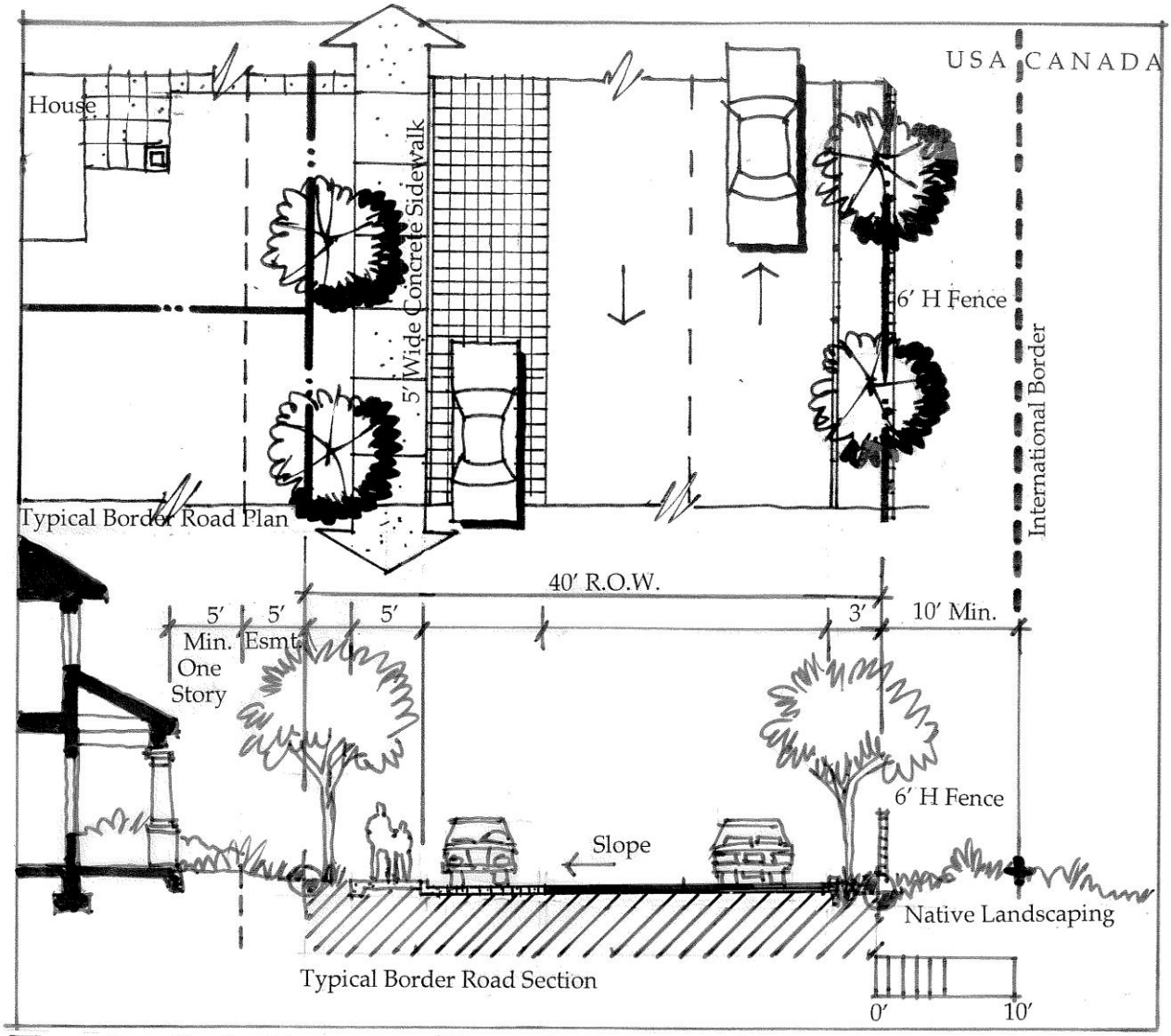
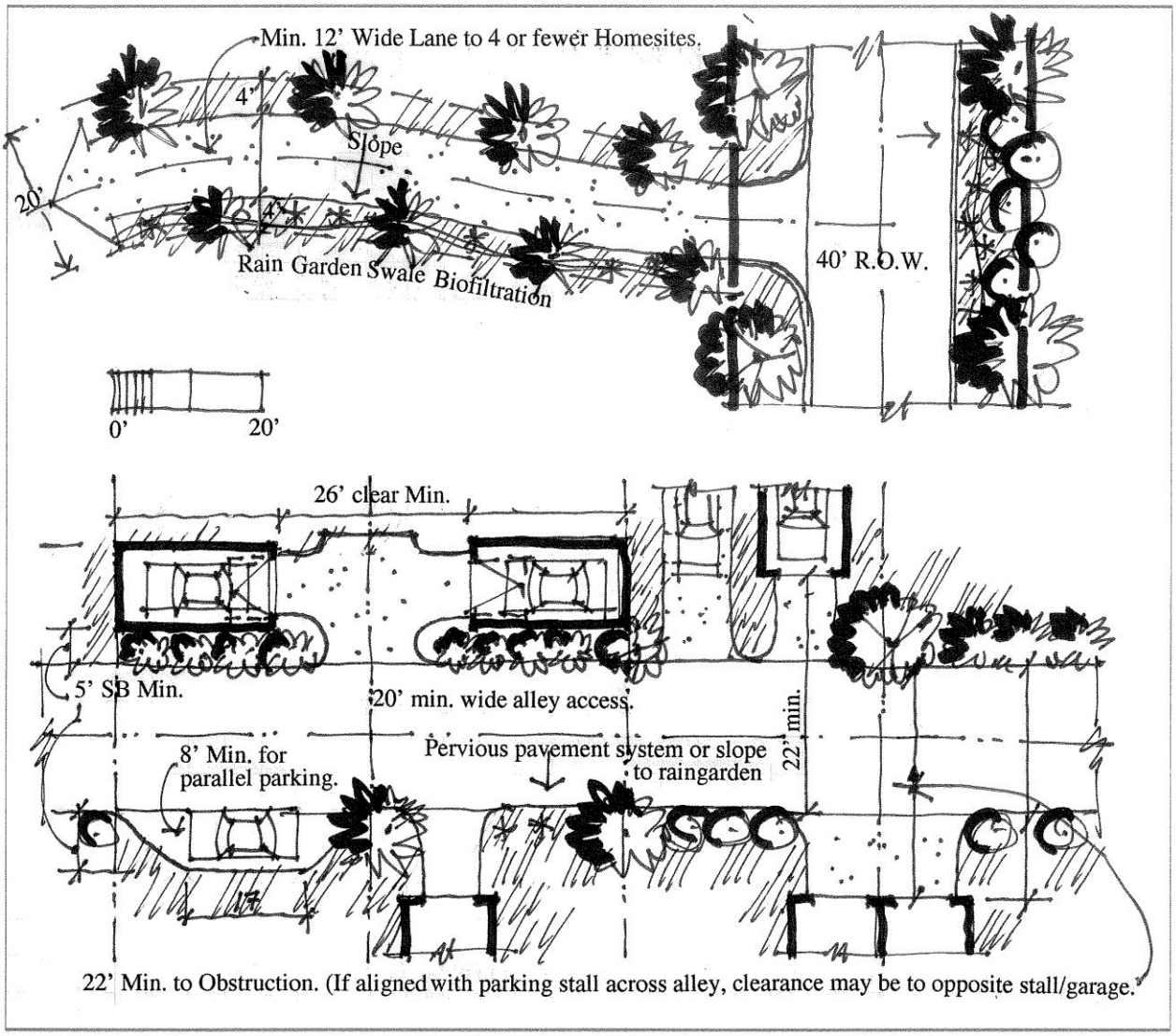


Illustration #23

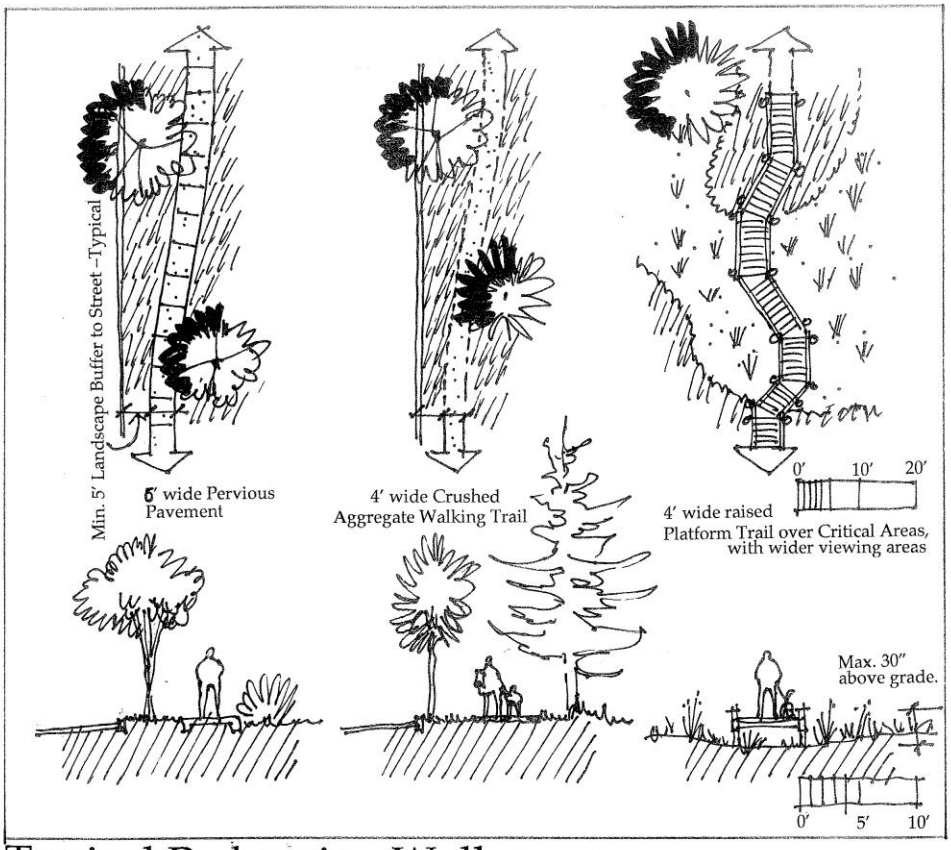


Alleys & Easement Driveways

Illustration #24

Trails Standards

Motts Hill Parkway Trail:	10’ wide
Paved Trails:	6’ wide (To accommodate pedestrians and bicycles)
Unpaved Trails:	4’ wide (Pervious paving materials)
Raised Trails:	4’ wide min., max. 30” above grade. w/out guardrail



Typical Pedestrian Walkways

Illustration #25

Single-Family Detached Standards

Front Yard Setback:	10’ minimum to 1 story open porch, 16’ minimum to main house. Architectural projections are permitted up to 2’ into the 16’ front yard setback. See Illustrations #26 and #27.
Parking Setback:	Minimum 40’ front setback to garage parking. Porte cochere and similar architecturally integrated covered parking permitted at 20’ front setback. On corner lots, a 5’ ROW setback applies to open parking and a 10’ ROW setback applies to garage parking on the subsidiary frontage.
Side Yard Setback:	3’ Minimum for a maximum of 50% of home length (no roof overhang eave). 5’ elsewhere w/ up to 24” eave. See Illustration #26. Corner lots are considered to have two front yard setbacks (10’ and 16’ respectively).
Rear Yard Setback:	20’ minimum to main house structure. 5’ minimum to accessory building. See Illustration #26.
Building Height:	Maximum 2 stories, 30’ Maximum roof height above existing average grade. See Illustration #27. Maximum 15’ average for one story open porch roof line.
Lot Coverage:	Maximum 55% (Lot coverage shall be an impervious surface calculation including all building roofs, paved driveways, patios and walkway/paths, and excluding green/vegetated roofs and pervious paving systems approved by the City.
Open Area:	Minimum 20%

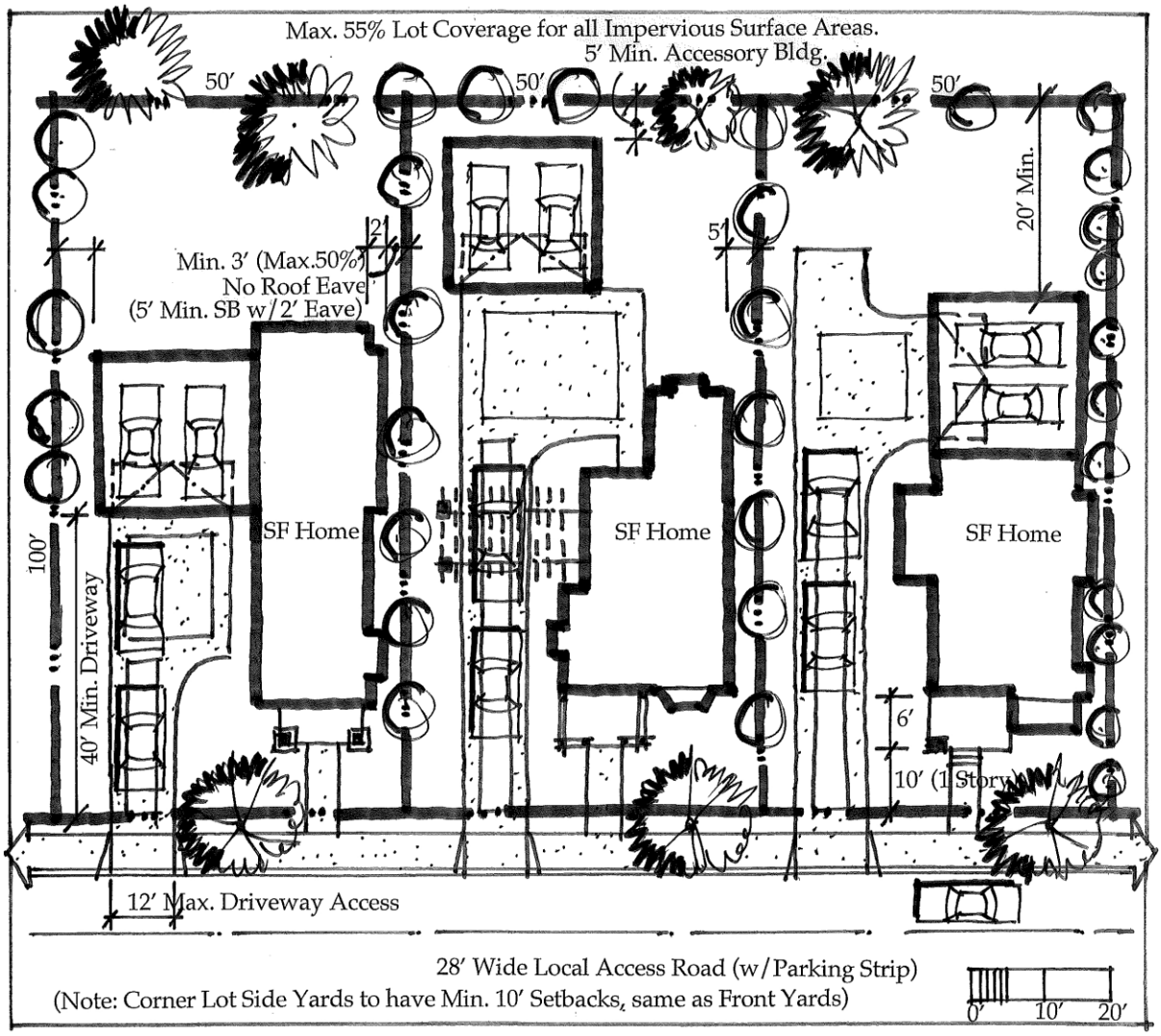
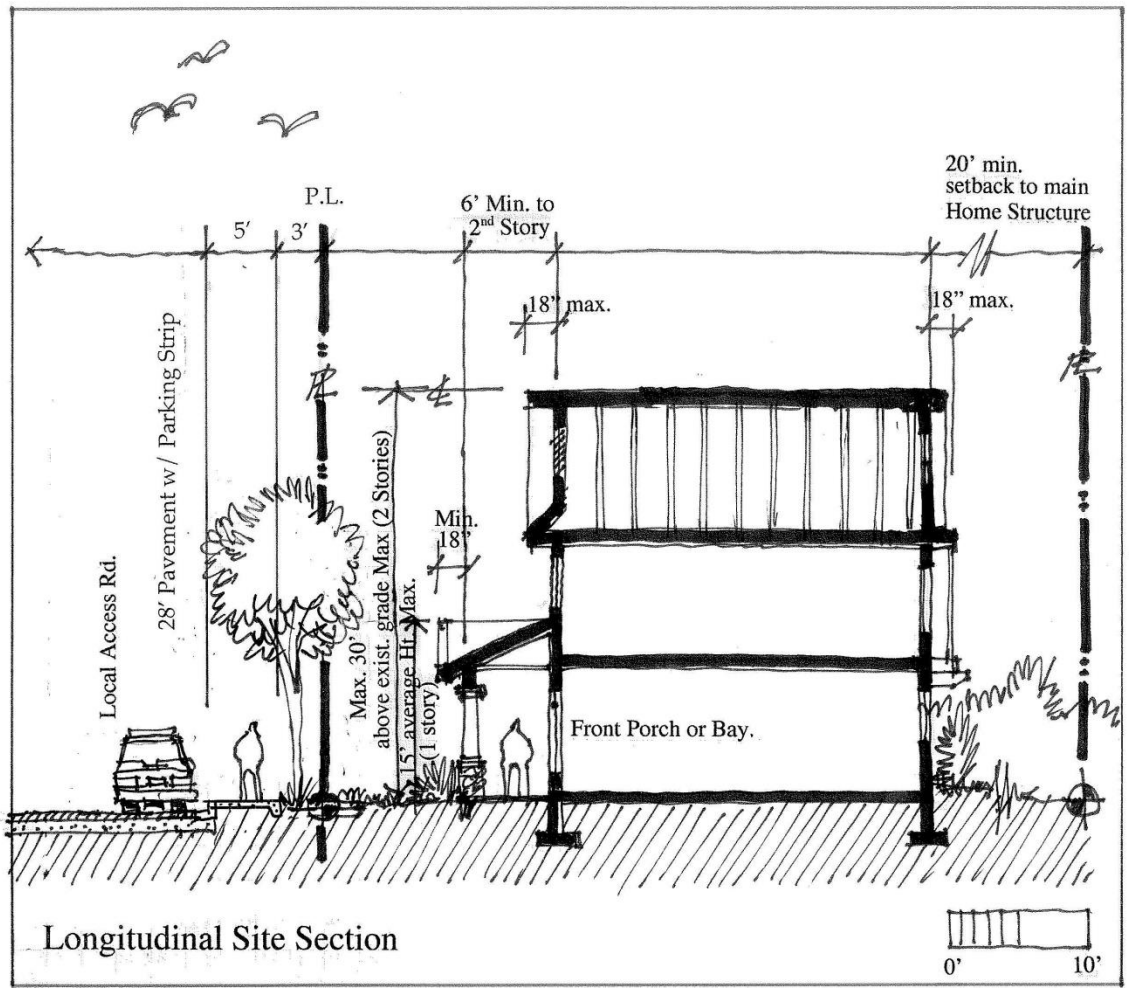


Illustration #26

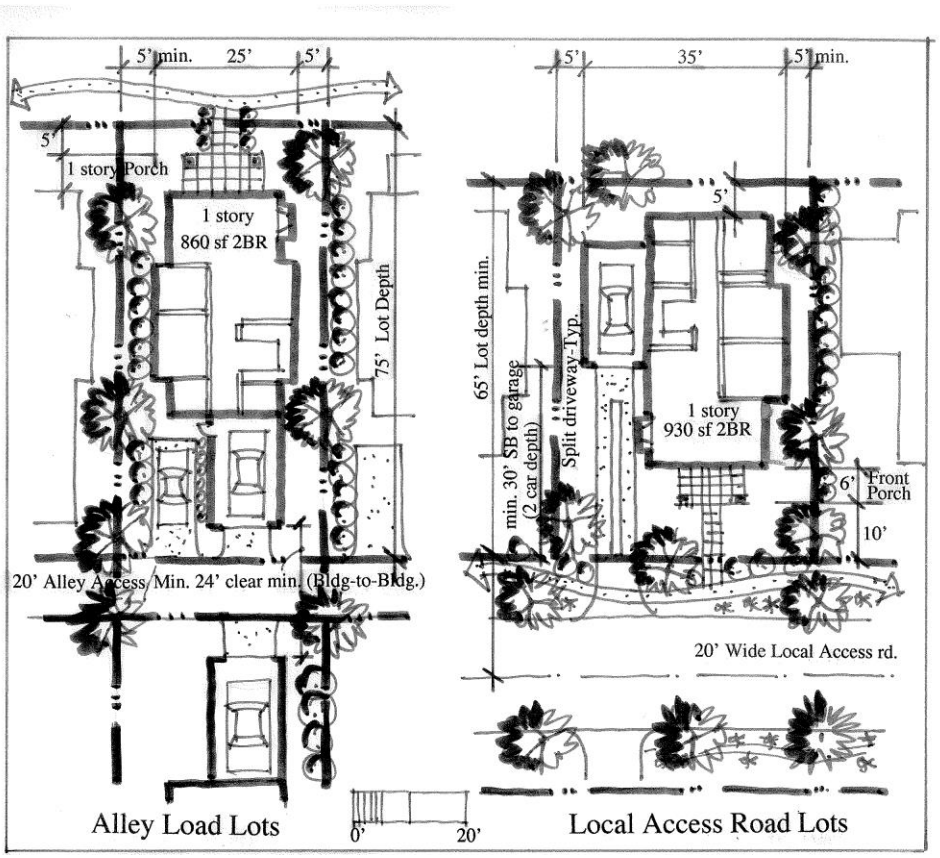
Typical Single Family Lot



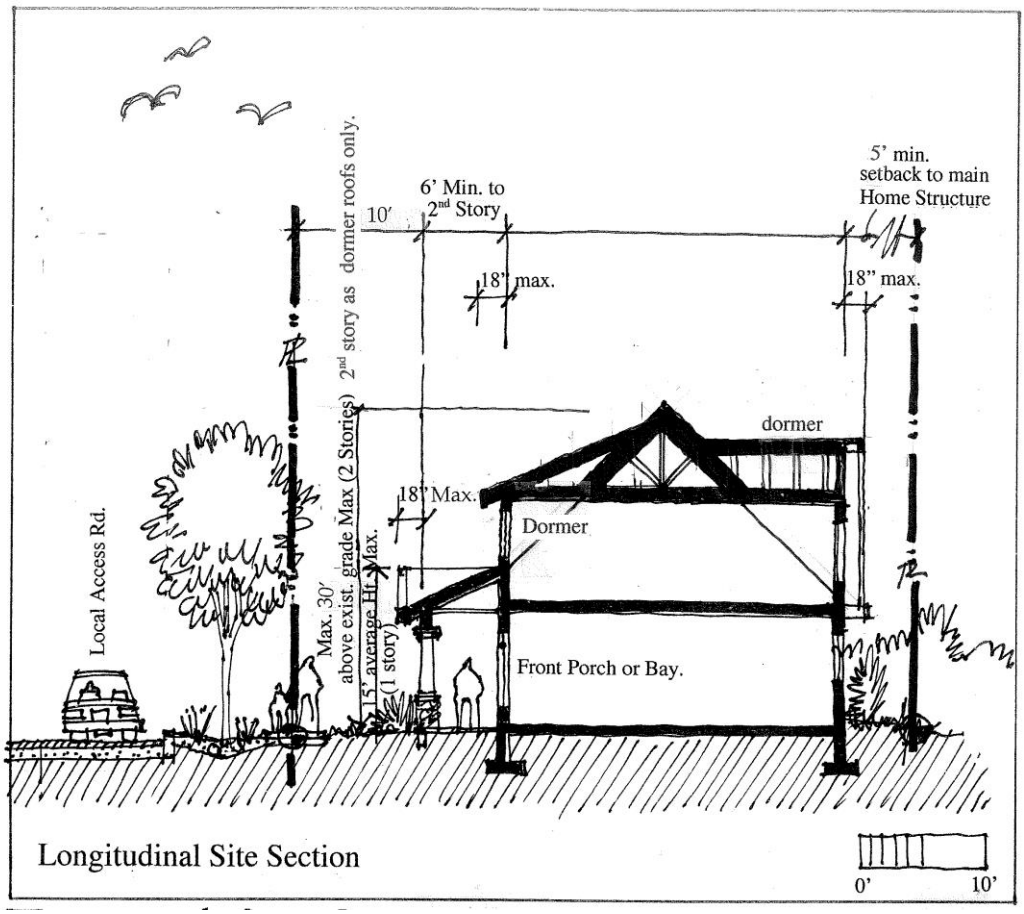
Typical Single-Family Development **Illustration #27**

Cottage Home Detached Standards

Front Yard setback:	10’ minimum to 1 story open porch, 16’ minimum to main house on street. See Illustrations #28 and #29 5’ minimum to 1 story open porch, 11’ minimum to main house on alley. See Illustrations #28 and #29
Parking Setback:	Minimum 30’ front setback to garage parking. Porte cochere and similar architecturally integrated covered parking permitted at 20’ front setback. On corner lots, a 5’. On corner lots, a 5’ ROW setback applies to open parking and a 10’ ROW setback applies to garage parking on the subsidiary frontage. Verify garage clearances per Illustration #28
Side yard setback:	3’ Minimum for a maximum of 50% of home length (no roof overhang eave). 5’minimum elsewhere w/ up to 24” eave, see Illustration #37
Rear Yard setback:	5’ minimum.
Building Height:	Maximum 2 stories; 2nd floor uses dormers. 30’ Maximum roof height above existing average grade. See Illustration #29. Maximum 15’ average for one story open porch. See Illustration #29.
Lot Coverage:	Maximum 70% All coverage shall be an impervious surface calculation including all building roofs, paved driveways, patios and walkway/paths, and excluding green/vegetated roofs and pervious paving systems approved by the City.
Open Area:	Minimum 20%



Typical Single-Family Cottage Home Lots **Illustration #28**



Typical Single-Family Cottage Development **Illustration #29**

Single-Family Attached (Paired Homes) Standards

Front Yard Setback:	10’ minimum to 1 story open porch, 16’ minimum to main house (maximum 2 story portion).
Parking Setback:	Minimum 40’ front setback to garage parking. Porte cochere and similar architecturally integrated covered parking permitted at 20’ front setback. On corner lots, a 5’ ROW setback applies to open parking and a 10’ ROW setback applies to garage parking on the subsidiary street frontage.
Side Yard Setback:	3’ Minimum for a maximum of 50% of home length. No roof overhang eave permitted with 3’ setback. 5’ minimum elsewhere w/ up to 24” eave.
Rear Yard Setback:	20’ minimum. to main house structure. 5’ minimum to accessory building.
Building Height:	Maximum 2 stories, 30’ Maximum roof height above exist average grade. Maximum 15’ average for one story open porch.
Lot Coverage:	Maximum 55%. All coverage shall be an impervious surface calculation including all building roofs, paved driveways, patios and walkway/paths, and excluding green/vegetated roofs and pervious paving systems approved by the City.
Open Area:	Minimum 20%

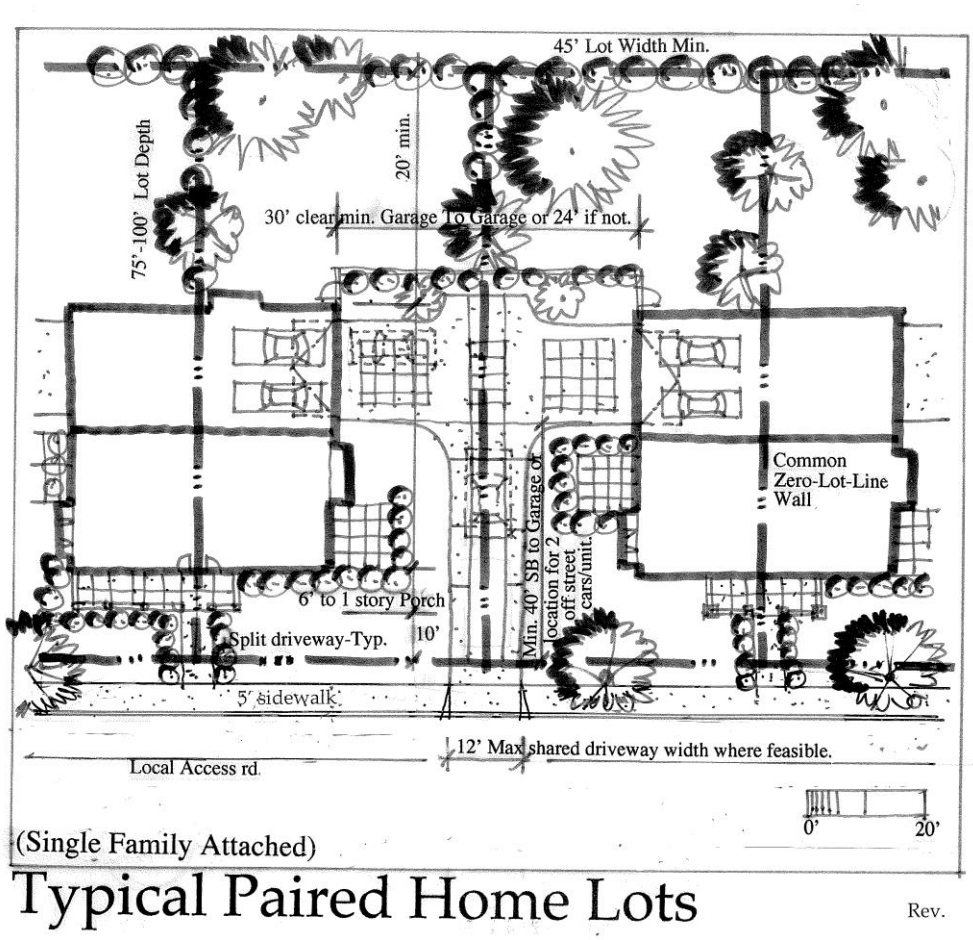


Illustration #30

Multi-Family Attached Standards (Similar to BMC 17.30 as modified below.)

Front Yard setback: 20' minimum from any Public Road R.O.W

Side yard setback: 10' minimum or wetland buffer setback, whichever is greater. Corner lots are considered to have two front yard setbacks.

Rear Yard setback: 20' minimum or wetland buffer setback, whichever is greater.

Building Height: Maximum 30' to roof height above existing average grade,

Lot Coverage: Maximum 55% All coverage shall be an impervious surface calculation including all building roofs, paved driveways, patios and walkway/paths, and excluding green/vegetated roofs and pervious paving systems approved by the City.

Open Area: Minimum 25%

Parking Setback: Parking shall be setback from the ROW as determined by a site plan review. No parking shall be designed to back into a public ROW, excluding alleys. All parking shall be screened from public ROW with buildings, fences or landscaping.

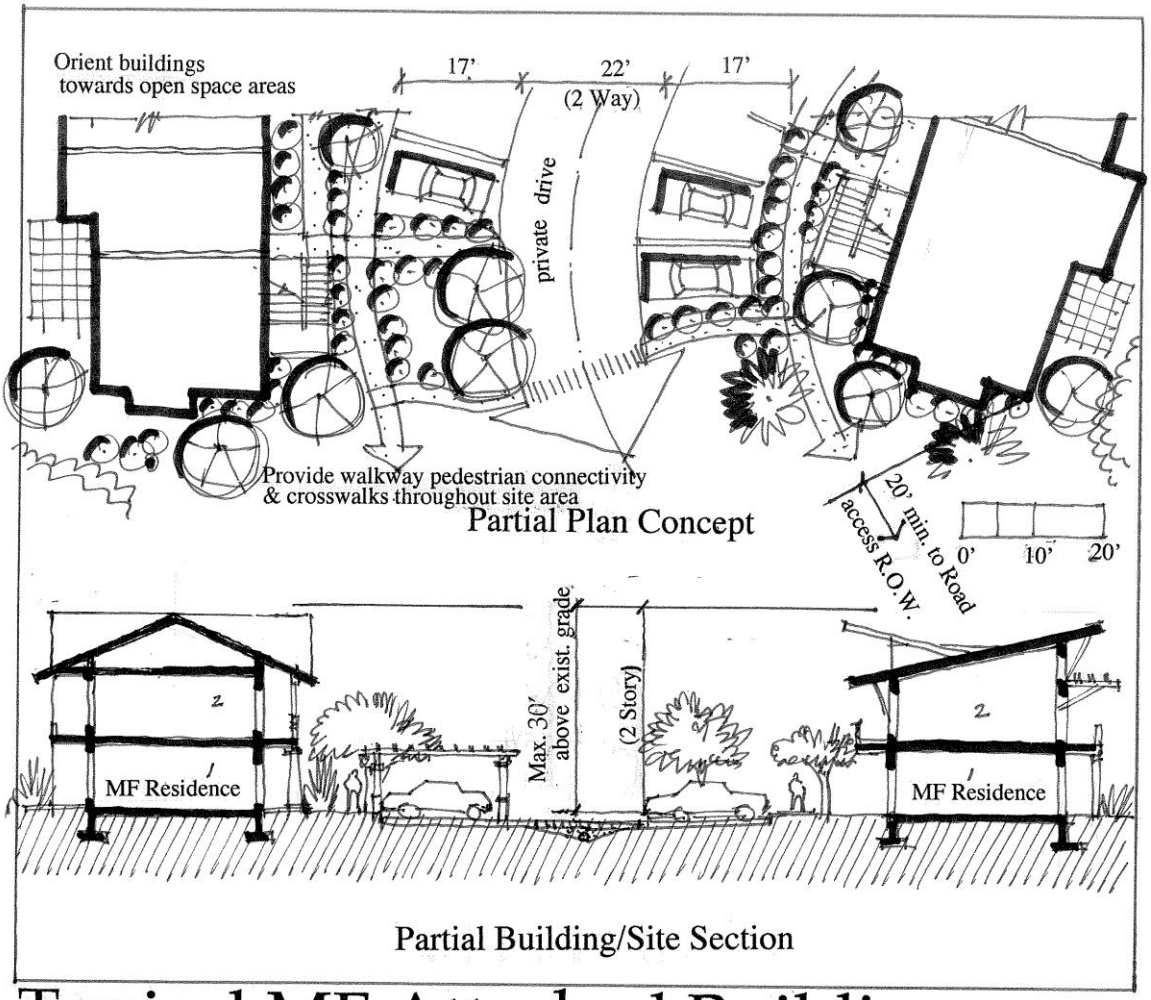


Illustration #31

Commercial Standards

It is the intent for the commercial area to provide a neighborhood or "urban village" atmosphere and a "Sense of Place". Community gathering areas are encouraged. As such, all buildings are to be in close proximity to one another with strong pedestrian walkway connections between all buildings. All parking should be located to the interior of a developed area as much as possible. Buildings should front on public roads where possible to create a small village feel. The setbacks are minimized due to the quantity of open space that is adjacent to this area.

Front Yard setback:	10' minimum to public right of way. See Illustration #32.
Side yard setback:	10' minimum to allow for window openings and fenestration. See Illustration #32.
Rear Yard setback:	10' minimum to allow for window openings and fenestration. See Illustration #32.
Building Height:	The maximum height of building roofs or parapets shall not exceed 30' from average existing grade. Non-occupied architectural appurtenances (clock towers, campaniles, parapet design, etc.) may be higher. In a mixed use building, with residential use above commercial on the first floor, the height may increase to 45' provided road access and parking area clearances meet Uniform Fire Code requirements. See Illustration #33.
Lot Coverage:	No maximum
Parking:	Provide minimum 5' landscape buffer to adjacent property line or any walkway. Provide a landscape island for every 10 continuous parking stalls. See Illustration #32. Provide 15' minimum pedestrian walkway or landscape/walkway combination in between all parking and buildings. Parking shall be provided in amounts as specified by the BMC. Parking ratios may be reduced through an administrative review of a Shared Parking Analysis if the buildings are residential/commercial mixed-use. . Parking spaces for all cars shall be at least nine feet wide and 17 feet long as measured for perpendicular spaces with minimum 22' aisles. No compact sized stalls allowed.

Spaces required to be accessible shall meet current requirements of the International Building Code. Provide wheel stops minimum 24" beyond curb, if sidewalk is adjacent to parking stall, or widen sidewalk to allow for pedestrian clearance.

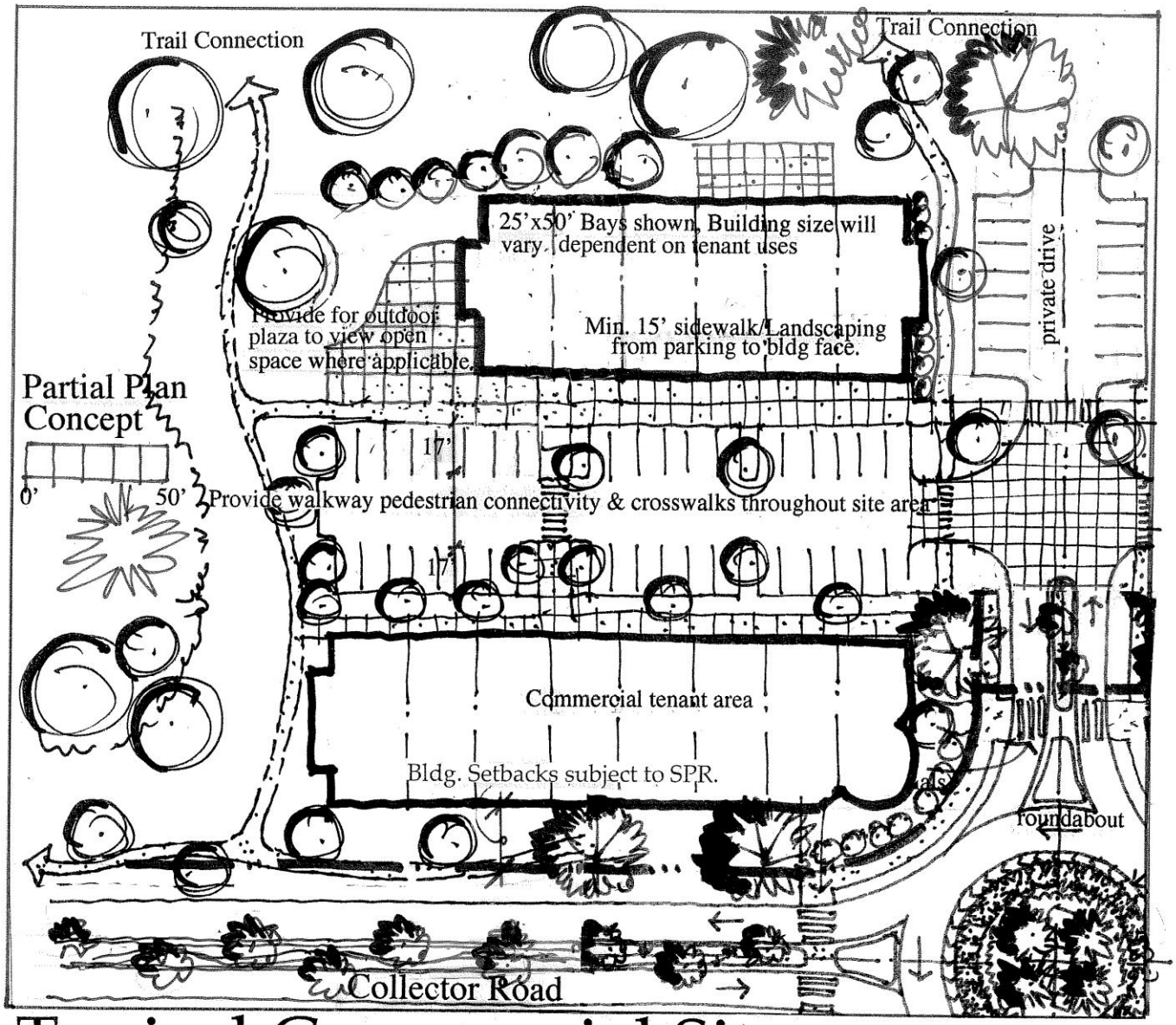
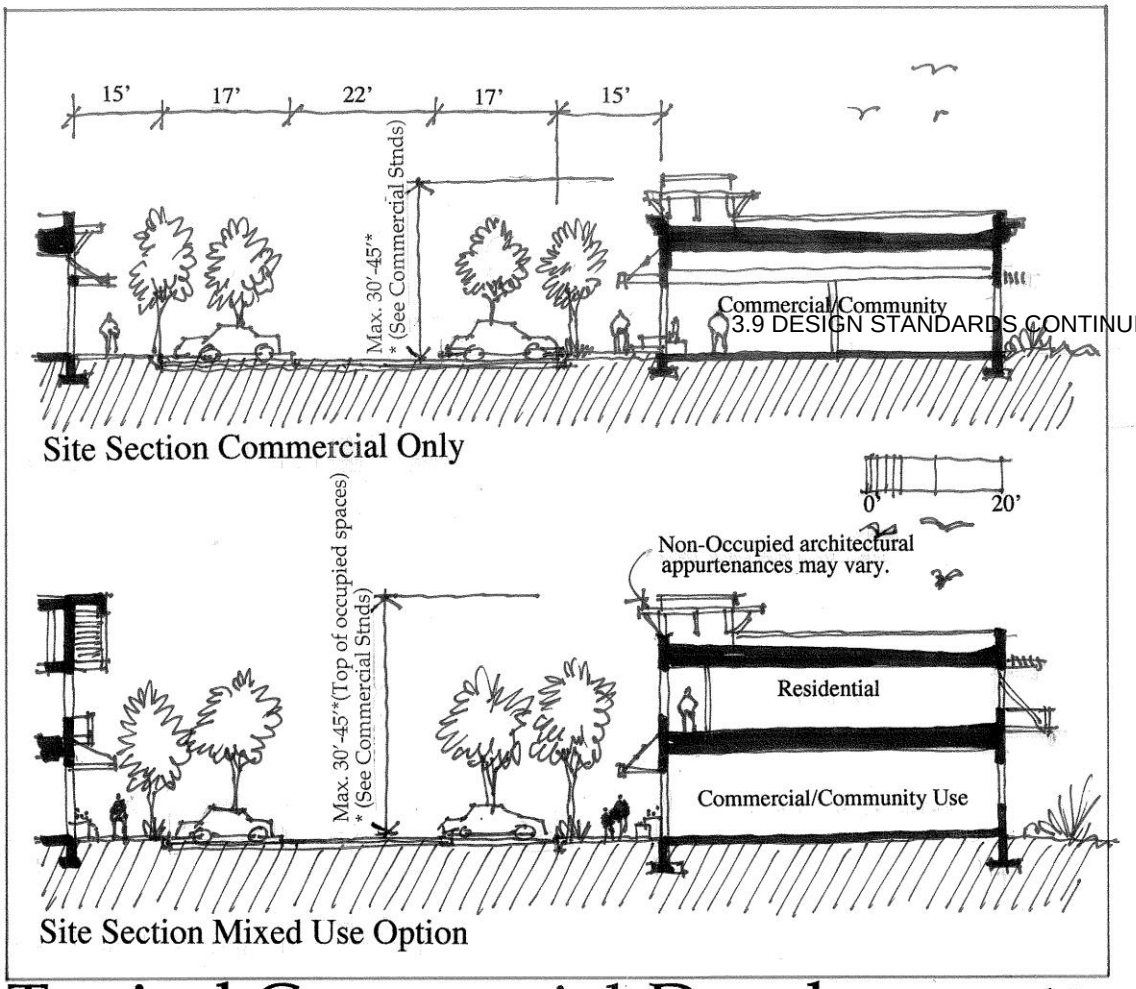


Illustration #32



Typical Commercial Development *

Rev.

3.9 DESIGN STANDARDS CONTINUED

Illustration #33

3. GRANDIS POND GENERAL PLAN ELEMENTS

3.10 GENERAL DEVELOPMENT IMPROVEMENTS

Signage/ Wayfinding

Project Entry Monuments:
Major design elements at the H Street entry points to the project are intended to convey a sense of the project quality with landscape features and project name. Ground based lighting on the signage, without off site glare will be included. Rockery and water features are possible, but not required design options. Maximum 54" high for visibility from vehicle height. (Maximum size 60 sf for graphics copy on wall size that varies). See Illustration #34.

Neighborhood Monuments:
Entry signage at the entrance to each neighborhood off the parkway collector road will be allowed at the Neighborhood Commons Park entrances. Maximum 42" high. Maximum18 sf. See Illustration #34.

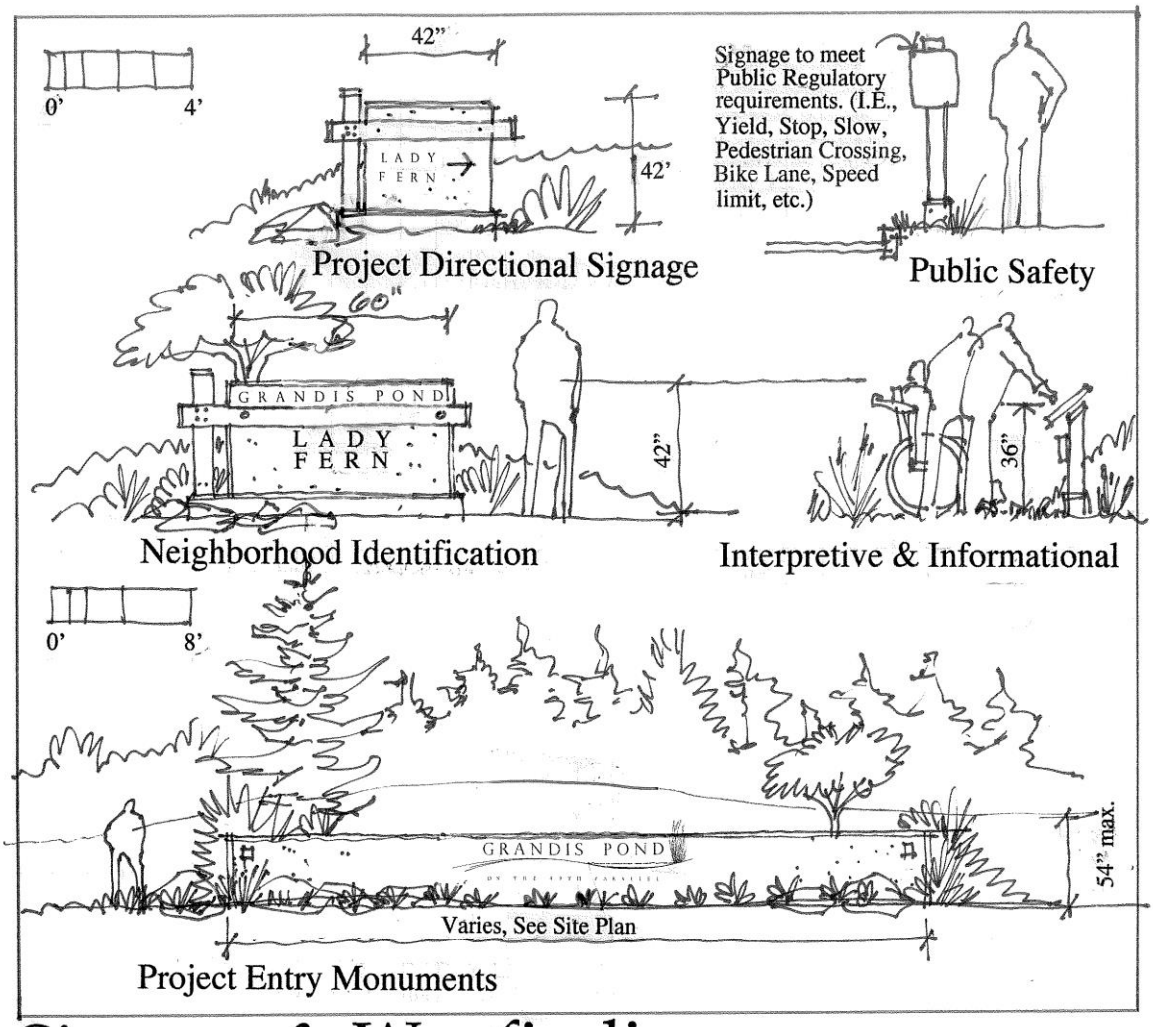
Commercial Signage:
All signage to conform to BMC 17.22.050 and subject to HOA Design Review requirements.

Interpretive Signage:
Throughout the development, interpretive signage educating the residents about sensitive environments and habitat is to be provided at key locations along walking trails and near all critical areas. (Wetlands, pond, etc.) These signs are freestanding, at an easy height to read while standing. (Maximum size approximately 5 sf depending on copy) Benches may be provided a various locations and intervals for special viewing areas. (See Illustration #34.)

Street and Directional:
All directional signage will be integrated with a harmonious design program providing continuity with the project graphics and entry /neighborhood monument signs. (Max/Min. size for all as determined by City Public Works). See Illustration #34.

Public Safety:
Vehicular and pedestrian safety signage (stop, yield, slow, etc.) and City street name signs shall be installed per City of Blaine Public Works for all roads.

Walking Trails
Walking trails signage on private open space provided by Developer and/or HOA. (Max/Min. size as determined by City Community Development Department). See Illustration #34.



Signage & Wayfinding

Illustration #34

Site Lighting

The intent of site lighting, in addition to preserving the nighttime environment per the mission of the International Dark Sky Association, includes the following goals:

Stop the adverse effects of light pollution on dark skies, including:

- Energy waste and the air and water pollution caused by energy waste
- Harm to human health
- Harm to nocturnal wildlife and ecosystems
- Reduced safety and security
- Reduced visibility at night
- Poor night-time ambience

Lighting Standards

- All light fixtures shall be shielded to prevent glare.
- Street lighting shall illuminate the street and sidewalk to offer visibility by and of the users of the public right-of-way
- Street lighting shall illuminate the street and sidewalk to offer safe and comfortable interaction of drivers, bicyclists, and pedestrians.
- Street lighting shall illuminate the street and sidewalk in such a way as to encourage pedestrian-friendly walking and bicycling
- Street lighting shall comply with CPTED techniques for public safety.
- Street lighting shall provide distinction between major and minor roads
- Primary pedestrian routes outside of preserved open space areas shall be defined with lighting.

Low Mount Fixtures provide for better uniformity and surface illumination. Low Mount Fixtures should be used wherever feasible Tall 25-30' light standards with "Cobra-Heads" are to be avoided and are not allowed. 15-20 ht is preferred to illuminate under tree canopies. (See Illustration #35 & #36)

A consistent and alternating pattern of light areas (pools) shall be provided. Final spacing of fixtures is dependent on light fixture specification / photometric pattern to meet energy efficiency and CPTED safety standards.

Adequate lighting of walkways and pedestrian crossings is a significant aspect of new street lighting. In addition to lighting pedestrians areas, street lighting should have reasonably uniform illumination for the full width of the public travel way.

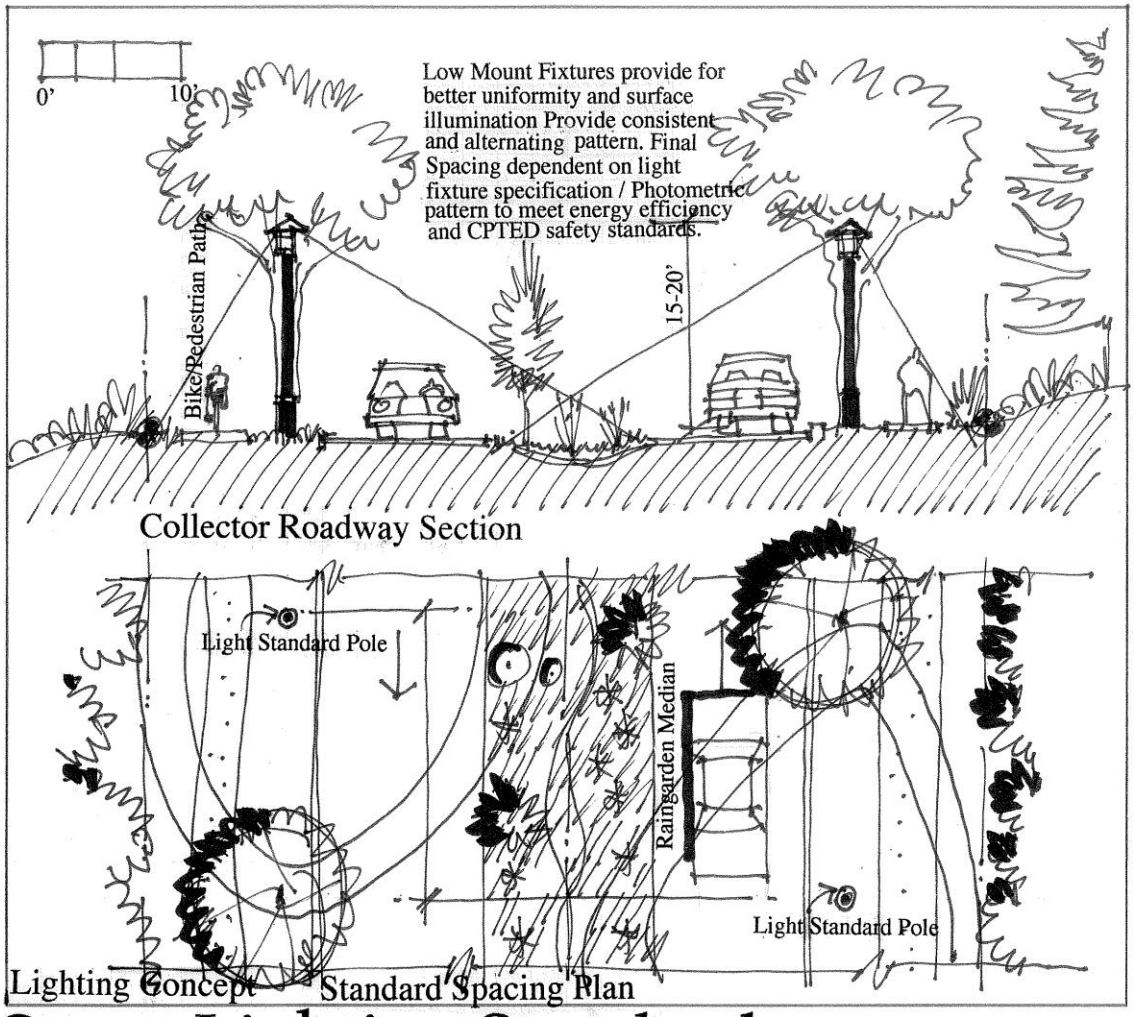
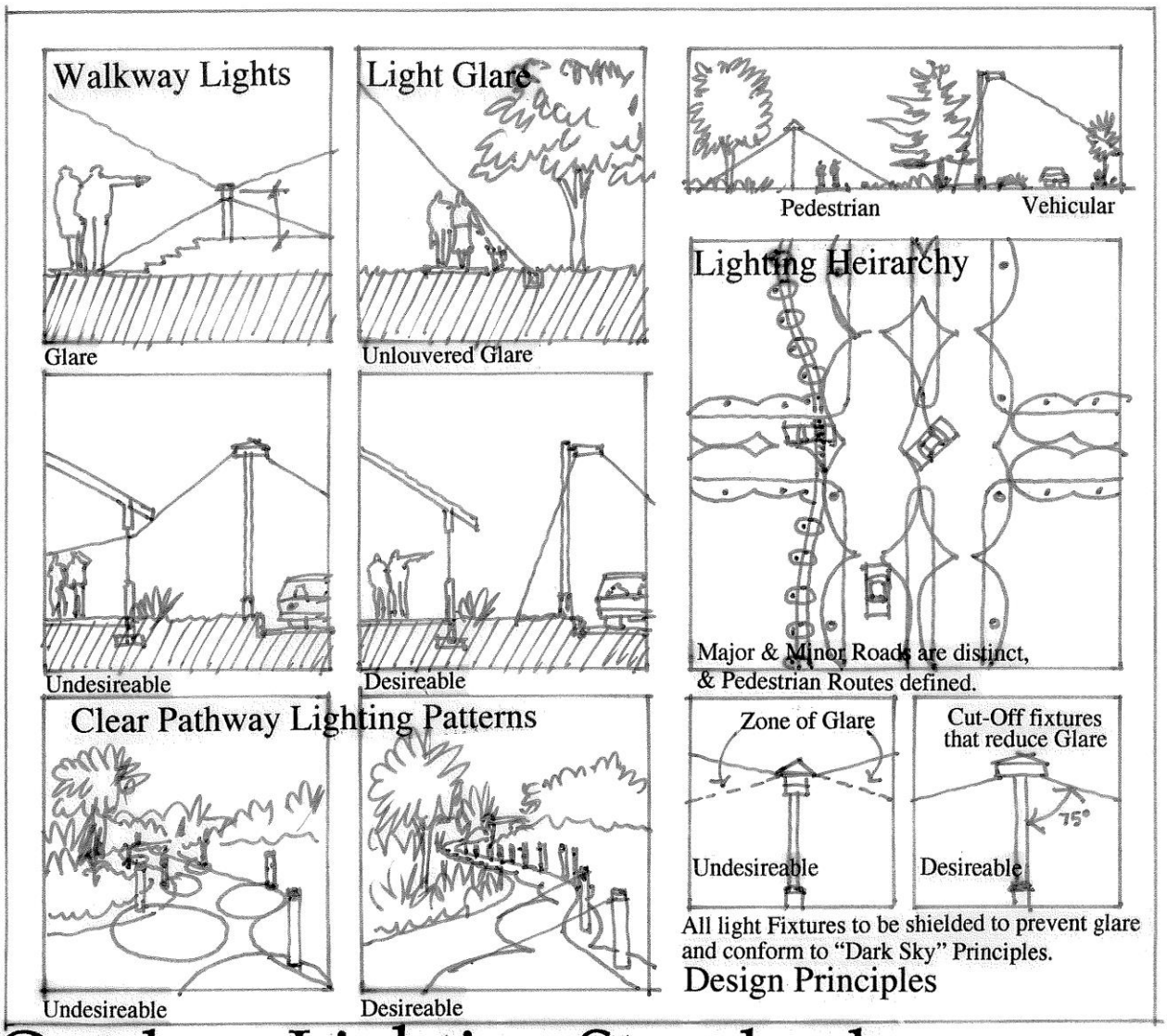


Illustration #35



Outdoor Lighting Standards

Illustration #36

4. GRANDIS POND NEIGHBORHOOD PLAN ELEMENTS

Neighborhood Descriptions

It is the intent that each neighborhood has an identity that is unique to their geographic location on the land. Additionally, it is the intent that all neighborhoods have a central pocket park near the entrance to the subdivision for US Mail, Public Transportation and community gathering. Every neighborhood should have relatively close and walkable access to passive and active open space areas via sidewalks and trails. Most home sites are designed to minimum 5000 sf with larger lots on the outer edges, as shown on the plan.

1. Lady Fern

This neighborhood is characterized by having one of the main project entries adjacent to the area on the west and a 50' landscape buffer along H Street to the south. A centrally located, active park area is designed for open play activities, dog run, field games, etc. Most home sites are designed to minimum 5000 sf with larger lots on the outer edges, as shown on the plan. There is a possible road connectivity to future development to the east. The topography allows for a sloping hillside lots facing towards westerly views.

*** See Lady Fern Neighborhood drawing for Master Plan Design Elements***

2. Hawthorn

This neighborhood is also characterized by having one of the main project entries adjacent to the area on the east and a 50' landscape buffer along H Street to the south. Most home sites are designed to minimum 5000 sf with larger lots on the outer edges. There is a possible road connectivity to future development to the west. This neighborhood has interior trail connectivity around adjacent storm water basins and wetlands. This area has minimum topography to deal with, and relatively flat.

*** See Hawthorn Neighborhood drawing for Master Plan Design Elements***

3. Foxglove

This neighborhood is a smaller area with fewer lots with a minimum 5000 sf lot size, but it has extensive adjacency and access to passive open space wetland areas to the East, with a variety of lot sizes. There is also an active open space park access at the roundabout intersection in the Northeast corner. This area is also relatively flat.

*** See Foxglove Neighborhood drawing for Master Plan Design Elements***

4. Twinberry

This neighborhood is similar, but a larger area than Foxglove, so it includes an additional active Open Space Park that is visible from the entry Parkway Road with easy access to passive open space areas to the east. The topography is on one of the highest areas in phase One, with regional views in all directions.

*** See Twinberry Neighborhood drawing for Master Plan Design Elements***

5. Engelmann

This neighborhood has a main access from the easterly roundabout with small to larger Single family lots that face onto a dramatic ravine/water course that flows into Canada from Grandis Pond. There are good territorial views into Canada and the Canadian Cascade Mountains. An internal local access road leads to an out parcel and connects to a linear park heading westerly into the Cottonwood neighborhood. A stormwater detention area acts as a buffer to the Canadian border.

*** See Engelmann Neighborhood drawing for Master Plan Design Elements***

6. Cottonwood

This neighborhood contains mostly 5000 sf lots with larger lots along the Canadian border. There is a 50' conservation easement along the Border to preserve an existing stand of specimen conifer trees. The neighborhood contains great internal connectivity to open space areas with a continuous linear park that allows greenspace access to the west and east.

** See Cottonwood Neighborhood drawing for Master Plan Design Elements***

7. Snowberry

This neighborhood has a unique amount of open space available to most lots. There are a couple of unique sub-neighborhoods with an internal loop road drive that encloses a common, active open space area. This area is also bisected by the main parkway that will eventually connect through to the east.

*** See Snowberry Neighborhood drawing for Master Plan Design Elements***

8. Brooklime

This neighborhood will be one of the last phases to develop, due to utility access. Each home lot is a unique size and they all front on passive open space areas. This neighborhood also has an access road that is adjacent to the International border, with a looped connection back through Snowberry.

*** See Brooklime Neighborhood drawing for Master Plan Design Elements***

9. Dogwood

This neighborhood allows for development of “Cottage Homes”. This housing type is intended for smaller homes, in the 600-1200 sf size, and more architectural character. The lots are much smaller than other neighborhoods, but they all front on a common, active, open space with direct access to passive open space areas, great pathway connectivity, and a reduction of impact of vehicles on the property with alley access and common parking areas. This area has very close access to the walking trails near Grandis Pond.

*** See Dogwood Neighborhood drawing for Master Plan Design Elements***

10. Bentgrass

This neighborhood offers another affordable, alternative single family home concept that has been around for a while, but with a difference. These zero-lot line homes share a common wall to maximize the usability of the lots, reduce driveway/garage impacts and reduce construction costs. These lots have great access to passive open space areas and close connectivity to the future commercial area to reduce vehicle trips and increase walkability.

*** See Bentgrass Neighborhood drawing for Master Plan Design Elements***

11. Marsh Wren

This neighborhood allows for the highest density housing because of its proximity to the future commercial area in Sedge. The design concept will allow for Multi-family, attached homes. There needs to be strong pedestrian connectivity within and without this area to adjacent passive and active open space areas. The adjacency of this area to “H” Street, the main collector road, community and commercial uses is meant to encourage a more walkable neighborhood. This area also is adjacent to a dedicated, future public services (Fire Station, etc.) area for possible public uses.

*** See Marsh Wren Neighborhood drawing for Master Plan Design Elements***

12. Sedge

This neighborhood allows for multifamily and commercial and a mixed use component for adding residential uses above the commercial. The additional density, for residential mix will add to the livability and 24 hour use of this small community center for the master planned community in the future. The scale of the buildings is intended to be small for local homeowner conveniences and services. Flexibility of uses is a key feature, while maintaining a “form-based” zoning envelop for any building development through the Design Review Process. This area also has direct access to pathways accessing Grandis Pond open space areas.

*** See Sedge Neighborhood drawing for Master Plan Design Elements***

13. Sitka

This neighborhood has the closest access of any single family home lots to the commercial and community area in Sedge. There is direct access to the wetland complex surrounding Grandis Pond across the collector road, and the neighborhood is complemented by adjacency to the "H" Street Landscape Buffer.

*** See Sitka Neighborhood drawing for Master Plan Design Elements***

14. Willow

This neighborhood has one of the best topographies, gently sloping down to Grandis Pond with additional great territorial views to the west. There is also direct access to the wetland complex surrounding Grandis Pond across the collector road.

*** See Willow Neighborhood drawing for Master Plan Design Elements***

15. Pond Lily

This neighborhood is similar to Willow with better, gently sloping topographies down to Grandis Pond. This neighborhood has a great linear park connection down to the pond area. The eastern-most lots are significantly deeper as a buffer to the collector road that connects back down to "H" Street.

*** See Pond Lily Neighborhood drawing for Master Plan Design Elements***

16. Buttercup

This neighborhood includes a large complex of passive open space areas and the largest single active open space with minimum cross slope. This is also one of the highest topographic locations on the entire property. The large open space park could be used for more active sports activities such as softball, etc. There is a strong possibility that a water tank storage facility will be located here A final determination will depend on future water system designs.

*** See Buttercup Neighborhood drawing for Master Plan Design Elements***

17. Salmonberry

This neighborhood is a smaller, somewhat isolated area, due to wetland locations. The lots will be larger to accommodate a different homebuyer profile. All lots back onto passive open space areas or perimeter landscape buffers.

*** See Salmonberry Neighborhood drawing for Master Plan Design Elements***

18. Huckleberry

This neighborhood is unique by having the most exposure to the wetland complex open space surrounding Grandis Pond and the International Border. These lots also will be larger to accommodate a different homebuyer profile. There are outstanding views looking north into Canada and the passive open space areas to the south. Lots should be created and homes developed to maximize views and value of the development overall. All lots back onto passive open space areas or perimeter landscape buffers. The neighborhood also contains a common vehicle parking area and active open space area to provide direct access to the pond for all homeowners in the Grandis Pond community.

** *See Huckleberry Neighborhood drawing for Master Plan Design Elements***

19. Grandis Pond

This area includes the entire wetland complex (Including uplands, buffers and wetlands) surrounding Grandis Pond open water area. This is a sensitive environmental area. The only improvements allowed will be pathways, elevated and on ground, trails, interpretive signage and benches. The delineation of the upland areas was very complex, and any trail locations need to be field located in conjunction with guidelines and recommendations in the Wetland and Habitat Report by Cantrell & Associates. There is a series of existing logging roads and trails on site that can be followed as close as possible, along with access to the few open water areas that have existing docks, etc. This is established as a separate neighborhood so that all developed areas have easy access to this shared open space amenity upon completion of Phase Two development.

*** See Grandis Pond Neighborhood drawing ***

20. Public Safety Facility

This neighborhood is located in close proximity to the commercial and multi-family areas and at a key entrance to Grandis Pond. The facility may be used as a fire station / security facility for the project and surrounding areas.

*** See Public Safety Facility Neighborhood drawing ***

5. GRANDIS POND IMPACTS AND MITIGATION

Wetlands are located across the project site and include numerous drainages, linear wetland assemblages, and a large central pond surrounded by a wetland complex (interspersed with upland areas). The project has been designed to avoid and minimize wetland and buffer impacts to the greatest degree possible. However, in order to access the project site for development it is necessary to impact some on site wetlands and drainages. Impacts are primarily from access road development. Mitigation is proposed at several potential locations within the project site to compensate for these impacts. These include wetland creation at a ratio of 1.5 to 1 (creation to impact) and wetland enhancement at a ratio of 2 to1 (enhancement to impact) at up to four locations in existing disturbed wetlands adjacent to the proposed wetland creation areas. Other mitigation measures include the replacement of lost buffer via buffer averaging at a ratio of 1 to 1 or greater of new buffer, reforestation of disturbed buffers across the project site, and the implementation of LID strategies within the project design. LID strategies include reduced road and sidewalk standards, rain gardens/bio swales, and residential-lot roof-runoff dispersion trenches.

Mitigation goals and objectives include improving wildlife habitat and replacing lost hydrologic and water quality functions. The mitigation area will be monitored and maintained for a period of five years following the guidelines within the approved mitigation plan.

For a complete report on the impacts and mitigation measures, see Conceptual Mitigation Plan for the Grandis Pond Development, dated April 23, 2007; prepared by Cantrell & Associates, Inc. and David Evans and Associates, Inc. project #BLMT0000-0004. Refer also to the REVISED Mitigated Determination of Non-Significance (i.e. SEPA Decision) dated August 13, 2010.