

II. F. DESIGN GUIDELINES

Introduction

Purpose and Use

These design guidelines provide direction over a period of many years, and to multiple and changing participants, including park staff, design consultants and potential partners. Participants will use these design guidelines to meet the spirit and intent of the master plan by establishing standards for quality, aesthetic, environmental accessibility and safety. Future in depth design processes associated with the first major capital project in each development zone will establish specific material, product and color choices for design elements.

Principles

For all park design elements the following design guideline principles apply:

- Maintain consistent character and quality throughout each building development zone – resulting in exceptional character, quality and identity for all park elements
- Apply design guidelines coordinated with park development partners
- Apply Low Impact Development (LID) strategies for site, infrastructure and building facilities
- Apply green environmental and energy technologies and strategies (Such as those found in Leadership in Environmental and Energy Design (LEED) from the US Green Building Council or the *Sustainable Sites Initiative* (ASLA, et al).

Character and Qualities

The accompanying images are visual examples from related park, recreational and interpretive facilities that are provided for reference to guide future designers regarding standards for quality and aesthetic of the built environment. The five topics represented by the figures are:

- Figure F-1 People's Center Facilities
- Figure F-2 People's Center Facilities
- Figure F-3 Village Center and Ohop Equestrian Center Facilities
- Figure F-4 Picnic and Camping Facilities
- Figure F-5 Interpretive Facilities and Trails
- Figure F-6 Site Restoration Activities

Building Development Zones

Four building development zones are identified in the master plan, each with a related, but distinctive design character (see *Figure B-7: Conceptual Organization, page II.B.9*):

Village:

Using contemporary response to sustainable building practices, the village is laid out on an axis corresponding to the view of Mount Rainier. (See *Figure 3- Village and Ohop Equestrian Center*)

The People's Center and Tribal Management Area:

The cultural and aesthetic values of the indigenous people belonging to the Southern Lushootseed Association of the Southern Coast Salish (primarily the Nisqually Tribe) will guide the design of the People's Center and Tribal Management Area facilities. This will require close coordination with the Tribe or designated representatives. At this time little is determined regarding the scope, functions and character of many of the Native American elements beyond interpretation and incorporation of traditional forms and materials of the Salish people. Designs may include understanding and response to cardinal directions, circular and/or organic forms; use of native plant materials, local stone, and cedar logs and planks. Visual design examples from other northwest tribal projects are provided for reference (See *Figures F-1 through F-2 Character & Qualities*).

People's Center facilities will include:

- Interpretive Center
- Observatory
- Chief Leschi's Village
- Shaker Church Reconstruction
- Medicine Springs
- Mashel Prairie

Ohop Equestrian Center:

The Ohop Equestrian Center builds on the reuse of the existing Milk Barn. This is the only significant structure of outstanding scenic and historical significance on the state park site. Reuse of this structure should enhance and preserve the exterior. Modification of the interior space and layout is allowed to meet the program needs of potential operating concessionaire (See *Figure F-3*).

East Mashel Plateau:

A contemporary response to sustainable building practices, similar to buildings in the Village, will guide development. However, there is no mountain vista in this zone. For the East Mashel Plateau development area the most significant aesthetic context is the experimental tree planting rows, mosaic of various plant test plots and pattern of roads within the UW Center of Sustainable Forestry at Pack Forest.

Park Design Guidelines Organization

Design guidelines presented here are organized into four sections:

1. *Low Impact Development and Architectural Guidelines (LIDAG) for the Nisqually Watershed, 2006*, developed by the Nisqually River Council

2. State Park guidelines applicable to the NMSP Site Master Plan
3. General and specific site design guidelines
4. General and specific building design guidelines
1. *Low Impact Development and Architectural Guidelines (LIDAG) for the Nisqually Watershed*

The Nisqually River Council's 2006 guidelines were reviewed for applicability to the Nisqually-Mashel State Park Site master plan areas and elements. The following site and building design guidelines based on this document apply.

Site Design Guidelines

Pre-design Site Analysis

- Understand and record natural and cultural resource patterns before proceeding with development plans

Site Planning & Design

- Respond to what was learned from the pre-design site analysis
- Cluster buildings and other development to reduce development footprint
- Retain existing natural features and systems, including: existing native vegetation, soils and drainage courses – protect these resources during construction periods
- Locate intensive use facilities away from site hazard or environmentally critical areas
- Reduce impervious surfaces by reducing building footprints, road widths and lengths

Storm Water Management Design

- Use alternative green technologies where appropriate, including pervious pavement and rainwater harvesting
- Integrate storm water management
- Minimize and manage storm water at the source or location of development

Construction Activities

- Establish erosion and sediment control from the beginning through completion of facility construction
- Limit removal or compacting of site soils
- Limit the amount of area devoted to construction staging and material storage
- Rehabilitate all disturbed natural systems
- Use on-site materials, where appropriate
- Manage site soils to preserve existing soil structure and apply Low Impact Development principles for soil protection and enhancement
- Provide for reforestation of cleared areas



Figure F-1

Character & Qualities: People's Center Facilities



Art & Sculpture



Beaver Lake Park, Issaquah, WA

Traditional Knowledge Camp



SE 10.00 THE WINTUN, THE FIRST PEOPLE
(Edge of Shasta 47 Site)

Theme:
Winter Settlement and the Use of Regional Resources

Turtle Bay Exploration Park, Redding, CA



Jilkaat Kwaan Cultural Heritage Center
and Bald Eagle Observatory, Klukwan, AK



Cultural Interpretive Walks

Figure F-2

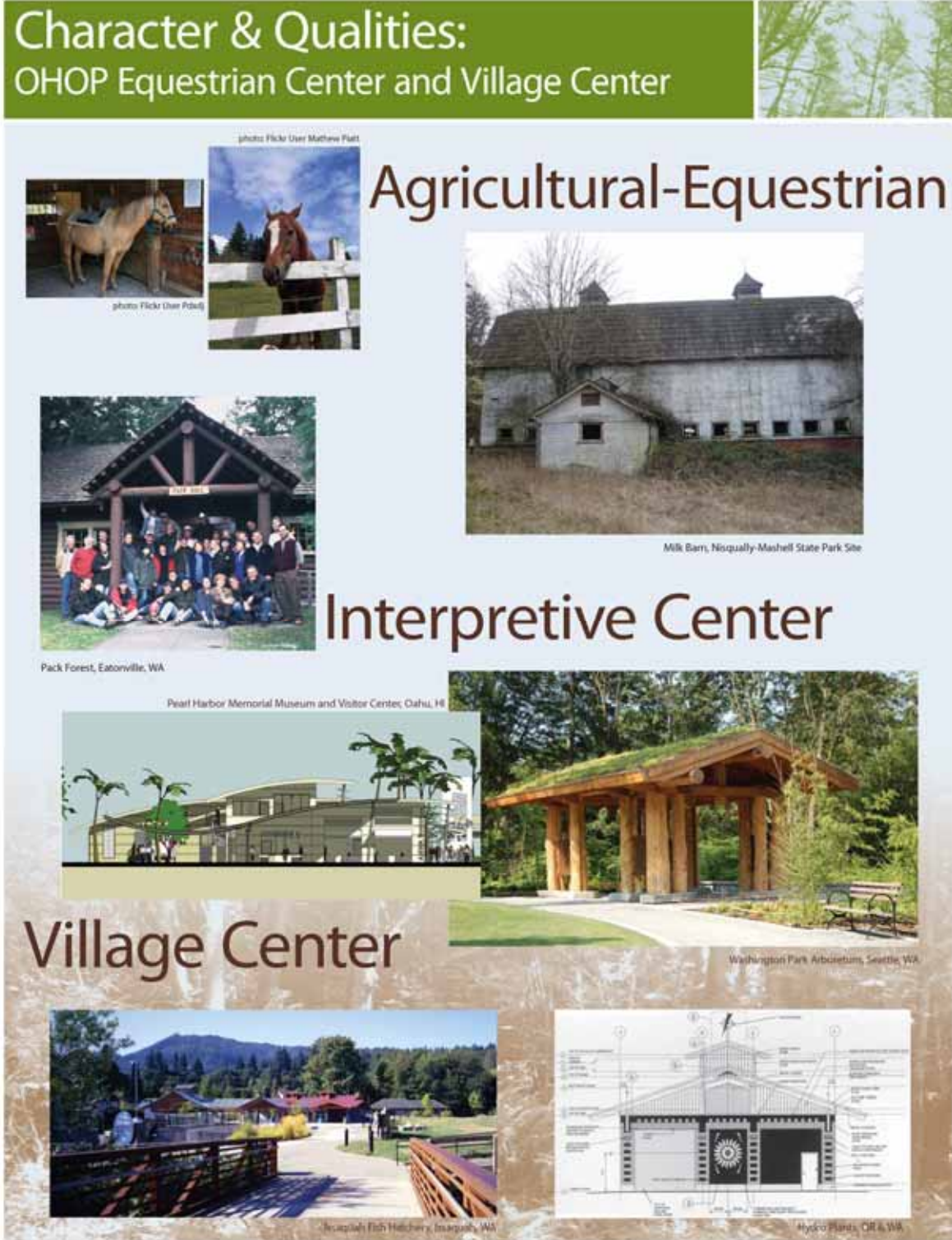


Figure F-3

Character & Qualities: Picnic and Camping Facilities

R.V. & Tent Camping

Mountain Biking

photo Flickr User Square In The Barn

photo Flickr User Graham Ballantyn

Meeks Bay Resort Campground Rehabilitation, Lake Tahoe, CA

photo Flickr User Jordan N22

Beaver Lake Park, Issaquah, WA

Newhalem Campground, WA

Canoe Island Ecological Preserve & Learning Center, San Juan County, WA


Kirk, Bellevue Botanical Garden, WA

Cabins

Figure F-4

Character & Qualities: Environmental Education and Trails

Environmental Education



Washington Park Arboretum, Seattle, WA

Lowry Park Zoo Discovery Center, Tampa, FL

Hiking Trails




photo: Flickr User Opswamk, via Slansky By


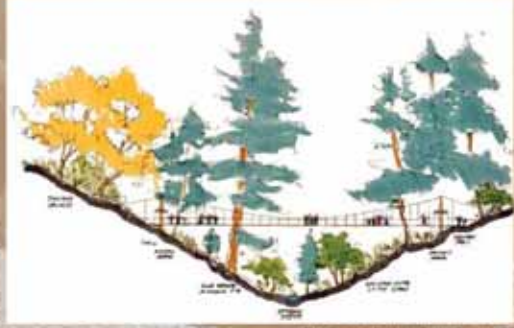


photo: Flickr User Day & Thompson

Nature Walks



The Canopy Project, Curry County, OR

Canopy Bridge

Figure F-5

Character & Qualities: Site Restoration Activities



photo: Flickr User Sean Munson

Prairie Restoration



Des Moines Beach Park, Des Moines, WA

Stream & Salmon Habitat Restoration

Mendenhall River Engineered Log Jam,
Juneau, AK



photo: Flickr User David Anthony Porter



photo: Flickr User Snappy Jones



photo: Flickr User Ian Huotala

Forest Restoration

Figure F-6

Building Design Guidelines

- Use green and water retention roofing systems (where appropriate), including: vegetated roofs, water collection cisterns, dry wells, splash blocks and rain gardens
- Apply Low Impact Foundation Technologies (LIFT)
- Apply sustainable building technologies, including:
 - Efficient building framing systems
 - Recycled building materials
 - Sustainable building products
 - Low flow fixtures

2. State Parks Guidelines

The Washington State Parks and Recreation Commission has developed a sign manual, paint and roofing policies, and a draft policy on exterior building standards. These guidelines were reviewed and where applicable are referenced or incorporated into this document. In addition, the de-facto standards for State Park campsites are also referenced.

Campsite Design Guidelines

The most current campsite design guidelines shall be used as starting points for campsite layout and design, including standards for:

- Overall privacy
- View
- Accessibility
- Density options
- Single back-in
- Single pull-through
- Cascading pull through
- Accessible campsites

In so much as these standards are based on density standards of 3 -5 sites per acre, it will be necessary to modify these standards where site conditions and park camp standards for enterprise recreation RV camping may call for higher densities (10-15 sites per acre).

Sign Manual, 1979

This extensive document provides guidance to the State Park's sign and marking system. Although Nisqually-Mashel State Park Site will require a unique response for signs and markers, the initial design projects should review the manual to determine appropriate

elements to incorporate within this new park. The unique aspects of the park to be reflected in signage come from several park objectives

- Celebration of Centennial Park designation
- Incorporation of Native American – Salish/Lushootseed language
- Coordination with Interpretive Plan for the park
- Reflective of unique site qualities and resources

3. Site Design Guidelines

General Site Design Guidelines

Service Access

- Provide service access, when required, at:
 - Locations where the access can be integrated with other paving areas or
 - The perimeter backside of the buildings - screen access from public view using earthworks and planting as primary screening measures

Storm Water Management

- Design grading and drainage plan to direct water flow into on-site storm water and infiltration systems
- Design, construct and manage water quality and storm water facilities as functioning components of the sites' natural environment and landscape systems, features, forms and patterns

Site Utilities (Water, Gas, Power, Waste and Communications):

- Locate where screening is easily accomplished with retained or enhanced forest vegetation
- Locate underground where possible – especially distribution lines and pipes
- Locate lines within roadway and trail corridors or co-join with other utilities

Grading

- Protect and enhance site landforms through responsive site grading and low impact land shaping practices
- Balance on-site or limit off-site export of soil and excavated subsurface materials
- Limit import of site construction materials and soils

Site Walls

- The first choice for retaining walls is stacked/dry laid local stone systems
- When used, develop wall systems with a consistent character and quality throughout the park
- Incorporate large anchor, marker or accent stones into all wall segments

- Construct seat and/or retaining walls that require reinforcement with stone veneer finishes or cast-in-place stone embedment's
- Design top of seat walls to be level for sitting or display

Barrier or Marker Stones

- Place large stones for barriers or markers so that at least one third of the stone is below grade – whether in a berm or level area
- Design the top surface of stone barriers in camping areas level for use as seating, equipment placement or other camp use

Paving

- Disconnect or break-up continuous or contiguous impervious surfaces – establish breaks and planting strips in paved parking areas, roads, driveways and pedestrian/plaza areas
- Provide shade cover over paved and other heat sink surfaces

Materials

- Use a broad palette of locally found materials, with emphasis on wood and stone
- Base color selection on the palette of the natural world of the site and Nisqually River basin – seasons, earth and plants
- Salvage and reuse on-site natural resources, where appropriate
- Where practicable, use river cobble or other local stone veneer/embedment for site walls

Interpretive and Wayfinding Signs

- Design park facilities so that wayfinding is apparent without the need for signs, and where possible, integrate interpretation into the facility design, rather than relying solely on signage.
- Where good facility design is inadequate for proper communication, develop a hierarchy of wayfinding and interpretive signs reflecting the cultural, conservation and renewal interpretive themes and character. Sign types will include:
 - Primary and secondary feature identification signs
This sign is intended to identify large Park areas that have multiple features or facilities within and those which have smaller single or stand alone Park features or facilities
 - Primary and secondary building identification signs
Where a building's use is not otherwise apparent, this sign is mounted on several surfaces and is used to identify public features as part of a building, such as park welcome centers, restrooms or offices.
 - Vehicular and pedestrian directional signs
Where necessary, these signs serve to both direct vehicles and pedestrians to, in and around the Park and as well as reinforce ownership and

operations. Pedestrian signs are used to guide trail circulation as well as between features and facilities within a given Park area

- Regulatory signs
These signs are a collector of multi-purpose regulatory messages. One regulatory sign shall be posted at the entry to each of the major Park areas, including: Welcome Center, Village Center, Day Use, Camping, People's Center, Ohop Equestrian Center and East Mashel Plateau areas
 - Informational signs
This sign is used to highlight features within the park, such as a unique view, landform, or cultural landmark. It are also used to hold a temporary message
 - Trail markers
This wayfinding element is intended to provide both orientation and interest. The markers are scaled and located to match the type of trail and its use, such as: pedestrian, multiple use, equestrian or back country bicycle
 - Kiosk
This is a multiple purpose “collector” of messages and orientation displays. Kiosks are roofed to protect messages and provide a “place” for the user. The Kiosk allows for temporary messages including maps and displays – these elements are shielded to further protect and maintain the integrity of the message and material
- Incorporate Lushootseed language in signs, particular as they relate to place names and destinations within park

Irrigation

- Limit the need for long-term irrigation system by designing park areas with drought tolerant native plant species and planting techniques – thus limiting the need for long-term water demand
- Apply irrigation strategies such as: drip systems, temporary systems for establishment, permanent irrigation only for lawn areas at Village Center or use of recycled, grey water systems or cisterns that aid in plant establishment and health, while reducing water demand and usage once plants are established

Planting

- Remove invasive plant species and apply *Stewardship Planning and Forest Health* management guidelines for all forest, wetland, prairie and other critical habitat within the park
- Use native plant materials (Reference *Environmental Constraints Report - Appendix A: Vascular Plants in Nisqually-Mashel State Park Site*)
 - Upland Forest

- Lowland/Floodplain Forest
- Wetland
- Meadow

Exterior Lighting

- Select energy-efficient lamps and ballasts
- Install efficient, low glare luminaires to minimize light pollution to the night sky
- Use controls to turn lights off when not needed

Specific Site Design Guidelines – (Character, Materials, Dimensions)

Vehicle Circulation

- *Existing Mashel Prairie Road:*
Use and maintain much of the existing road alignment and paving, as shown in the master plan's circulation layout design
- *Park Roadways :*
22 foot wide asphaltic concrete paving with 6 foot wide shoulders
(This roadway/lane width guideline meets current Pierce County standards. Future park roadway design shall examine possible reductions in lane and shoulder widths while providing for emergency vehicle access and maintaining safe circulation facilities)
- *Existing River Access and Maintenance Roads:*
12 to 16 foot wide – unpaved
- *Camping Area Roads:*
10 to 12 foot wide pervious or asphaltic concrete paving
- *Main parking areas:*
Asphaltic concrete paving, with consideration of pervious paving if soil testing and analysis confirms required permeability
- *Secondary or overflow parking areas:*
Pervious native grass surfaces
Compacted crushed surfacing as secondary option

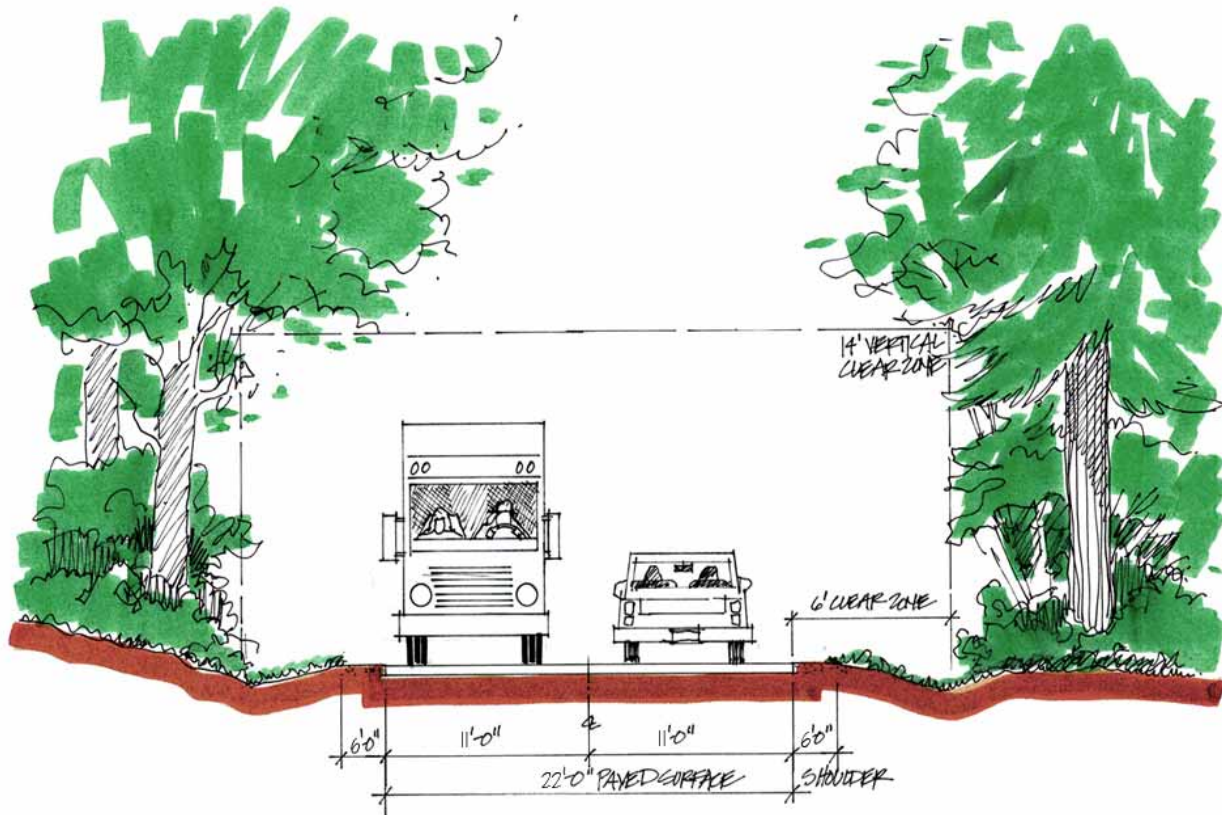


Figure F-7: Park Roadway

Pedestrian, Bicycle and Equestrian Trails

- ***Primary Multi-Use Trails***
 - 10 foot wide asphaltic concrete paving with 2 foot wide shoulders
 - 5 foot side-of-trail clearance to obstructions
 - 2 foot side of trail horizontal obstruction/shy zone
 - 12 foot vertical clearance to overhead obstructions
 - ADA Compliance:
 - Strive to provide universal accessibility
 - Visibility and warning at intersections
 - Trail profile grades less than 5%
 - Trail cross grades less than 2%

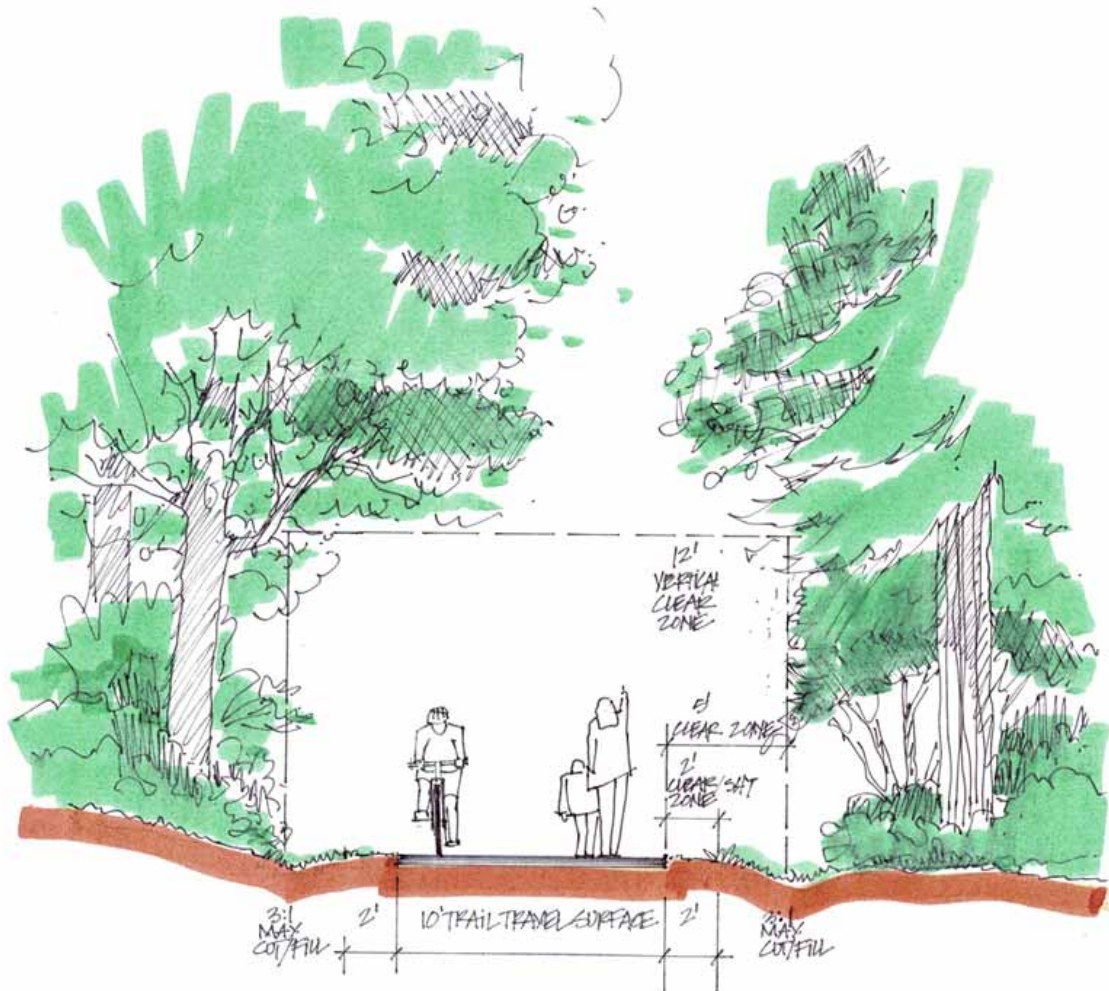


Figure F-8: Multi-Use Pedestrian/Bike Trail

- **Secondary Multi-Use Trails**
 - 8 to 10 foot paved or unpaved
 - 5 foot side-of-trail clearance to obstructions
 - 2 foot side of trail horizontal obstruction/shy zone
 - 12 foot vertical clearance to overhead obstructions
 - ADA Accessibility:
 - Strive to provide universal accessibility
 - Visibility and warning at intersections
 - Trail profile grades less than 5%
 - Trail cross grades less than 2%

- *Tertiary Multi-Use Trails*
 - 6 to 8 foot wide accessible surfacing
 - 5 foot side-of-trail clearance to obstructions
 - 10 foot vertical clearance to overhead obstructions
 - ADA Accessibility:
 - Strive to provide universal accessibility
 - Visibility and warning at intersections
 - Trail profile grades less than 5%
 - Trail cross grades less than 2%

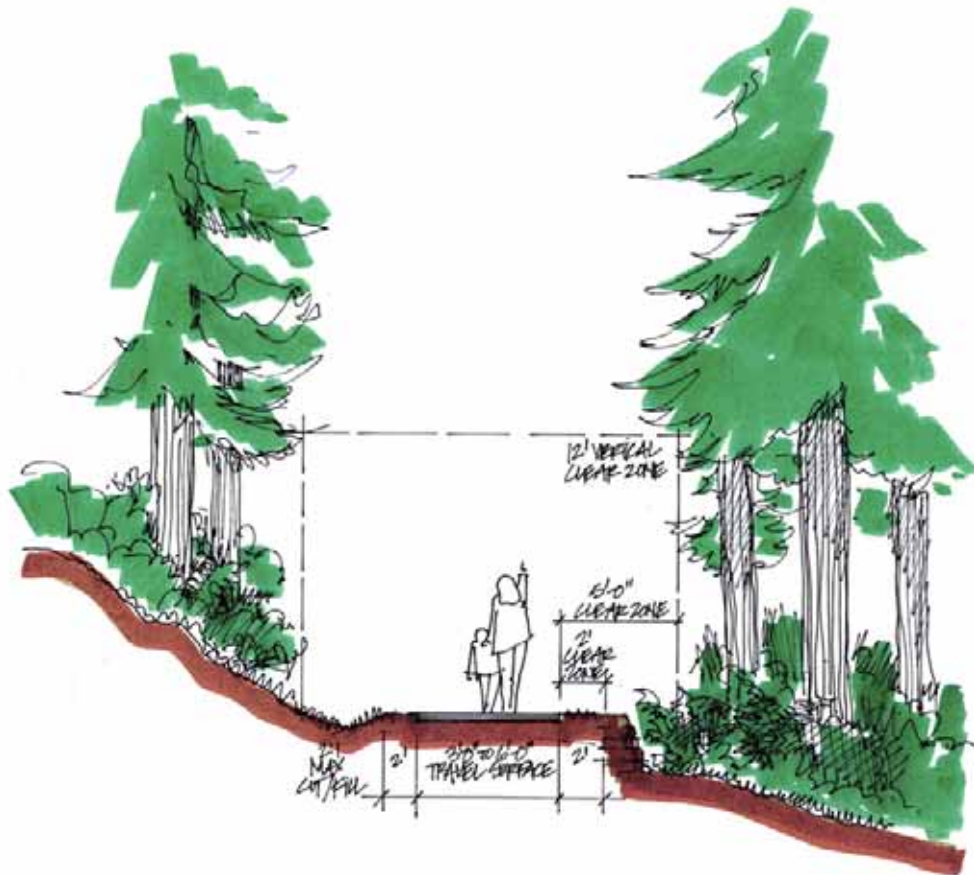


Figure F-9: Pedestrian Trail

- *Pedestrian Trails (Unpaved)*
 - 3 to 6 foot unpaved trails with erosion control surfacing
 - 5 foot side-of-trail clearance to obstructions
 - 10 foot vertical clearance to overhead obstructions

- *Challenge Course Bike Trails*
 - 2 to 5 foot unpaved trails with erosion control surfacing
 - 5 foot side-of-trail clearance to obstructions
 - 12 foot vertical clearance to overhead obstructions

- *Equestrian Trails*
 - 3 to 6 foot unpaved trail
 - 5 foot side-of-trail clearance to obstructions
 - 14 foot vertical clearance to overhead obstructions
 - Visibility and warning at intersections

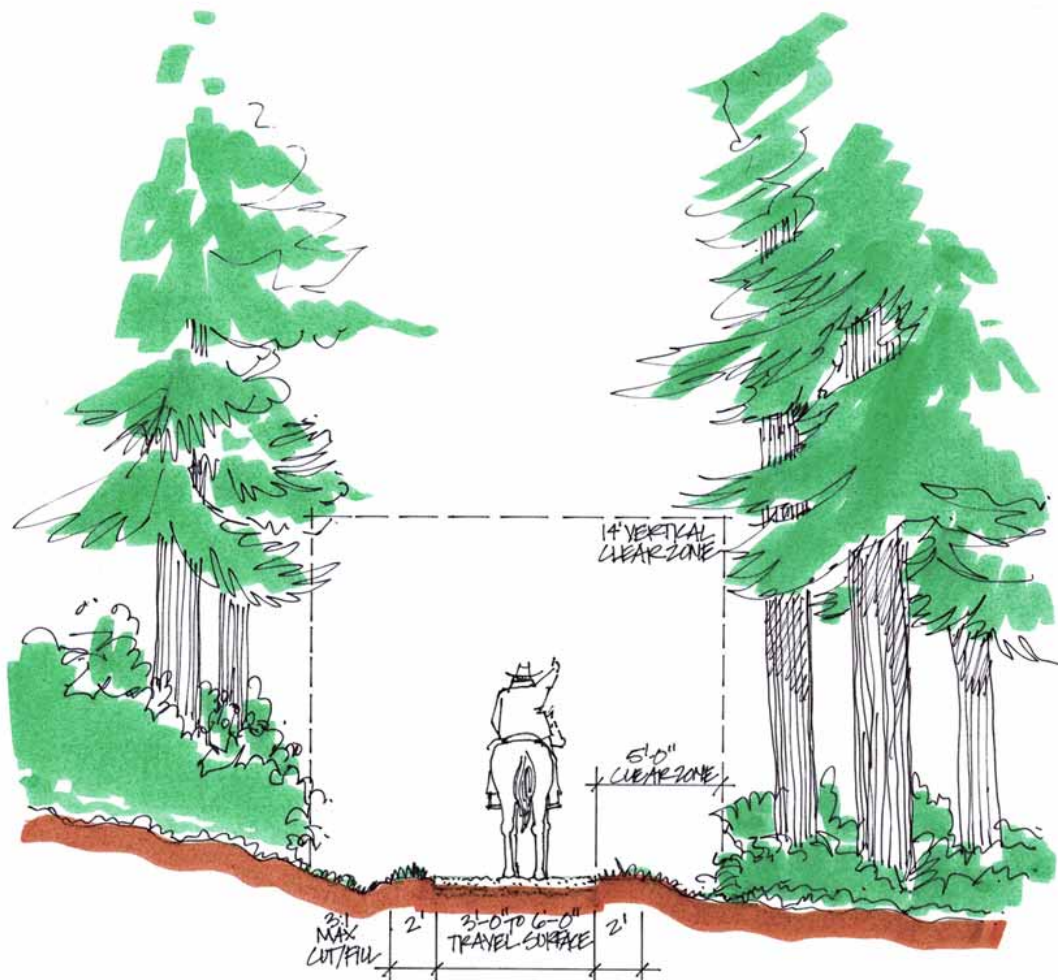


Figure F-10: Equestrian Trail

Mashel and Nisqually River Valley Overlooks:

- Access overlooks via spur trails approximately 100 – 200 foot long and separated from adjacent loop trail
- Protect both visitor and bluff edge habitat with railings at overlook approach
- Interpret natural and cultural history of river valleys

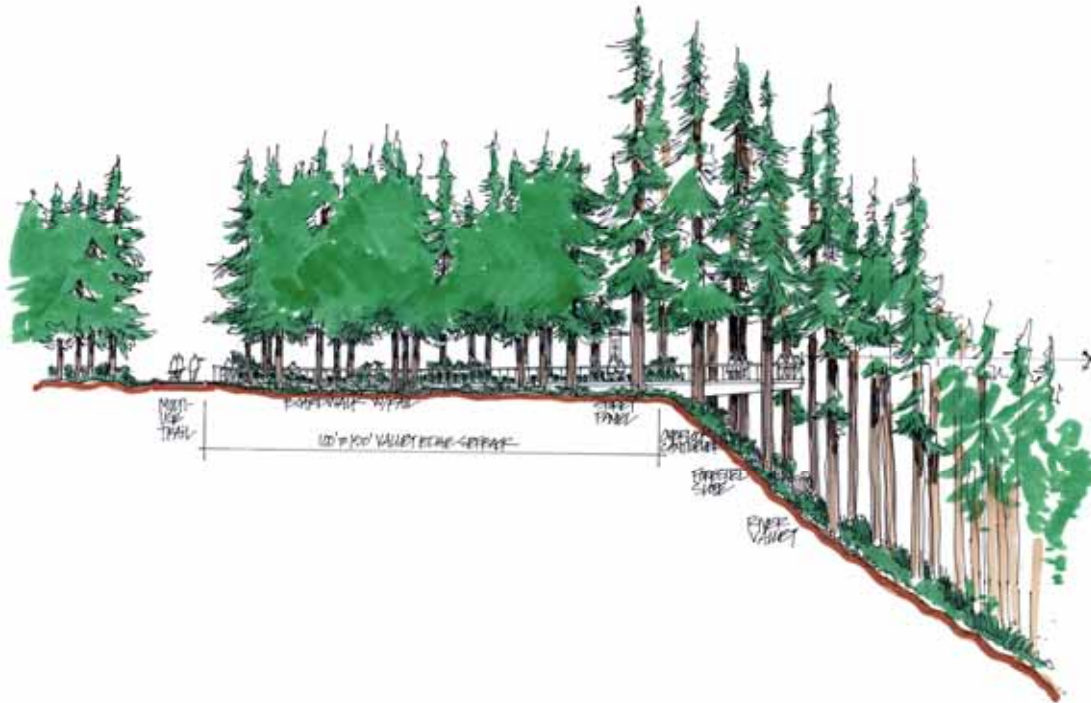


Figure F-11: Overlook Section & Illustration

High Bridges

(Park Bridges Linking Plateaus, Edge to Edge, over the Mashel and Nisqually Rivers)

The high bridges serve pedestrians and walked-bike users. No equestrian or vehicles are permitted. All high bridges shall be 6 feet wide. The lengths of the three high bridges are:

- South Mashel River High Bridge – Central Plateau to East Mashel Plateau
 - 1,300 foot length
- North Mashel River High Bridge – Central Plateau to East Mashel Plateau
 - 1,500 foot length
- Nisqually River High Bridge at Ohop Creek Confluence
 - 1,100 foot length

For each of the bridges, specific guidelines apply:

- Utilize a cable-stay design, without in-valley supports
- Include interpretive displays, seating and rest facilities at bridge approaches and landings
- Incorporate Native American and Nisqually-Mashel State Park Site symbols in bridge railings and towers



Figure F12: High Bridge with Interpretive Panels

Low Bridges

(Bridges over Mashel and Nisqually Rivers and Ohop Creek at the riverbank/floodplain level)

The lengths of five low bridges are:

- Mashel River Bridge at washed out section of Old Logging Road
(300 feet length x 10 feet width)
- Nisqually River Low Bridge at Mashel River / Nisqually River Confluence
(200 feet length x 10 feet width)
- South Ohop Creek Bridge
(100 feet length x 10 feet width)
- North Ohop Creek Bridge
(60 feet length x 10 feet width)
- Existing Mashel River Bridge

For each of the bridges, specific guidelines apply:

- Avoid impact on creek or river valley environments and natural hydraulic patterns
- Maintain a low profile design
- Span as much distance between supports as possible
- Locate bridge deck above 100-year flood levels
- Incorporate open character railings to maintain views through

Road Trail Crossings

Ohop Creek Valley and SR 7 Crossing (Under-crossing – Pedestrian/Bike)

This under-crossing uses an existing highway bridge. Incorporate the following standards:

- Provide positive drainage
- Create 14 foot minimum vertical clearance
- Maintain 12 foot width

Eatonville Highway West and SR 7 Crossing (At Grade - Pedestrian/Bike)

This at-grade crossing will require comprehensive engineering. The highway intersection is complex, with a “Y” approach and turn lanes and a location along a broad curve of SR 7.

UW Pack Forest and SR 7 Crossing (Under-crossing – Pedestrian/Bike/Equestrian)

This under-crossing is located just to the east of the intersection of UW Center for Sustainable Forestry’s Pack Forest Conference Center entry drive and SR 7. Here the highway rises in elevation allowing for a more open under-crossing approach. Guidelines are:

- Provide positive drainage
- Provide 14 foot minimum vertical clearance
- Maintain 12 foot minimum width
- Meet geometric standards for safety, warning and orientation at under-crossing approaches
- Maintain maximum 2% slope within the under-crossing and maximum 5% at the approaches
- Provide compacted crushed surfacing

Camping Areas

- Vehicle camp pads sizes:
 - RV – back-in or pull through (allowing for RV vehicle and 1 additional non-RV vehicle), 10 foot width
 - Vehicle back-in (2 vehicles), 8 foot width
 - Equestrian vehicle (Vehicle w/Trailer and one additional vehicle), pull through and back-in, 10 foot width
- Camp site amenities:
 - Picnic table
 - Two tent areas (vehicle/tent areas)
 - One tent area (RV and Cabin areas)
 - Rock or log barriers (parking pads and exposed camp area roadway sections)
 - Retained and enhanced forest vegetation screening
- Camp utility services:
 - Full hookup services (Power, water, WIFI, waste)
 - Basic services (water and power)
 - No services

4. Building Design Guidelines

General Building Design Guidelines

Sustainable Design

- Design all new buildings to a minimum LEED silver level

Energy Efficiency:

- Apply energy conservation technologies and design principles to reduce heating and cooling need
 - Relax design criteria to allow wider temperature ranges
 - Reduce solar loads by shading windows

- Introduce occupancy sensors that turn off equipment when people are not present
- Produce electricity on-site from renewable sources
 - Use daylight instead of light fixtures during the day
 - Reclaim heat from ventilation air streams
 - Extract heat from the ground through geothermal exchange, where practicable
- Design buildings and functions with appropriate adjacencies to minimize vehicular travel on site
- Use passive approaches to heating, cooling, ventilation and lighting including:
 - Good solar orientation
 - Seasonal shading and overhangs
 - Natural ventilation (orientation to breezes)
 - Narrow building sections
 - Operable envelope openings, cross ventilation, stack effect
 - Daylight (orientation, reflection & diffusion of direct sun, high daylight openings, narrow building sections)
 - Passive cooling (shading, thermal mass, night flush, etc.)
- Design efficient building envelopes with minimal infiltration and appropriate thermal mass and insulation
- Install efficient electric lighting
- Design efficient heating and air conditioning systems in spaces that need them
- Reduce plug loads by specifying efficient *Energy Star* computers, equipment & appliances

Water Efficiency:

- Reduce consumption using efficient water fixtures
- Capture and use rainwater runoff from roofs on-site to eliminate use of potable water for irrigation purposes

Solid Waste:

- Apply and enforce pack-it-in / pack-it-out policies
- Provide program, locations, wayfinding, screening and receptacles for recycling and composting
- Initiate a zero waste-stream to landfills at phase 1 implementation

Materials

- Contemporary materials such as concrete, metal structural members, and energy efficient glass shall also be considered – allowing for consistency with other park materials and within each development zone
- Base color selection on the palette of the natural world of the site and Nisqually River basin – seasons, earth and plants

