

MOUNTAINS TO SOUND GREENWAY

IMPLEMENTATION PLAN

Volume 3



ROADSIDE MASTER PLAN

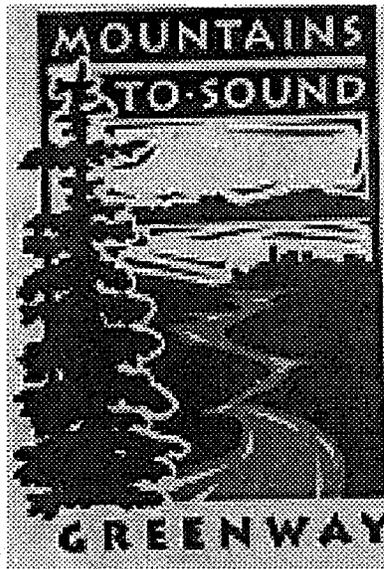


Washington State
Department of Transportation



Roadside Masterplan

**Mountains to Sound Greenway
Puget Sound to Elk Heights
Interstate 90: MP 1.94 to MP 93.62**



Volume 3
of the
Mountains to Sound Greenway Implementation Plan

May 1997
WSDOT Northwest Region Planning Office

John Okamoto, Regional Administrator

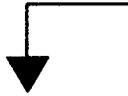
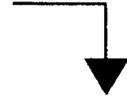


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Introduction



The Mountains to Sound Greenway Roadside Master Plan (RMP) is Volume #3 of the Greenway Implementation Plan. The RMP provides the support of the Washington Department of Transportation for the scenic highway protection and enhancement goals of the Mountain to Sound Greenway Trust. As a part of the WSDOT Route Development Plan, the RMP provides guidance for all planning, design, construction and maintenance activities within the WSDOT right of way. In addition, it presents recommendations for resource management collaboration between jurisdictions outside the right of way. In 1991, the MTS GT assembled a 70 - person Technical Advisory Committee to meet the goal of working on a plan that enabled human activity and nature to coexist. The Mountain to Sound Greenway vision started with an emphasis on trails and recreation in the Snoqualmie Pass corridor. The challenge was to expand the beginning into a complete comprehensive plan. The process required the Committee to go beyond trails to confront some hard economic issues. The Technical Advisory Committee is comprised of experts from public agencies, community groups and private companies. After a year and a half of work they created the Draft MTS Greenway Concept Plan in the size and form of a roadway map. This plan was provided for public scrutiny and comment. In 1993, Washington State Department of Transportation (WSDOT) began working with the Mountain to Sound Greenway Trust to develop a master plan for the 92 mile section of the I-90 corridor. The intent of this collaboration is to blend the highway into the regional landscape in an environmentally sensitive way while addressing all the issues of trails, enhancing wildlife habitat, preserving the working farms and forests, preserving and enhancing the scenic and recreational character while supporting appropriate economic development.



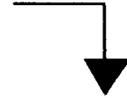


The greatest influence on the Mountain to Sound Greenway viewshed comes from outside the WSDOT right of way. While the viewshed extends several miles from the roadway, the WSDOT right of way typically extends only 100 feet from the edge of pavement. Successful preservation and enhancement of the existing character and viewshed depends on collaborative efforts by the various interests and jurisdictions, especially in regards to future development. Collaborative effort is key to realization of the Greenway vision. Land use planning, Transportation development, design, construction and maintenance will shape the future character, environment, and livability of the Greenway. This process can be guided in a positive direction by developing growth management laws and forest management practices that incorporate the RMP.

The Roadside Master Plan is divided into two sections.

Section One contains the key WSDOT recommendations for future planning and actions to protect and enhance the scenic, recreational and historic character of the Mountains to Sound Greenway. Section one is designed to be a principle policy reference point for WSDOT, public and private resources planners, jurisdictions and citizens.

Section Two is the inventory of existing conditions along the Greenway corridor, with detailed analysis of problems and potential solutions. This section includes the goals of the Greenway Trust, WSDOT goals, relevant supporting laws and regulations, Scenic Byway status of I-90 and a summary of public participation in Greenway planning. This section includes maps that pinpoint Manmade, Natural and Proposed Elements along the corridor.



SECTION ONE





ACTION ELEMENTS

This section outlines the action elements of this plan to actively pursue within the jurisdiction of WSDOT. Action elements or options that might be pursued with others are also identified to facilitate coordination and unification of the various interest groups. Fulfilling the goals of the Greenway will only happen with a common focus and diligent pursuit of these action elements and options. Overall planning and details need close coordination to bring the desired focus to a reality.

Comprehensive Planning and Coordination

- Set up mechanism to ensure the goals of WSDOT and MTSGT are coordinated and meet whenever revisions are scheduled within the WSDOT Rights-of-way.
- Ensure that all proposals involving decisions in planning, design, construction and maintenance within the right of way incorporate this Roadside Master Plan.
- Coordinate all planning, design, construction and maintenance activities within the WSDOT right of way to reflect and be compatible with the goals of the Greenway Trust.
- Coordinate highway architectural elements to unify the elements along the corridor. Provide opportunities for community identification with architectural elements
- Provide and maintain roadside vegetation to unify the corridor and to blend or screen development to be compatible with natural beauty of the corridor.
- Designate a coordinator familiar with the Greenway goals in landscape architecture to assist organizations coordinating designs, construction and maintenance to reflect the MTS greenway goals. Provide thorough design process on the I-90 Greenway.

Options

- Encourage and participate in collaborative efforts for proposals within the viewshed corridor yet outside WSDOT right of way.
- Partner with various interests to accomplish transportation related projects that support the Greenway goals and share costs.



Land use

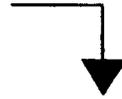
The roadside within the I-90 corridor will be used to compatibly integrate the transportation facility into the landscape and satisfy environmental needs.

Options

- Partner with the jurisdictional agencies to ensure the goals of the Greenway including livable communities, scenic quality, sustainable resources, economic opportunities, wildlife habitat, trails, etc. are realized.
- Collaborate with jurisdictional entities to minimize impact as development occurs within the greenway viewshed.
- Utilize the permitting process for development and utility accommodation to support the Greenway goals.
- Work cooperatively in conjunction with major improvement projects, adjacent jurisdictions and property owners to establish land buffer zones between the transportation corridor and other uses within the viewshed.
- Purchase right of way and easement is recommended as proactive measures to protect roadside character and limit necessity for future roadside mitigation expenses. The department is authorized to secure lands or interest in lands adjacent to any state highway for the preservation of natural beauty or historic sites or viewpoints, or to provide a visual or sound buffer between highways and adjacent properties (RCW 47.12 / Roadside Classification Plan 1996). Retention of surplus right of way is recommended to protect or encourage appropriate vegetation, correct unsightly conditions upon the right of way, provide a visual or sound buffer between highways and adjacent properties, or fulfill environmental functions. When adjacent lands are designated for actions that may impact the roadside, coordination with adjacent landowners to protect roadside character is recommended.

Highway Facility

- Plan and design new highway alignments and expansion projects to protect and enhance overall scenic experience by assuring, whenever possible, that travellers in each direction do not see vehicles coming toward them in the opposite direction. Plan for independent alignment and significantly divided and vegetated medians.
- Plan highway facilities with medians to accommodate future



expansion. Environmental impacts of additional right of way to meet these goals would be balanced with the benefits of the divided highway.

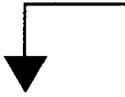
- Blend alignments with the land forms of the surrounding landscape. Incorporate buffer zones, berms and / or walls to separate the visual and noise elements.
- Place a high priority on use of vegetation and landform to integrate built forms with surrounding landscape in accord with the principals in the Roadside Classification Plan.
- Coordinate planning of major highway projects for community and regional trail system linkages.

Visual Elements

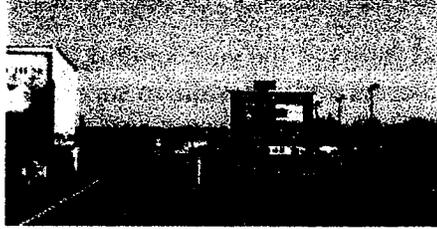
- Create an interdisciplinary team to establish guidelines and implement a coordinated, consistent and uniform appearance of the visual elements compatible with the landscape character of the corridor when major highway projects are planned.
- Design, coordinate, and place all visual elements, including structures, bridges, retaining and noise walls, safety barriers, signs, fencing and utilities, to be in context with the landscape character and consistent throughout the length of the corridor.
- Locate and design all visual elements will be done to minimize impacts or enhance scenic qualities of the corridor. Use line, form, color, texture and materials for all elements to harmonize with Landscape Character and the specific setting.
- Modify to existing elements to blend line, form, color, texture and materials

Structures:

- Design and coordinate all structures to blend with the natural elements of the corridor and the other elements along the corridor.
- Use line, color, form texture and materials for all elements to harmonize with the landscape character and site location.
- Coordinate associated elements with structures such as signing, safety barrier type, and lighting to harmonize with the structure and the corridor.



Signing:



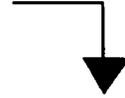
- Minimize signing within the corridor viewshed within the flexibility of traffic standards.
- Screen and work with local entities to eliminate visual encroachment from signs on adjacent properties to reduce visual clutter along the corridor.
- Unify signs within the Greenway.
- Pursue grants to develop and implement a sign plan.

Options outside the R/W

- Work with local jurisdictions and community groups to find approaches to signing that give both commercial and community visibility while reducing sign clutter at the entrances to towns and along the corridor. Town “gateway” signs might incorporate sculpture or historic elements with listings of town businesses, clubs, etc. without the competition of signs.

Highway Lighting:

- Coordinate within several guidelines to enhance scenic character whenever changes and additions to lighting fixtures in the corridor are necessary. The first guide should be to create the least light spillage beyond the highway. Secondly, where all new fixtures are being installed on a visibly continuous section of highway, fixtures should be designed to blend with surrounding scenery. Finally, when mixing new fixtures with the old, new fixtures should blend with existing fixtures.
- Special consideration should be given to using fixtures of natural materials or rustic design in recreation and historic areas when feasible with dark brown poles and fixtures generally recommended.

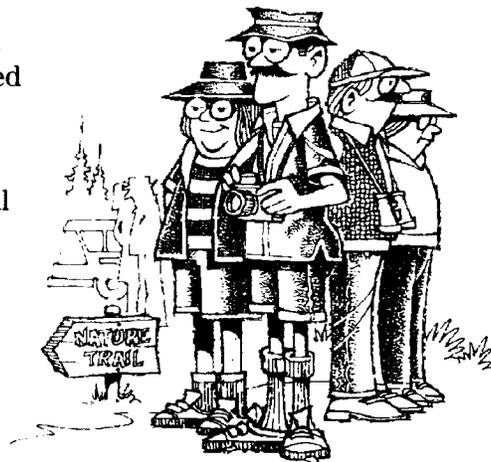


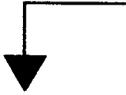
Rest Areas

- At the earliest stages, recognize that highway rest areas bring tremendous public use and visitation to an area and could enhance public appreciation of scenic and historic sites along the greenway.
- Coordinate any planning for rest areas along I-90, with other Greenway plans and developments.
- Review and coordinate design to ensure compatibility with the Roadside Classification Plan, the scenic highway system, MTSGT goals and community character.
- Incorporate historical, cultural, recreational information and interpretation into facilities at such sites.

Trails

- Provide opportunities for trail development along the right of way with interconnecting access trails to recreational, or commuter facilities.
- Provide safe, user friendly designs for all trail and associated facilities within right of way.
- Provide signing of trails designated along the corridor to meet the goals of the Greenway. Locate pedestrian / bicycle path signs at entrances, and every 5000 ft. of the pedestrian/bicycle trail.
- Plan and design the missing links between Lake Sammamish State Park and Thorp.
- Seek funding to finish the missing trail links, and sign trails utilizing a standardized MTSGT signing.
- Coordinate pedestrian/bicycle trail lighting, interpretive signing, informational kiosks, trail heads and parking in cooperation with local communities and land management agencies.





Vegetation Preservation/Restoration

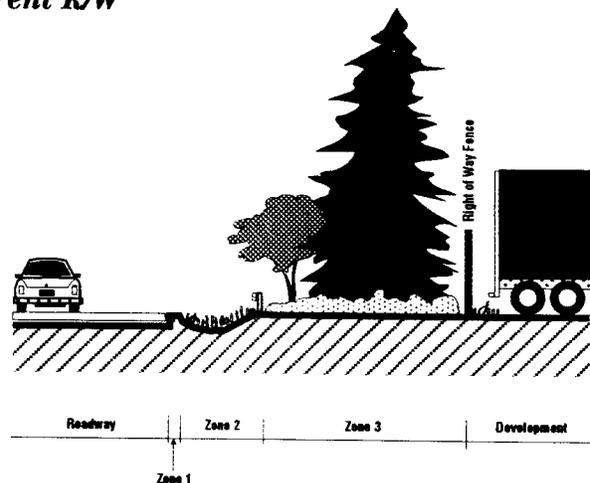
- Maximize preservation of desirable vegetation along the corridor through coordination of WSDOT planning, design and maintenance activities with this plan. Desirable vegetation might include native plant communities, natural or introduced vegetative screens and buffers and vegetation conducive to wildlife habitat..
- Provide enhancement projects and maintenance activities that are coordinated and fulfill the goals of the greenway. Encourage native plant communities.
- Create vegetative cover that enhances the scenic quality character and provides design function, ease of maintenance, and safety while providing adequate clear zone and sight distances.
- Promote vegetation diversity with open and enclosed areas of native plant communities.
- Screen undesirable or distracting views or construction to maintain landscape continuity and harmony along the corridor.
- Use plant communities to improve water quality, water runoff, and air quality and provide soil stabilization.
- Ensure roadside planting is sustainable over time.

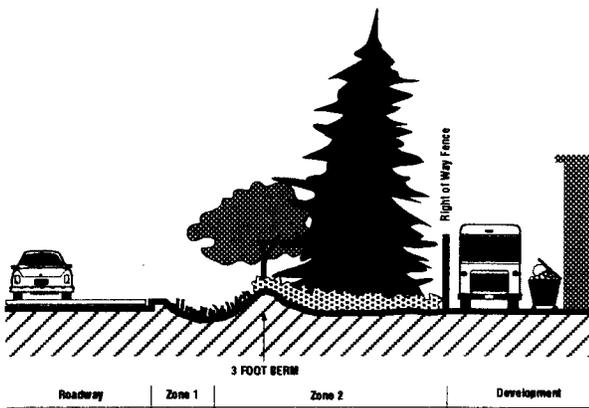
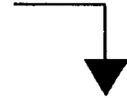
Buffers

- Provide buffers between the transportation facility and adjacent land uses within the available R/W. Buffers can be earth landforms, walls, vegetation or a combination of these.

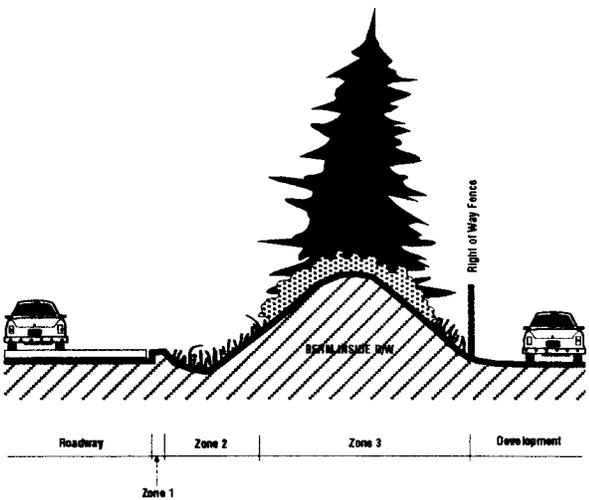
Options inside the current R/W

Option 1: *Guardrail or traffic barrier provides safety to allow trees within R/W and normal clear zone*

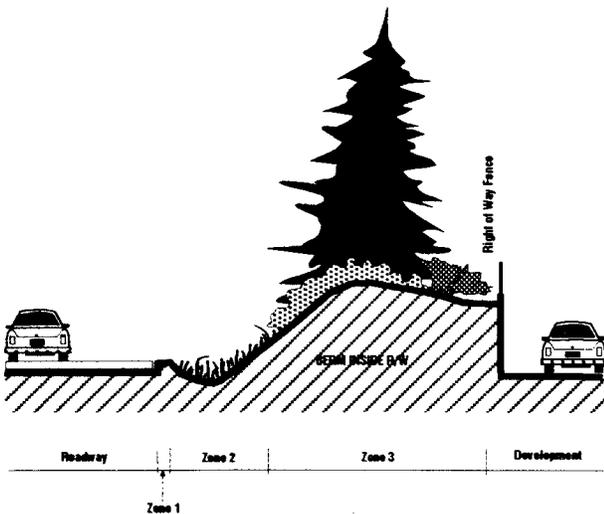




Option 2: *Small berm provides safety barrier to allow trees within normal clear zone*



Option 3: *Earth berm provides noise barrier, view screen and area to allow trees and shrubs within R/W of limited depth*

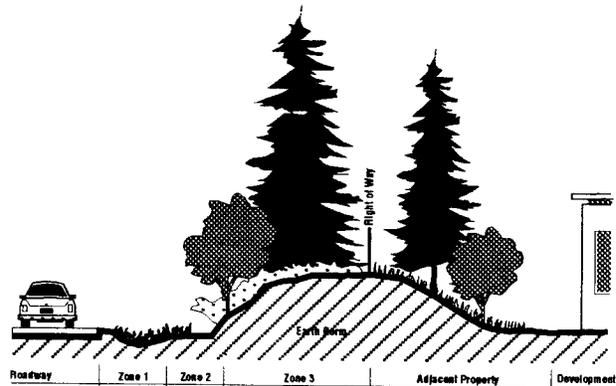


Option 4: *Retaining wall, earth berm and vegetation provide noise barrier, view screen and planting area for trees and shrubs within R/W*



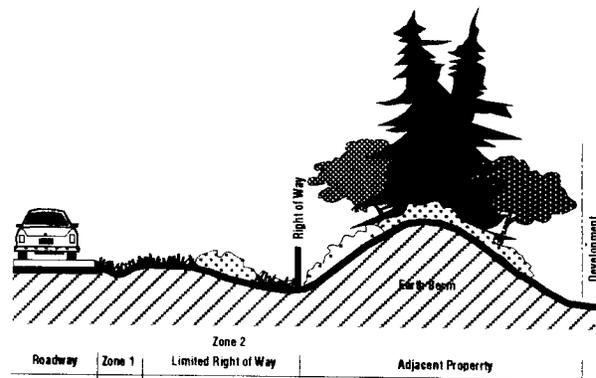
Options utilizing current R/W and adjacent property

Option 5: *Earth berm on WSDOT R/W and adjacent property provide joint area for greater depth of noise and visual screen of conflicting land uses*



Options outside the current R/W

Option 6: *Earth berm outside R/W provides separation of conflicting land uses, noise barrier and visual screen. Area could incorporate pedestrian/bicycle trail system.*

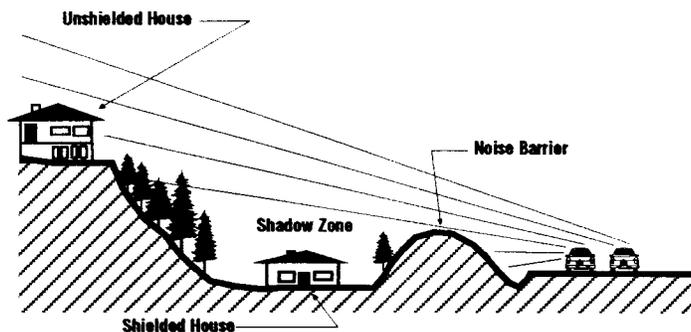


In conjunction with major improvement projects and in accordance with RCW 47.12 (allows the Department of Transportation to purchase right of way for preservation of beauty, historic sites, view points, safety rest areas and buffer zones) and the Roadside Classification Plan protect the roadside character by securing land in fee title or acquire airspace rights to ensure scenic quality of viewshed is maintained. Retention of surplus right of way is recommended to protect or encourage appropriate vegetation, correct unsightly conditions upon the right of way, provide a visual or sound buffer between the highway and adjacent properties, or fulfill environmental functions.



- Promote cooperation between the WSDOT, MTSGT and local jurisdictional agencies to achieve buffer zones on lands along the corridor adequate to screen incompatible uses from travellers and highway noise from adjacent property owners, and maintain scenic character in conjunctions with major improvement projects.

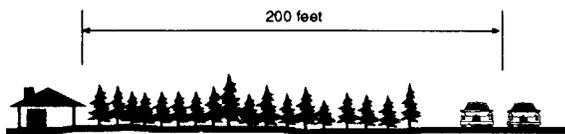
The Federal Highway Administration has a publication (Highway Traffic Noise by U.S. Department of Transportation/Federal Highway Administration, April 1991) that explains the necessity of a 200 foot width, dense vegetation to reduce noise created by highway traffic.



Shadow Effect of Noise Barrier

The lower house is protected by the barrier, but the upper one is not

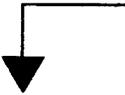
Vegetation, if high enough, wide enough, and dense enough (can not be seen through), can decrease highway traffic noise. A 200 foot width of dense vegetation can reduce noise by 10 decibels, which cuts the loudness of traffic noise in half. It is often impractical to plant enough vegetation along a road to achieve such reduction; however, if dense vegetation already exists, it could be saved. If it does not exist, roadside vegetation can be planted to create psychological relief, if not an actual lessening of traffic noise levels.



Loudness Cut in Half
10 dB Reduction



No Noise Reduction (Psychological)
Vegetation and Noise Reduction



Scenic Strips

Scenic strips are narrow parcels of land that provide an area to grow trees or build land forms that enhance the scenic character and livable community outside the highway corridor.

- Pursue acquisition of scenic land parcels, where warranted, to maintain the scenic quality along the corridor.
- Locate desirable viewing areas for view point turn outs/view points.
- Open and enhance views where safe.
- Screen undesirable views.

Options

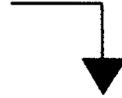
- Enhance scenic character by the purchasing a buffer outside the R/W. (See RCW 47.12 and the Roadside Classification Plan). It is usually not enough available WSDOT right of way to allow a dense screen planting to buffer any sizeable reduction in noise. A 200 foot width of dense planting can reduce the loudness of traffic noise in half.

Where WSDOT owns land parcels adjacent to the right of way, and these parcels play a visible role in supporting scenic character, WSDOT should retain ownership of these parcels or arrange exchanges with other public agencies that will manage them for scenic or recreational purposes (i.e. US Forest Service, DNR, State Parks, etc.).

Wildlife

- Connect existing wildlife habitat areas across the roadway with special effort to provide significant wildlife crossings where wildlife corridors have been identified by wildlife specialists.
- Maximize the wildlife habitat a safe distance from the vehicular traffic along the corridor.





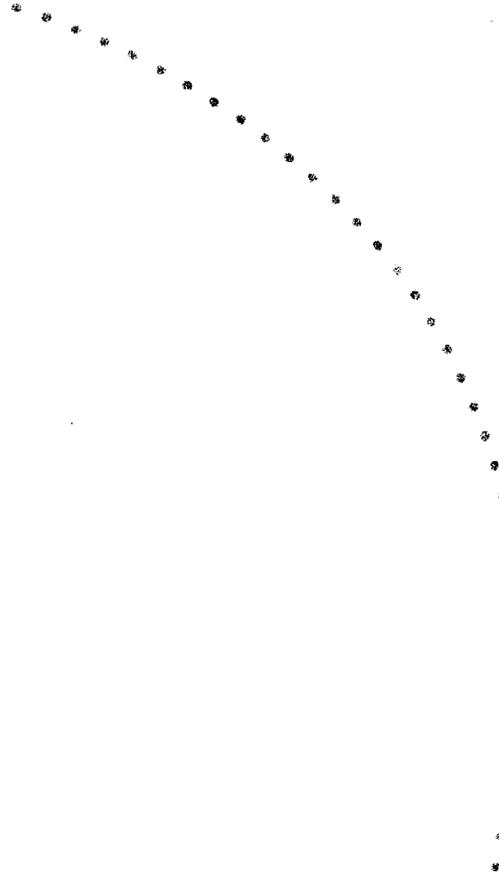
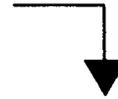
Water Quality

- Ensure quality is not degraded due to the transportation projects.
- Provide temporary and permanent erosion control measures to counteract the impacts caused by construction.

Maintenance

- Work in cooperation with maintenance staff at all levels to communicate the goals of the MTSG and implement them through maintenance activities.
- Seek funding to develop a Maintenance Plan for the Greenway to provide guidance for maintenance activities. Provide channels for communication between maintenance and MTSGT regarding maintenance plans prior to implementation.
- Coordinator will conduct periodic reviews with the Maintenance Division to ensure long term success of the Greenway Roadside Master Plan.





SECTION TWO

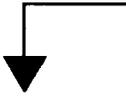




The following section of the Roadside Master Plan describes existing conditions along the corridor and discusses future directions. Many existing elements - such as landscape views and trails, are intrinsic to the natural scenic character that has given rise to the Mountain to Sound Greenway plan. Other conditions grow out of the regulatory framework of WSDOT and local jurisdictions and the development of human communities and infrastructure.

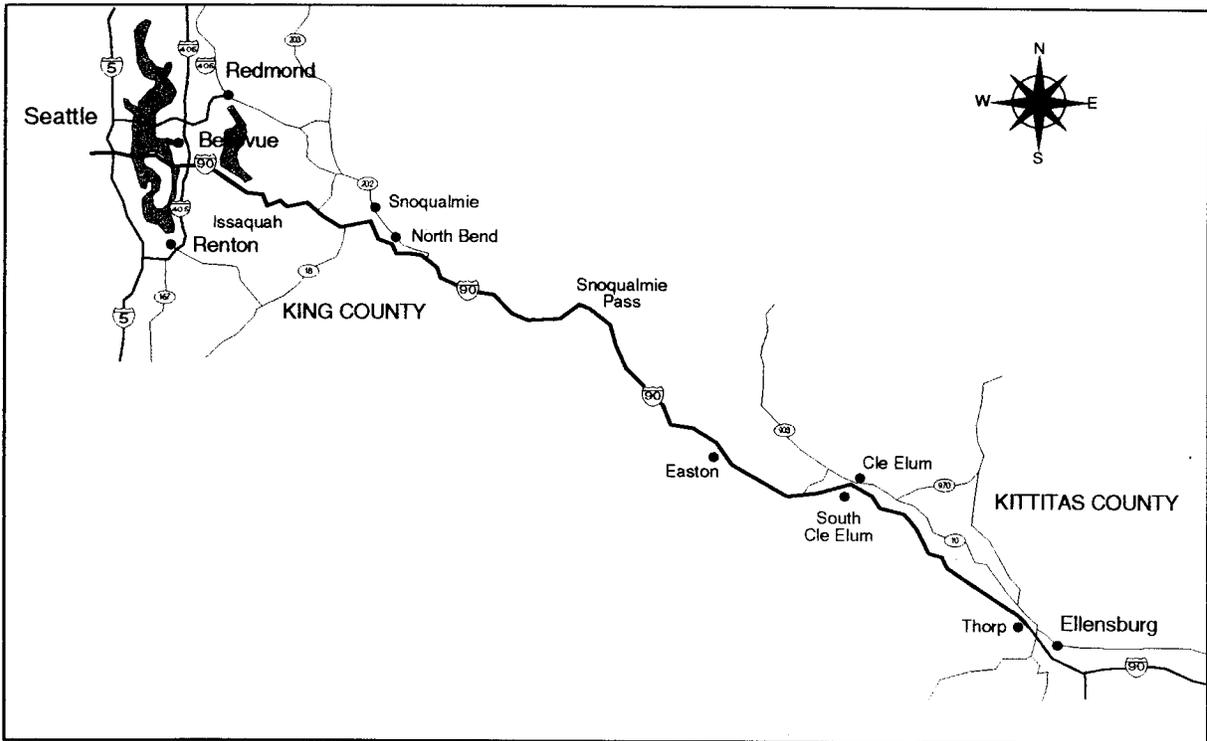
The purpose of the inventory of Existing Conditions is to lay the baseline from which to anticipate future development and change along the I-90 Greenway and to focus on elements and factors where changes in planning, coordination and implementation might better support the Greenway goals. Those changes are discussed in each section under future directions. Recommended Actions can be found in Section One of this Roadside Master Plan.

Three sets of maps accompany this Roadside Master Plan and they document all important sites, whether natural or man made, identified in this study. One set documents Manmade Elements along the corridor, a second set documents Natural Elements and the third set documents Proposed Elements (projects developed by WSDOT during the planning process to support the scenic highway goals of the Mountain to Sound Greenway and the RCW 47.12)



Vicinity

The study area extends approximately 92 miles along Interstate 90, from the Puget Sound area in Seattle, through the Snoqualmie Pass, and terminating in Thorp vicinity, about 7 miles West of Ellensburg. Seventy five miles of this section are designated as State Scenic and Recreational Highway. WSDOT will apply for National Scenic Byways status for this 75 mile area, based on the high scenic quality, recreational opportunities and general environmental experiences that exist along the route.



Vicinity map



Supporting Laws, Regulations and Policies

Several federal and state laws and regulations support the strategies of this Roadside Master plan. The following list includes the most supporting toward the Greenway goals:

Federal

- National Forest Land Management and Planning Act (1976).
Provides planning of harvest activities to be sensitive to environmental factors including view shed pursuits.
- Intermodal Surface Transportation Efficiency Act (ISTEA).
Provides a funding mechanism for a multitude of proposals, enhancement, restoration, trails, habitat, etc.
- Federal Highway Administration Act (FHWA).
Provides a funding mechanism for roadway and roadside development.

Washington State

- Transportation Policy Plan for Washington State
Sets policy for statewide transportation issues.
- Scenic and Recreational Highway Act (RCW 47.39)
Designates state scenic highways. Sets out guidelines for preserving and designating Scenic Highways. While this designation does not guarantee preservation of a character, it does recognize the existing character as a scenic area.
- Highway Advertising Control Act (RCW 47.42)
Controls advertising along state highways.
Prohibits billboards unless on premise. Sets up funding to purchase signs that are in violation of the Act.
- Scenic Vistas Act (1971)
Updates Highway Advertising Control Act to include scenic highways.
- Growth Management Act (SHB 2929 and RSHB 1025)
Controls development and growth within the state.



Provides direction of growth within areas that can handle growth and encourages protection of open space, wetland, and critical areas.

- Franchises on State Highways (RCW 47.44)

Controls overhead utilities in scenic areas.

Provides an opportunity to maintain the visual character of an area by prioritizing utility franchises to be placed underground.

- State Forest Practices Act

Controls how state and private forests are managed.

Emphasizes the environmental aspects of stream preservation, and provides environmentally and sensitive forest harvest.

- Roadside Classification Plan

Establishes a classification system for roadsides and documents roadside character statewide.

Facilitates coordination of roadside planning and design intent with maintenance actions through consistent treatment process.

Advocates the use of native plants and Integrated Vegetation Management to achieve sustainable roadsides, and provides guidelines for their use in roadside treatment.

- Revised Code of Washington (RCW 47.12)

Authorizes the department to secure lands or interests in lands adjacent to state highways for the preservation of natural beauty or historic sites, or to provide a visual or sound buffer between highways and adjacent properties.

- Highway Runoff Manual

Provides guidance to prevent erosion and sediment from leaving the site, preserve natural drainage, source control of pollutants, maintain or improve water quality, water quantity treatment, develop or mitigate wetlands.

*Ensures water quality improves or at least doesn't degrade.
Emphasizes the environmental aspects of stream preservation,
and provides environmentally and sensitive methodology for the
treatment of water that leaves the site.*

Local and regional agencies have developed regulations and ordinances pertaining to zoning, land use, development, access permitting, and other procedures that will have an effect on the nature of the region and the realization of the goals of the MTSG.

Scenic and Recreational Status



The Mountain to Sound Greenway covers 92 miles of Interstate 90, of which 75 miles are designated State Scenic and Recreational Highway. The scenic designation is important since the corridor is scenic in its present condition and can be improved or maintained with a dedicated and coordinated effort.

In 1967, a 52 mile long segment of I-90 from North Bend to Cle Elum was designated Scenic and Recreational Highway. In 1993, segments from Issaquah MP 18.33 to North Bend MP 30.87 (12.5 miles) and Cle Elum MP 82.95 to Elk Heights MP 93.62 (10.5 Miles) were added to the Scenic and Recreational Highway designation.

National Scenic Byway status will be applied for by the Mountains to Sound Greenway Trust based on the scenic character, intrinsic qualities, recreational opportunities and general environmental experiences that



exist along this heavily traveled route. If this designation is received, a unified and careful approach to planning and development of the corridor will result in preservation of the intrinsic qualities, higher quality of life, and economic return through the tourism industry.

The route is also recognized as the American Veterans Memorial Highway. This status may have implication if the veterans were to implement any enhancement projects.

Public Participation

In preparation of this Roadside Master Plan (RMP), the WSDOT hosted a 1-day workshop and review session for public participants including representatives of many of the agencies, jurisdictions, communities and businesses along the corridor. Their comments and recommendations have been integrated into this plan.

The most significant element of public participation, however, comes from the Greenway planning process. Since 1991, the Greenway Trust has involved hundreds of citizens representing a wide range of interests, from business to environmental protection, in developing specific plans for the scenic corridor. A Technical Advisory Committee met for nearly two years with continuous input from community activists, business and civic leaders and technical experts from many disciplines to develop the Greenway Concept Plan. That document has been presented to over 50 community and civic groups for review and comments since 1993 and has been universally approved with minimal changes. The plan has also been endorsed by the elected councils of every jurisdiction in the Greenway corridor two counties and nine cities and towns.

The Greenway Trust is financially supported by 165 individual donors and 46 corporate and foundation donors. Two hundred citizens participate actively in volunteer tree-planting projects have been organized by the Greenway Trust with assistance and Guidance from WSDOT.

GOALS FOR THE CORRIDOR

The Department of Transportation and the Mountain to Sound Greenway Trust cooperatively working together with their respective goals, will accomplish a plan that unifies the various interests along interstate corridor. The I-90 ribbon of right of way, owned by WSDOT, is significant as the common, connecting factor and provides the foreground to the scenery. The viewshed surrounding this highway corridor has a



more complicated concern, since it involves the relevant public agencies and private interests that traditionally have not coordinated activities into a common focus or purpose. A coordinated effort will need to occur to realize success of the goals. The issues of commercial visibility, buffering land uses, standards for regional development and regional tourism will have to be addressed.

WSDOT Goals

The Washington State Department of Transportation's goals pertaining to this corridor are as follows. These cover areas significant to the corridor that also relate to the interest of the MTSGT:

- Provide safe, efficient, dependable and environmentally responsive transportation facilities and services.
- Promote a positive quality of life for Washington citizens.
- Enhance the economic vitality of all areas of the State.
- Protect the natural environment and improve the built environment.

For more information on WSDOT policy, see the *Transportation Policy Plan for Washington State 1995- Report to the Legislature*. Contact the Washington State Transportation Policy Plan at (360) 705-7962.

Mountain to Sound Greenway Trust Goals

The Mountain to Sound Greenway Trust's objectives are to restore, preserve and enhance a Greenway along the I-90 corridor, and to encourage cooperation between the relevant public agencies and private interest groups to accomplish these goals well beyond the highway right of way.

The goals of the Greenway Trust are as follows:

- Preserve and restore scenic beauty along Interstate 90 and its byways. Create interconnected trails for walkers, bicyclists and equestrians.
- Help people of all ages to appreciate their place in history and understand natural systems.
- Improve access and enjoyment for families, senior citizens and the physically challenged.

- Protect and enhance wildlife habitat and corridors.
- Preserve working farms and forests.
- Encourage communities to retain their identities and plan for sustainable employment, settlement and natural resource use.
- Preserve and enhance the scenic and recreational character of the I-90 corridor while supporting appropriate economic development.
- Encourage cooperation between interest groups.

The policies of WSDOT are compatible and supportive of the Mountain to Sound Greenway Trust goals. A collaborative effort between the Mountain to Sound Greenway Trust, WSDOT, and the various interests along the corridor, including the local community and governmental entities, can achieve these goals. Growth management laws and forest management practices will also facilitate realization of these goals. Beyond the WSDOT right of way significant coordination with local agencies is needed to influence development results.

EXISTING CONDITIONS

Population/urban expansion



The population of King County is expected to increase from its 1990 population of 1,507,300 to 1,833,000 by 2010, resulting in 195,000 new households and 350,000 new jobs over the next few decades. The population of Kittitas is also expected to increase and put more pressure on the land for more development. County and local land use plans continue to set development goals but these are sometimes altered by changing community needs or the goals of various interests. Land bordering the highway is often in demand because of easy access and visibility. Land development interests sometimes seek maximum



allowable space for buildings and parking. This leaves inadequate area to truly buffer the different uses or protect the scenic or historic character of the area. Larger issues of quality of life are at stake as communities designate zoning issues and regulations for these areas in comprehensive plans.

The King County Comprehensive Plan, developed under the guidelines of the state Growth Management Act, emphasizes the importance of guiding population growth into designated Urban Growth Areas in order to protect rural natural resource lands, sensitive areas and open space lands which provide multiple social and environmental benefits. In concept, the Urban Growth Areas will help concentrate population growth and therefore limit pressure on rural and open space areas and more efficiently use human services, transportation facilities and utilities. Long-range growth management planning of this intent should provide policies that support the MTS GT.

Transportation planning may also play a key role in encouraging concentration of population in urban centers. With its emphasis on preserving rural areas, public open spaces and environmentally sensitive areas, the Growth Management Act provides a favorable framework for accomplishment of Mountains to Sound Greenway goals.

Land Use and Local Planning

The land use along the route, as shown in the plans, is evolving from undeveloped “rural”, “forested” and “open” to developed, “semi-urban” and “urban”. Outside WSDOT right of way, future urbanization and development can either detract from, or integrate with, scenic highway goals. A variety of zoning and design review measures applicable at the local level are available to help preserve and enhance the scenic highway character, if local jurisdictions choose to use them. Within the scope of planning and zoning, areas of particular influence on the scenic corridor are: buffer zones and berms along Interstate 90, viewshed protection through zoning overlays that guide height and location of buildings, site design in areas easily visible from I-90, tree preservation, commercial signage and identification and protection of wetlands, sensitive areas and wildlife corridors. For example, buffer zones with vegetation next to the highway could accommodate development of recreation and commuter trails, noise walls and vegetation to screen or integrate residential, commercial and industrial development alongside the transportation corridor.



Forest Practices

The Forest Practices Act, administered by the state Department of Natural Resources, provides standards for protection of water quality and wildlife habitat when forests are harvested. However, along I-90, public and private timber managers have increasingly responded to multiple public needs by developing new harvest practices that minimize the visual impact of clear-cutting practices. They include thinning harvesting rather than clear-cut harvesting, contouring harvests or natural landform rather than square block cutting along with property lines. This contour harvesting practice leaves trees in contoured natural areas or softening the visual impact of bare land. Set backs to streams are also improving the sensitivity to the land, fish and wildlife habitat and water quality.

Comprehensive Plan Coordination

A fundamental premise of Mountains to Sound Greenway planning has been that housing, commercial and industrial development can coexist in and complement the scenic highway corridor if it is done with careful planning and design. The WSDOT fully supports that premise and has developed this plan to help carry it out.

As of 1996, many jurisdictions along the I-90 corridor, including King and Kittitas counties, Issaquah, North Bend, Snoqualmie and the Snoqualmie Summit, have specifically supported the goals of the Mountains To Sound Greenway in their Comprehensive Plans. These municipalities are currently developing detailed codes and regulatory guidelines for future development under these plans.

However, partly because of development done under previous comprehensive and zoning plans and partly because different communities along the Greenway corridor have different goals and needs regarding land use, there are jurisdictions which support Greenway goals in principal but have not translated those goals for detailed implementation.

Coordination along lines laid out in the Mountains to Sound Greenway Concept Plan will be essential and should include King and Kittitas Counties, cities of Seattle, Bellevue, Issaquah, Snoqualmie, North Bend, Snoqualmie Summit, Easton and Cle Elum, and land management agencies such as DNR, the US Forest Service and the Washington State Parks and Recreation Commission and the WSDOT. The Greenway Trust has instituted an active and functioning partnership between these entities and it is the goal of this plan to support and advance that cooperative approach.



Another area for coordination is in protection of recreational opportunities along the I-90 corridor which have traditionally been an important feature of regional quality of life. Linked trails through population areas and into the surrounding mountains are critical to this recreational context. A variety of trails, both local, regional and statewide, now exist along the I-90 corridor but missing links in these trail systems stand in the way of gaining maximum public benefits. Trails are being planned and developed by various jurisdictions and agencies along the corridor, including WSDOT.

The Greenway Concept Plan has been endorsed by multiple jurisdictions along the 92-mile corridor but it is clear that continuing coordination and cooperation on a regional and interagency level will be necessary to maintain the strengths and goals of the plan. The WSDOT, as a major land manager at the heart of the corridor can play a leading role in encouraging this cooperation.

Natural Elements

Existing Conditions along the corridor can also be located on the attached maps. They include land use, landscape and roadside character, roadway, rail, rest areas, view point areas, trails and trailheads, recreational areas, wildlife corridors and proposals for expanding the wildlife area, views and potential viewscales, potential reforested areas and Seattle Port facilities (see Natural Elements Inventory Maps).

Landscape Character / Scenic Quality

The following scenes are visible in the I-90 Greenway corridor as one travels from the west to the east (see accompanying maps). Mount Baker to the north and Mount Rainier to the south are visible on clear days. The area between Eastgate and Issaquah, the Cascade Mountain range is visible to the north of the corridor. The Issaquah area, is in transition is to a more urbanized business development. The area still maintains the rural character with the dominant views in the background. Just east of Issaquah, the highway curves between two steep, forested slopes and begins the distinct transition to the forest zone through what is known as the Issaquah Gate, if you were traveling westbound.

The communities of Preston and North Bend are visible for a short time but the forests dominate. The Cascade mountain range, especially the local icon of Mt. Si are visible as one approaches the North Bend area. The landscape character from North Bend eastbound is generally forest type with trees and steep mountain slopes. The highway ascends into mountainous regions where spectacular views of the Cascades are seen. The highway separates and the forest character which predominates the



scene. Business developments and residential areas are springing up along the route but forest character still dominate the scene.

At the summit of Snoqualmie Pass, the landscape character mixes views to dramatic mountain peaks with commercial and residential development around the highway. Development for winter recreation includes large parking lots which present a bare and dusty prospect in the summer, commercial and utility buildings and considerable removal of the trees that would ordinarily dominate this mountain setting.

East of the Snoqualmie Pass summit the area opens up on the south to a reservoir known as Lake Keechelus. The landscape character continues through the forest type that has changed from predominantly Douglas-fir to a Douglas-fir/Ponderosa pine forest. Highway travelers may see glimpses of the John Wayne trail to the south and Lake Kachess to the north and Easton Lake. The scene to the south consists of forested hillsides with some large harvest sections dating from the 1980s. Along the Yakima River the landscape character continues with forested character and distant glimpses of farms, ranches and rural character. The buildings of the small town of Easton are visible. The Yakima River and forested hills lead toward the community of Cle Elum. Beyond Cle Elum the landscape character switches from rural farmland to steeper hills of ponderosa pine forest. The ponderosa pine forest transitions to open farm and rural character as you enter the Thorp Prairie which is rural/farmland character. The Roadside Master Plan shows the areas along the highway where landscape character changes.

Views along the corridor can be considered in two ways: views seen from the highway and views toward the highway from points in the landscape. The highway structure and highway traffic both have an impact on the local landscape. From the highway, visual qualities include important views to be protected or screened, roadside character, spatial characteristics and visual continuity within the corridor.

Views available to the traveling public include many general and vivid views while traveling through the corridor. These views are identified on the "Natural Inventory maps" such as the following:

Puget Sound and the Seattle skyline, Lake Washington, Mercer Island, Mt. Rainier, Mt. Baker, Cascade Mountain Range, Mercer slough, Lake Sammamish, Tiger Mountain, Grand Ridge, Upper Raging River Valley, Rattlesnake Mountain, Mt. Si., Cedar River Watershed, Snoqualmie Pass, Keechelus Lake, Kachess Lake, Cle Elum, Wenatchee Mountains, Mt. Stuart.



Future Directions:

There are several options for retaining the landscape character and scenic quality along I-90. Scenic strip land parcels in the viewshed could be purchased either in fee title or through conservation easements designed to conserve existing natural character or natural resources use. Between 1991 and 1996, the Greenway Trust has helped coordinate public purchase of nearly 5,000 acres in pursuit of this goal using federal, state and local open space funding sources. Land exchanges between public or public and private agencies have and would also be useful.

The view corridor can also be preserved through conditional zoning practices such as overlay zones in municipal plans, where building heights and sites are limited to preserve views, provision of land for buffers along the corridor to screen development and tree-clearing ordinances which seek to retain significant natural vegetation in new development. In the highway right of way, viewpoints and viewpoints are options that can be investigated and implemented by the WSDOT where outstanding views exist.

Vegetation

General Vegetation Types

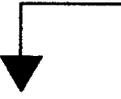
Vegetation within the I-90 corridor includes both western and eastern Washington species. In the west tree species include Douglas-fir, Western Red Cedar, Mountain Ash, Cascara, Big leaf Maple, Vine Maple, Black Cottonwood, Red Alder and Willow species.

East of North Bend the vegetation changes to more true firs, (Sub Alpine Fir, Grand Fir, Noble Fir, Pacific Fir and Silver Fir), Western Hemlock, Western Red Cedar, Mountain Alder, Mountain Ash, Red Alder, Douglas fir, and Willows.

East of the Snoqualmie Pass summit Douglasfir, True Firs, Ponderosa Pine, Tamarack, Vine Maple, Willow species, Crab Apple, Chokecherry and Sagebrush species are found. The forest lands become more open and sparse corresponding to more limited rainfall as one travel from the Snoqualmie pass area eastward to Thorp.

Functions

Vegetation in the highway right of way has a variety of functions: it contributes to visual quality by helping blend the highway with surrounding land forms and vegetation coverage; it screens roadside land uses that disrupt the overall landscape character; it frames scenic vistas



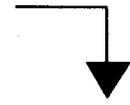
and can integrate vivid views into the highway experience. Vegetation is also important in providing or controlling wildlife habitat and minimizing erosion. Vegetation can also screen and reduce visual distractions such as oncoming headlights. The type of plant community that is preserved or created directly affects which animals use the wildlife habitat.

Plants can be safety hazards to the highway user when adequate buffers are not provided for trees. Some areas provide situations where trees cast shadows and cause ice formation on the roadway. These patches are more of a problem when periodic ice and dry pavement exist. Shrubs and trees that are tall enough to block sighting of cross traffic or signs (visual clear zones) can cause traffic hazards. Safety clear zones must also be provided for vehicle recovery areas where vehicles have a potential for traveling out of control. (This usually is 30 feet unless an intervening back slope or guardrail protect the plant material).

Vegetation Zones

When construction impacts the roadside vegetation, WSDOT has focused on traffic safety, maintainability, reforestation, erosion control, and preservation. The appearance of the highway itself is, to a large extent, governed by Roadside Management Zones. Zone One, 0 to 2 foot wide along the shoulder, is vegetation-free. Zone Two is the operational Zone for vehicle recovery and sight lines for signs, guide posts, lighting, etc. for motorists. Zone Two varies in width and is dependent on the design speed, and side slopes and whether a roadside protection device is installed. Grass is usually the predominant vegetation in Zone Two, although the roadside management rules do not preclude shrubs and trees, as long as they are smaller than 4 inches in diameter and do not obscure required sight lines (clear zones). Grass is a common choice for Zone Two because it will not grow too tall or become greater than 4 inches in diameter, is easy to maintain by mowing, can grow without irrigation, and is user friendly to maintenance workers and volunteers who pick up litter. Blending the roadside into the adjacent landscape Zone Three, the transition Zone, blends and buffers the roadside with the existing preserved vegetation where possible. All vegetation layers (herbs, shrubs, or trees) are allowed in maintenance Zone Three within standard set backs from right of way fencing.

Also, for a variety of reasons, the creation and protection of sufficient buffer areas where vegetation can protect the scenic quality, will contribute to an overall better quality of life for surrounding residents and businesses. Specific information on the use of vegetation to integrate development in the scenic viewshed follows.



Among the planning and design elements adopted by communities, outside WSDOT right-of-way, the following will be most helpful in integrating development with the scenic highway, and is user friendly to maintenance workers and volunteers who must pick up litter. Blending the roadside into the adjacent landscape Zone Three, the transition Zone, blends and buffers the roadside with the existing preserved vegetation where possible. All vegetation layers (herbs, shrubs, or trees) are allowed in Zone Three. The clear zone and slopes of the particular site affect the actual planting allowed.

Planting and Maintenance zones Two and Three can have a big impact on the highway sense of openness or enclosure. The highway is visually an open zone. The wider the paved highway area, the less enclosing the vegetation and topographic features will appear on the highway development. The open space created by the highway appears wide where topography is flat and Zones Two and Three are dominated by grasses. Taller vegetation in Zone Two and Three creates a more enclosed effect.

Example

(See Design Manual Fig. 710-3)

Exit 31 South Fork I/C

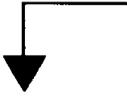
Posted Speed = 65 M.P.H. (105 Km/H)

ADT is about 30,000 in 1993

		Clear area required
Fill section	6:1 slope	38 feet or 11.7 meters
	5:1 slope	41 feet or 12.6 meters
	4:1 slope	50 feet or 15.3 Meters
Cut section	6:1 slope	30 feet or 9.2 meters
	5:1 slope	29 feet or 8.9 meters
	4:1 slope	27 feet or 8.2 Meters

Median areas

Median areas are very difficult places in which to maintain healthy vegetation because of the wind turbulence, compacted soils due to construction activities, limited space and proximity of traffic. Clearance for sight lines, utilities, signs, ability to survive and selected vegetation type are key criteria. Generally, where there is no backslope or guardrail, unprotected vegetation that potentially will reach 4 inch in diameter or greater needs to be set back a minimum of 30 feet in order not to constitute a hazard to the motoring public. This eliminates the use of trees in an unprotected median, if the median is less than 60 feet wide.



Future Directions:

Find innovative ways to include a vegetated median within the safety guidelines.

Interchanges

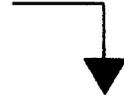
Interchange areas are very similar to median areas in clearance for sight lines, utilities, signs, compacted soils, and wind turbulence. Generally unprotected vegetation that potentially will reach 4 inches in diameter or greater (no back slope, no guard rail) needs to be set back far enough to not be considered a hazard to the motoring public. Trees can be preserved and planted where space allows the safe retention outside of zone 2 or behind traffic barriers.

Adjacent Right of Way

Areas outside WSDOT right of way take on a different set of criteria for the establishment of buffer. Buffer strips in this area are governed by a minimum setback requirement legislated by local jurisdictions for developments. Many city and county setbacks and construction buffer requirements have limited setbacks (generally 10 feet). Setbacks of this size are grossly inadequate in depth to provide a buffer for varying uses, which might include landscape to screen non-compatible uses and noise walls to protect surrounding neighborhoods from traffic noise. Narrow setbacks result in the loss of privacy screening for adjacent properties and increased noise and sometimes automobile air pollution from the roadway. In recent years, there have been increasing public demands for protection from these highway impacts and existing shallow buffers make it costly and difficult to create a long-term screen from the transportation corridor.

It must be realized that in order to minimize the noise impacts of the traffic on a highway that a land form must be high enough to mitigate the noise source. Vegetation alone will not make much a difference unless it is a dense, tall, evergreen mass some 200 feet deep from the noise source to the receiver. Some psychological effect is obtained with a narrow planting but true mitigation of noise requires a wall or earth landform.

Another problem arises as businesses prefer visibility to the transportation corridor to increase business advertising potential. Trees and shrubs in buffer strips which improve the view for the highway traveler, have sometimes been removed by individual adjacent owners in disregard of the laws governing these areas.



Finally, as traffic demands increase, the need for more lanes of roadway will consume existing buffer areas and further reduce the ability to mitigate the adverse impacts of proximity to the highway.

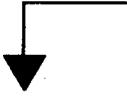
Landscape treatment proposals by WSDOT reflect roadside safety concerns while responding to all these elements outside the right of way. Screening of undesirable or discontinuous type views or objects in the landscape is desirable to maintain continuity and harmony. Screening may be done for safety reasons to provide driver guidance and/or reduce visual distractions. Headlight screening can assist the driver in a safe passage through an area.

Future Directions: Vegetation

Protection and restoration of corridor vegetation are WSDOT goals which ultimately lead to a corridor that benefits the livability of the community, the traveling public and wildlife. The Greenway vision of a green parkway stresses vegetation management, appropriate planting projects continuous wildlife resources, and preservation of views and natural features. Vegetation protection and restoration in the highway right of way affects a variety of issues.

Also for a variety of reasons, the creation and protection of sufficient buffer areas where vegetation can protect the scenic quality, will contribute to an overall better quality of life for surrounding residents and businesses. Specific information on the use of vegetation to integrate development in the scenic viewshed follows:

- WSDOT, in its design for the integration of I-90 through the City of Mercer Island, has developed a coordinated approach to visual screening, vegetative enhancement and design coordination. When such treatments are appropriate to the surrounding landscape, innovative plans will be used in development of the scenic I-90 corridor. The low maintenance direction is preferable.
- Establishment of adequate buffer zones of open land between the highway and new development will provide adequate space for trees and vegetative screening to enhance the environment for both travelers and people within the new developments. It will also provide space for regional trail connections and recreational trails for people in the new development.
- Landscaping codes vary in the amount of screening they accomplish. Where true screening is desired, a buffer zone may be



created with structures, earth berms, trees or a combination of materials. Noise and conflict of use create chaos, disunity, distraction, general lowering of the quality of life and degradation of roadside classification.

- Earth berms and combination of walls, earth berms and vegetation can play a critical role in buffering adjacent land uses. Berms may be constructed in clear zones to allow planting of trees that would be prohibited for safety reasons if the zone were flat. Berms to adequate height to screen adjacent buildings can be planted with shrubs and trees, allowing for better views of distant scenery or total screening of conflicting land uses.

By recognizing the unique, scenic character of I-90, WSDOT can respond to safety and vegetation planning with flexibility and creativity. Where plants present safety hazards vegetation treatment proposals can reflect and respond to these concerns. At the same time, the role of vegetation to screen oncoming traffic or unsightly views may require development of new vegetation treatments. For example, where trees in the clear zone might present a safety hazard, evergreen shrubs might be used instead.

The successful protection of the scenic, historic, environmental and recreational qualities of the I-90 corridor will depend entirely on the willingness of counties, cities, land management agencies and private land owners to acknowledge and support the MTSG plan in all phases of the land use planning process. Given predicted strong pressures of population growth, the best protection for intrinsic qualities may sometimes require public land purchase, from additional WSDOT right-of-way for buffering, to purchase of larger parcels of rural and forest lands for protection of community character and viewshed. Otherwise, specific guidelines, codes and regulations will be needed to preserve the vegetation that contributes to the scenic highway as it exists today.

WSDOT has designated the Design Coordinator in Landscape Architecture who will guide all organizations through the design process. This coordinator will ensure specific planting construction and maintenance plans comply with the master plans and goals, initiating communication with the maintenance department and general design and scheduling through maintenance.

The landscape architecture and maintenance departments will work together to prepare an instructional packet for groups interested in instigating planting plans in the right of way. Planting opportunities are mapped, so WSDOT can direct groups to the most desirable or highest priority planting sites.



WSDOT's enhancement projects will emphasize preservation, increase the design emphasis on visual character. Planting designs will respond to multiple objectives (visual character, views, wildlife habitat, noise mitigation, trail access, etc.) and fit into the larger planning picture. The landscaping on I-90 through Mercer Island, while more urban in style than much of the Greenway, presents a useful example of new uses and types of vegetation.

It is also critical that within WSDOT, this RMP be used as basis for communication and policy with maintenance departments and crews, so that the intent of preservation and planting designs will be sustained and functional over time.

WSDOT can also expect increasing involvement from service organizations and local jurisdictions in planning and implementing planting plans in the right of way. The process of working with these groups will be streamlined if WSDOT can be efficient about giving them guidance regarding locations of planting opportunities, plant selection, safety and maintenance parameters and how to work with WSDOT. Several projects have and will be accomplished utilizing volunteer crews to realize the goals set out in this Plan (see Roadside Master Plan Proposed Maps).

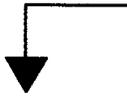
Wildlife Habitat / Crossings

The transportation corridor and its surroundings can provide positive and negative aspects to wildlife habitat. Where green space is limited, vegetated roadsides can prove most important in providing habitat. Preservation of substantial vegetated buffers should be goals where habitat is to be encouraged. Wildlife habitat is best situated in a safe area from vehicular traffic for the benefit of the wildlife and traveling public.

Wildlife crossings

A highway corridor can also present wildlife with an unsafe barrier in their migration corridors. Where migration patterns are identified, safe crossings will often follow water corridors. These corridors must be large enough to encourage the use of the corridor rather than the roadway for safe passage. Wildlife habitats and the migration patterns have been identified by the Department of Fish and Wildlife, City of Bellevue, Plum Creek Timber Company, King County, Kittitas County, Department of Natural Resources, along with the Endangered Species areas. These are shown on Natural Element maps.

Fish passage is also an important feature to provide accessibility to the fish habitat in a safe and accommodating manner. Our current direction is



to provide fish passage and eliminate barriers of the past. There is only one stream that I-90 creates a barrier to fish passage. This was identified by the Department of Fish and Wildlife Data Base. It is located at Silver Creek near Easton in Kittitas County in the form of a concrete box culvert.

In the Route Feasibility Study for SR 90 (MP 55.17 to MP 111.00) DNR indicated that they had no record of any rare plants or high quality native plant communities within 500 feet of I-90 route. The Department of Interior indicates that bald eagle, gray wolf, grizzly bear, marbled murrelet and northern spotted owl may be present in the area. Ten other species that may be present are currently candidates to be listed as threatened or endangered.

There are two existing wildlife crossings that were designed and built for providing safe wildlife crossings. They are located on the mapping as follows:

MP 26.98 West of W. Snoqualmie Road

MP 28.86 East of W. Snoqualmie Road

Most stream over-crossings (bridges) were constructed to allow animals to crawl along with the stream by channeling the game fencing toward the bridge, encouraging animals to cross under the highway.

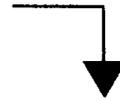
The plant community preserved or created determines which animal species inhabit the landscape. Creating diversity to enhance the wildlife habitat is an objective where habitat can successfully be developed in a safe manner for the wildlife and the traveling public. In some situations the vegetation selection will take on a different direction by discouraging wildlife to inhabit the area that is unsafe to the traveling public and wildlife, itself.

Future Directions:

Enhancing habitat is a WSDOT objective where adequate safe space away from vehicular traffic is available. Planting might include forage and material for a safe hiding area from predators. Safety of the wildlife habitat and the traveling public must be addressed.

Sensitive Areas and Environmental Quality

Sensitive areas range from steep slopes, talus slopes, wetland areas, heavy clay soils, seismic sensitive areas, wetlands, or areas containing rare or endangered wildlife. While mapping of these areas exist in other formats, this study does not address the sensitive areas, such as steep



slopes, talus slopes, clay slopes and seismic sensitive areas. The implementation plans will further identify these sensitive areas and deal with them as projects develop.

Wetlands

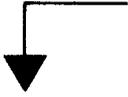
Wetlands exist along most of the Mountain to Sound Greenway. Construction along the route needs to avoid impacts to these fragile areas. The Department of Transportation complies with all jurisdictional agency regulations for wetland mitigation. WSDOT is dedicated to mitigating all wetland habitats impacted by replacing or enhancing wetland sites. These wetland inventories are shown on the mapping included with this document.

Air Quality

Air quality along the corridor is important to the traveler and to the habitat viability. The normal gasoline and diesel fuels release residue and pollutants in the form of carbon monoxide. Various industrial facilities also add to the degradation of the air quality in close proximity to the corridor. As traffic and congestion increase there is an increase in air pollution. Benefits to air quality are provided by the large forests located along the I-90 Greenway corridor. Growing forests incorporate and sequester large quantities of Carbon dioxide and the existence of these forests in Washington state help to give the state one of the better air quality ratings in the United States. Preservation of these forests is a major goal of the Mountains to Sound Greenway. To a small degree, WSDOT policies and practices that retain trees along the corridor also contribute to this positive situation.

Sound Quality

The noise impacts of highways are inventoried and addressed during the planning process to provide adequate buffers from traffic noise and sensitive land uses. Currently the noise attenuation is designed with the use of concrete walls with appropriate planting. Adequate beams, walls and planting buffers provide relief from noise. During the construction of these noise walls, many established planting must be removed to allow the installation of the wall. The steeper the slope, the more cleared area is required. Depending on funding, small trees are replaced in accordance with the Roadside Classification Plan.



Water Quality

WSDOT is actively implementing the Highway Runoff Manual in current projects. The Highway Runoff Manual is the document approved by DOE for WSDOT's use in applying principles and best management practices outlined in the DOE's Stormwater Management Manual for the Puget Sound Basin on existing and new highways, rest areas, park and ride lots and ferry terminals. Development along the corridor has a dramatic impact on the hydrologic cycle. The land cover that once consisted primarily of mature forests is now being replaced in many areas by impervious surfaces, such as buildings, parking areas, and roadways. The creation of impervious surfaces has major impacts on the hydrologic cycle: increased runoff, prevention of infiltration and lack of recharge of aquifer. Reduction of the number of trees can also significantly increase runoff with reduction of leaf surface on trees and uptake of water by tree roots even though pervious surfaces remain.

As highway projects come up for implementation, water quality issues are analyzed to ensure that water quality is maintained or improved. WSDOT is developing retention ponds, detention ponds bioswales and other features to ensure the environment is not degraded due to the highway project. Some of this effort has an adverse impact on the visual screen of the existing tree areas that are replaced with detention ponds and run off infiltration swales.

Future Directions:

Water quality will be designed to slow the water run off and minimize impacts to the ground water environment. Bioswales and detention/retention pond areas will be constructed wherever necessary to ensure water quality is maintained or improved. When highways impact wetland areas through expansion or through a new facility, wetlands will be re-established or enhanced. While new wetlands help to improve the ground water quality they entail a trade-offs between gain and loss of normal drier sites. Some vegetation and land area is impacted from these wetland areas. Inovative planting and earth berm developments need to be improvised to fullfill the buffering affect of conflicting land uses.



BUILT ELEMENTS

Built elements are those elements that are constructed or man-made. It includes such elements as highways/automobile, rail/train, trails/pedestrian/bicycles, high speed rail/train, HOV/ bus or HOV capacity vehicles and structures (see Built Elements Inventory Maps).

Transportation

This corridor is one of the most important national trade and commerce routes in the State. It welcomes a high number of travelers to the region and provides a primary access to the many recreational opportunities in the Cascade Range. The corridor contains 92 miles of highway. It also contains rail facilities (abandoned), trails, Bus /HOV lanes , etc.

The transportation corridor is explained more completely in the Route Development Plan (RDP).

Alternative transportation modes are being explored, including a safe and convenient, user friendly bicycle/pedestrian route, and HOV/tunnel train/trail options.

Rail Corridor

The WSDOT is planning for the possibility of mass transit and use of existing railroad facilities or new rail facilities along the I-90 corridor. Improvements in and expansion of the corridor's rail facilities might result in reduced volumes of highway traffic for both commercial and recreational purposes. This would reduce the pressure for improved transportation lane miles in the corridor. Freight rail may be operating on a reopened Stampede Pass route line.

A major railroad yard, Port of Seattle, for north-south freight travel is located near Interstate 90 in Seattle and is visible at the western end of the I-90 Greenway. The east-west railroad over Snoqualmie Pass, the former Milwaukee Railroad, has been abandoned and is now the Iron Horse State Park trail system.

Currently, some regional railroad lines are being abandoned due to lack of use. Burlington Northern rail line that runs east/west through the study area beginning at Stampede Pass, just east of Keechelus Lake, and diverts to the north side of the Yakima River just east of Cle Elum has been reopened. Both Burlington Northern and the Milwaukee rail lines follow the Yakima River at this point near State Route 10.



High Speed Rail

In 1991, the Legislature directed a comprehensive assessment of the feasibility of a high speed ground transportation system. It was recognized that major transportation corridors in the state were reaching unacceptable levels of congestion, that most improvements are temporary at best and that in addition to congestion in large metropolitan areas, inter-city travel between the state's major cities was becoming increasingly difficult. Route studies will be ongoing. If this type of system were to be created on a new alignment through the I-90 corridor, the impacts to the natural environment could be considerable. Design must consider the least impact solution to support the goals of the Greenway.

Transit / HOV



The majority of bus or transit "Metro/King County" traffic is concentrated in the metropolitan areas of Seattle, Mercer Island and Bellevue/Issaquah. As the population growth is concentrated in urban growth areas, the demand for access to the transit system will increase. The more convenient the transit system, the larger the volume of ridership it will tend to attract and thus reduce the volume of vehicles on the roadways.

High Occupancy Vehicle (HOV) is a system of designated lanes on existing highway which encourage more people to commute together thereby reducing the number of single-occupancy vehicles. HOV lanes extend from Seattle to Issaquah on I-90.

The Highway Corridor

The transportation facility, including future expansion, is fully explained in the Route Development Plan (Volume 2 Mountains to /Sound Greenway Implementation).



The extent of the study area is approximately 92 miles along the highway corridor. The Highway is primarily a 6-lane facility which divides the natural corridor and becomes a significant visual element for any view looking toward the Snoqualmie Pass valley.

The Northwest Region element of the State Systems Plan (20 Year List) includes a regional rail system, new HOV lanes, expansion and reconfiguration of park and ride lots, new signals, the installation of an intelligent vehicle highway system (IVHS), and a proposal for two new rest areas.

The Route Feasibility Report for SR 90 MP 55.17 to MP 111.00 produced by the South Central Region of WSDOT has information on expanding SR 90 to six lanes between Hyak and Ellensburg and the geometric and environmental impacts involved. Final capacity improvement scale (number of additional lanes) and its alignment will not be resolved until an Environmental Impact Statement is done. The report, however identifies issues so that the Greenway Trust can comment with an understanding of what may be occurring in the future.

WSDOT's 1996 publication, *The Roadside Classification Plan*, provides an important policy foundation for roadside development. Roadside character preservation and enhancement elements in all future highway projects are to be designed collaboratively with multiple disciplines within the WSDOT and coordinated with MTS GT and other resource management agencies.

Highway Viewshed

The western end of the I-90 Greenway corridor provides a panoramic view of the Seattle ship yards and ferry traffic in the Seattle City skyline. The highway enters Seattle's Rainier Valley before swinging sharply east and through the Mt. Baker tunnels before dropping to a wide, spectacular view crossing Lake Washington on famous floating bridges. It then travels on a depressed and lidded roadway through the northern portion of Mercer Island, across the East channel bridge, across the Mercer Slough and up the Eastgate Hill from the Factoria area. The roadway follows along the hillside facing Lake Samammish to the north, along the valley floor through Issaquah and up through the valley passing High Point and Preston. The roadway winds up the valley of tree lined slopes to North Bend.

Nearing the Snoqualmie Summit, I-90 is divided on two sides of the steep mountain corridor, providing a striking architectural bridge element integrated with the dramatic mountainous scenery. This scenic highway design has been highly commended for its grace and sensitivity to the



surroundings. Its raised structures also allow for maximum wildlife migration in the Denny Creek valley below. I-90 then continues east down to and Lake Kachless and Lake Kachess to Cle Elum, head sup slightly to Indian John Hill and then presents a sweeping view of the dry farming plains around Thorp.

Highway Users

The I-90 corridor is a multiple use highway from transport of good and services, commuter travel or recreational. The section of I-90 between Seattle and Issaquah is primarily a commuter route during the week for Transit, High Occupancy Vehicle (HOV) and Single Occupancy Vehicular (SOV) traffic. The entire route is also heavily used by truck traffic to transport goods and services. Tourism and recreational travel is a predominate use during the summer vacation months and winter snow periods in the Mountains areas.

During the months of November, December, January, and February, a large percentage of motorists on the highway are on their way to the recreational ski resorts near Snoqualmie Summit. The peak travel time is during the summer week-ends and holiday weekends, and indicates an increased amount of tourism, recreational use and cross-mountain, week-end travel. This route provides access to all the types of recreation in the area (i.e. sight seeing, hiking, fishing, camping, nature exploring, skiing, snow recreational uses).

Access to Amenities

The highway corridor provides access to some Greenway amenities and restrictions to others. Many Greenway amenities such as trail heads are accessible to the traveler via the use of the highway corridor. Because it is a limited access highway, people can not turn off to gain immediate access to certain sites, but they do benefit from more free flowing traffic within the corridor. The attached maps show where access is available and where proposals are possible or desired for additional access.

Impact on Wildlife

The highway corridor affects the access and migration patterns of wildlife. Wildlife habitat is interrupted and safe foraging is jeopardized by the highway corridor. The highway corridor does provide limited habitat for wildlife and fish passage. Two wildlife crossings were built specifically for wildlife while other crossings exist for wildlife and fish where the

highway crosses a river or a stream. Some fish passage has been diminished by past practices. The highway corridor produces pollution through highway water runoff, snow removal operations, and weed control operations.

Safety Rest Areas

Currently two rest area facilities (one in each way) exist for a motorist's safety rest stop and enjoyment. Indian John Rest Area between Cle Elum and Elk Heights is located at approximately MP 89.10. The Indian John Hill Rest Areas have recently been rehabilitated. Views from these sites are of the pine forest and the Cascade Mountains in a northerly direction

The WSDOT 1995 Statewide Systems Plan has identified a proposed rest area between City of North Bend and Price Creek. The Price Creek site that was intended to be a rest area is currently operating as a snow park area using the ramps intended for the rest area. This rest area has not been completed due to inadequate drainage at the site. Further study is necessary to determine whether this site can be used or if it will be necessary to choose a new site.

Highway Architectural Elements



Architectural elements in this context include such highway facilities as lighting standards, signs and sign bridges, utility buildings and structures, retaining and other walls, bridges, highway separation barriers, guardrails and public rest facilities.

Architectural elements were coordinated between Seattle and Bellevue. Structures and elements are harmonious and compatible with the scenic or historic character of the area along the rest of the route.

signs, visible utilities, walls and other structures are uncoordinated as to type, color and texture to harmonize within the corridor, primarily due to the staging of projects along the route over a long time frame.

Areas within the responsibility of the WSDOT are relatively easy to deal with or control. Some constraints do exist when dealing with State and federal standards such as: safety drainage/water quality, park-n-ride facilities, Manual of Uniform Traffic Control Devices for signing. Areas beyond the WSDOT right of way are under the responsibility of the local jurisdiction and influence of the public, the developers or the Mountain to Sound Greenway Trust.

Examples of well coordinated designs exist in the Seattle to Bellevue portion of the corridor where wall configuration/alignment, signing, luminaire standards, bridge structures with textures, and color unify the project in the urban/suburban area. Concrete pigmented sealer gives concrete more resistance to weathering and uniformity in color.

In the rest of the corridor many of the existing elements are of variable design and scope, including luminaire poles and types of light fixtures, sign bridges, guard rails, bridge types and walls. The I-90 project between Seattle and Bellevue had the advantage of being a new project, guided by a multidiscipline professional team to ensure coordination of design elements.

Structures



The structures along the I-90 corridor have been built over the years with differing design criteria and differing emphasis on coordination of visual elements. In the 1980's and early 1990's, the section between Seattle and Bellevue utilized an interdisciplinary design team approach. The designs were coordinated from start to finish with the results that are not



only functional and harmonious but pleasant visually. It is not always possible to completely redesign a section of highway such as this but a coordinated effort is possible when section of the corridor are upgraded or reconstructed.

Future Directions:

There are several avenues to ensure coordinated designs, leading through construction and maintenance. The coordinator in landscape architecture will assist to ensure designs, construction and maintenance activities are coordinated with the goals for the corridor. Line, form, color, texture and materials of all elements within WSDOT control will be in harmony with the landscape character and the goals of the Greenway and roadside classification plan.

Major construction projects will now be coordinated through a multidisciplinary approach mandated by the Roadside Classification Plan. However, because of the state and national importance of this scenic portion of I-90, special care should be taken to integrate new structures with the surrounding landscape and the recreational corridors along the highway. An example is the planned construction of the Sunset interchange at Exit 18, scheduled for the late 1990s. This interchange will have a major effect on the current gateway to the forested segment of the Greenway. In order to support Greenway goals the following recommendations should govern this and other major construction projects:

- At the earliest stages of planning and design, incorporate existing non-motorized trail connections through the construction area with the goal of improving non-motorized mobility
- Design all structures so that future expansion of I-90 can minimize the impact in the future.
- Minimize the use of large concrete retaining walls wherever possible and when they are necessary, design for tiered or terraced vegetation plantings that will reduce visual impact of massive walls of gray concrete.
- Wherever possible, incorporate natural materials in structures. Design must consider access and safety for maintenance.

At a minimum, structures in the right of way should be painted to blend with surrounding scenery. Earth-tone brown or green buildings might be most commonly used. When a project is being planned to add



structures, large and small, in the scenic portion of the I-90 corridor, the Greenway Trust should participate in planning at the earliest stage. An effort should be made to work with historical or design specialists with the Greenway Trust to develop an appropriate design that could bring some unifying quality to corridor.

Safety Barriers

Safety barriers take on many forms along the corridor from land forms, concrete Jersey barriers, galvanized guardrails, Cor-Ten Guard rails to cable and post. They all have their place and the form sometimes depends on time period when they were installed. Locations of existing examples are:

- Jersey concrete barrier: extends the full length of I-90 between Seattle and Bellevue
- Galvanized steel guardrail: Issaquah area
- Cor-Ten: on Snoqualmie Pass
- Post and cable: near Easton

Some areas have concrete barriers with an extended galvanized beam guardrail. A new type being proposed on new projects or being allowed as a substitute is the Texas Barrier. The Texas Barrier has a different shape. It has a flat side toward the traffic and is about 6 inches taller.

Future Directions:

Since replacement of existing safety barriers with a more uniform design would be prohibitively expensive, the best solution to achieve some unifying Greenway design character may be coordination of barriers within a localized area, whether with new construction, or when older construction is replaced.

In general and within safety requirements, barriers should reflect the character of the surrounding landscape.

Signing



Signing in the right of way follows the Manual of Uniform Traffic Control Devices (MUTCD). Signs outside the right of way, in various municipalities, have been installed over many years under varied local codes. Issaquah and Bellevue have responded to the scenic highway concept with sign codes that place significant limits on the size, and lighting of signs facing I-90. Other jurisdictions have been less restrictive, resulting in areas where commercial and business signs compete for attention and detract from the scenic surroundings.

An informal inventory of existing type of signs includes the following:

Interpretive signing, scenic, motorist information, monotube signing, erector set-cross signing, pole mounted wood signs, advisory signs, destination signs, Mountain to Sound Greenway signs, off right of way signs (Billboards have been purchased and removed, however businesses often sign or advertise when allowed by local codes and some commercial signs are quite visible where buffers are insufficient, variable message signs, recreational information signs, chain-up area signs, rest area signs.

Lighting

An inventory of lighting elements is needed. Existing styles and heights of lighting fixtures vary along the route. Some are supported on highmast poles in the 100 foot high range while other areas have 40 foot poles.

The street lights of Seattle transition to higher level in the Rainier / Beacon Hill area, and then back to the lower 40 foot poles. Across Mercer Island they are the square poles with square luminaires fixtures. The style between Seattle and Bellevue was carefully coordinated for color, style and unity.

At the Factoria I-405 area the poles change to highmast poles (100



foot). The remaining route has poles in the range of 40 feet high and cobra heads, only at key entrance/exit locations, except the section at the SR 18 interchange which is high level lighting.

Where illumination beyond basic levels is installed, lighting may be achieved using highmast light poles. High mast light poles are most likely to be used at major interchanges, in heavily congested areas, or in areas where night time accident problems. At other locations lighting will normally be achieved using standard lower light poles.

Future Directions:

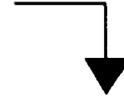
WSDOT and Greenway participants agreed to study the luminaires along the corridor and select new luminaires on major projects appropriate to the surrounding. Generally dark brown color is recommended for poles and fixtures.

Trails

The I-90 corridor provides access to major state recreation areas. Hiking and bicycling trails are among those opportunities. Several trails and trail networks exist in locations near or adjacent to I-90. Some of these are identified on the human-built Inventory maps within this document. Many other recreational and transportation trails exist along the corridor in lands managed by the US Forest Service, the Department of Natural Resources, State Parks and private lands. Following are significant trails near the I-90 corridor.

Existing Corridor Trails

- I-90 Trail from 4th Avenue in Seattle through the Mt. Baker Ridge Tunnel across Mercer Island and the East Channel Bridge to Richard's Road in Bellevue (9 miles, paved).
- Eastgate Interchange to West Lake Sammamish Parkway, (1 mile, paved).
- School Yard trail from Pedestrian Crossing to School yard at W. Lk. Sammamish Parkway Interchange (1 mile, paved).
- Issaquah-Highpoint Trail on the abandoned Burlington Northern Railroad Trail north of I-90 between Sunset Interchange and Highpoint (Currently not accessible at Sunset Interchange (2 miles, gravel path).
- Multiple trails, crossing the Issaquah Alps on Cougar, Squak and Tiger Mountains with popular trailhead at Exit 20 (unpaved).



- Preston-Snoqualmie Trail from Preston to the Lake Alice trailhead near Fall City. Trail would connect to city of Snoqualmie but a tressle has been removed at Snoqualmie Falls.
- Snoqualmie Centennial Trail starts at the Snoqualmie Centennial Log Pavilion in the City of Snoqualmie and connects to Snoqualmie Falls (2 miles, paved).
- Snoqualmie Valley Trail along the abandoned railroad beginning at SE Reing Road and ending at Rattlesnake Lake (southbound) and near Duvall (northbound). The abandoned railbed from I-90 south is proposed to be upgraded with safety features (gravel path).
- From Rattlesnake Lake to Ellensburg, the Iron Horse State Park/ John Wayne Trail is the dominant continuous trail along Interstate 90 and across the state. Missing trestles require by-pass through Exit 38. Trail uses 2.3 miles of abandoned railroad tunnel at Snoqualmie Pass (90 miles, gravel path).

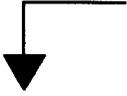
Over the last decade, paved trails have been included in the I-90 reconstruction from Seattle to Bellevue adding links to the Greenway trail system. These existing and scheduled trails account for a small length of the Mountains to Sound Greenway corridor. Gaps occur in the plan for a continuous multipurpose trail between Factoria and Thorp.

Missing trail links:

- Richard's Road to Eastgate Interchange,
- West Lake Sammamish Parkway to Issaquah,
- Issaquah to Issaquah-Highpoint Trail,
- Highpoint Interchange to Preston Interchange,
- Trestle on Preston-Snoqualmie Trail near Snoqualmie Falls,
- Trestle at Hall Creek on Iron Horse State Park,
- Two trestles and some abandoned railroad right of way west of Lake Easton on Iron Horse State Park.

The Washington State Parks and Recreation Commission has converted the abandoned Milwaukee Railroad right of way to a cross-state trail system: The John Wayne Trail within the Iron Horse State Park. This abandoned rail bed enters the Mountains to Sound Greenway study area at Rattlesnake Lake just southeast of North Bend and remains within the study area to the eastern study limits at Thorp.

The John Wayne Trail is only a few trestles short of being a fully linked trail at the present time and work is currently underway to finish those



connections. Eventual trail surface is still under debate but the trail is currently used by hikers, bicyclist and equestrians. New trailheads, primitive campsites and historical railroad interpretive signs are currently planned for the trail. Several utilities currently use or propose to use portions of the John Wayne Trail right of way. These include fiber optic cables (existing and proposed) and a gasoline pipeline (proposed).

Ownership and maintenance are always an issue with trail development. Currently, trail construction funding has been through Cities, Counties, State Parks, and federal government /with State /Federal Interstate funding programs. Future funding will more than likely come from local jurisdictions or through Inter modal Surface Transportation Efficiency Act (ISTEA) enhancement funding. Landscape maintenance of trails constructed by WSDOT in the I-90 corridor between Seattle and Mercer Island has been accomplished through WSDOT negotiations with the City of Seattle and Mercer Island.

WSDOT generally places a fence at the edge of its right of way boundary (the limited access boundary usually coincides with this boundary). To provide access control the normal method is another fence on the inside toward the traffic when a bicycle/pedestrian trail is installed. This creates a situation that is somewhat unpleasant to the user by the close proximity and tunnel effect of the fencing.

Future Directions:

The Mountains to Sound Greenway Concept Plan calls for trails allowing continuous non-motorized travel from Puget Sound to Elk Heights and beyond, as well as many connections to existing recreational resources and regional trail networks. The Greenway has advocated separation of incompatible uses to minimize conflicts when possible, with separate trails for “slow trail users” (hikers) and “fast trail users” (bicyclists, rollerblades). The Plan also seeks safe access points (trailheads) and protection of adjacent private lands and the natural environment.

The WSDOT is committed to alternative modes of transportation and provides trails wherever potential trail facilities connect in a comprehensive plan. Paved trails have been provided from the Seattle



beginning of I-90 through to Bellevue and WSDOT and local jurisdictions are cooperating to continue a paved-trail link, near and parallel to I-90, through the Issaquah and Preston areas to North Bend. Coordination with King County and local jurisdictions will be necessary to complete the I-90 trail linkages. Wherever possible, WSDOT will work to develop designs that use natural barriers and materials to replace the chain-link fence tunnel, providing a scenic and pleasant experience for the non-motorized trail user.

MAINTENANCE

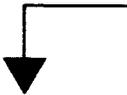
Vegetation Maintenance

Maintenance practices determine to a large extent the way I-90 looks to the highway traveler. The practices and activities of WSDOT maintenance staff have a significant impact on all elements of the I-90 Greenway plan, from visual qualities and vegetation screening of development, to wildlife habitat, fish passage and the general scenic character. Successful implementation of the Greenway plan will, to some degree, be dependent on the policies, technology, skills and funding of WSDOT maintenance staff. Currently roadside practices along I-90 indicate an emphasis on safety and ease of maintenance rather than visual and wildlife issues.

WSDOT maintenance staff reviews all planting/enhancement designs prepared by WSDOT design offices. Their concerns include maintenance costs, limited means of maintenance and limiting factors such as the safety and convenience of their workers. The dominance of mowing as a maintenance practice favors the use of grasses in Zone Two and sometimes this practice eliminates natural vegetation. Plant installations must be maintainable in terms of safety of field maintenance workers, visibility and proximity to traffic.

Maintenance Problem Areas

General problems affecting maintenance operations include: funding of maintenance activities, lack of funding for maintenance, safety concerns, availability of supplemental water, lack of understanding of design intent among field personnel, difficult access to drainage facilities, fence lines, etc. Variable requests for particular maintenance actions by adjacent property owners, weed boards and special interest groups give an



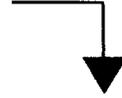
inconsistent direction. It is time consuming and confusing for maintenance to attempt to immediately resolve each individual issue to everyone satisfaction. The maintenance activities still need to be completed within an acceptable period of time.

Maintenance crews respond to a variety of pressures in shaping the landscape: citizen complaints (concerns about weeds, safety, views being blocked or exposed), the need to retain access to drainage structure, fire department requirements to keep the right of way fences clear of vegetation and businesses wanting visibility or a more formal landscape. Trees are often removed if they have the potential to shade the roadway that allows the moisture to remain on the roadway and freeze during cold weather.

Some vegetation areas are more challenging to maintain than others. Areas in close proximity to high speed traffic are naturally more challenging in terms of safety. Areas where natural buffers are provided for fish habitat conflicts with the desire for a more urbanized look. Invasive blackberry vines or scotch broom are difficult to eradicate on a permanent basis. These require constant management to avoid competition with more desirable plants.

Rock cut areas near North Bend have caused some difficulty when it comes to eliminating undesirable weeds and danger trees without the use of specialized equipment. Some types of installed landscapes inherently require more intensive maintenance measures (Seattle / Mercer Island). The cost of maintenance is an important factor for WSDOT. More urbanized designs require more intensive hand maintenance methods which drives up maintenance costs. Designs must preserve the necessary access to features such as manholes, drainage swales, utilities, fences and provide fall restraint when required. A landscape design must adapt to safety needs and allow ease of access for maintenance activities to protect the public investment and the environment whenever possible.

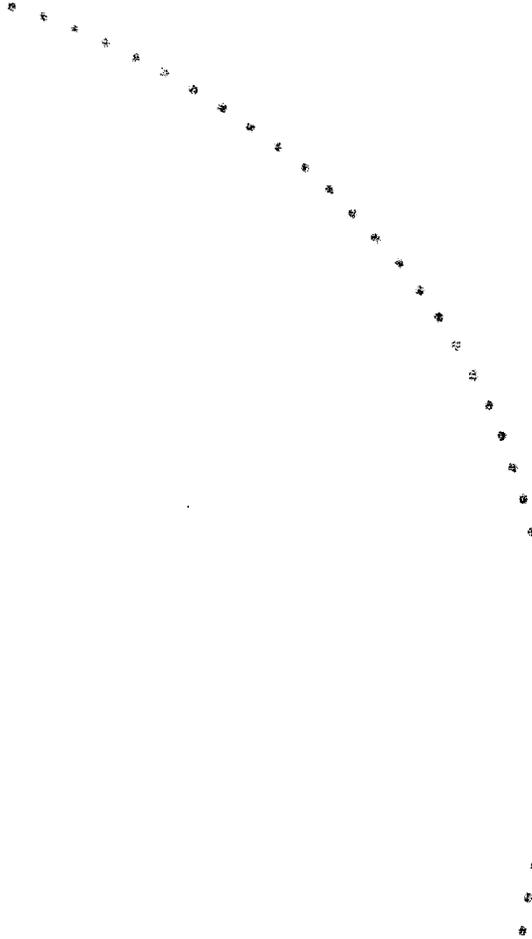
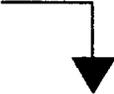
Reforestation measures will eliminate many of the challenges of the more urbanized landscapes installed in the past. Establishment of stable roadside vegetation that will resist encroachment of undesirable plants should be the primary goal of the program. Native plants that received proper water, nutrients and lights will resist invasion by weeds. It must be understood that every situation requires some type of monitoring and action at some point. Understanding and prioritizing the activities will make for more efficient management practices.



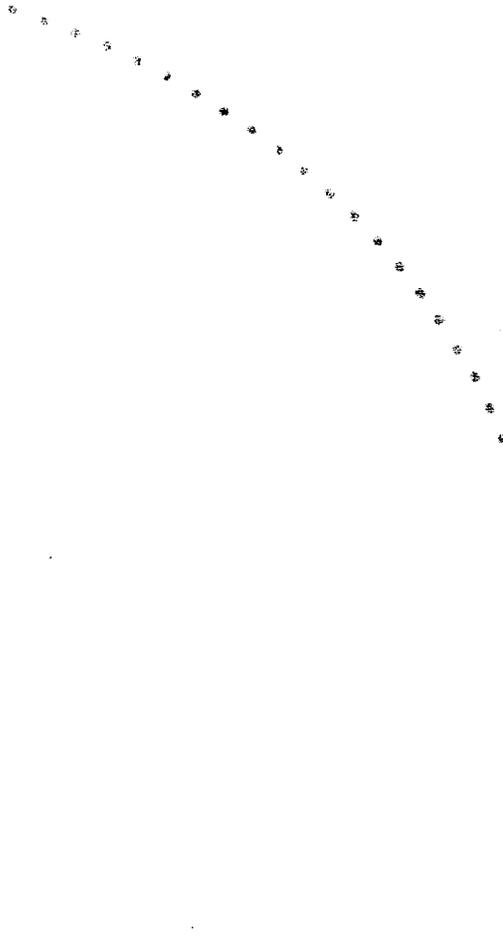
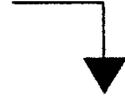
Future Directions:

In the effort to protect and enhance the scenic qualities of the I-90 corridor, it may be necessary to consider modifying and adapting standard maintenance practices. Where limbs can be left to grow near the ground as a visual screen, they should not be pruned. Future screening planting should take on low cost maintenance efforts that enhance the separation of the conflicting landuses with the transportation uses.

In meetings between the Greenway Trust staff and WSDOT maintenance field workers, a number of practices, problems and solutions have been discussed, contributing to a better understanding of the challenge and goals of each group. Emerging from these discussions was an agreement that good communication and flexibility of approach will make it possible to integrate scenic highway goals with good and efficient maintenance practices.

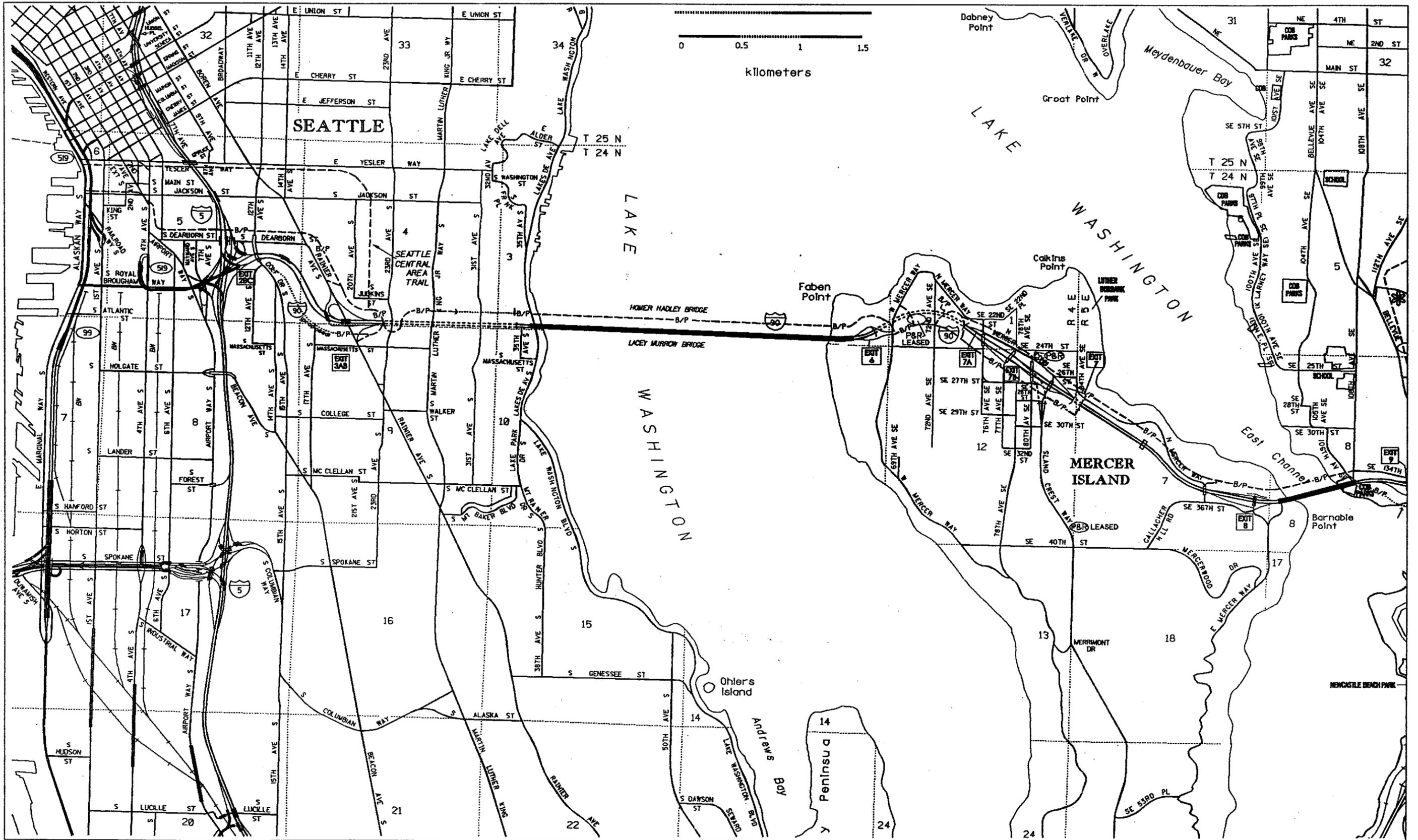


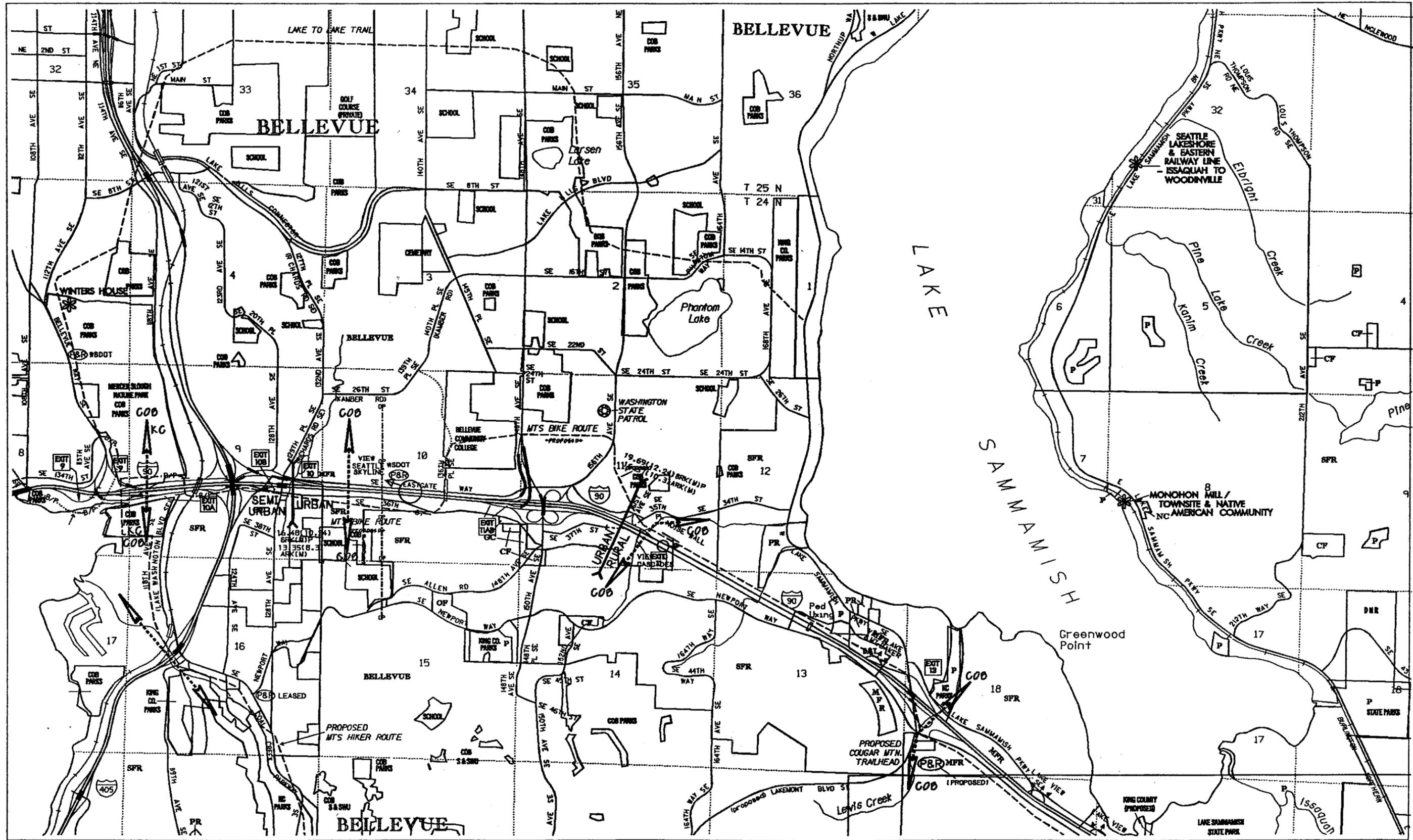
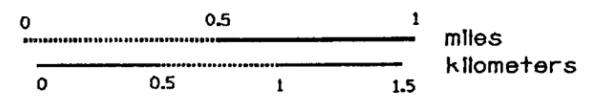
Maps

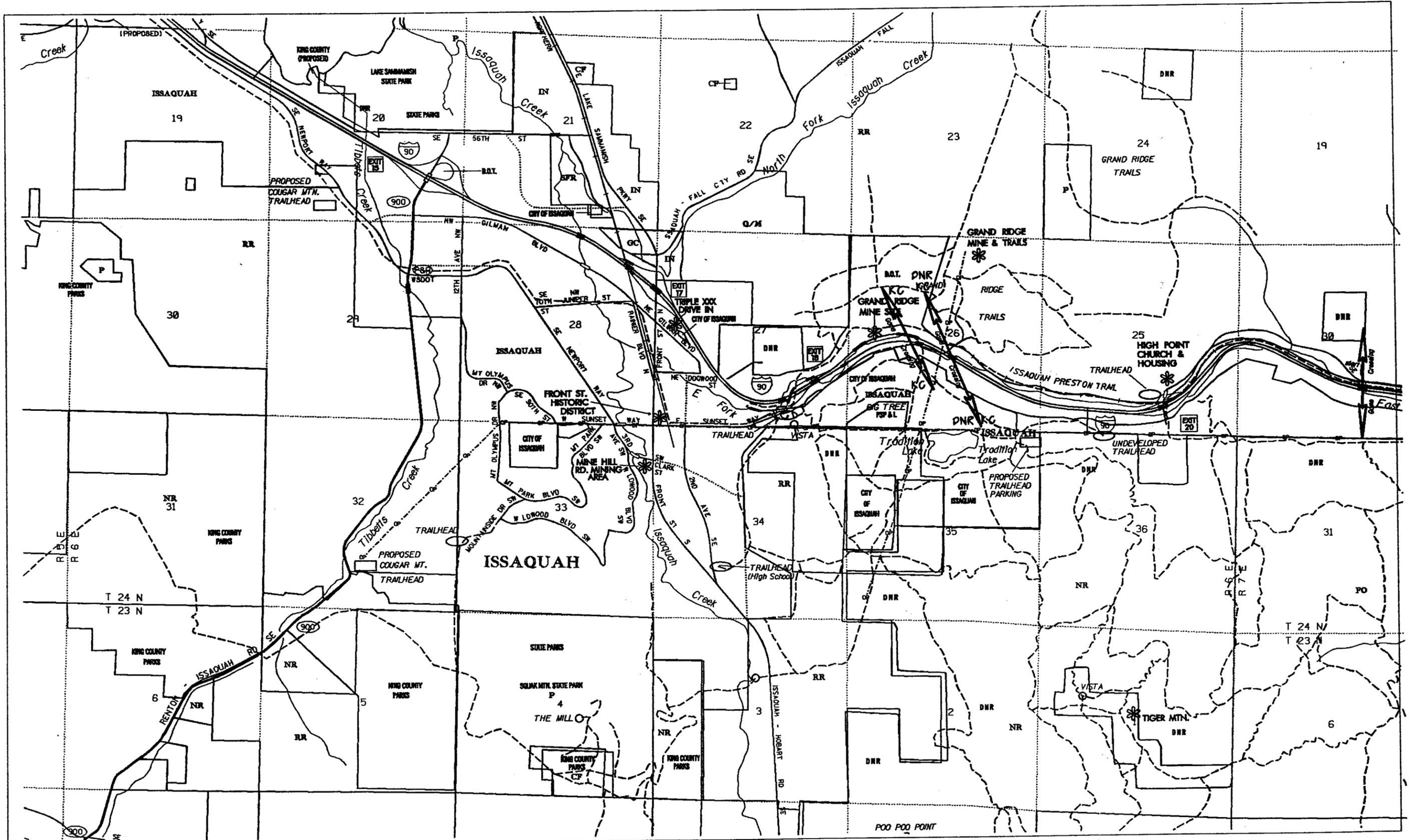
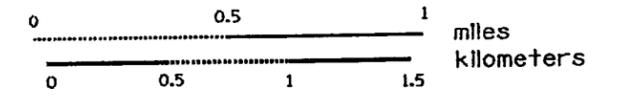


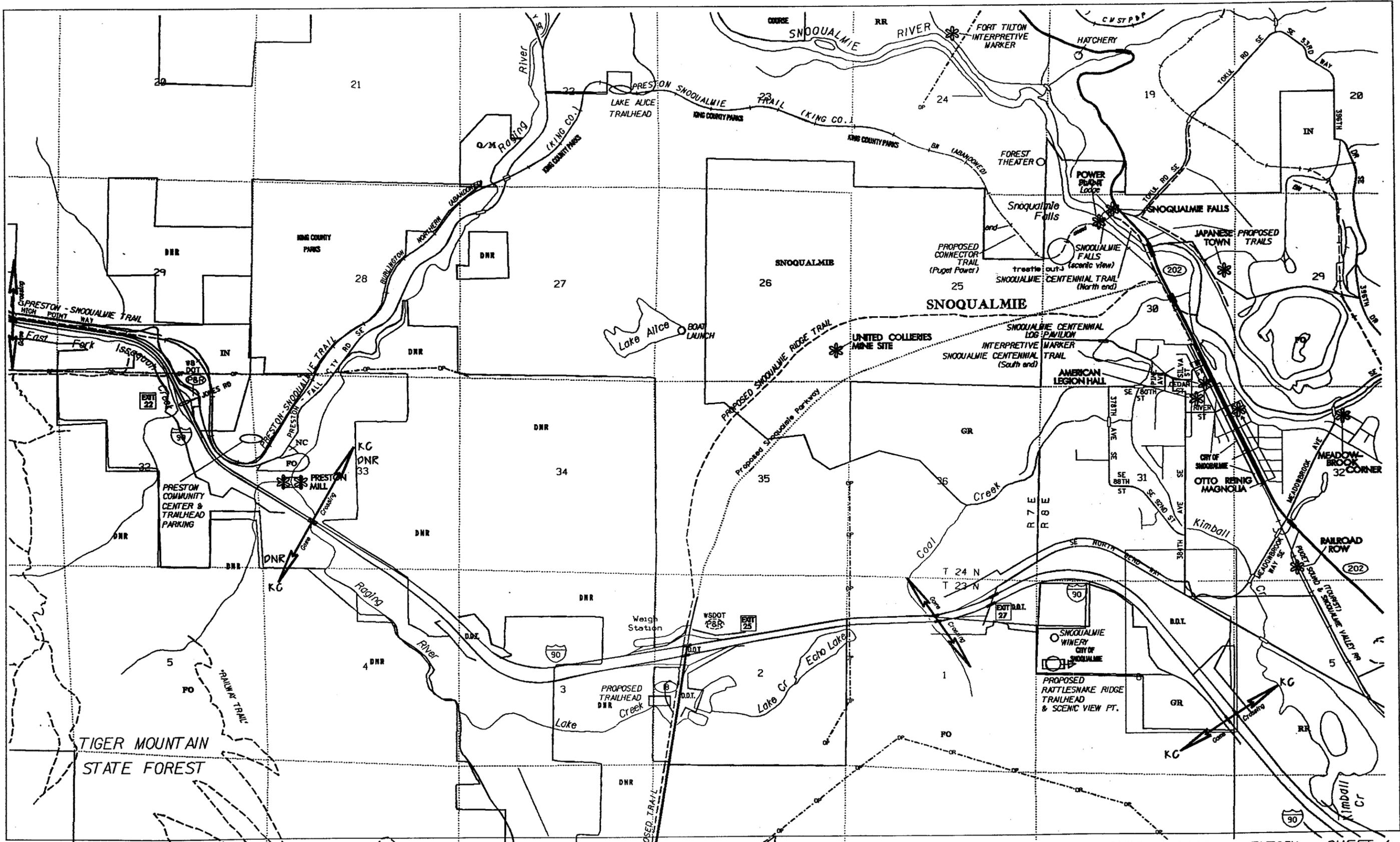
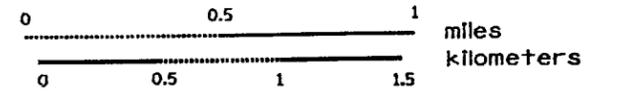
Built Elements Inventory Maps

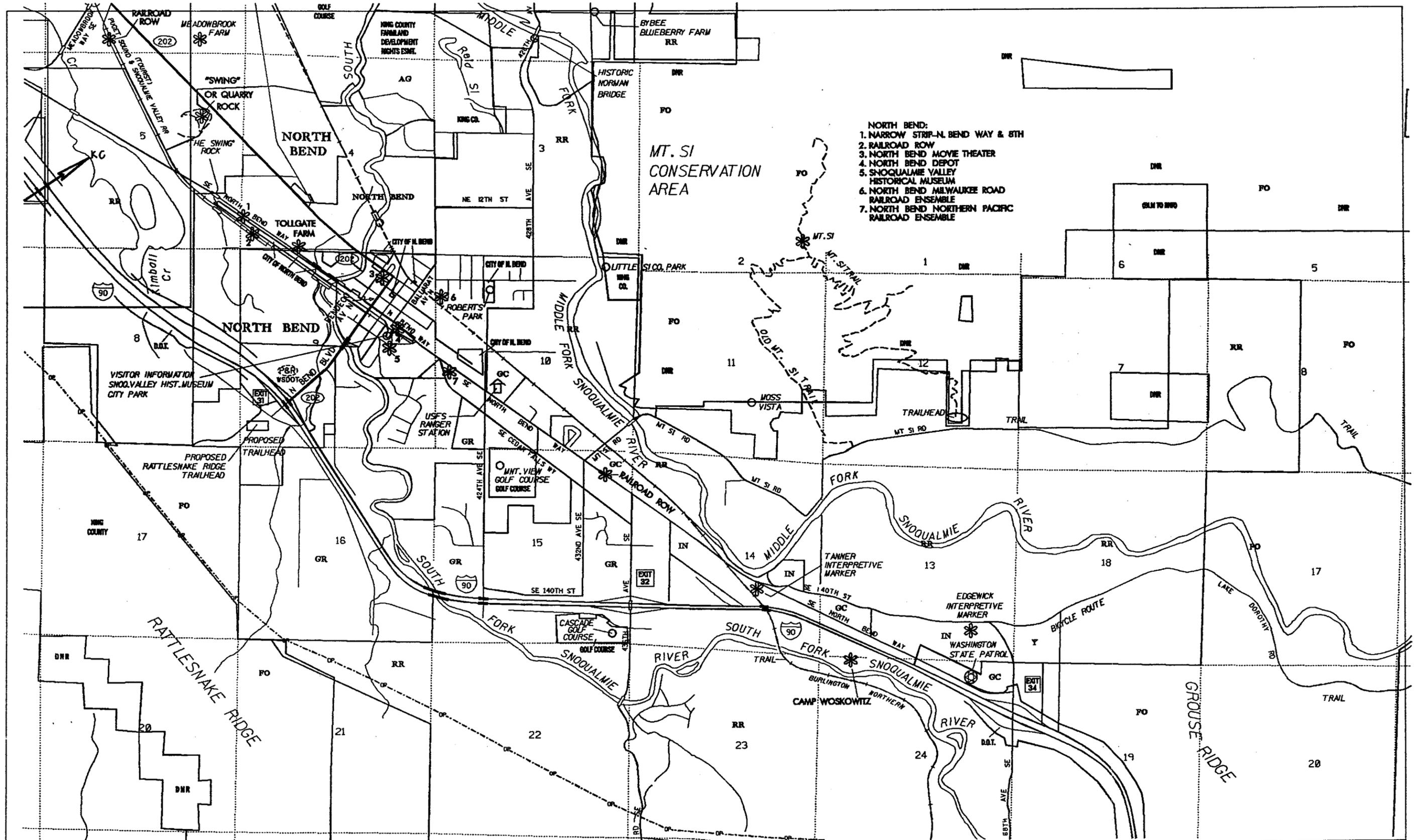
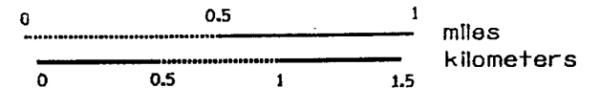
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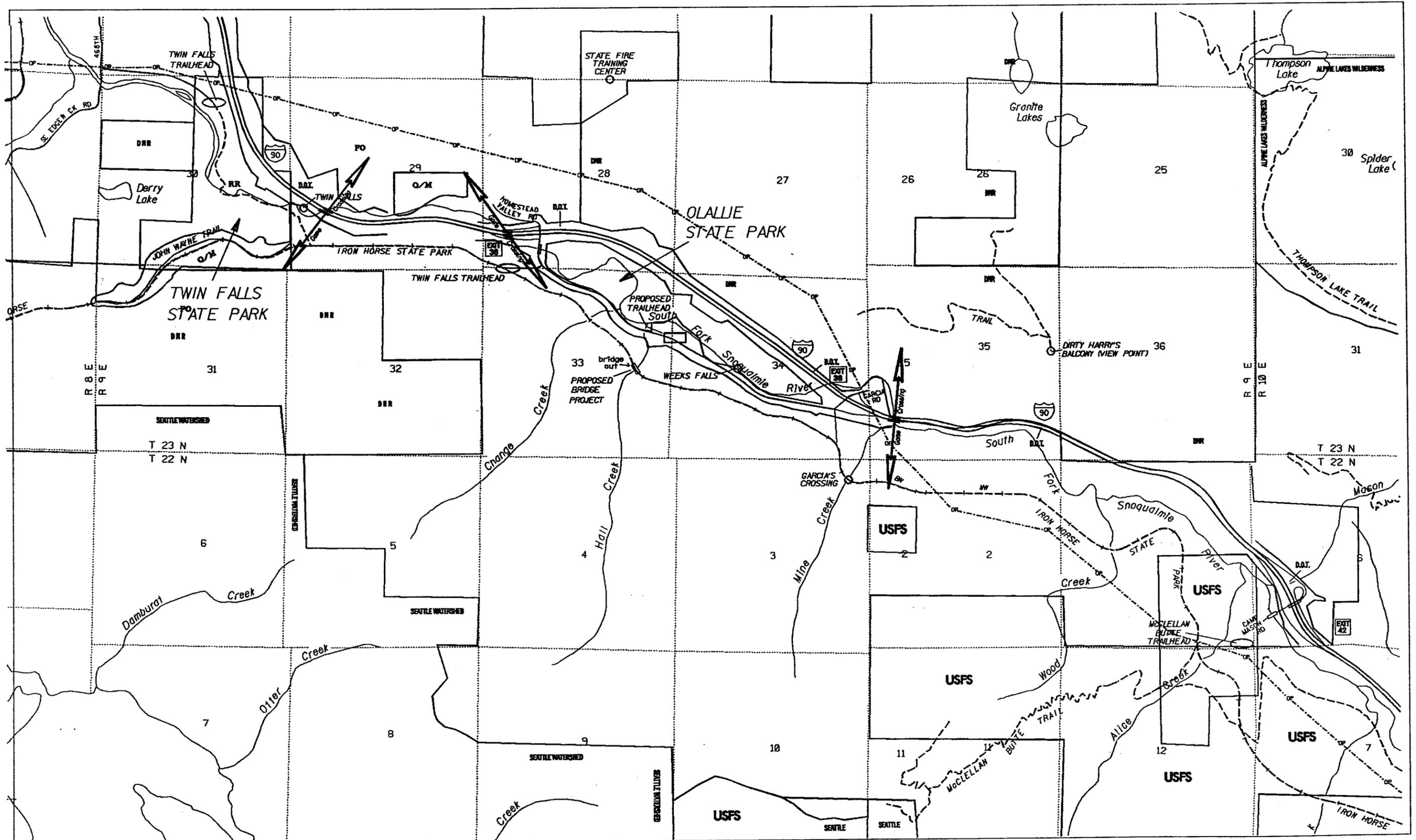
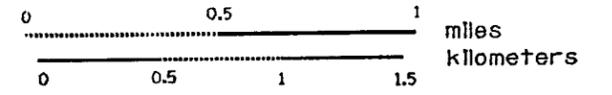


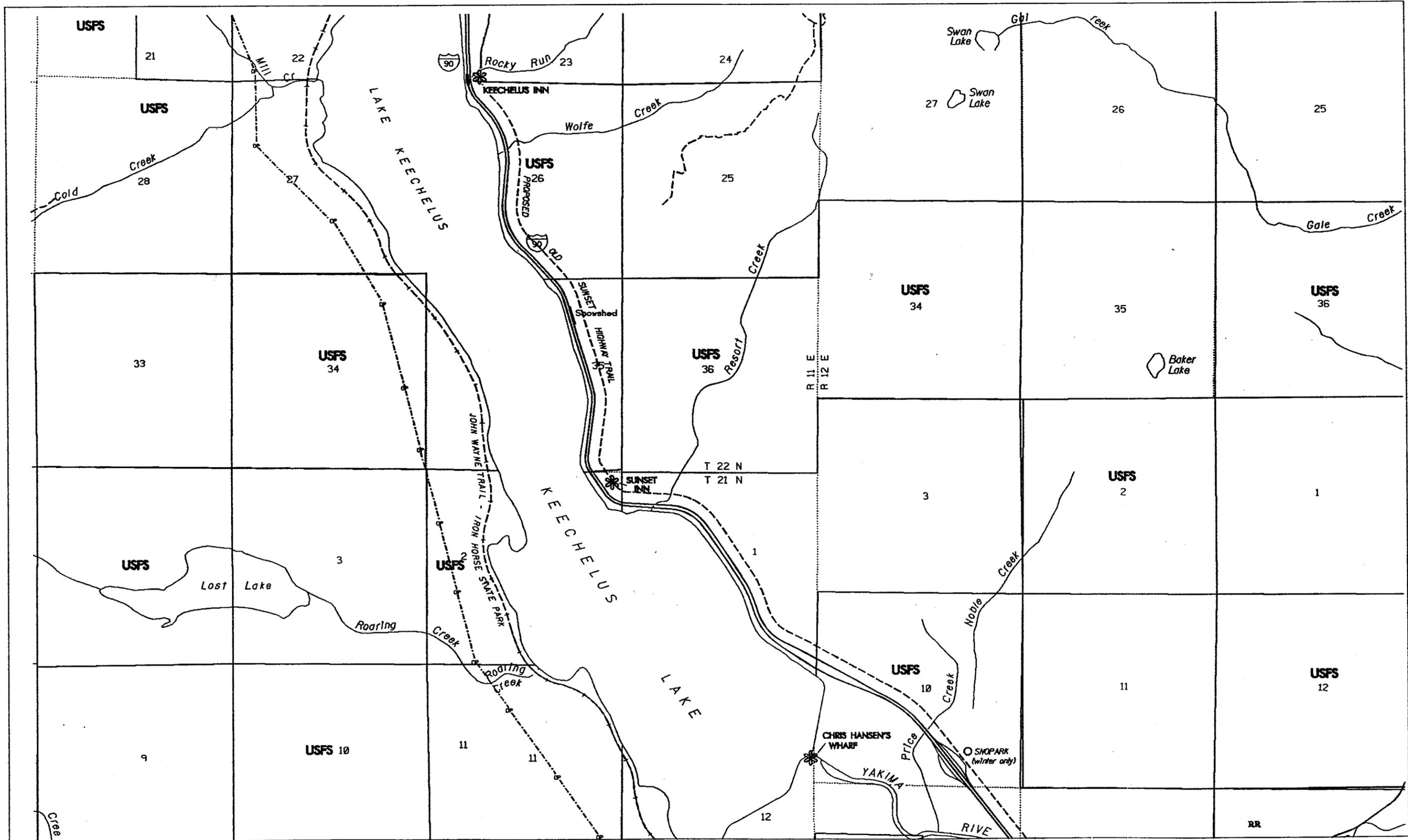
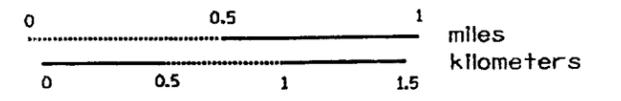


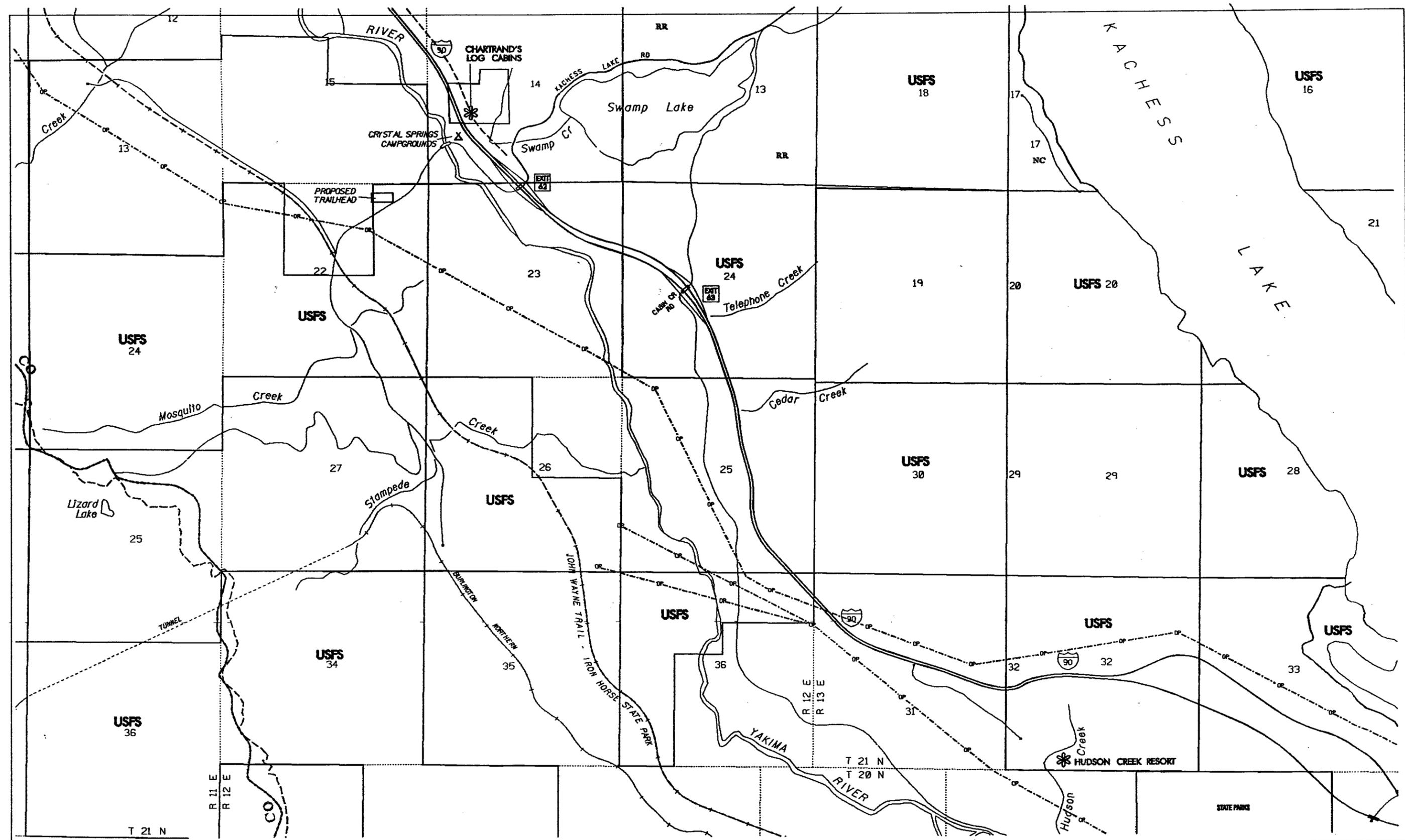
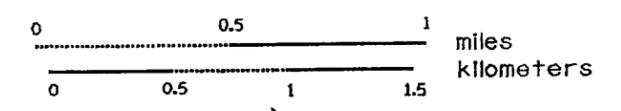


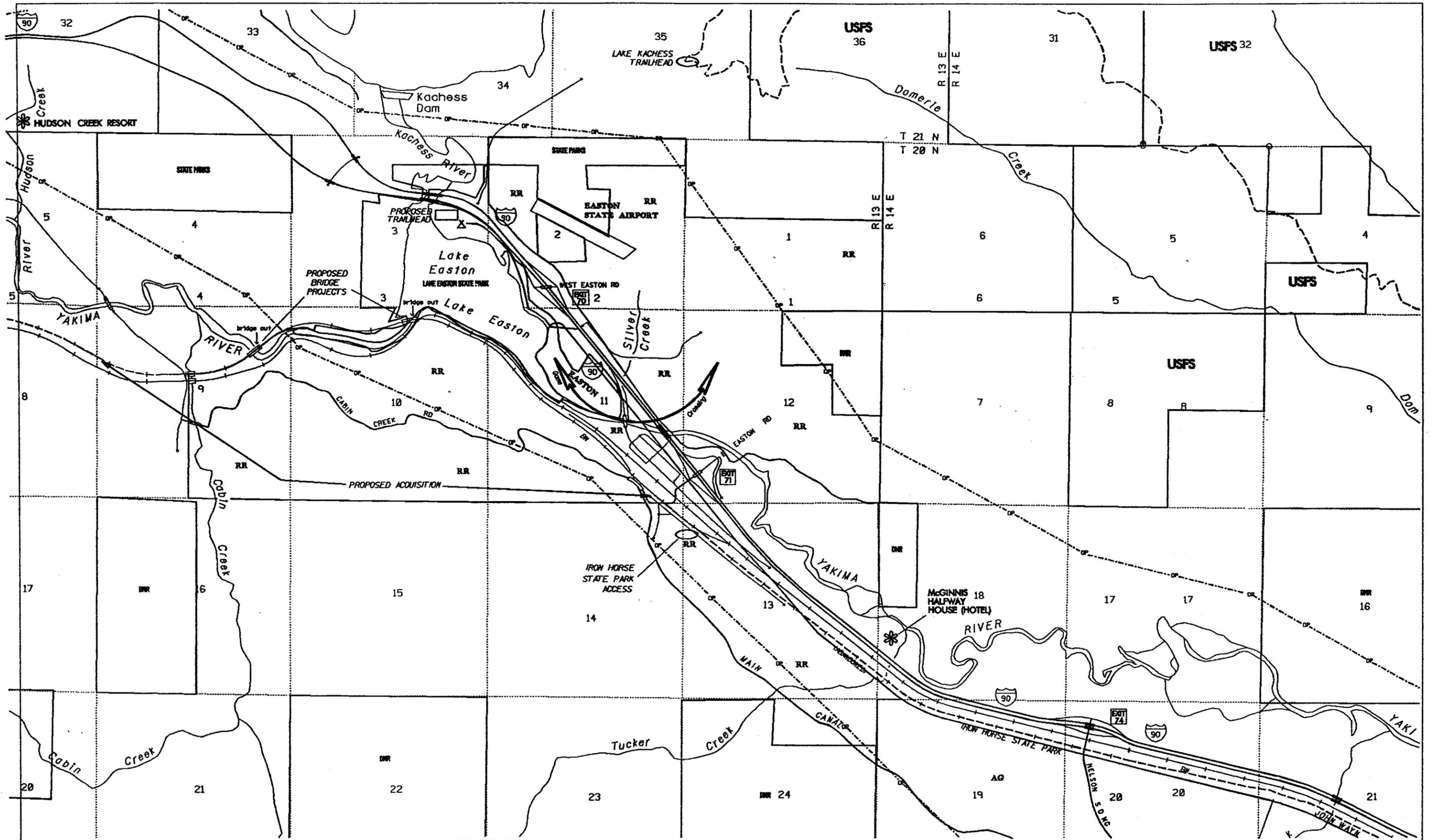
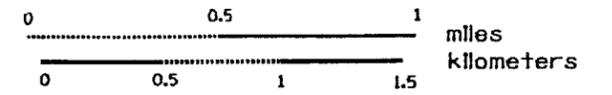


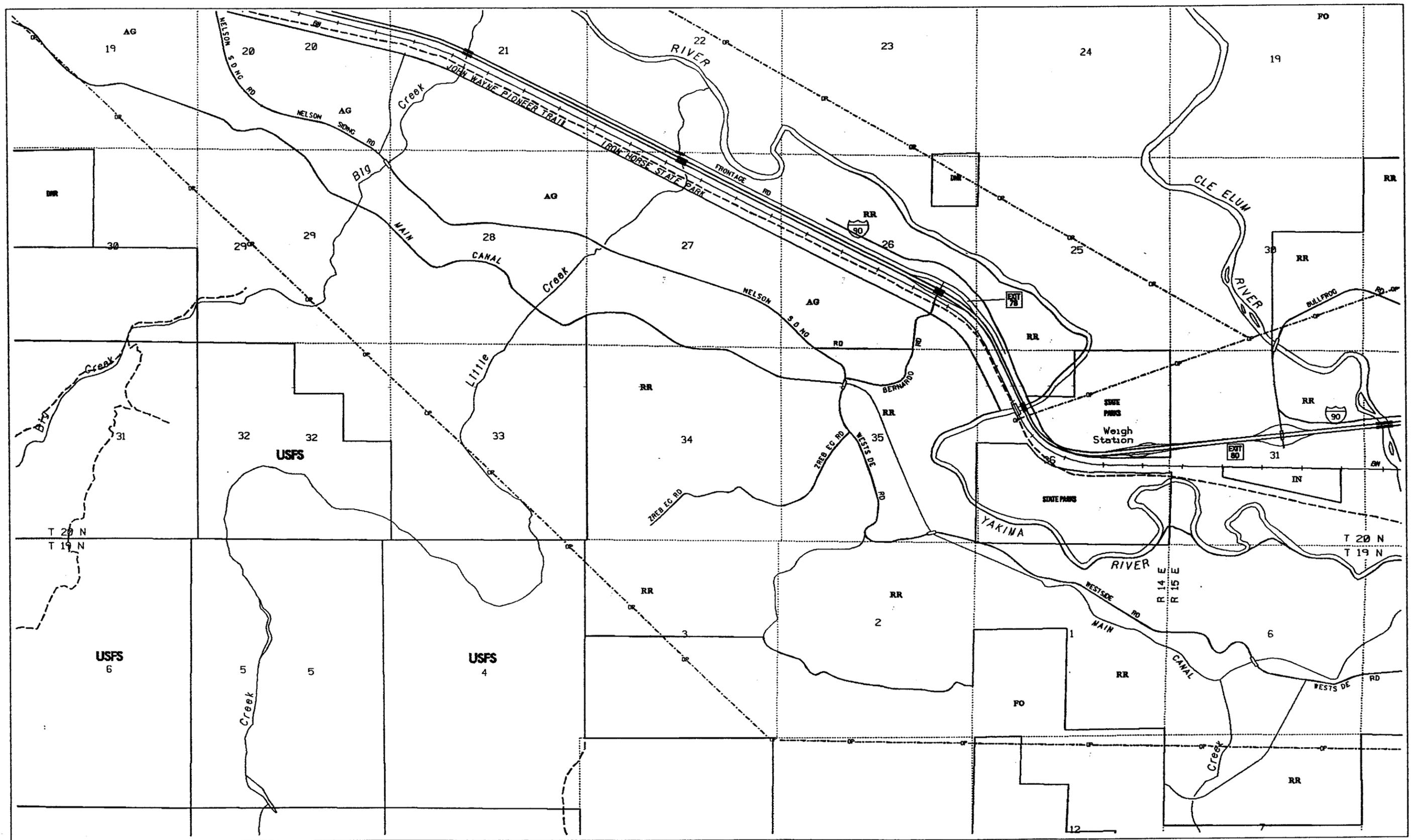
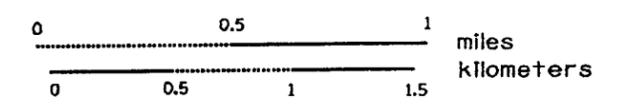
- NORTH BEND:**
1. NARROW STRIP - N. BEND WAY & 8TH
 2. RAILROAD ROW
 3. NORTH BEND MOVIE THEATER
 4. NORTH BEND DEPOT
 5. SNOQUALMIE VALLEY HISTORICAL MUSEUM
 6. NORTH BEND MILWAUKEE ROAD RAILROAD ENSEMBLE
 7. NORTH BEND NORTHERN PACIFIC RAILROAD ENSEMBLE

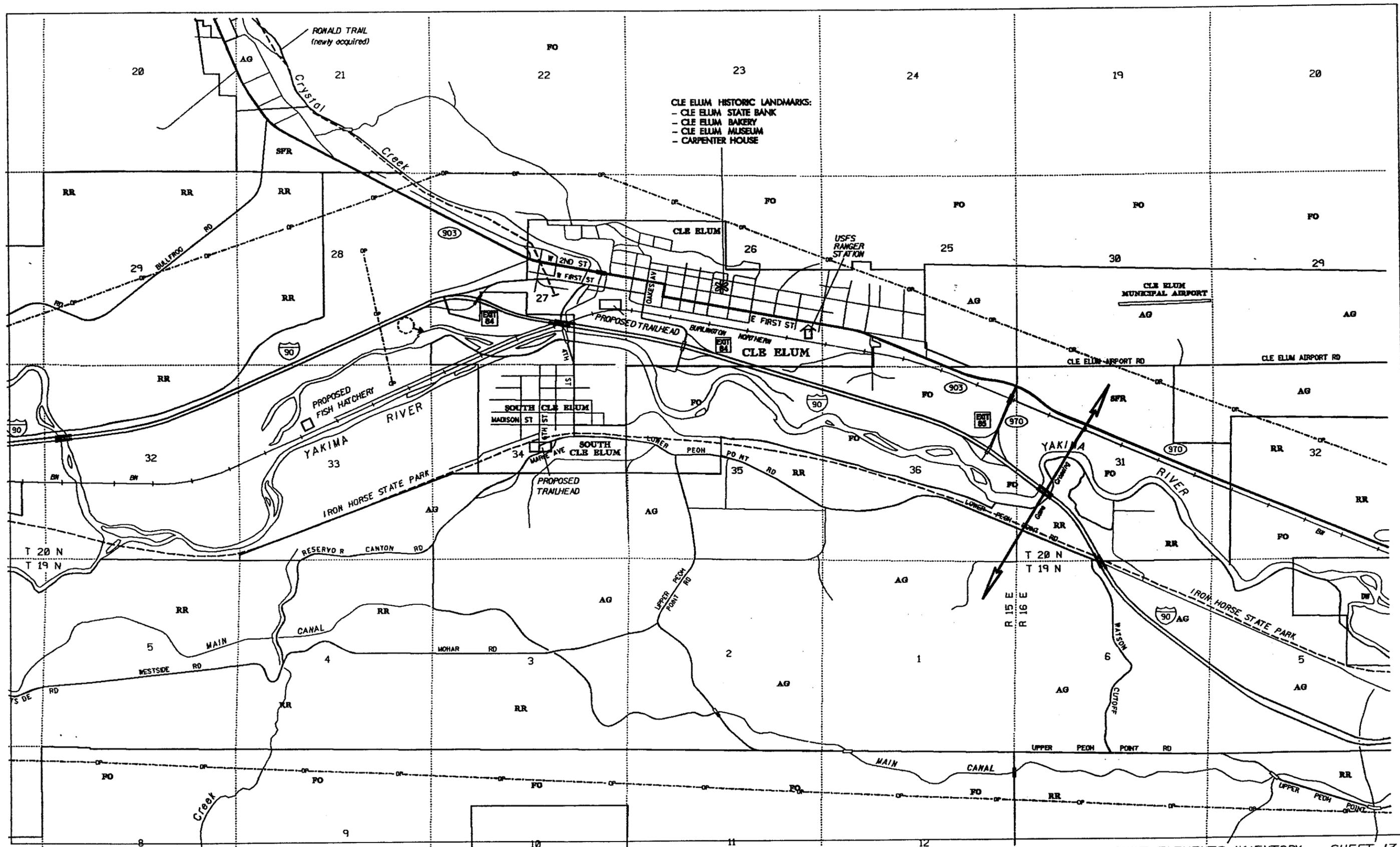
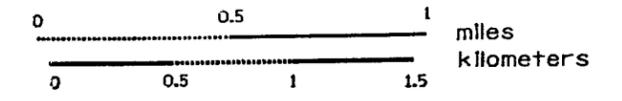


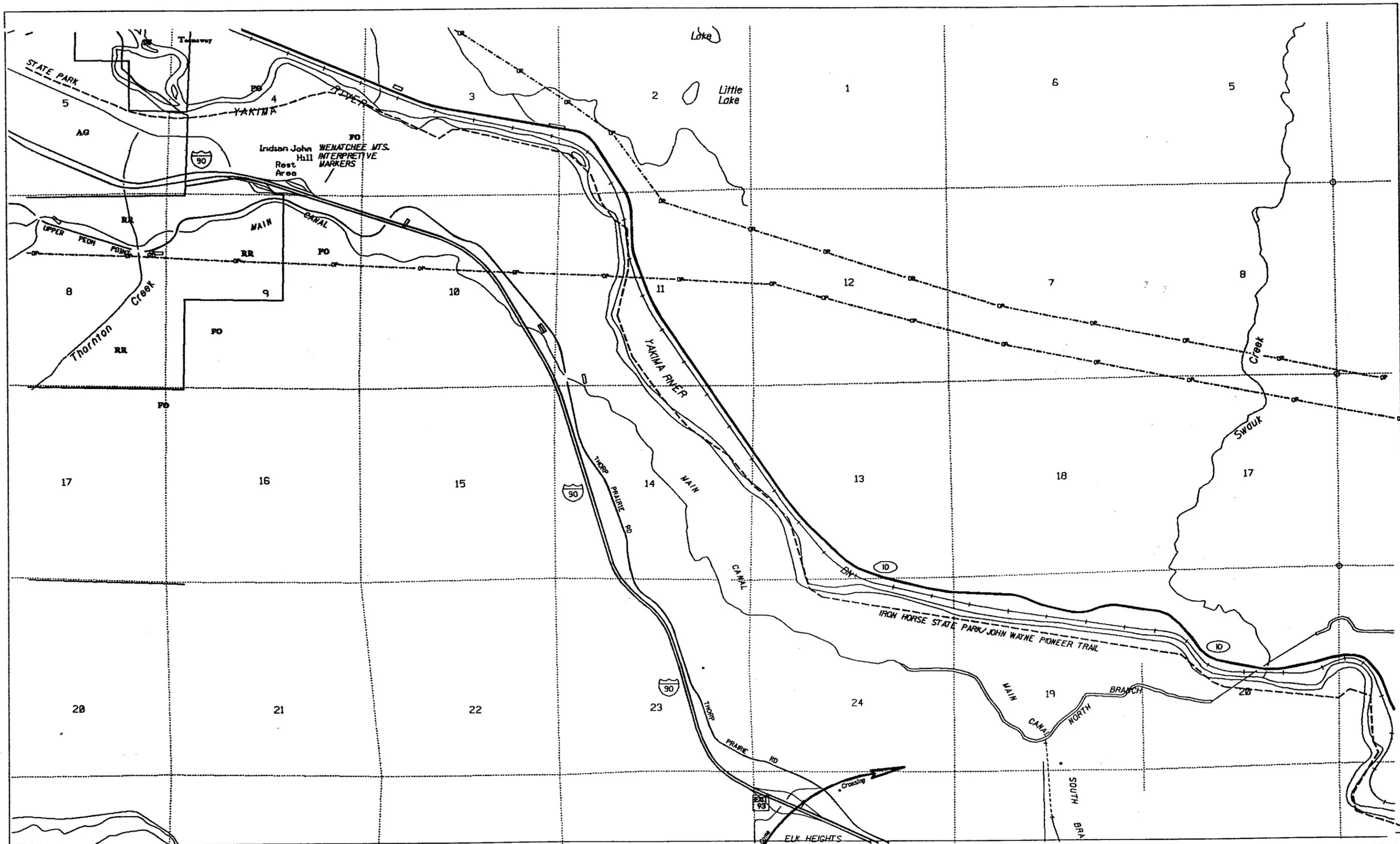
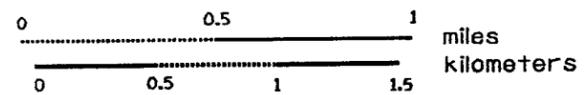


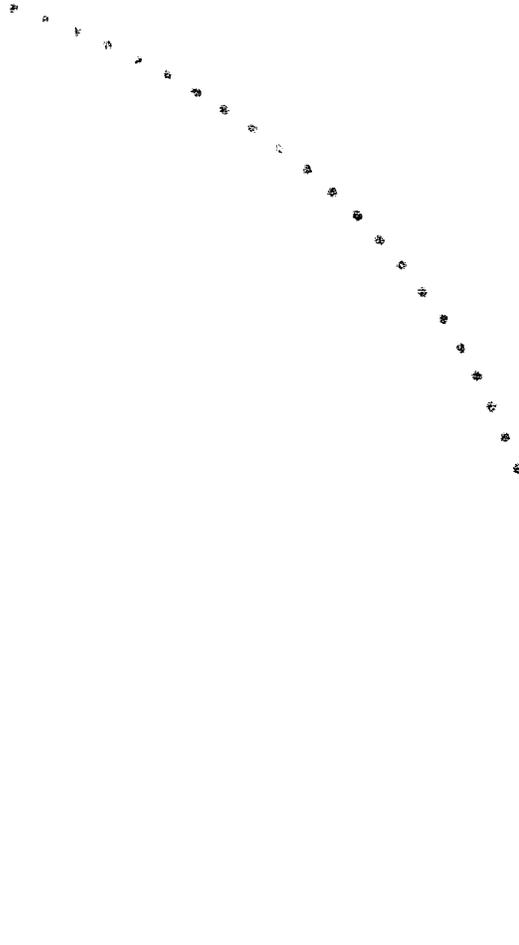
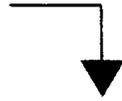




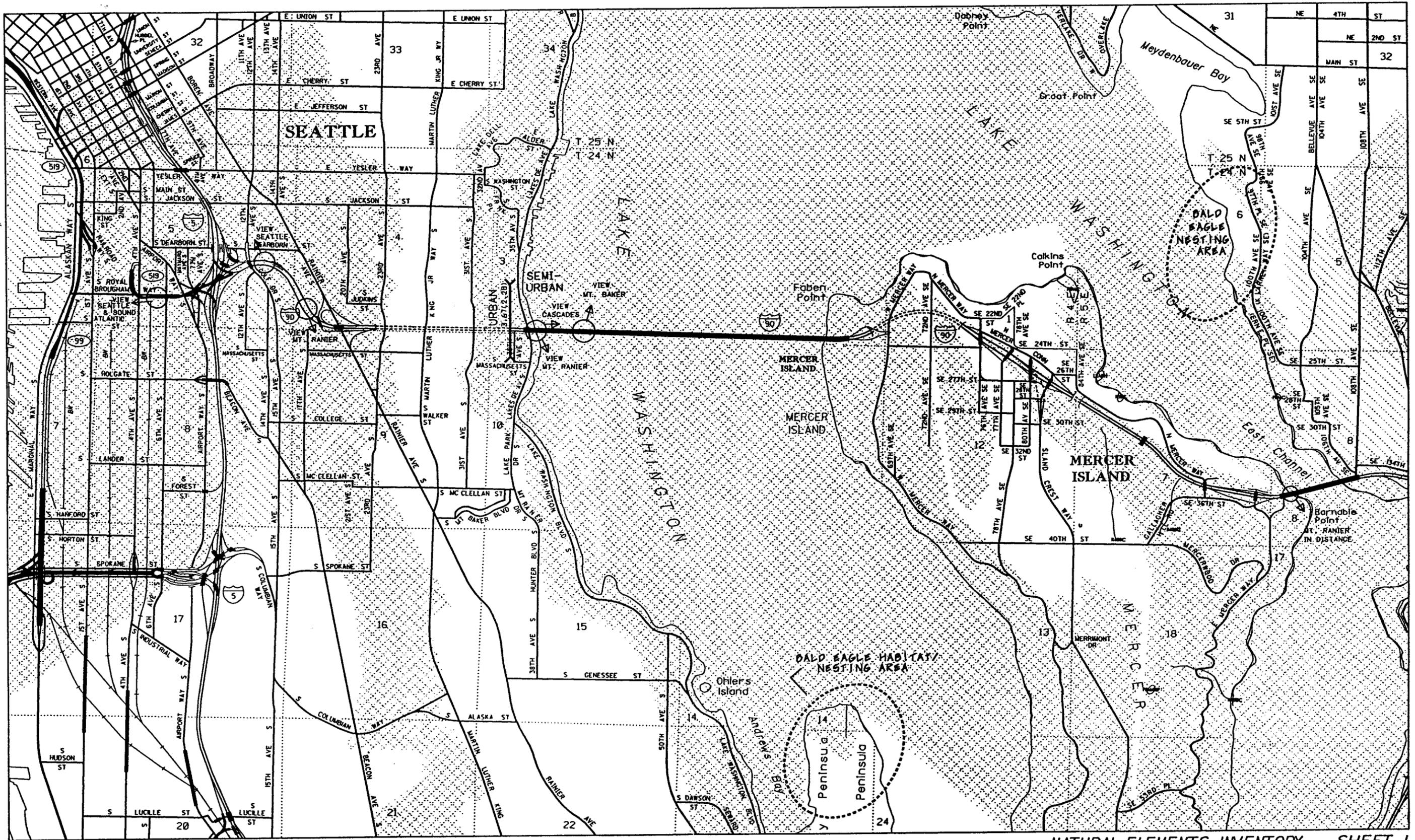




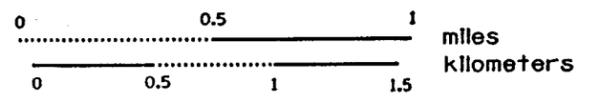


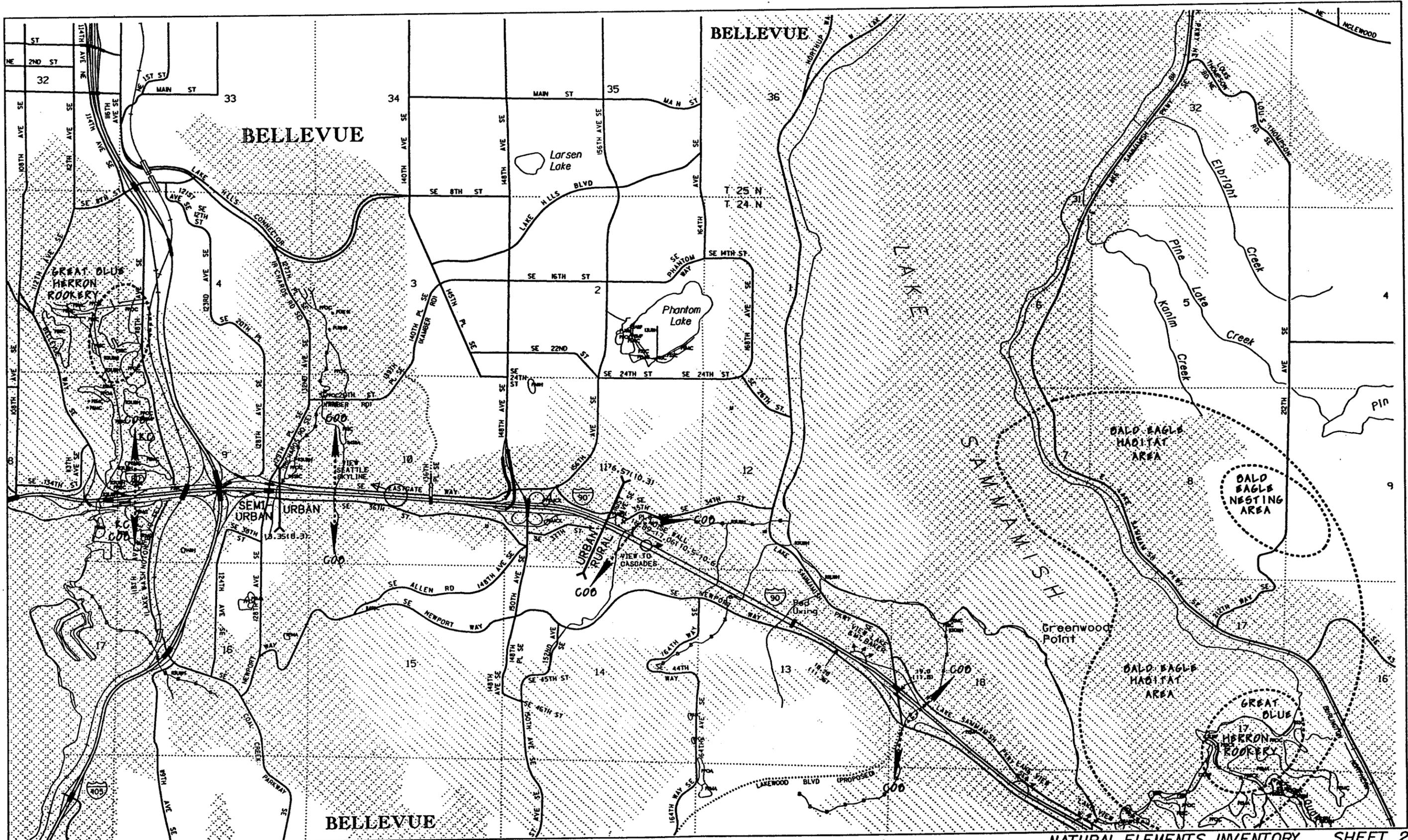


Natural Elements Inventory Maps

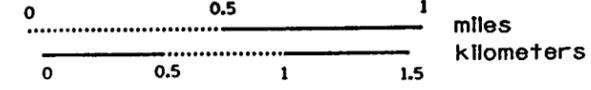


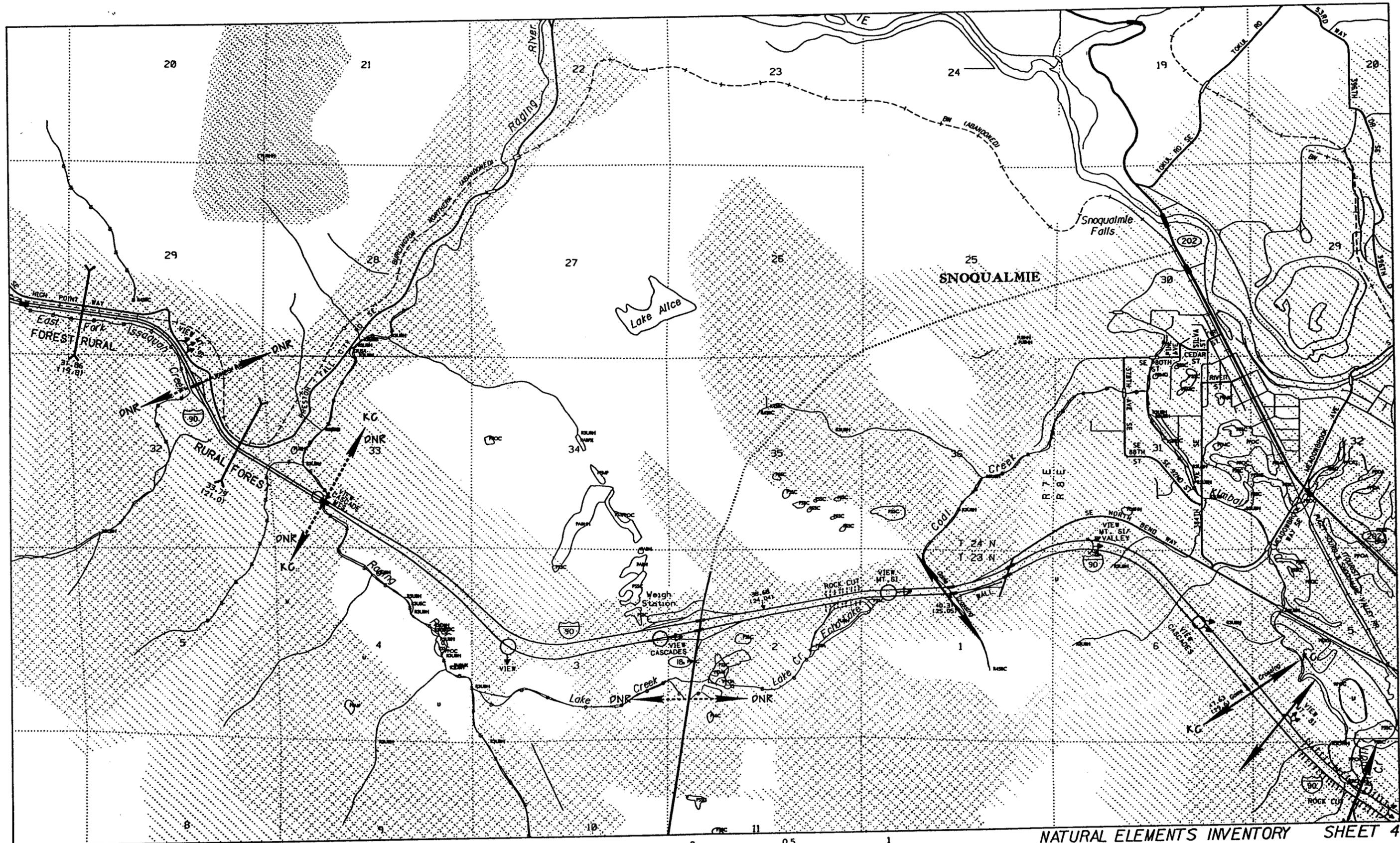
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| Existing Viewshed | | Existing Wildlife Corridor | | Roadside Classification Boundary | | Wetlands Classification | | | |
| Salmonid Stream | | Potential Wildlife Corridor | | | | | | | |





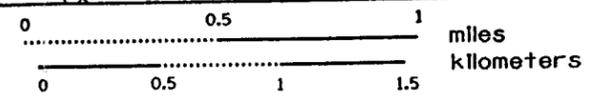
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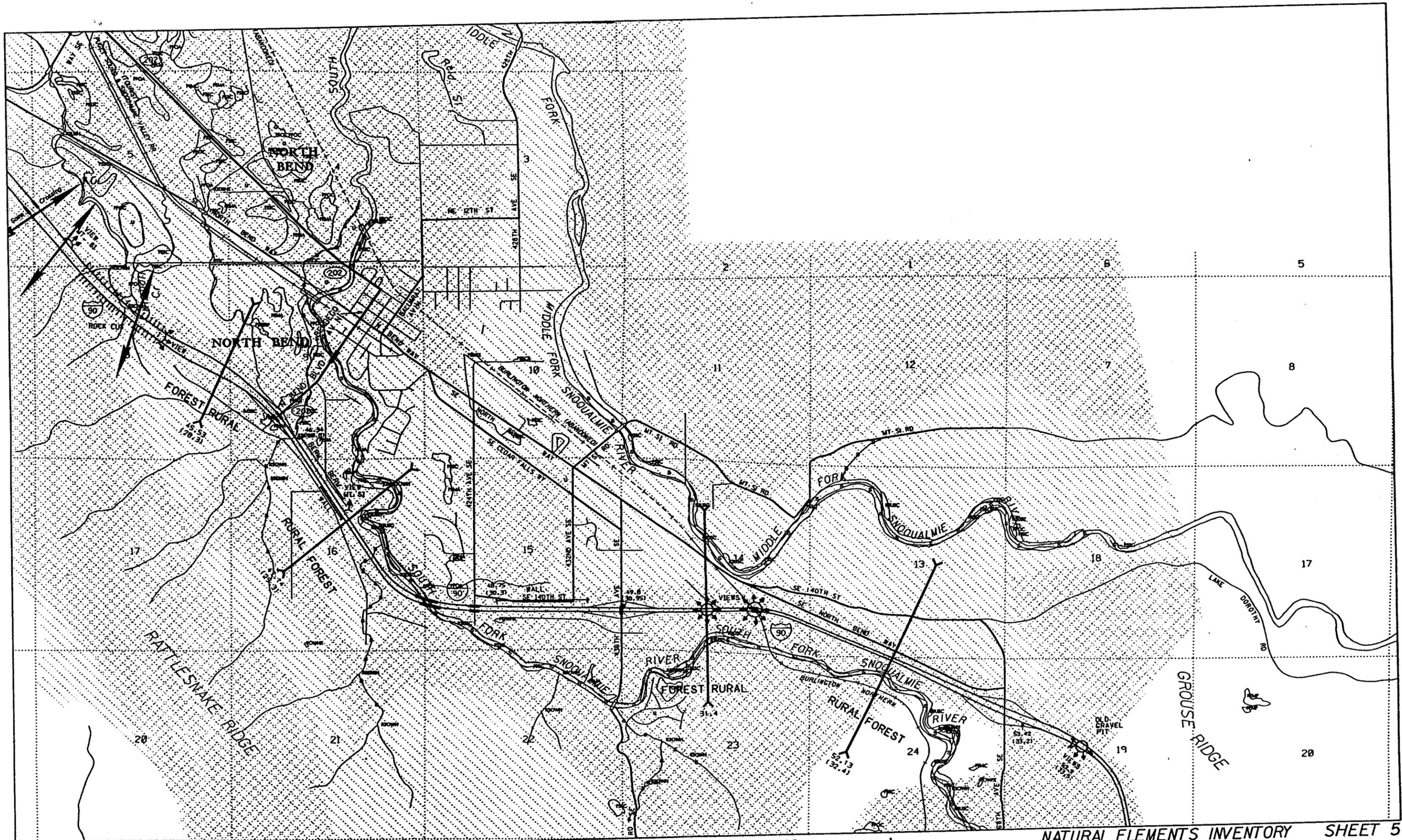




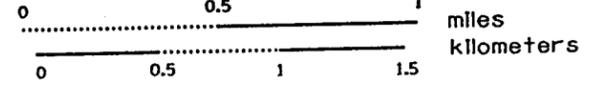
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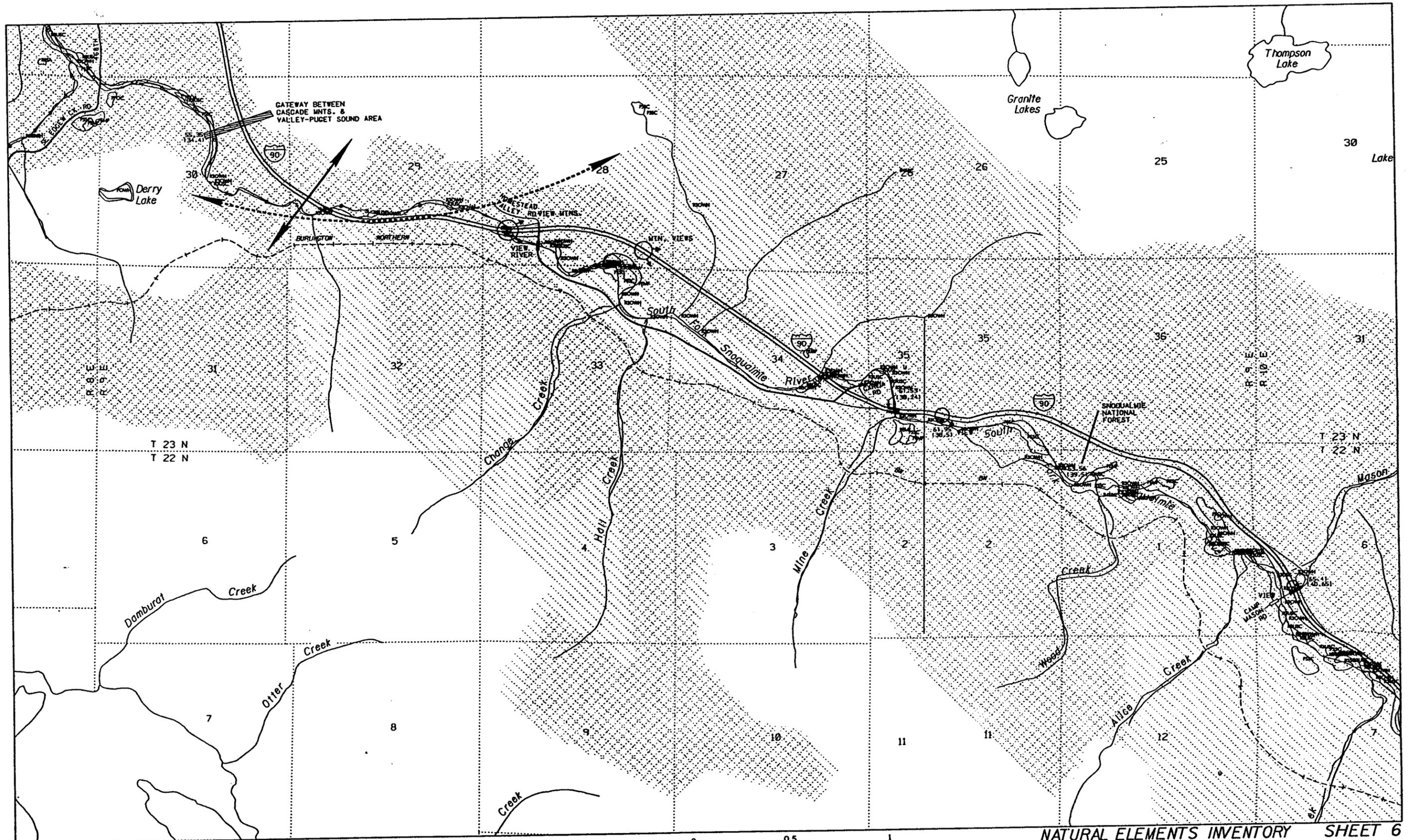
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| Salmonid Stream | Potential Wildlife Corridor | Potential Wildlife Corridor | Wetlands Classification | |



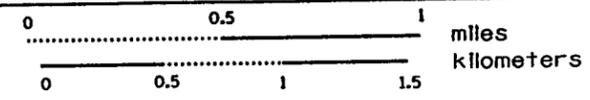


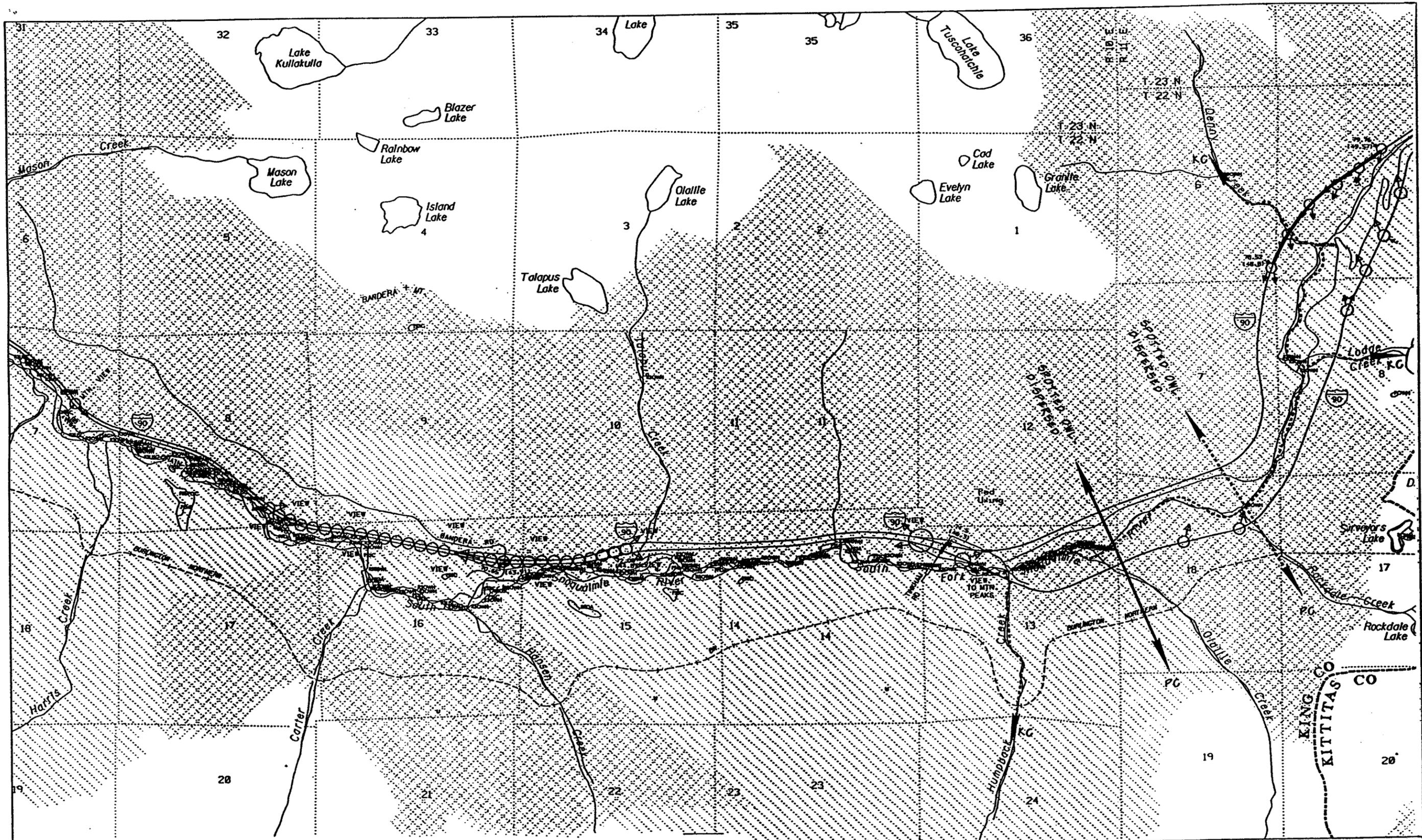
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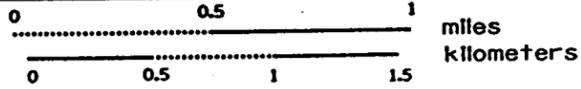
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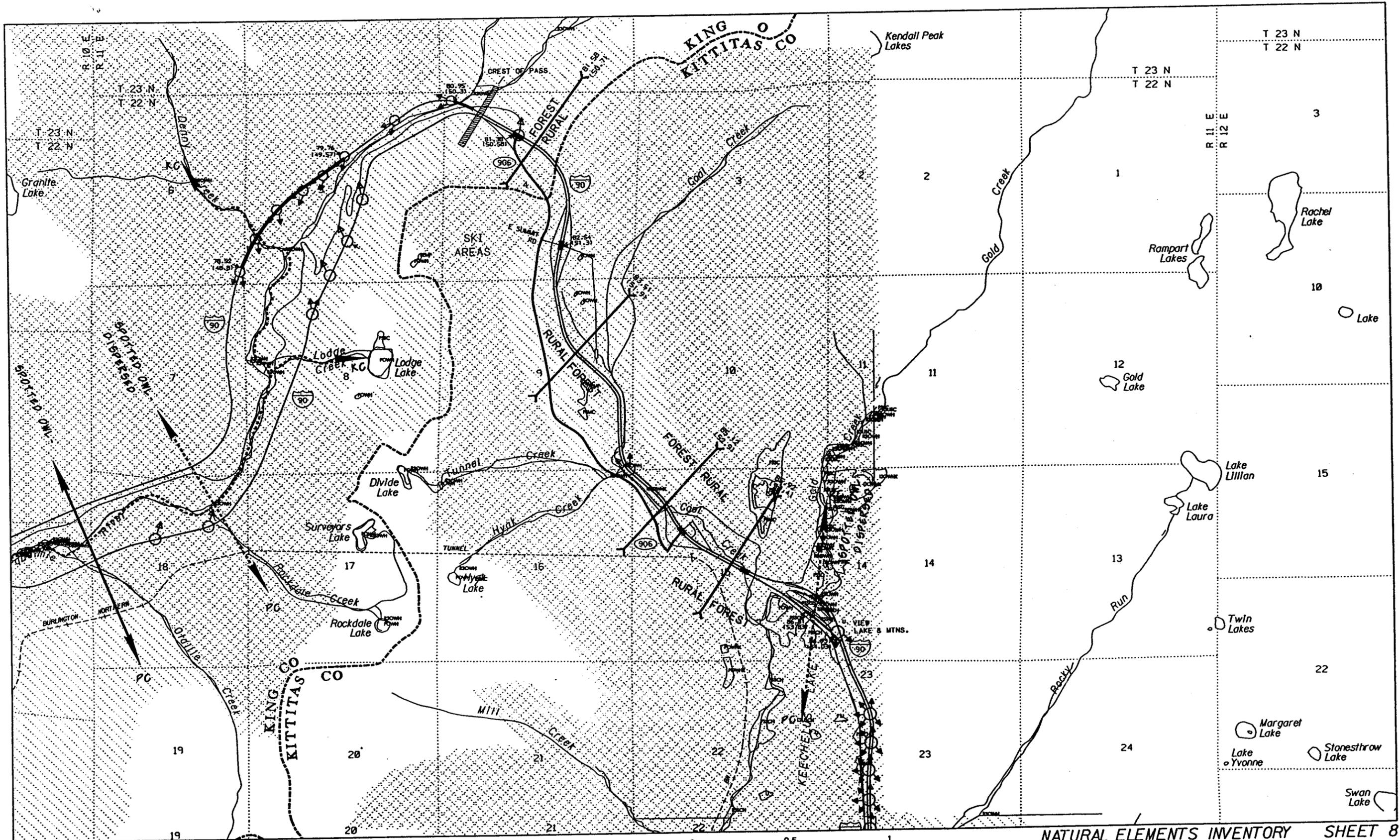




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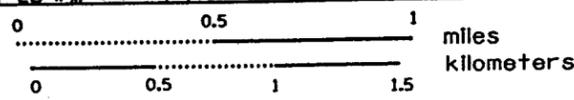
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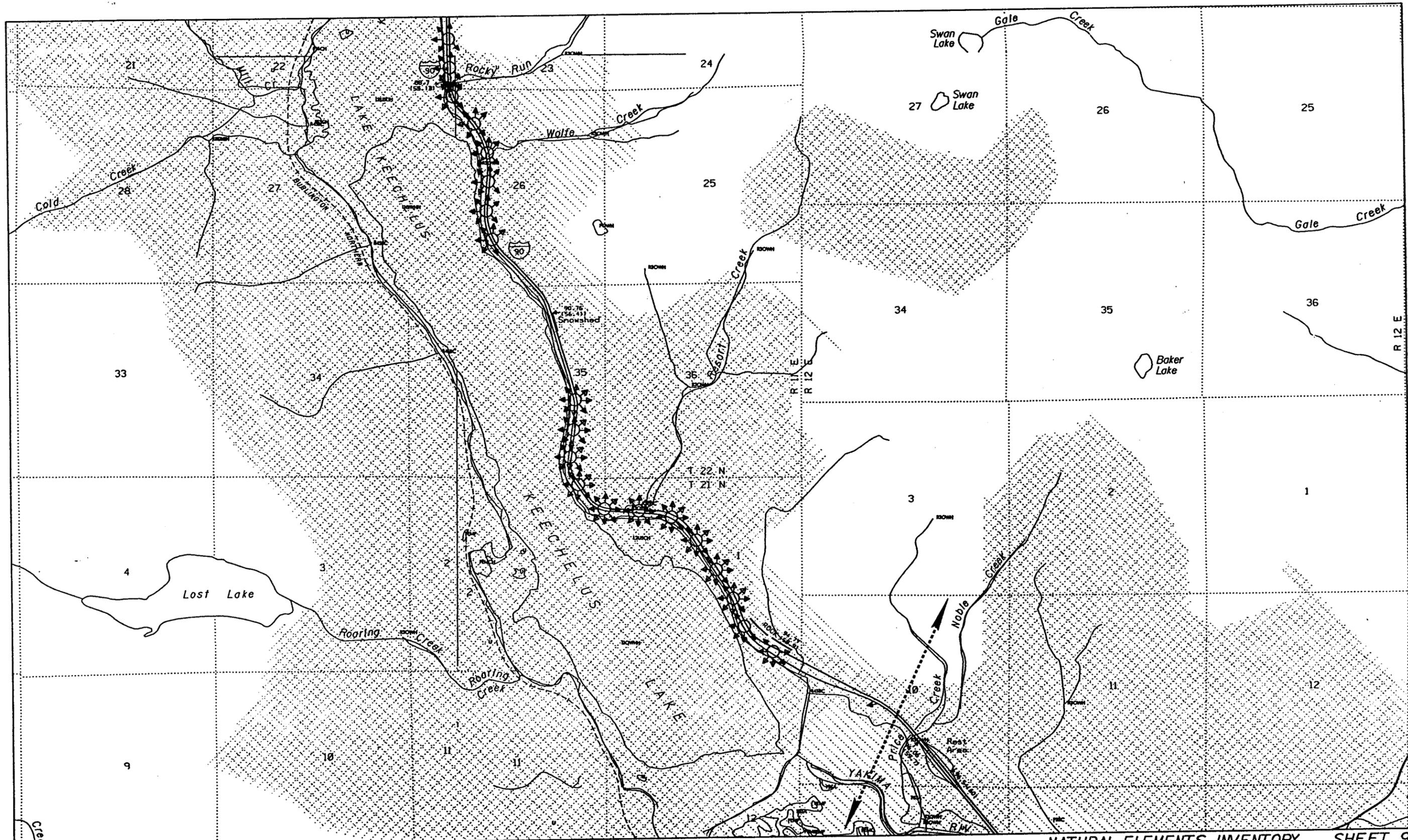




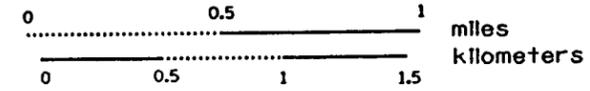
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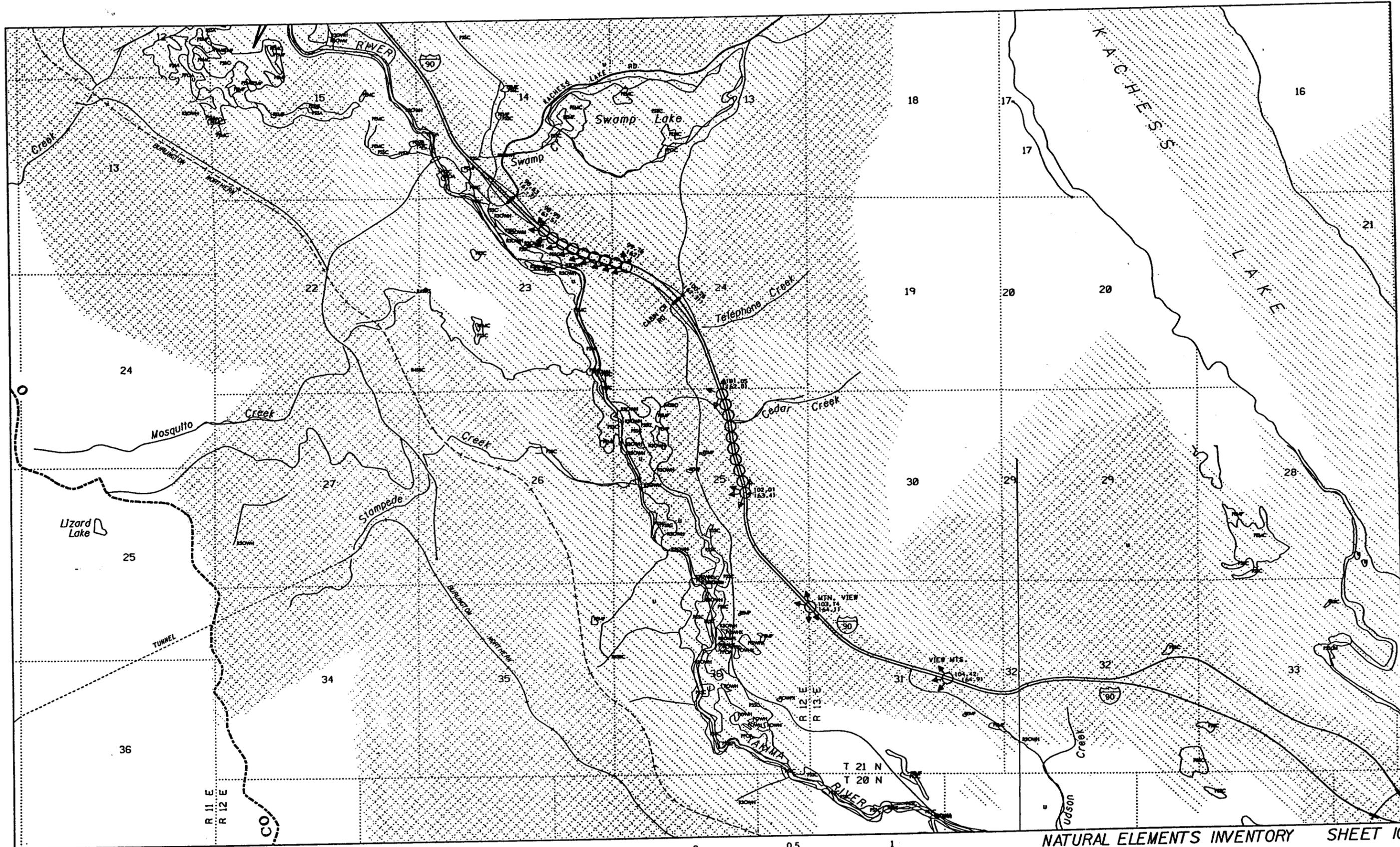
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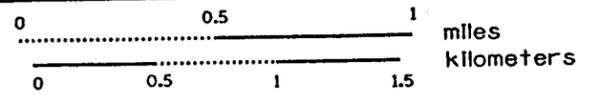


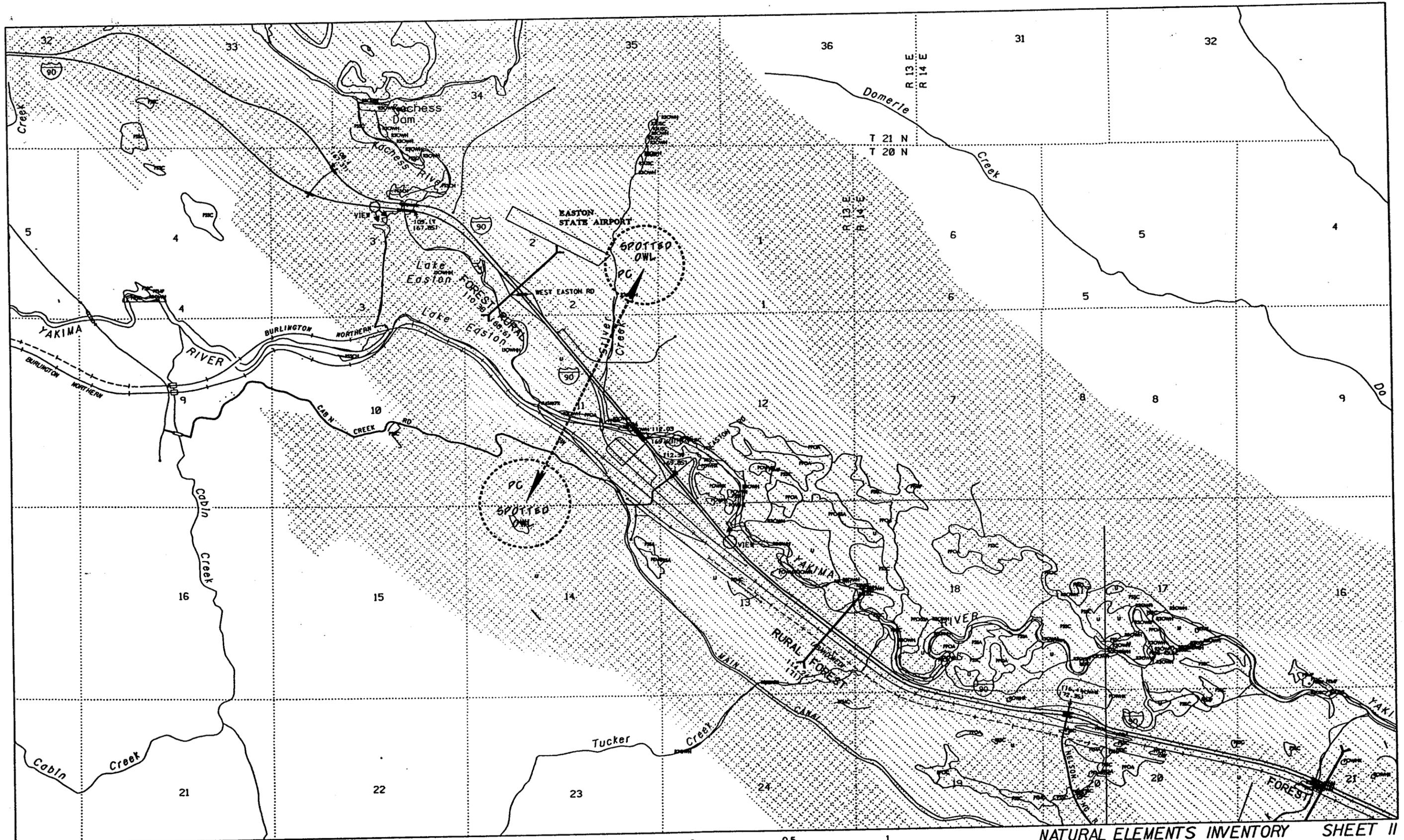
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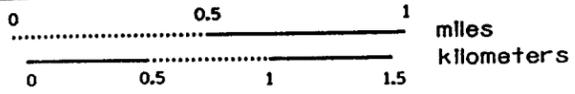
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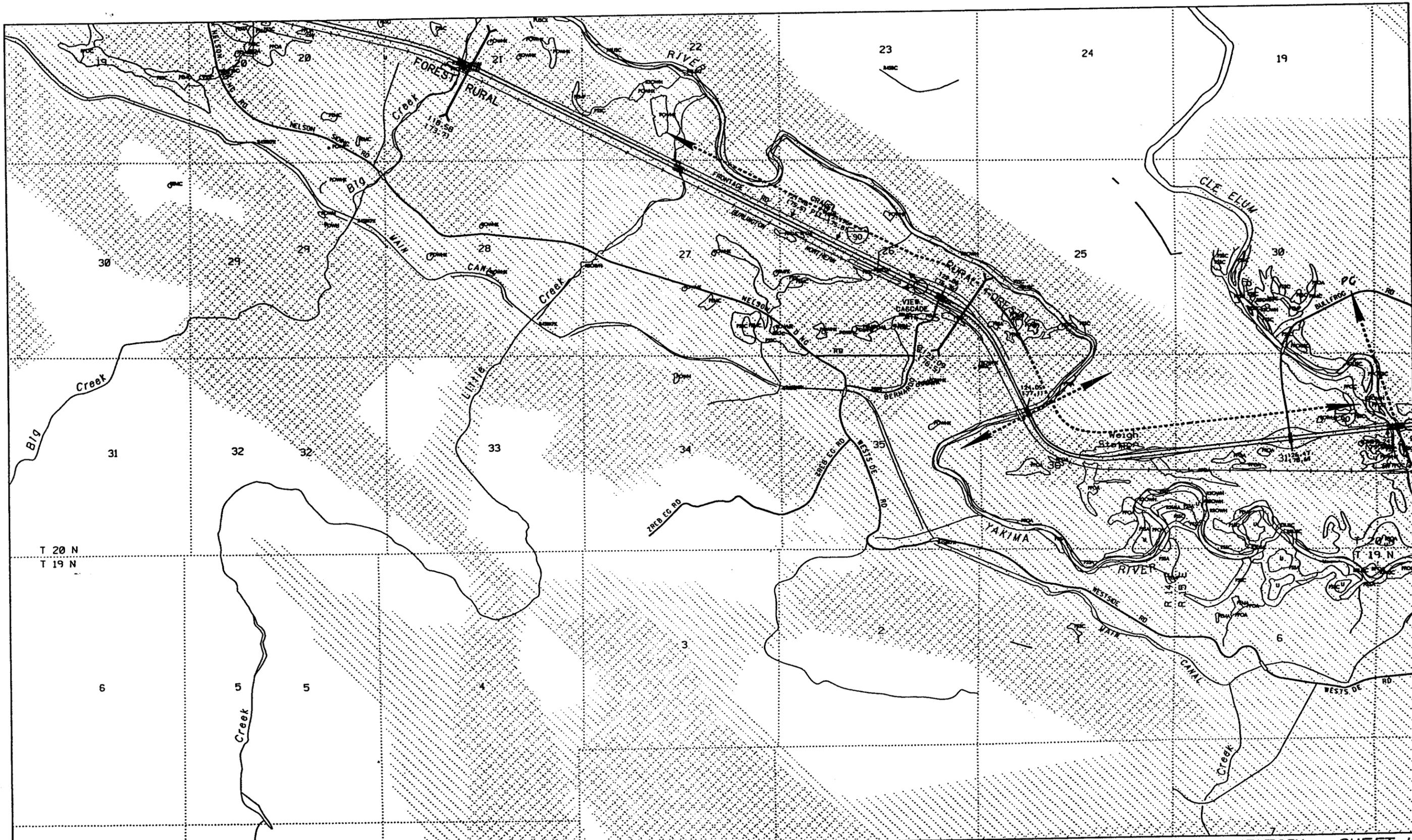




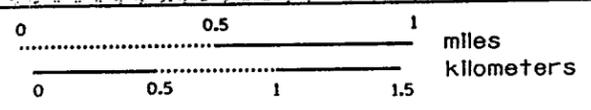
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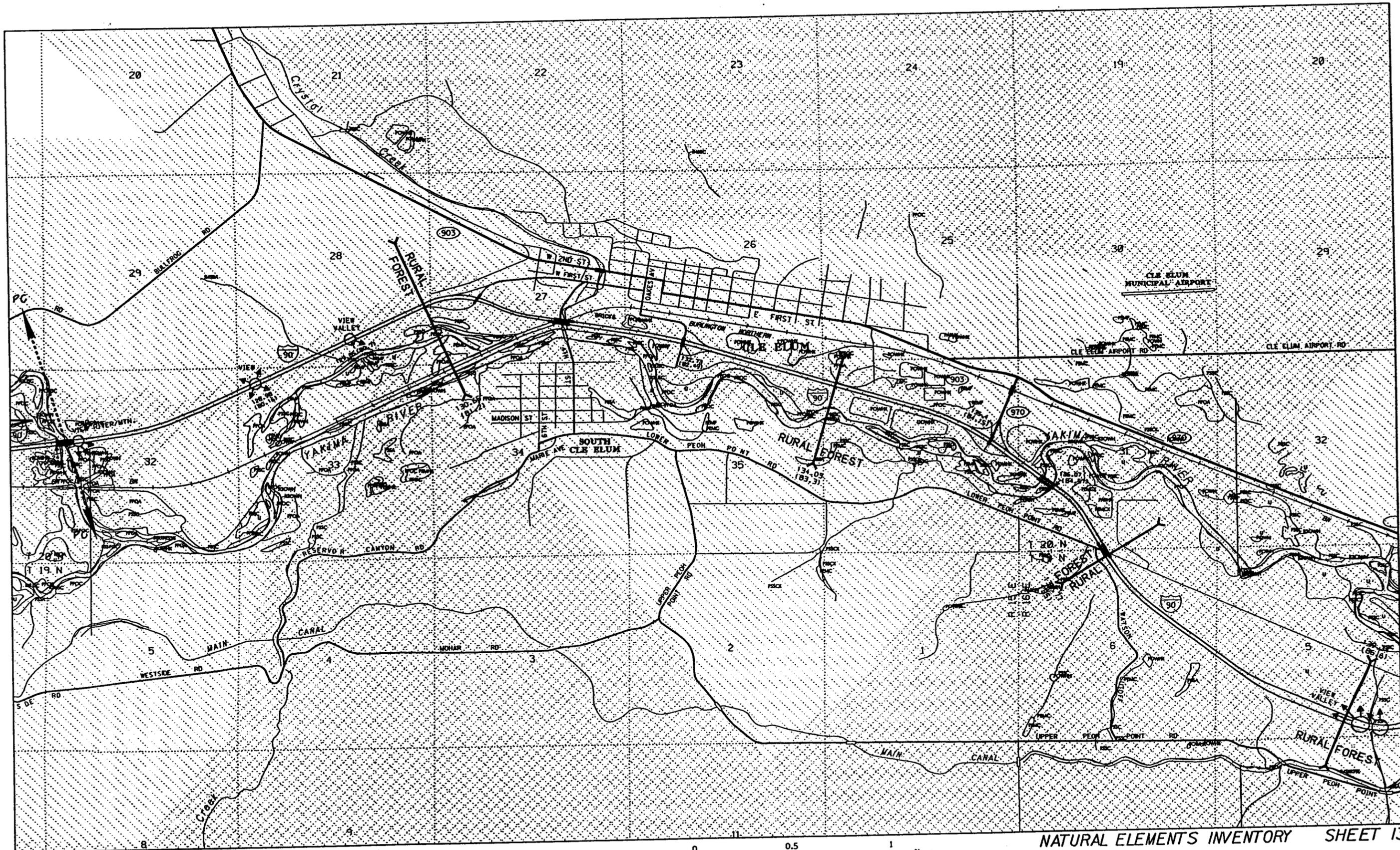
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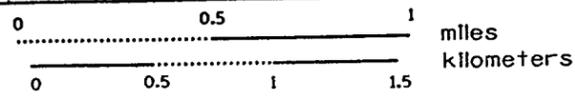
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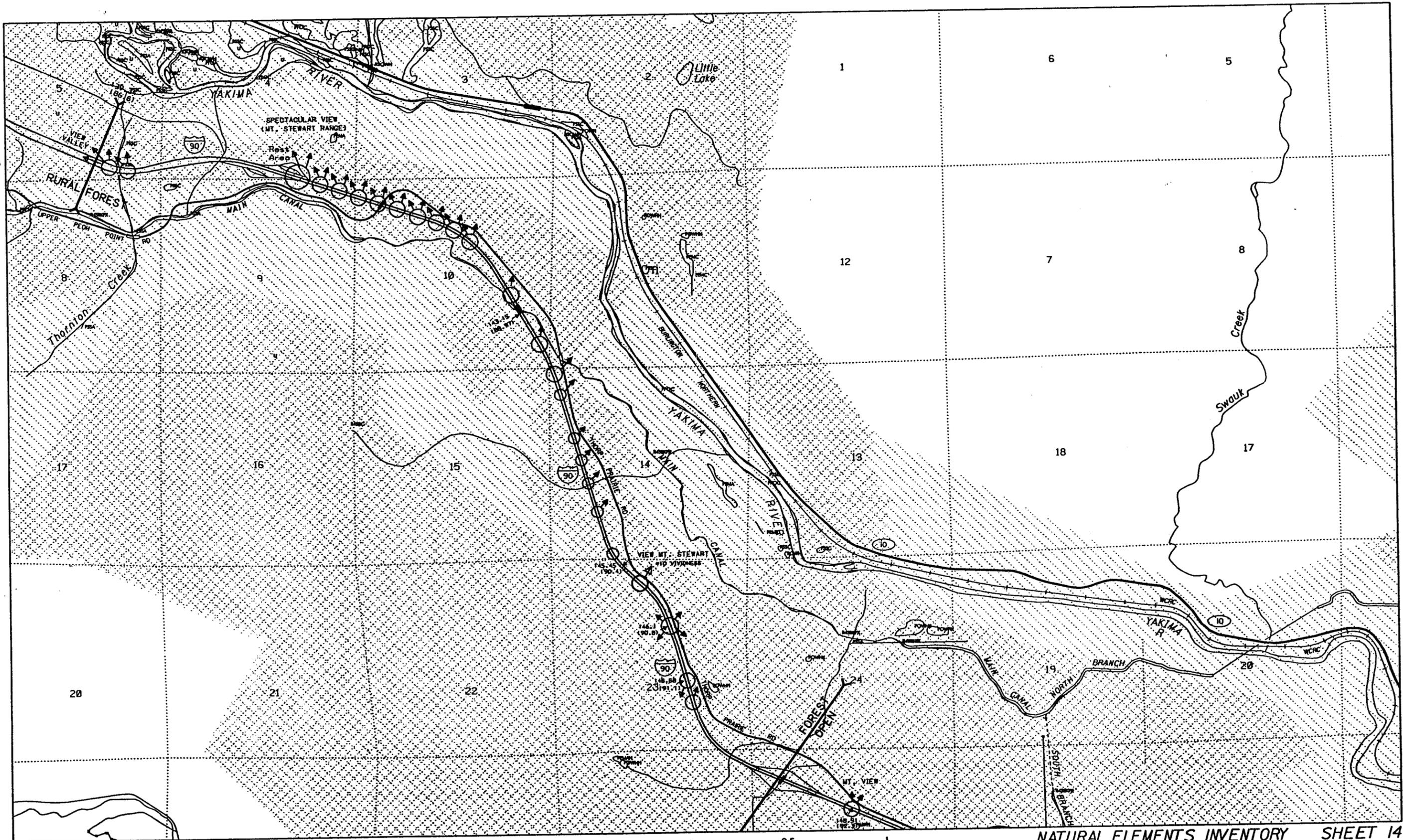




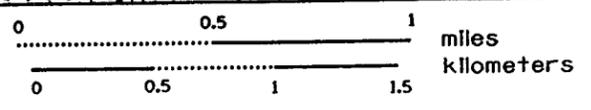
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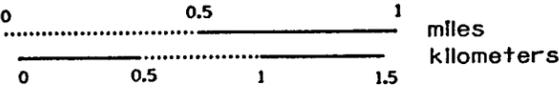
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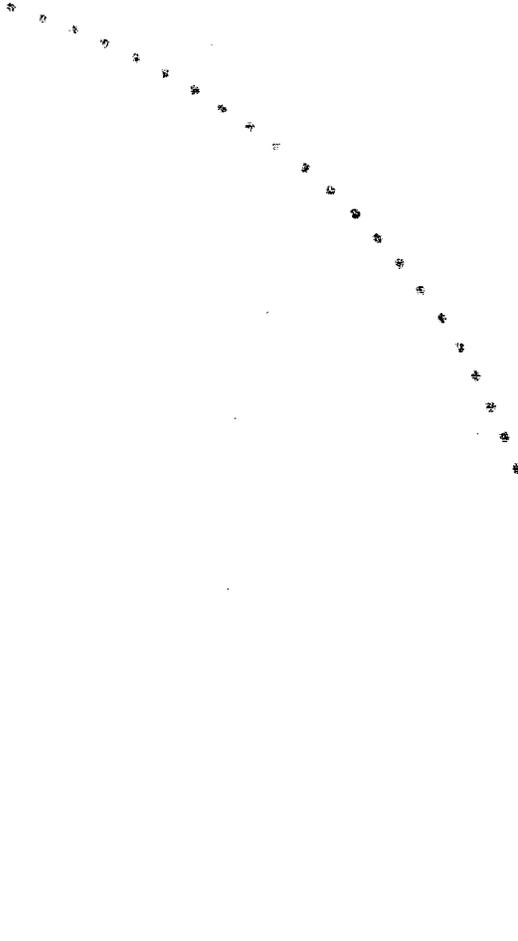
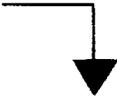




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**Roadside
Master Plan
Proposed
Maps**

