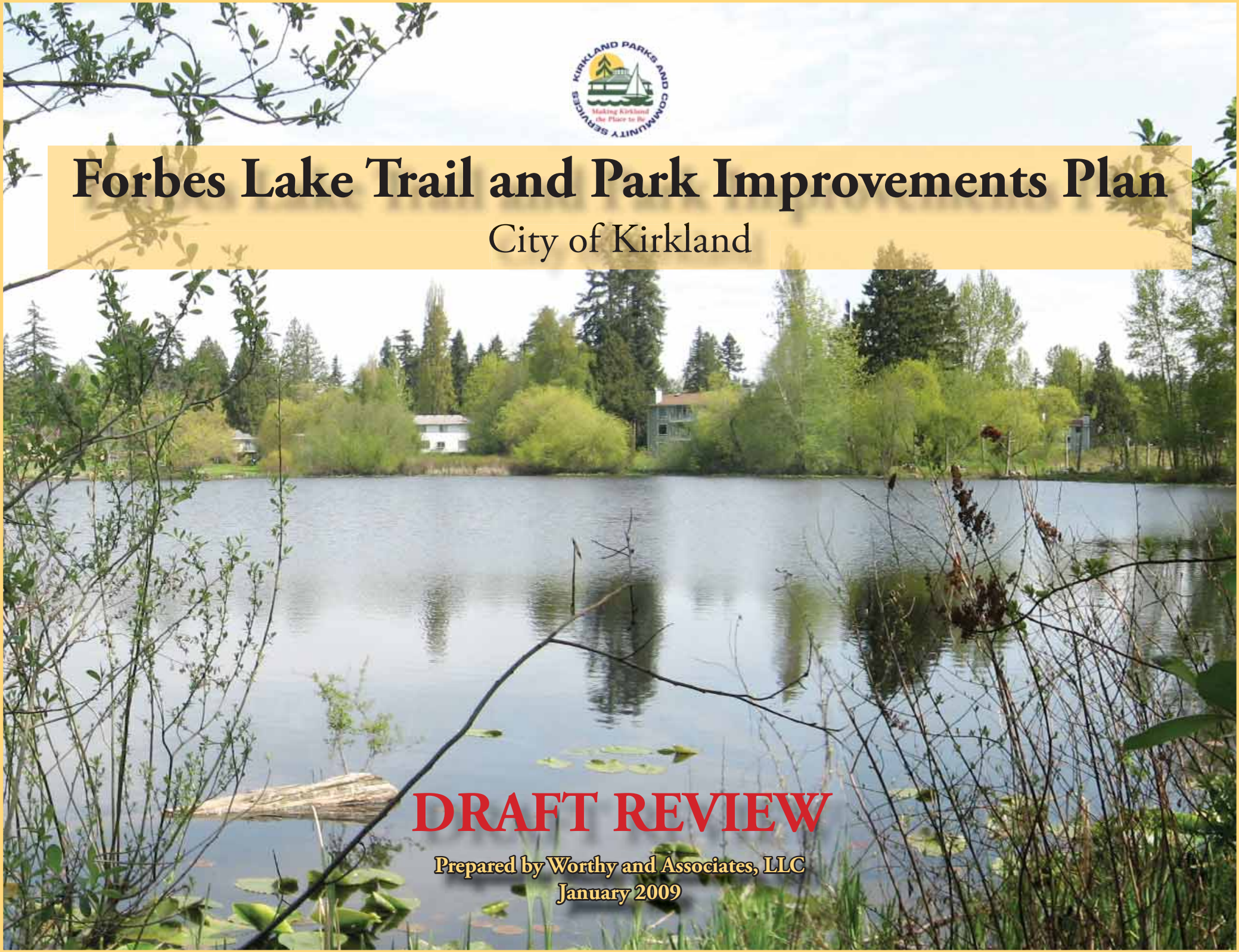
Forbes Lake Trail and Park Improvements Plan

City of Kirkland



DRAFT REVIEW

Prepared by Worthy and Associates, LLC

January 2009

Project Vision

The following are key statements from the 2003 **North Rose Hill Neighborhood Plan** related to Forbes Lake Park:

- Forbes Lake is an important public landmark and open space feature in the neighborhood. In future development, the City should seek to enhance the public views of the lake and wetland areas. To preserve the natural wetland system, active recreational use of this area should be discouraged.
- New development adjacent to Forbes Lake should provide for public access to the lake in appropriate locations. Public access should be limited to passive uses, such as walking trails or viewpoints.
- Nonmotorized connections should be improved and added ... around a limited portion of Forbes Lake connecting City-owned property and existing public access across private property.

North Rose Hill Woodlands Park boardwalk

Vision

The Forbes Lake Trail and Park Improvements project aims to protect and enhance shoreline and wetland habitat areas while providing public access to trail corridors and interpretive viewing platforms. Low-impact paved and boardwalk trails will be ADA accessible and provide important connections within the city's non-motorized transportation plan.

Acknowledgements

City Council

Mayor Jim Lauinger
Deputy Mayor Joan McBride
Dave Asher
Mary-Alyce Burleigh
Jessica Greenway
Tom Hodgson
Bob Sternoff
City Manager David Ramsay

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Forbes Lake Natural Amenities

Forbes Lake and its associated wetlands are located within the upper reaches of the Forbes Creek Watershed. The 1,800 acre Forbes Creek Watershed drains from the North Rose Hill Neighborhood, west through Forbes Lake, under I-405, and down to Lake Washington. The 16 acre site of the Forbes Lake Trail and Park Improvements Project is composed of open-water, aquatic-bed, emergent, scrub-shrub, and forested-wetland zones, with limited upland areas. This diverse wetland complex creates valuable wildlife habitat while providing important stormwater conveyance and water quality management functions for the City of Kirkland.

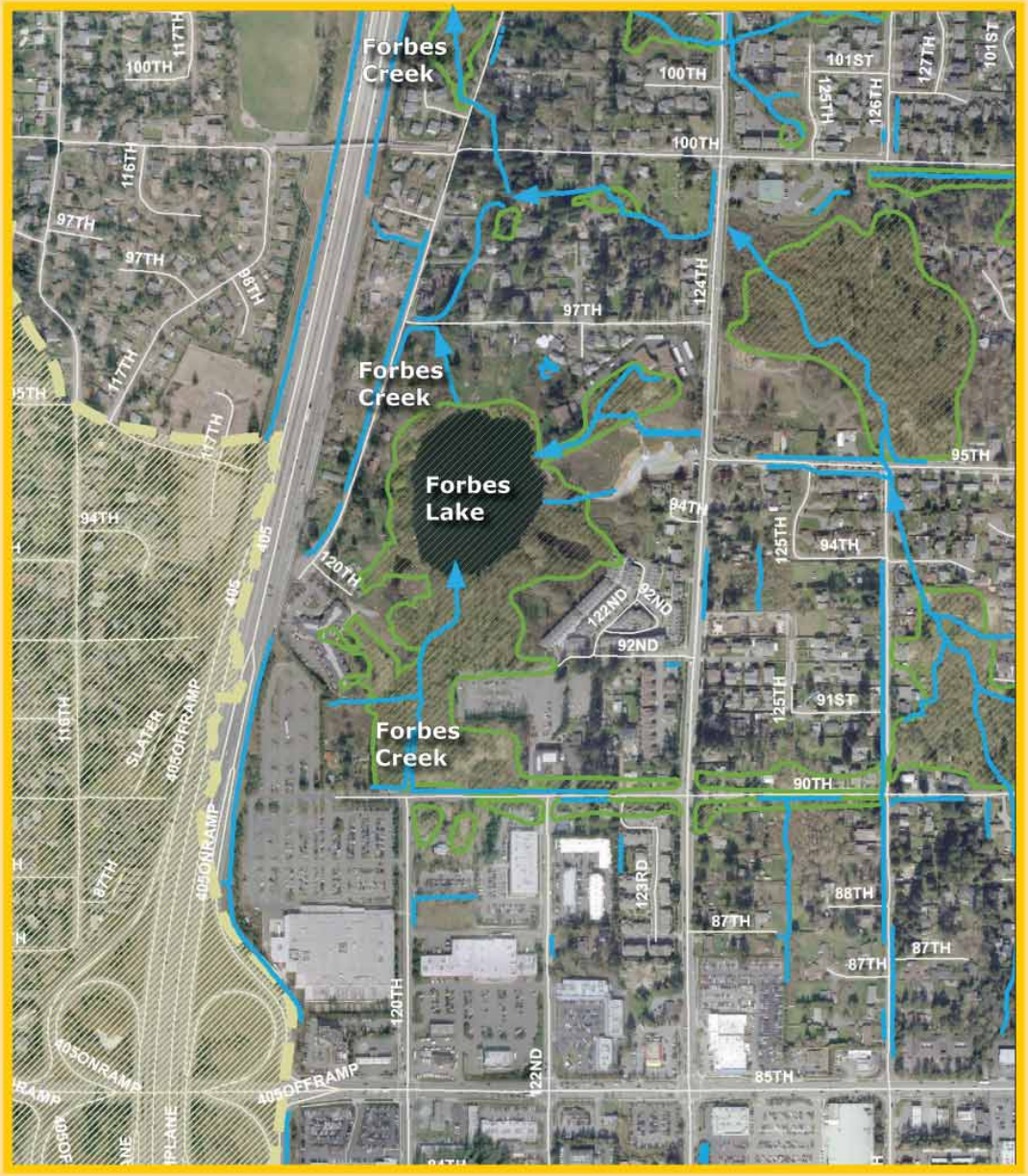
Two small headwater tributaries discharge into Forbes Lake within the project area, the main stem of Forbes Creek at the south end of the lake and an intermittent stream that crosses Forbes Lake Park-West through a deeply incised channel. The lake discharges through the continuation of Forbes Creek on the north side of the lake.

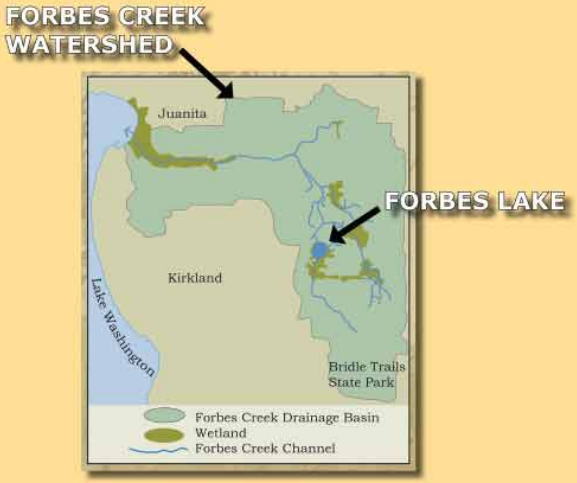
Wildlife observed at Forbes Lake has included coyotes, deer, raccoons, turtles, frogs, and a rich variety of bird species, including bald eagles, hawks, blue heron, osprey, marsh wren, ducks, quail, and swallows. Beavers have a long history of damming sections of Forbes Creek causing localized flooding. The main stem of Forbes Creek north of the lake has historically supported cutthroat trout (The Watershed Company, 1998), while the downstream reaches have records of both cutthroat trout and coho salmon. A recent fish habitat enhancement project conducted on Forbes Creek west of I-405 may result in increased salmonid presence upstream of I-405 towards Forbes Lake.

View from Forbes Lake Park-East

Resident bullfrog

Forbes Creek Watershed Map





WSDOT Mitigation Projects

In 2006 and 2007, the Washington State Department of Transportation (WSDOT) constructed mitigation areas at Forbes Lake Park-East and Forbes Lake Park-West as compensation for wetland impacts associated with the I-405 Kirkland Nickel Project. Both mitigation areas were created with knowledge and anticipation of planned park improvements for the sites, including trails, boardwalks, and a small parking lot at Forbes Lake Park-East. WSDOT is required to monitor and maintain the mitigation areas for a period of ten years from the project completion dates. As the Forbes Lake Trail and Park Improvements Project moves forward, the City of Kirkland will work with WSDOT and the permitting agencies on any proposed modifications within the mitigation areas.

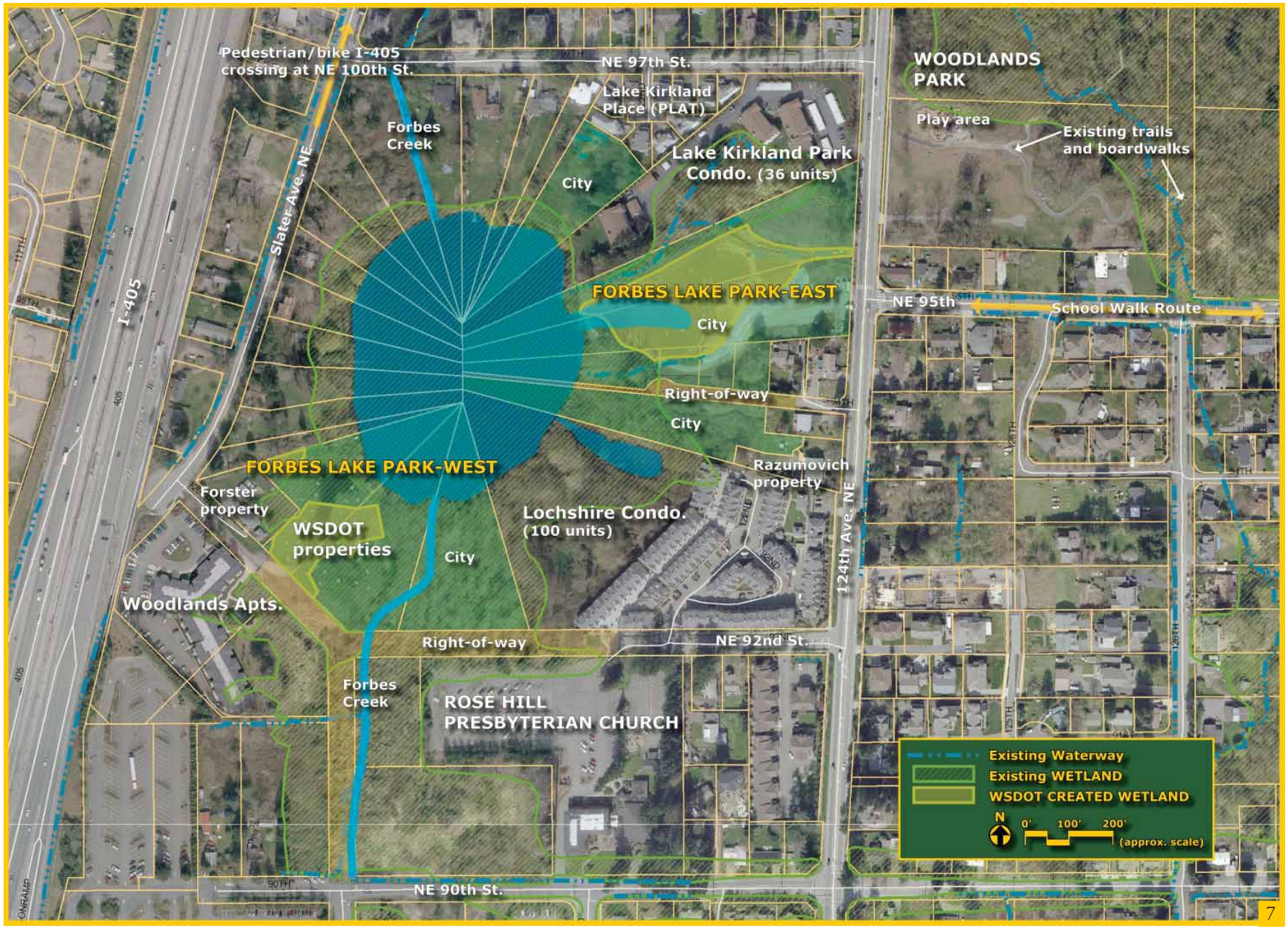
WSDOT mitigation work at Forbes Lake Park-East

Property Ownership

The following map illustrates existing ownership of land parcels surrounding Forbes Lake. At present, the City of Kirkland owns 8.8 acres of property surrounding Forbes Lake. The City purchased parcels at Forbes Lake Park-East in 1990 and acquired additional parcels as shown to the north and south as part of private development conditions. In December of 2008, the City purchased the lake-side parcel of the Razumovich property, south of Forbes Lake Park-East, to accommodate proposed trail access as described later in this report. WSDOT has also agreed to transfer 2.65 acres of property to the City of Kirkland at Forbes Lake Park-West following the required monitoring period.

WSDOT mitigation work at Forbes Lake Park-West

Existing Ownership Map (includes Razumovich parcel acquired by the City of Kirkland)



Existing Access

Kirkland's Shoreline Master Program "requires public pedestrian access along the water's edge of all shoreline development, other than single-family residential," (Kirkland Municipal Code, Section 24.05.065). Previous multifamily development projects at Forbes Lake have led to the creation of public access points on the northeast side through Lake Kirkland Park Condos and on the southeast side through Lochshire Condominiums. A public viewing platform with interpretive signage also exists within the right-of-way at Forbes Lake Park-West.

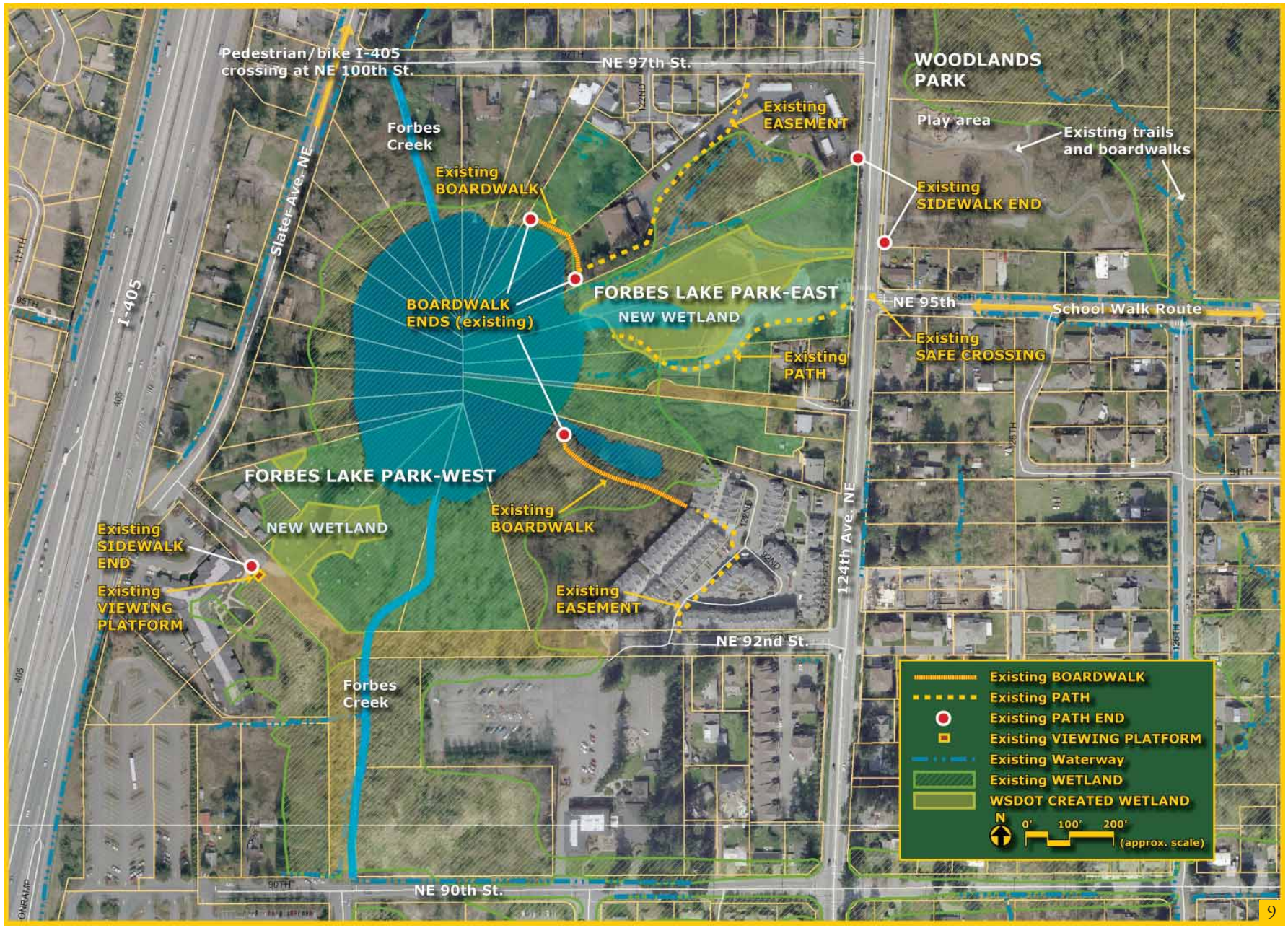
A stabilized access route and former construction staging area remain at Forbes Lake Park-East as a result of the WSDOT mitigation project. Roadside improvements including curb, gutter, and sidewalk have not been completed along 124th Ave. NE adjacent to the project site.

Existing north boardwalk section

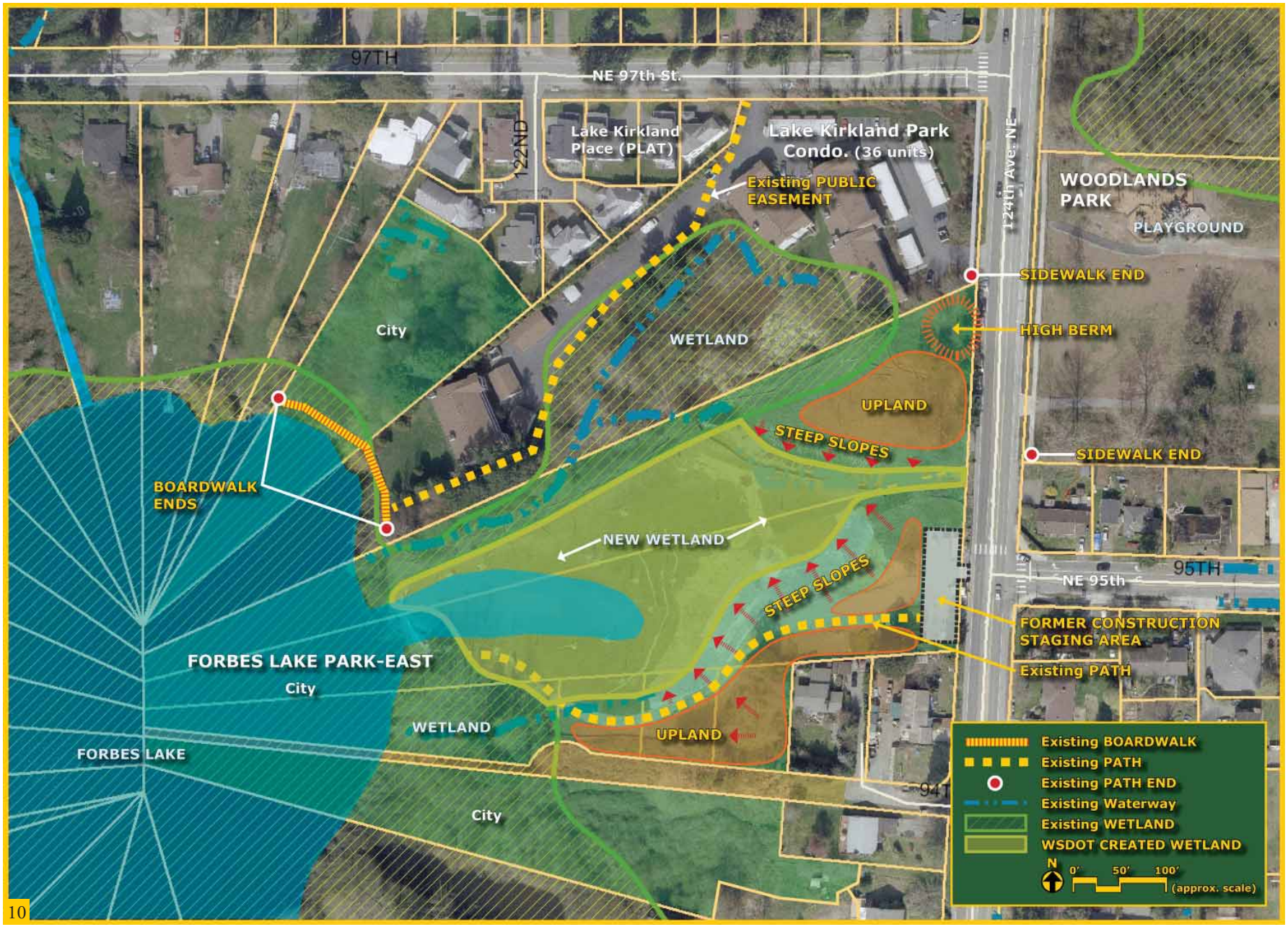
Existing viewing platform

Lochshire public trail easement

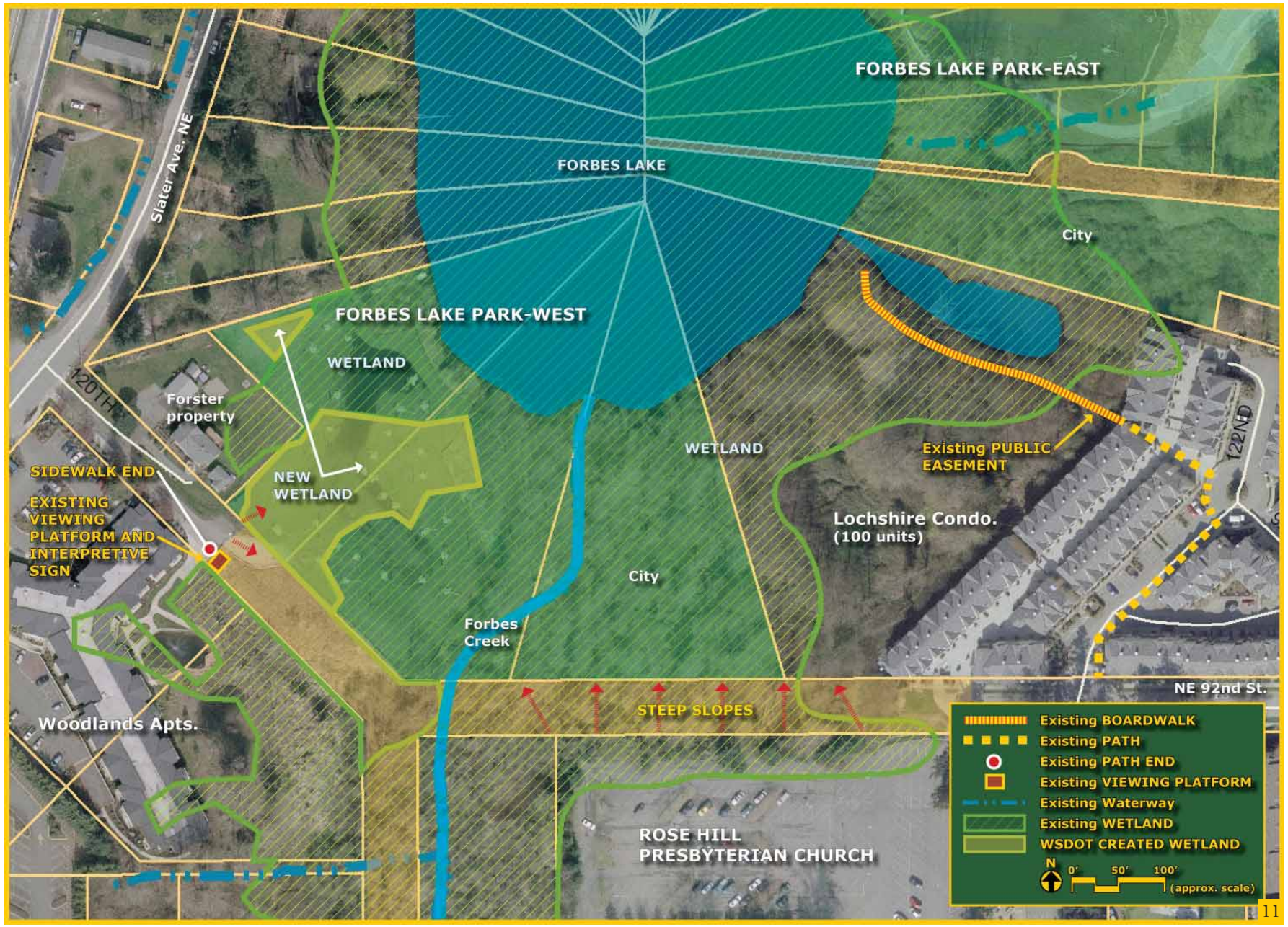
Existing Access Map



Forbes Lake Park-East: Existing Conditions



Forbes Lake Park-West: Existing Conditions



Non-Motorized Transportation Plan

The following map illustrates existing walking and bicycle routes near Forbes Lake Park. A main goal of the Forbes Lake Trail and Park Improvement Project is to enhance neighborhood connectivity by making important linkages between 124th Ave. NE and Slater Ave. as idetified within the City's Non-Motorized Transportation Plan.

Missing sidewalk connections at 124th Ave. NE

Existing Walking and Bicycling Routes Map

- Bus Stops
- Pedestrian Trail
- Sidewalk
- Crosswalks
- Bicycle Route

N 0' 100' 200' (approx. scale)

Public Process

Summaries of key events in the public review process are listed as follows:

February 13, 2008: **Park Board Meeting #1** covered the project's background, ownership, scope of work, proposed public process, and timeline.

May 22, 2008: All public meetings were held at the North Rose Hill Fire Station. At **Public Meeting #1**, attendees brainstormed existing site conditions, concerns, and design ideas for the park. Discussions revolved around recreation types, potential access routes, parking, public safety, adjacent homeowner security and privacy, maintenance of walkways and stormwater facilities.

June 25, 2008: City Council and Park Board field trip to the site.

October 22, 2008: Feedback from the previous meetings was used to develop two preliminary design alternatives which were presented at **Public Meeting #2**. Alternative A (see page 16) showed a complete boardwalk section connecting the existing north boardwalk through Forbes Lake Park-East, the Lochshire property, and ending at Forbes Lake Park-West. Alternative B (see page 17) did not include a connection to the north boardwalk and had a more circuitous route from Forbes Lake Park-East, connecting to the existing easement through Lochshire, and winding down the 92nd Street right-of-way to Forbes Lake Park-West. There was an overriding preference for the Alternative A trail alignment with the exception of the connection to the north boardwalk. Due to security concerns, residents of Lake Kirkland Park Condominiums strongly opposed linking the existing north boardwalk, which runs through their property, to the larger trail network.

Public meeting #1

City Council and Park Board field trip

Public Process Continued...

November 12, 2008: The preliminary design alternatives and the Draft Preferred Plan with proposed phasing and cost information were presented for comment at **Park Board Meeting #2**. The Draft Preferred Plan included the trail alignment from Alternative A without the connection to the existing north boardwalk. The boardwalk connection between NE 92nd Street and the main boardwalk corridor was designated as phase 2 construction and an added boardwalk segment connecting NE 92nd Street more directly to Slater Avenue was designated as phase 3 construction. Park Board Members and citizen attendees fully supported the proposed plan.

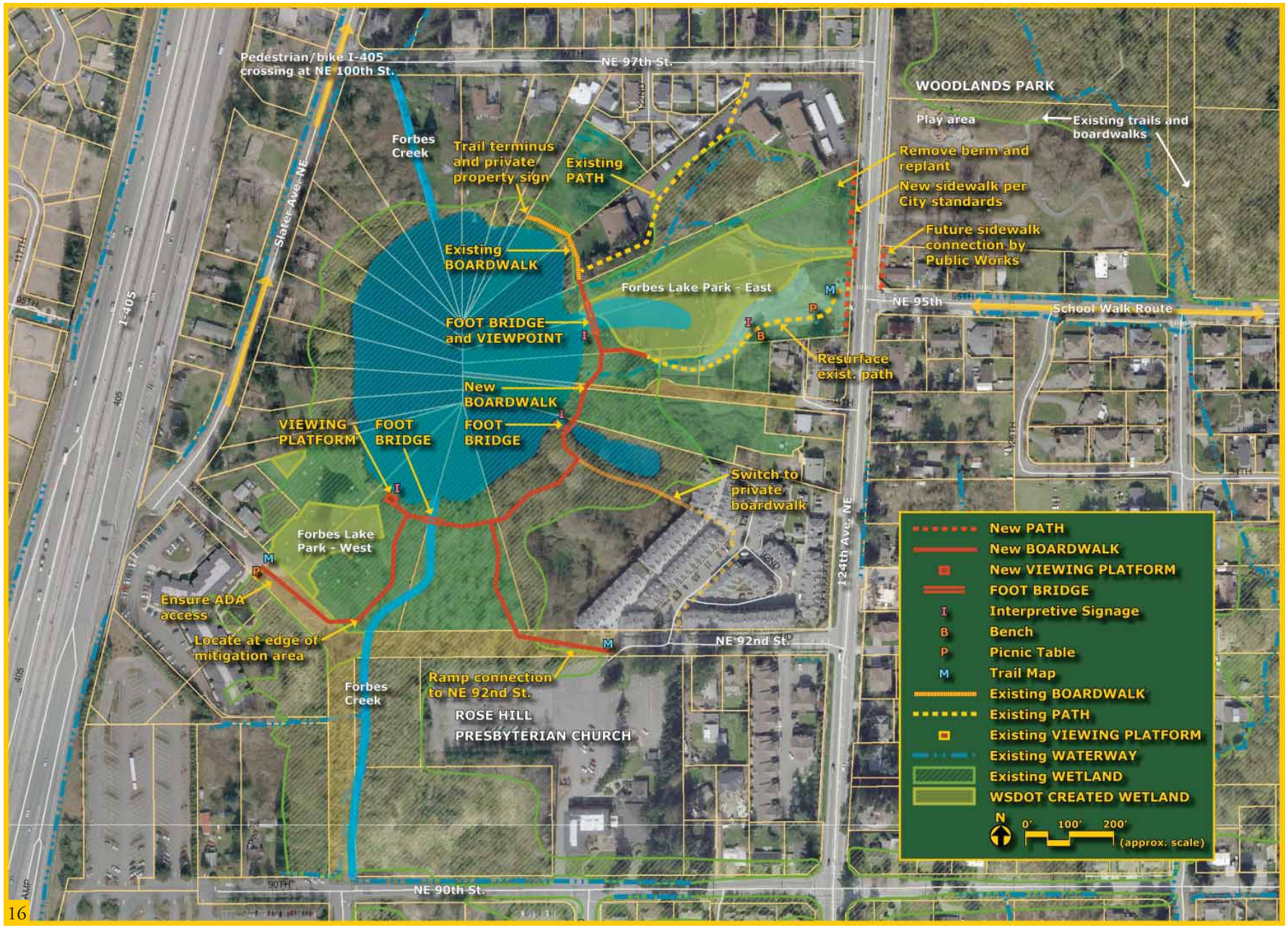
December 3, 2008: **Public Meeting #3** was an open-house review of the Draft Preferred Plan. Lochshire Condominiums past and current Board Presidents attended and approved proposed changes within the Lochshire property (pending full approval of their Board and membership). Lake Kirkland Park Condos residents all restated approval of the Darft Preferred Plan showing no bridge inlet crossing. Another view was expressed in favor of the original Alternative A showing a footbridge at Forbes Lake Park-East to complete the link and provide more connections.

January 14, 2008: **Park Board Meeting #3**

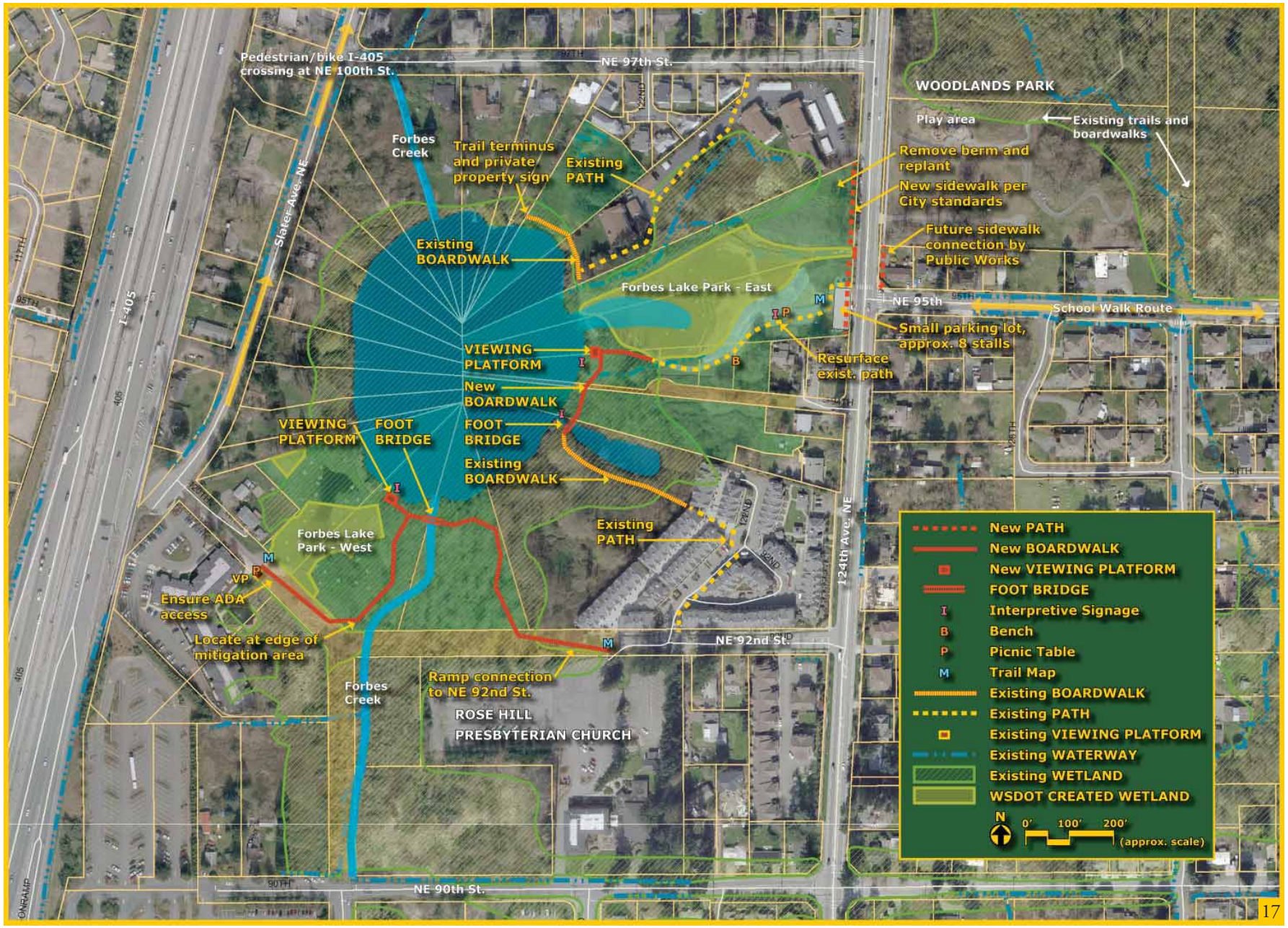
February ?, 2009 **City Council Presentation**

To be completed...

Preliminary Design Alternative A



Preliminary Design Alternative B



Trails and Boardwalks

The Draft Preferred Plan shown on the following page includes a main trail corridor that connects Forbes Lake Park-East to Forbes Lake Park-West. Future phase boardwalk connections are also proposed from the main boardwalk corridor to NE 92nd Street and from NE 92nd Street directly to Forbes Lake Park-West and Slater Avenue. No changes are planned for the existing north boardwalk section. The existing public trail easement through Lochshire Condominiums property would be converted to private access in exchange for public access across the northwest shoreline portion of the property. It is anticipated that all of the trails will be fully ADA accessible.

The ADA accessible trail system will utilize 6 foot wide elevated boardwalks within wetland areas and permeable paving within upland areas. The boardwalks will be constructed with Army Corps approved "diamond pier" block systems designed for low impact on wetlands. Three, approximately 10 feet long, foot bridges are proposed across Forbes Creek and the small inlet within the Lochshire property.

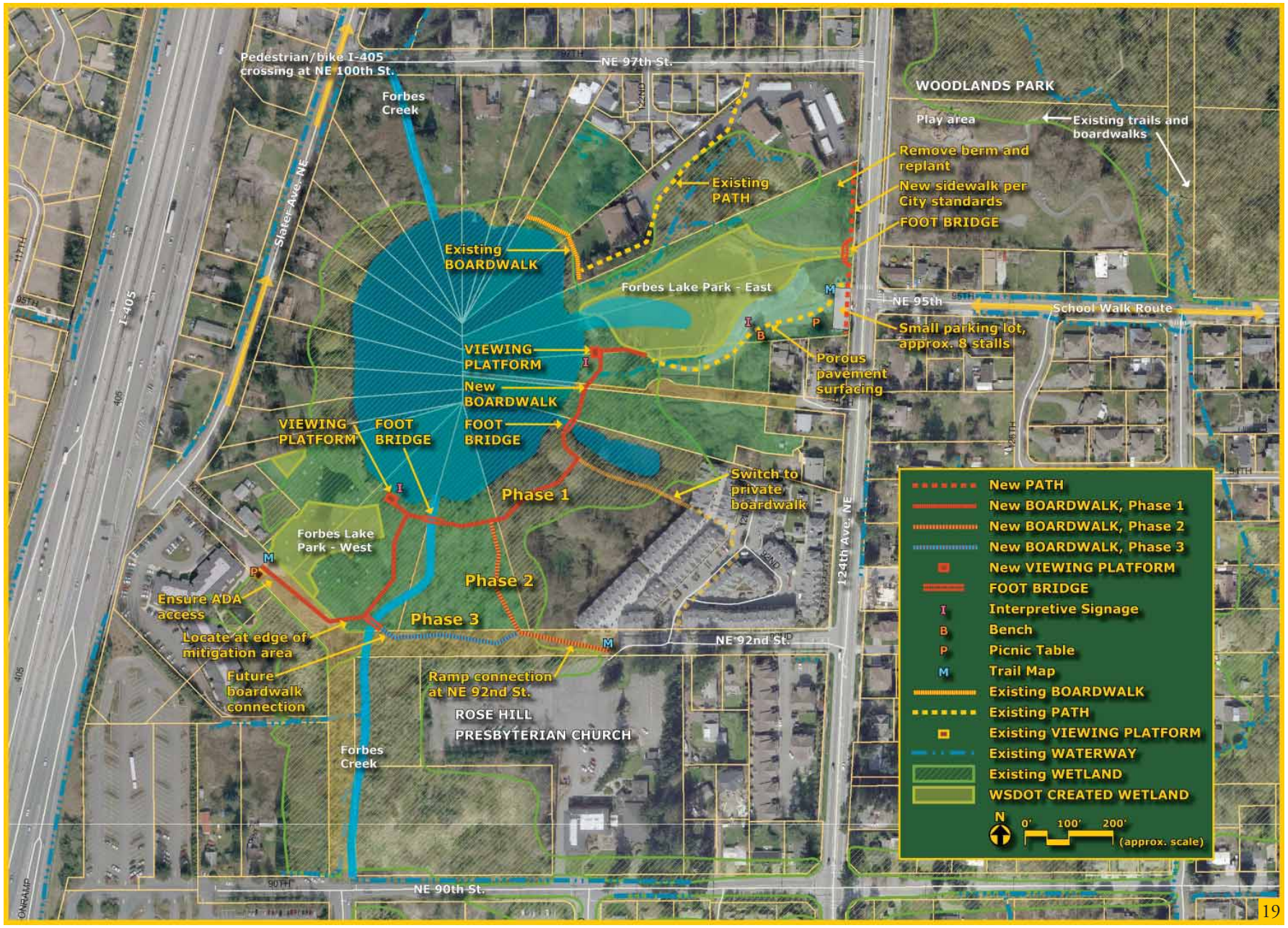
Viewing Platforms

Viewing platforms are proposed at both Forbes Lake Park-East and Forbes Lake Park-West. The platforms will be approximately 8 feet x 15 feet in size and include guardrails with angled tops. Interpretive signs will be installed to enhance educational opportunities.

Parking and Roadside Improvements

A small parking lot located within the existing gravel area at Forbes Lake Park-East will provide an ADA accessible stall and approximately 7 standard stalls. On-street parking will be available along Slater Avenue and on NE 92nd Street. New curb, gutter, and sidewalk improvements are proposed along 124th Avenue NE per City of Kirkland

Preferred Plan Continued...



Preferred Plan Continued...

roadway build-out standards. In order to minimize filling and grading impacts, a 6 foot wide and approximately 35 foot long bridge will provide safe pedestrian crossing of the existing deep drainage channel.

Site Furniture

Picnic tables are proposed in highly visible locations near the parking lot at Forbes Lake Park-East and within the existing viewing platform at Forbes Lake Park-West. The park entrances will include park signage, trail maps, trash receptacles, and dog stations. Wetland protection signage, regulatory signage, and private property boundary markers will be placed as-needed along the trail corridor.

Habitat Protection and Enhancement

The final trail alignment will be carefully sited to minimize impacts to habitat areas. Where opportunities exist, the boardwalk will be located in degraded zones such as areas of invasive Himalayan blackberry and reed canary grass. A mitigation plan will be created for vegetation impacts within the boardwalk alignment.

Next Steps

Following Kirkland Park Board and City Council acceptance, permitting and construction documentation for the preferred plan will be completed in 2009, with construction occuring in the spring through fall of 2010.

Sidewalk, Trails, and Boardwalks

Wildlife Viewing Areas and Interpretive Signage

Site Furniture

Phase Implementation and Cost Opinion

A phasing strategy will be necessary to implement the highest priority phase 1 portions of the Forbes Lake Trail and Park Improvements Project and defer lower priority portions for future funding opportunities. Phase 1 priorities include the trailhead parking area, improvements along 124th Ave. NE, and the main boardwalk corridor connecting Forbes Lake Park-East and Forbes Lake Park-West. Phase 2 extends the boardwalk trail system to NE 92nd Street, allowing portions of the Lochshire Condominium easement to be revised from public to private access in exchange for the granted Phase 1 easement alignment. Phase 3 has the lowest priority but is a desirable direct connection from NE 92nd Street to Forbes Lake Park-East and Slater Avenue.

The following cost opinion does not include site furnishings that are to be provided and installed by the City, including entrance, interpretive, and regulatory signage, trash receptacles, picnic tables, and benches.

Phase Implementation and Cost Opinion

City of Kirkland Parks and Community Services							
Forbes Lake Trail and Park Improvements							
Preliminary Design, Opinion of Probable Cost	DRAFT January 2009						
	UNIT	QTY.	$/UNIT	ITEM TOTAL	PHASE 1	PHASE 2	PHASE 3
Main Corridor Boardwalk and Trail Construction							
Erosion Control and Grading	LS	1	$10,525.00	$10,525.00			
Boardwalk, 1,450 LF	LS	1	$494,100.00	$494,100.00			
Bridges and Viewing Platforms	EA	1	$31,000.00	$31,000.00			
Asphalt Paving	SF	4,600	$2.50	$11,500.00			
Restoration Planting Allowance	SF	14,500	$3.50	$50,750.00			
Subtotal					**$597,875.00**		
NE 92nd St. to Forbes Lake Boardwalk Link							
Erosion Control and Grading	LS	1	$3,550.00	$3,550.00			
Boardwalk, 623 LF	LS	1	$212,574.00	$212,574.00			
Restoration Planting Allowance	SF	6,230	$3.50	$21,805.00			
Subtotal						**$237,929.00**	
NE 92nd St. to Forbes Lake West Boardwalk Link							
Boardwalk, 370 LF	LS	1	$125,060.00	$125,060.00			
Bridges	LS	1	$5,000.00	$5,000.00			
Restoration Planting Allowance	SF	3,700	$3.50	$12,950.00			
Subtotal							**$143,010.00**
Parking Lot Site Work							
Erosion Control and Grading	LS	1	$10,025.00	$10,025.00			
Asphalt Paving	SF	4,250	$2.50	$10,625.00			
Storm Drainage Allowance	LS	1	$7,000.00	$7,000.00			
Rock Retaining Wall (80 LF x 3 FT)	SFF	240	$35.00	$8,400.00			
Landscape Preparation and Planting	LS	1	$7,625.00	$7,625.00			
Subtotal					**$43,675.00**		
124th Avenue NE Street Improvements							
Erosion Control, Clearing, Grading and Excavation	LS	1	$18,350.00	$18,350.00			
35' Bridge	LS	1	$60,000.00	$60,000.00			
Curb, Gutter, and Sidewalk Improvements	LS	1	$21,360.00	$21,360.00			
Asphalt Paving	SF	1,250	$2.50	$3,125.00			
Landscape Preparation, Planting, and Seeding	LS	1	$8,070.00	$8,070.00			
Subtotal					**$110,905.00**		
Construction Subtotal				$1,145,989.00	$752,455.00	$237,929.00	$143,010.00
Bid and Design Contingency @ 15%				$171,898.35	$112,868.25	$35,689.35	$21,451.50
Mobilization and General Conditions @ 7%				$80,219.23	$52,671.85	$16,655.03	$10,010.70
Sales Tax @ 8.9%				$101,993.02	$66,968.50	$21,175.68	$12,727.89
Construction Contingency @ 10%				$114,598.90	$75,245.50	$23,792.90	$14,301.00
TOTAL* Base Construction Contract				**$1,614,698.50**	**$1,060,209.10**	**$335,241.96**	**$201,501.09**
*(Total does not include surveys, permits, design, or construction administration.)							
All items shown are probable and not guarantees of project costs. Worthy and Associates is not							
responsible for any discrepancies for differences between estimated costs and actual constructed costs.							
Other Costs							
Surveying and Geotechnical				$58,000.00	$41,000.00	$9,000.00	$8,000.00
Design and Engineering @ 18%				$206,278.02	$135,441.90	$42,827.22	$25,741.80
Construction Administration @ 7%				$80,219.23	$52,671.85	$16,655.03	$10,010.70
TOTAL Project Cost (with phasing)				**$1,959,195.75**	**$1,289,322.85**	**$403,724.21**	**$245,253.59**

References

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