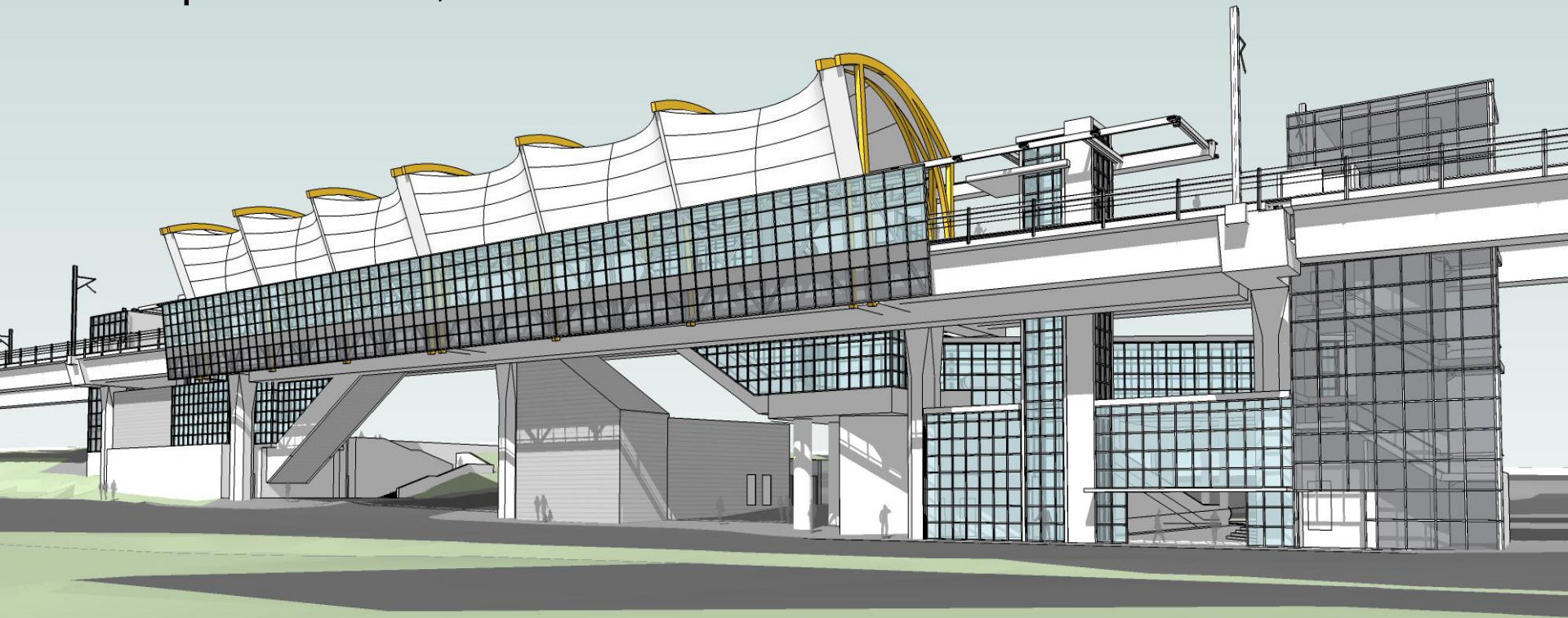


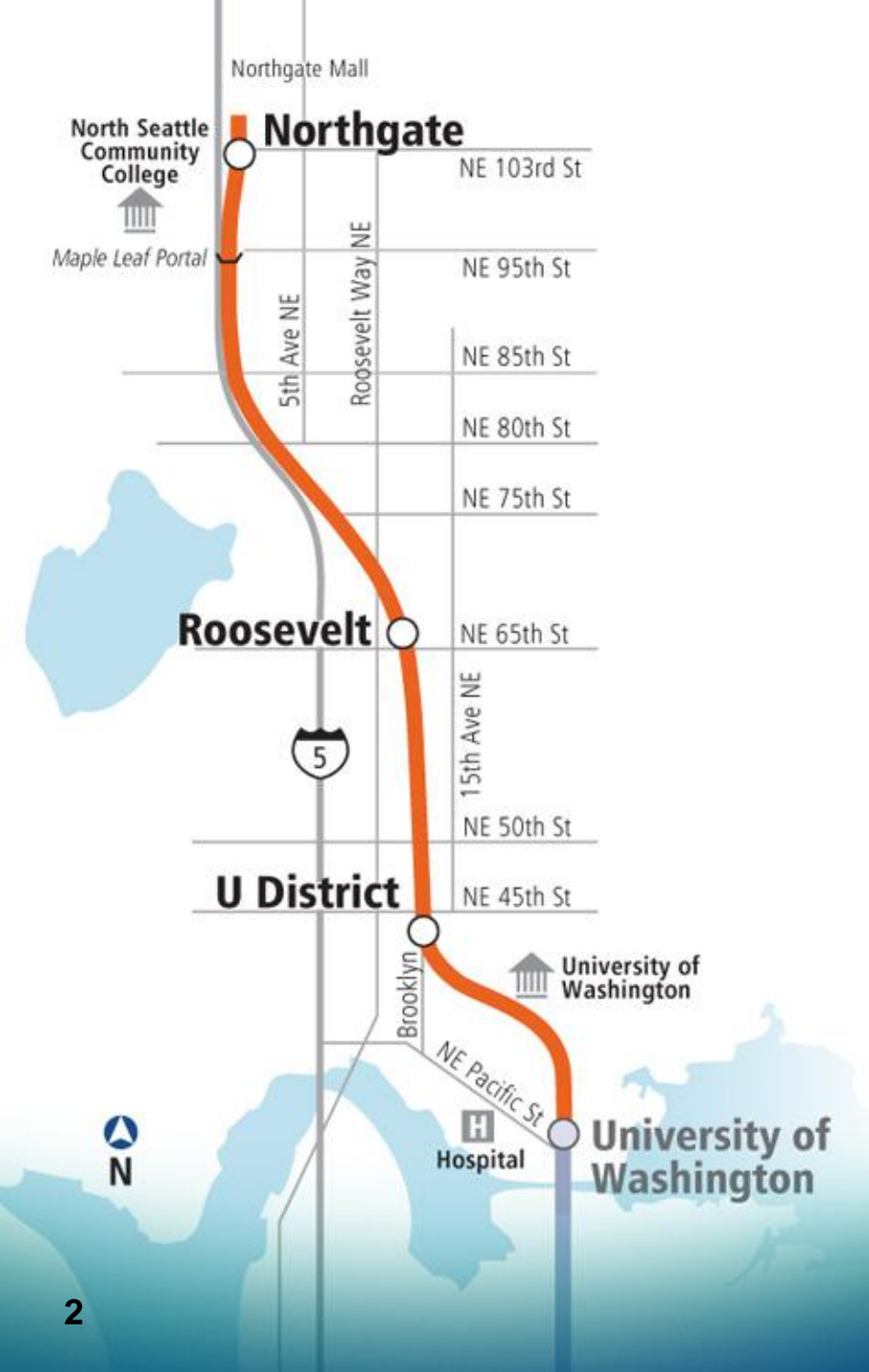
Northgate Station Construction Open House

September 25, 2012



Tonight's Agenda

- 6:00 pm – Open House
- 6:30 pm - Presentation
 - **Introduction**
 - Ron Endlich, Northgate Link Extension Deputy Project Director
 - **Northgate Station Construction**
 - Fred Wilhelm, Station Project Manager
 - **Noise Variance**
 - Jeff Munnoch, Community Outreach Supervisor
 - **Next Steps**
 - **Questions and Answers**
- 7:45 pm – Return to Open House
- 8:30 pm – Close



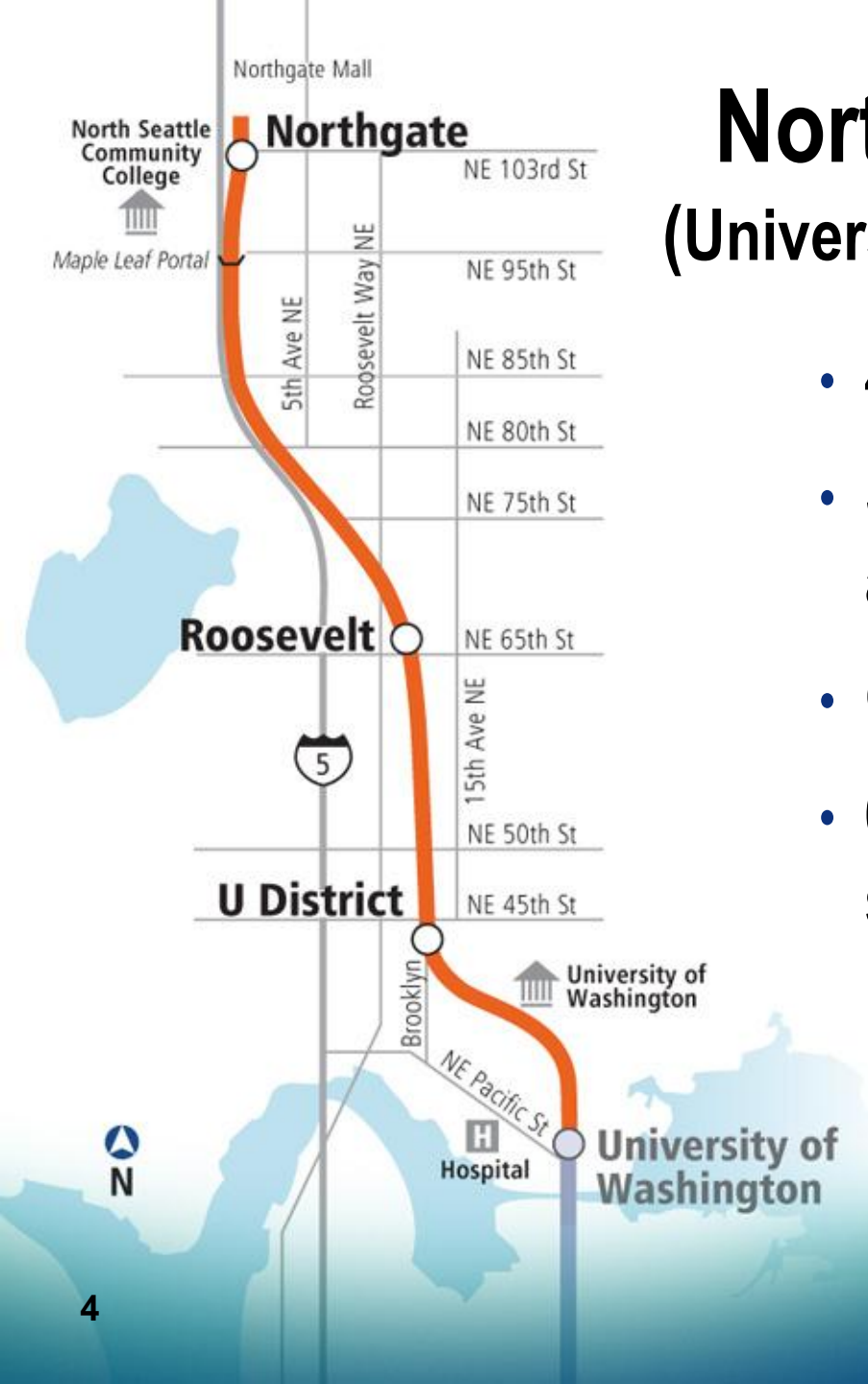
Link Light Rail System



- 16 miles of light rail with 13 stations currently in service
- University Link under construction; opens 2016
- ST2 Plan funded extensions to Overlake, South King County, and Lynnwood
- 54 mile system

Northgate Link Extension (University of Washington to Northgate)

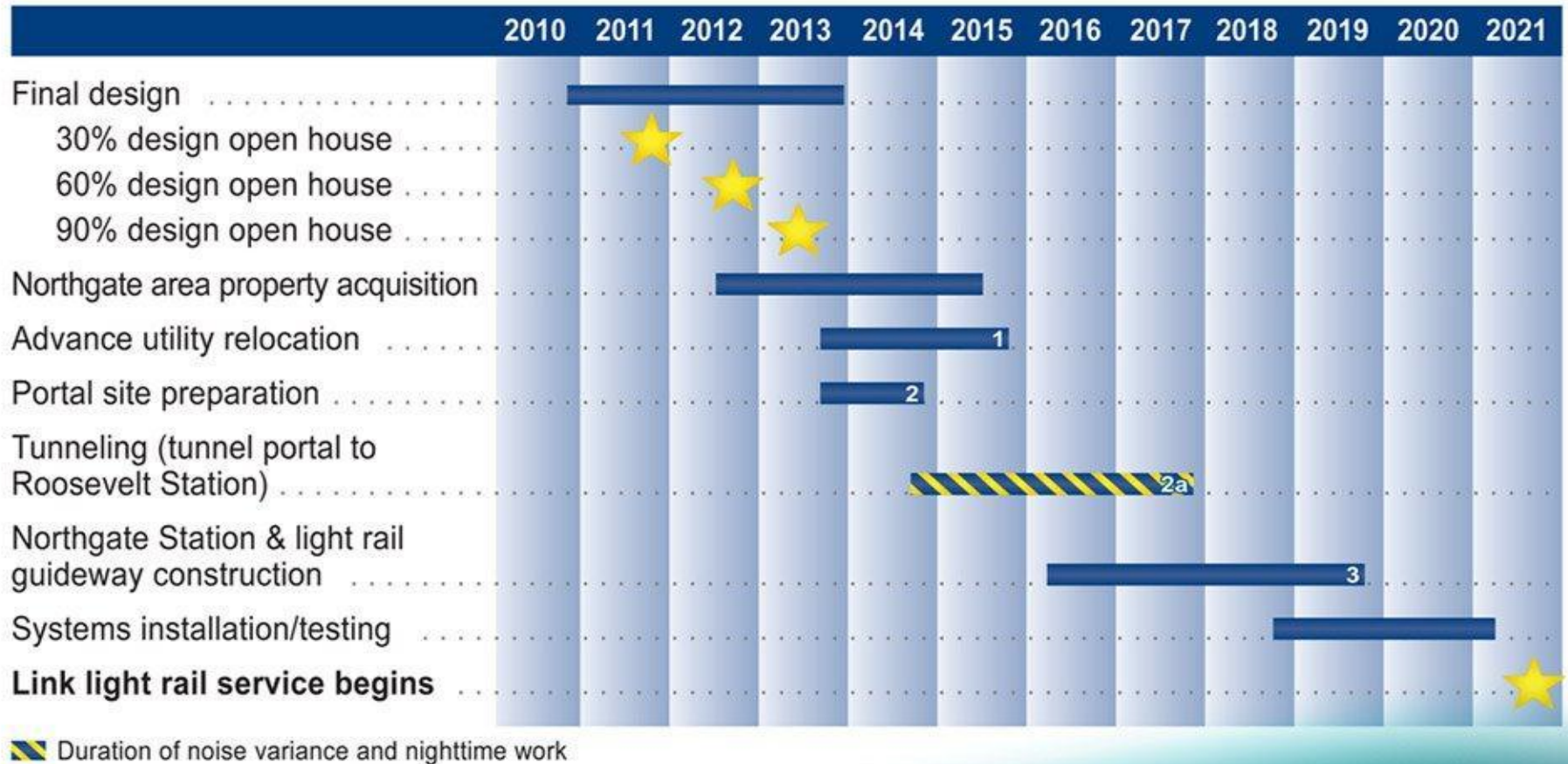
- 4.3-mile light rail extension
- Stations: U District, Roosevelt, and Northgate
- Open for Service: 2021
- 62,000 daily boardings added to system by 2030



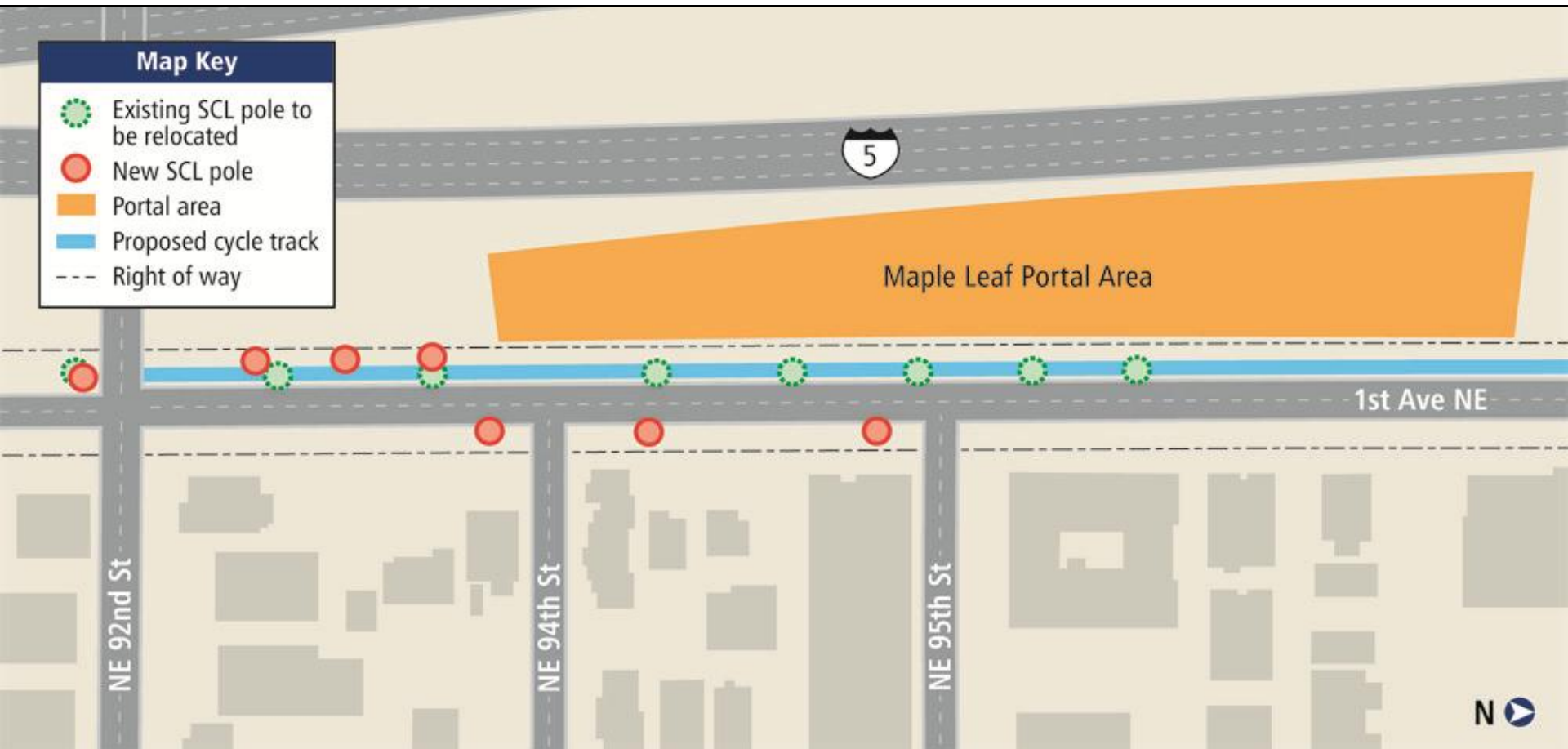
Northgate Construction Activities

1. Advance utility relocation
2. Portal site preparation and tunneling to Roosevelt Station
 - a. Nighttime noise variance
3. Northgate Station and aerial guideway

Northgate Station Schedule



1. Utility Relocation – Overhead Power Lines NE 92nd St to NE 95th St Starting spring 2013



1. Utility Relocation – Undergrounding Power Lines from NE 98th St to NE 107th St

Starting early 2014 through 2015



2. Maple Leaf Portal - Sequence of Work

- Site preparation
- Tunneling mobilization
- Tunnel boring machine (TBM) preparation
- Tunnel bore #1
- Tunnel bore #2



2. Portal Construction Noise Walls

Looking SE



INCOMING TRUCK HAUL ROUTES



2. Portal Truck Hauling Incoming

- Portal construction - Tunneling spoils
- Trucks will enter and leave site from 1st Ave NE



2. Portal Truck Hauling Outgoing

- Portal construction - Tunneling spoils
- Trucks will enter and leave site from 1st Ave NE

2a. Noise Variance



- ST will seek Major Public Project Construction Noise Variance from City of Seattle
- Noise variance establishes noise limits for contractor work between 10pm - 7am weekdays, 10pm - 9am weekends, holidays
- Daytime construction activities will comply with City's construction noise limits
- More noise information at next construction open house

2a. Why Work at Night?



- Certain activities are required for tunnel worker safety
- Maximizes project safety, efficiency, duration and cost
- Anticipate about three years total nighttime construction



2a. What Goes on at Night?



- No high impact equipment (jackhammers, concrete saws, etc...)
- Tunnel ventilation fans, pumps, air compressors
- Generator
- Vehicles



2a. Typical Noise Mitigation



- Solid plywood construction wall
- Stationary equipment (compressors, generators) enclosed in noise reducing material
- Nighttime Truck Operations
 - No beeping alarms at night
 - Engine idle limit of 5 minutes
- Monitoring



2a. Construction Wall



2a. Construction Wall Photo Simulations (looking north at NE 94th - Before)



2a. Construction Wall Photo Simulations (looking north at NE 94th - After)



2a. Construction Wall Photo Simulation (looking north from NE 92nd - Before)



2a. Construction Wall Photo Simulation (looking north from NE 92nd - After)



2a. Level of Common Sounds

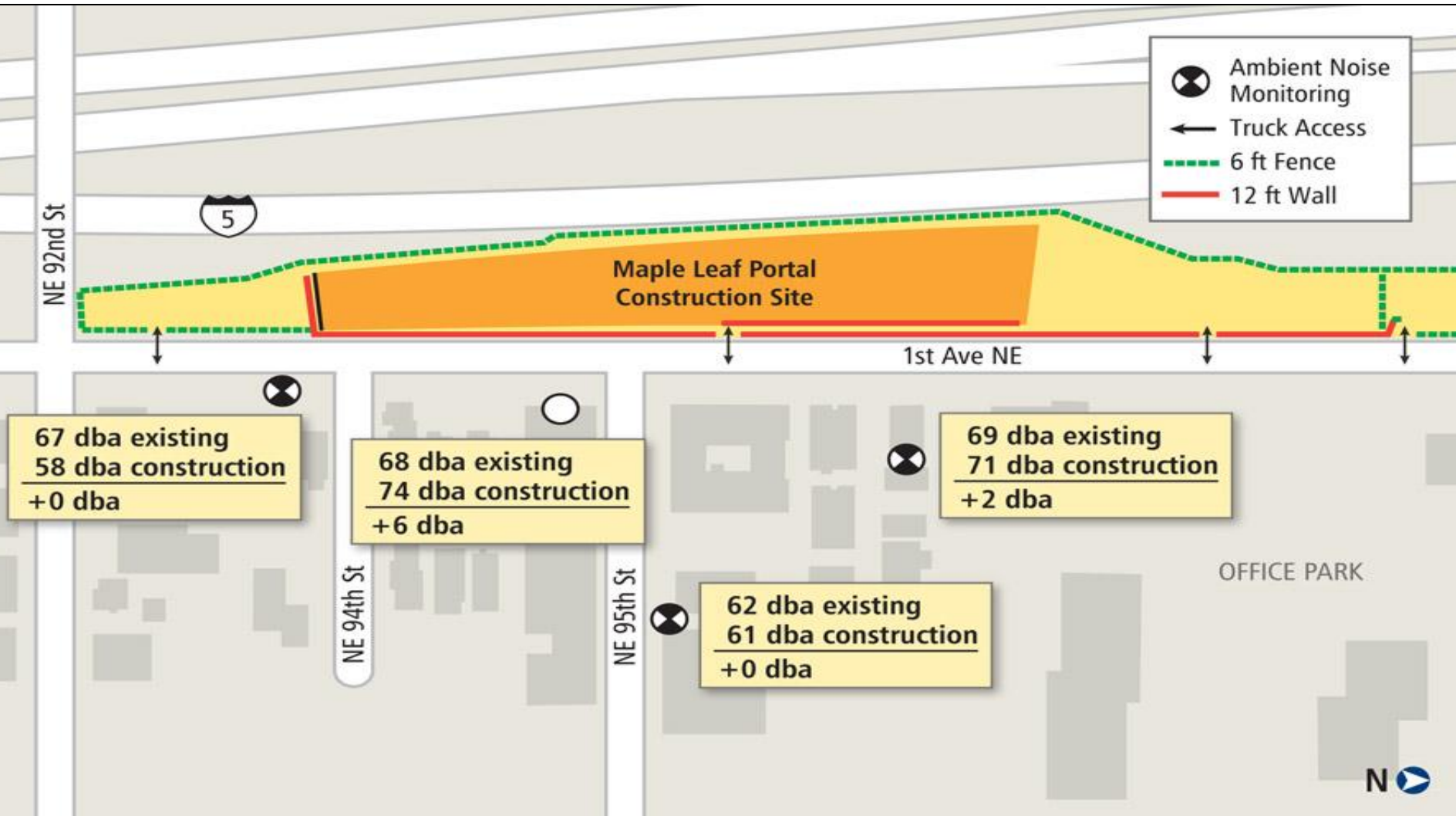
A-WEIGHTED LEVELS OF COMMON SOUNDS

	SOUND	SOUND LEVEL	APPROXIMATE RELATIVE LOUDNESS
	Jet plane at 100 feet	130	128
120	Rock music with amplifier	120	64
110	Thunder; danger of permanent hearing loss	110	32
100	Boiler shop, power mower	100	16
90	Orchestral crescendo as 25 feet	90	8
80	Busy street	80	4
70	Interior of department store	70	2
60	Ordinary conversation at 3 feet	60	1
50	Quiet car at low speed	50	1/2
40	Average office	40	1/4
30	City residence, interior	30	1/8
20	Quiet country residence, interior	20	1/32
10	Rustle of leaves	10	1/64
0	Threshold of hearing	0	1/128

Existing night-time noise on 1st Avenue NE

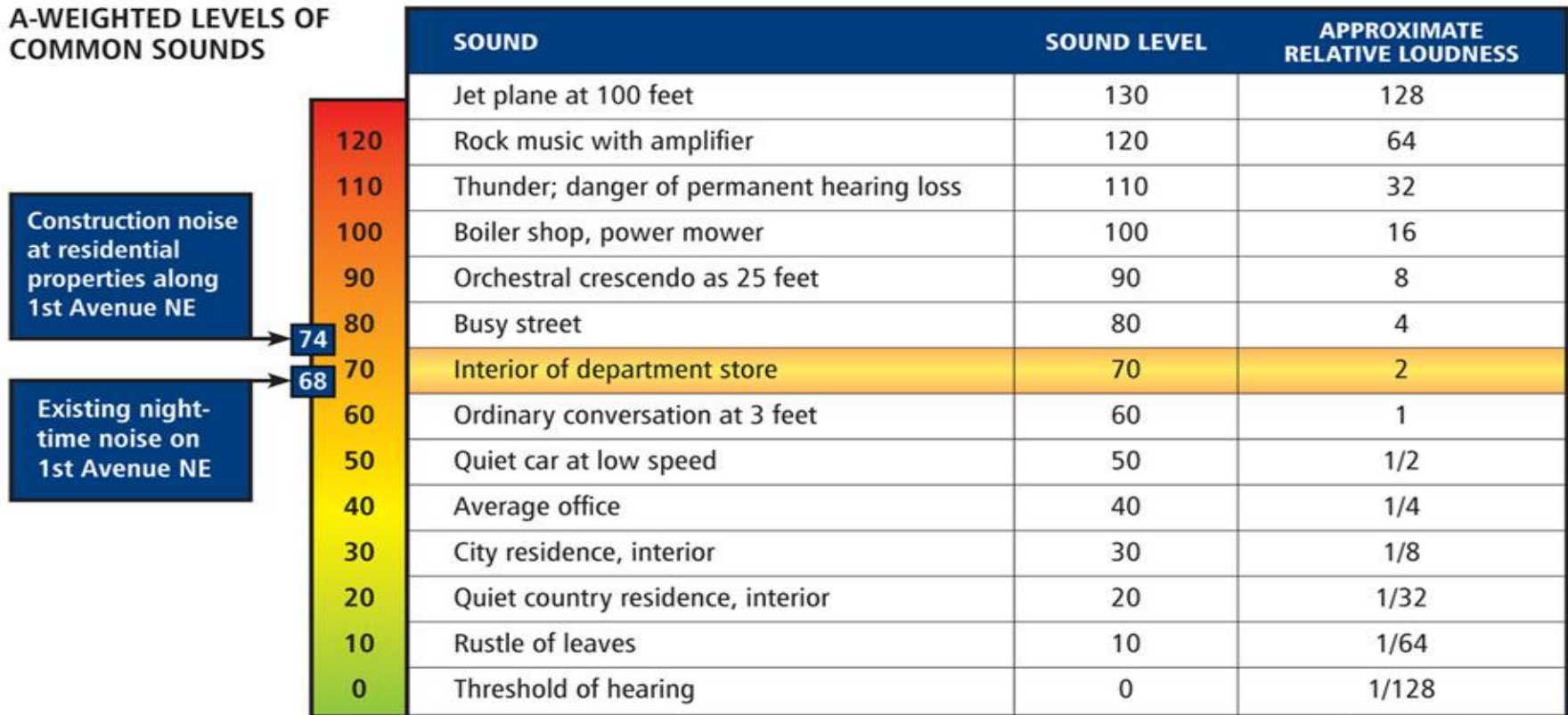
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2a. Noise Monitoring Locations/results 12 a.m. to 5 a.m.



2a. Level of Common Sounds

A-WEIGHTED LEVELS OF COMMON SOUNDS



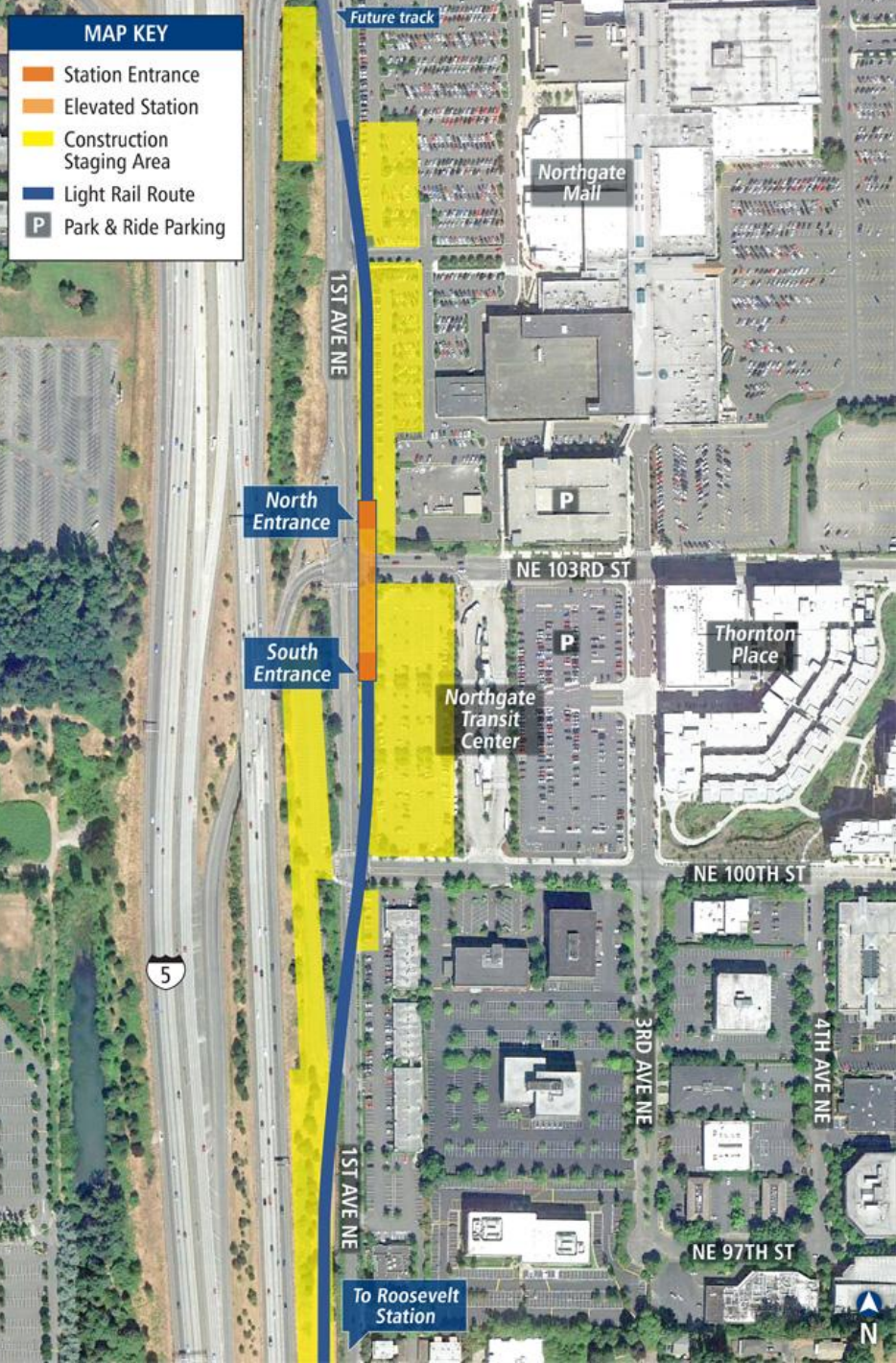
2a. Monitoring and Responding to Complaints



- Continuous sound monitoring stations
- 24 hour Construction Hotline: 1-888-298-2395
- Response by Noise Abatement Specialist



3. Northgate Station Key Features



- Elevated station spans NE 103rd with escalators, elevators and stairs
- Serves nearby residents and businesses
- North entrance connects the mall
- South entrance connects to buses, park-and-ride facilities, future Transit Oriented Development sites
- Bicycle parking
- 15,000 daily boardings (2030)
- 60% design Open House November 7, 2012

3. Northgate Station Construction Sequence

- Mobilization
- Guideway construction
- Deck construction
- Station construction
- Site restoration



Mt Baker Station
Station Construction

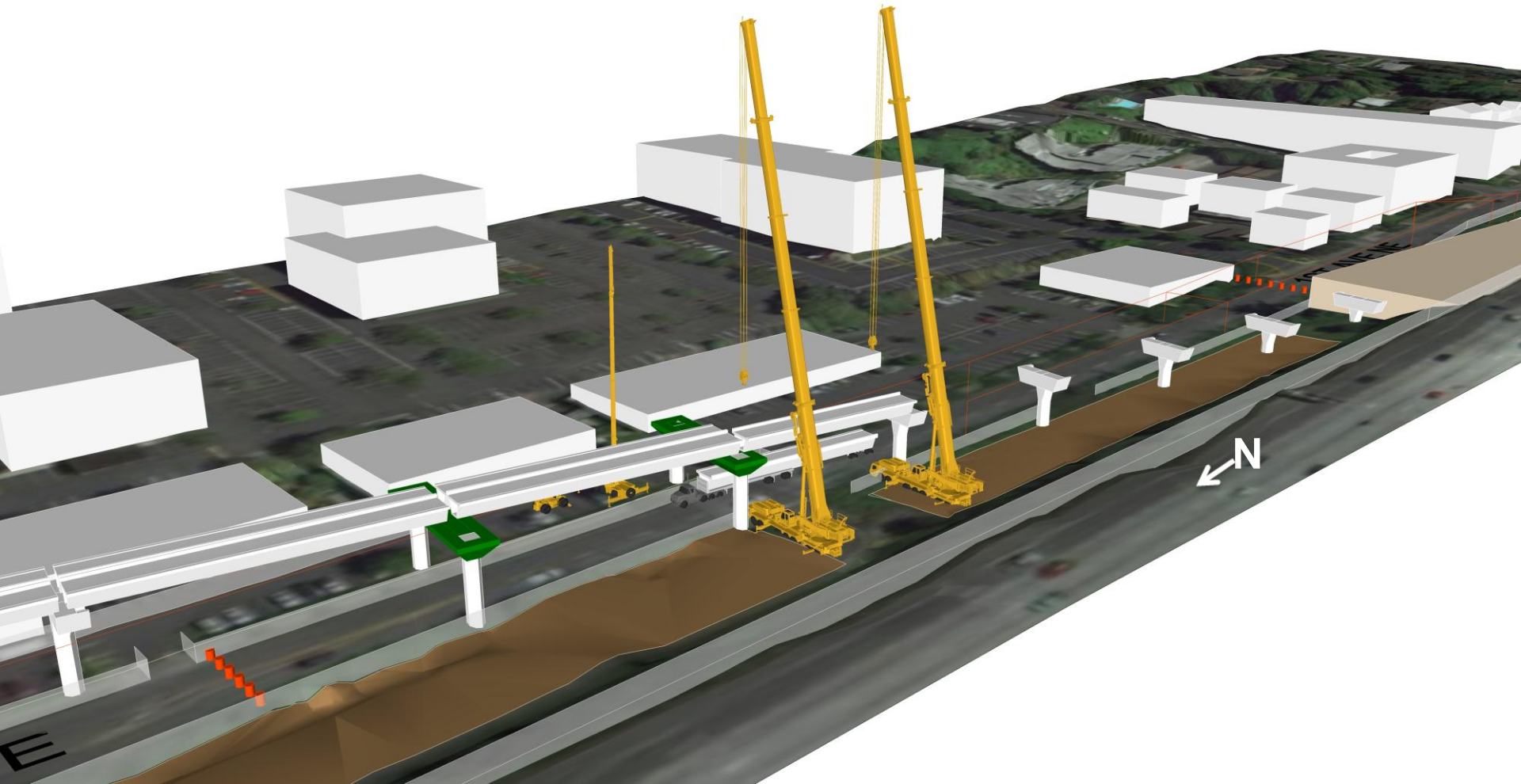
3. Mobilization/Column Construction



3. Station Falsework and Guideway Construction



3. Guideway Construction Placement of Pre-cast Girders



3. Deck Construction



3. Station Construction





3. Station Construction Haul Routes

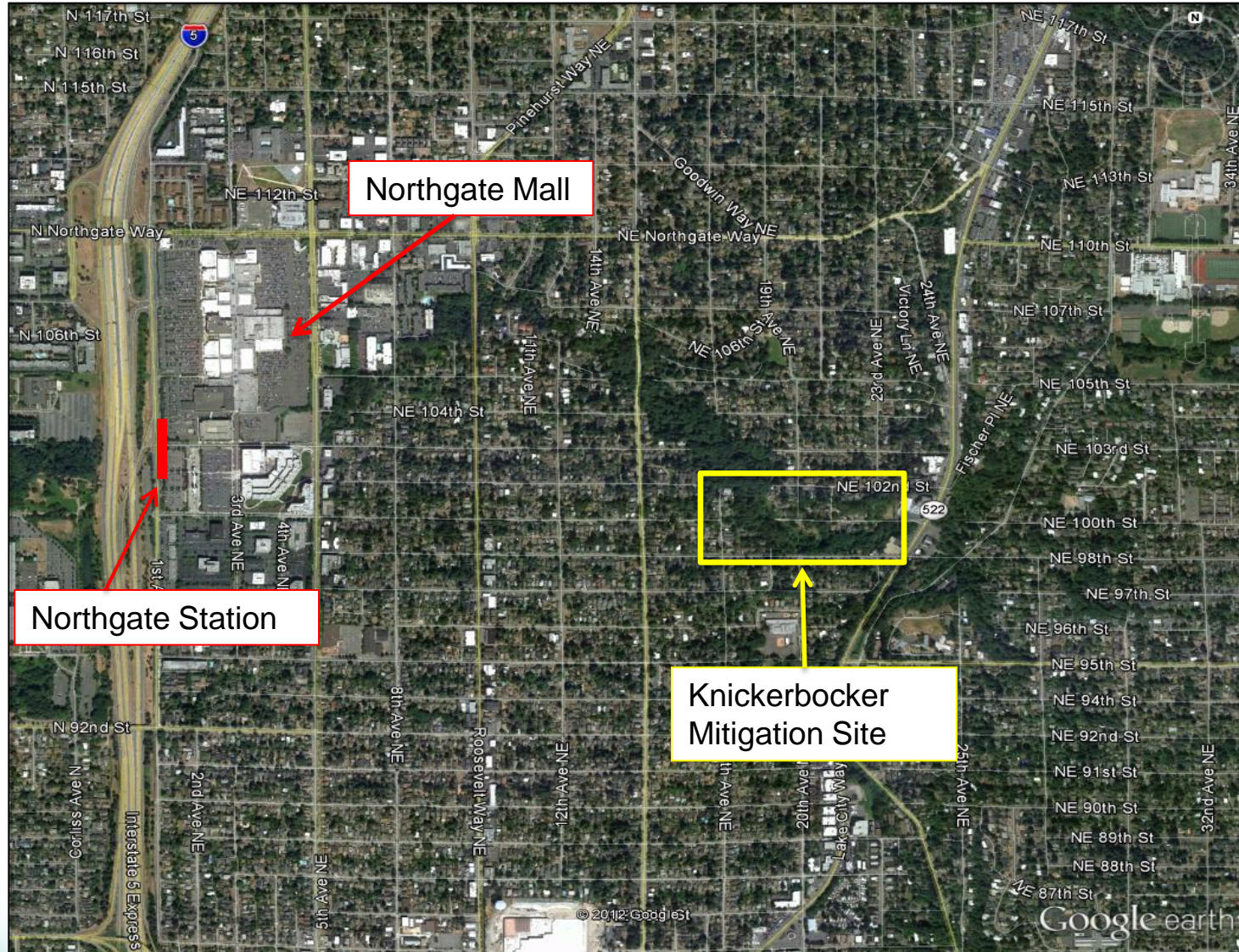
- Station construction
- Material hauling
- Trucks will enter and leave site from 1st Ave NE

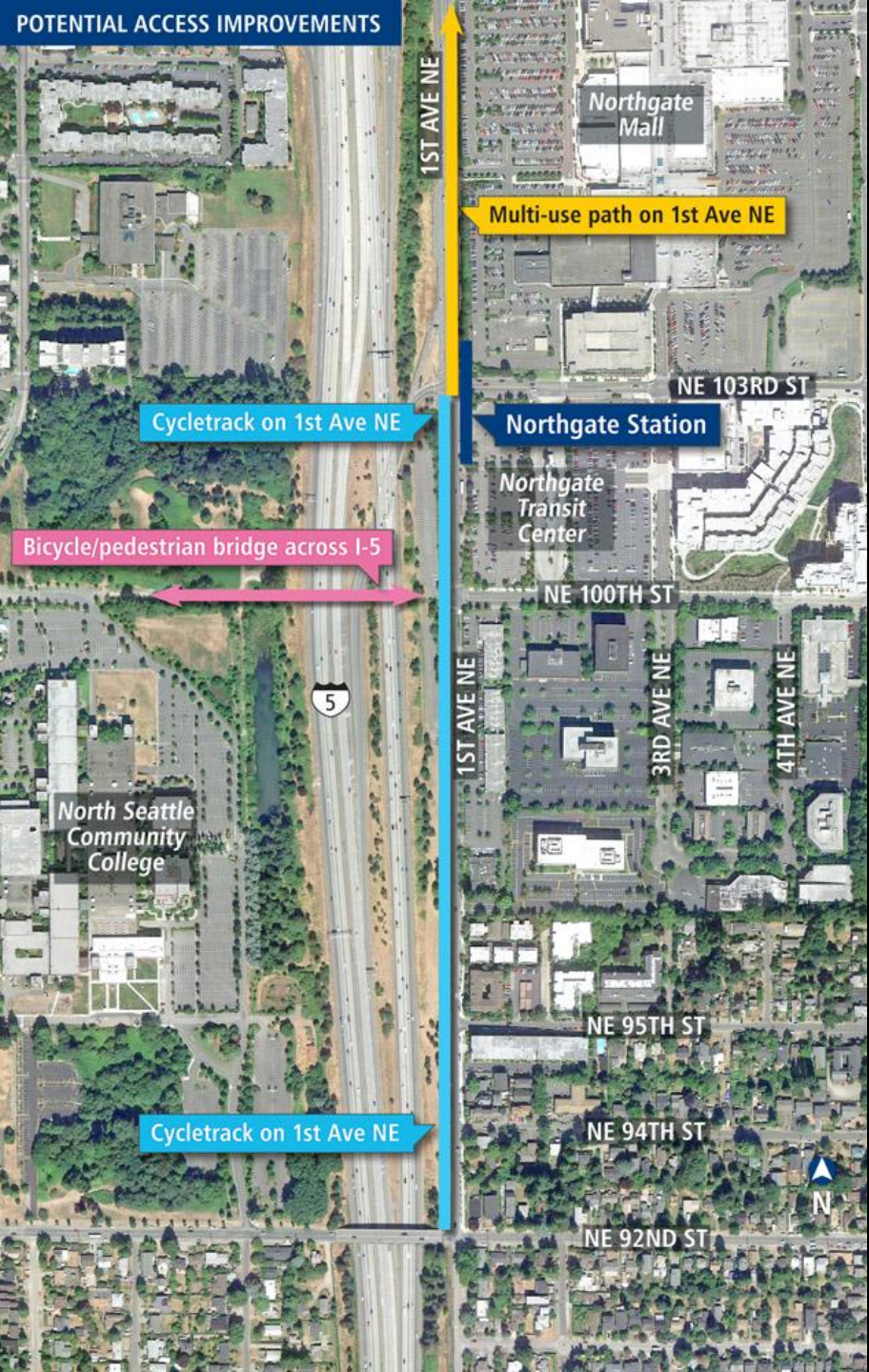
2. and 3. Wetlands



- Project construction at Northgate will provide protection to the streams during construction.
- Temporary stream impacts will be mitigated for on-site with restoration and enhancements after construction is complete.
- Permanent wetland impacts will be mitigated for approximately 1.5 miles downstream at the Knickerbocker site.
- Permit applications for the Northgate wetland and stream impacts expected to be submitted in October.
- Permit issuance expected in late winter or early spring.

Knickerbocker Site





Access Improvements

- ST has incorporated Bicycle Advisory Board input into station design
- City of Seattle has identified non-motorized improvements for Northgate area including a cycle-track along 1st Ave NE
- KCM completed I-5 pedestrian bridge feasibility study
- ST performing station area Access Study in cooperation with KCM and City

Next Steps



- Station 60% design open house – November 7, 2012
 - Access Study update
- Noise Variance submission – November 2012
- Access Study project improvement recommendations – Spring 2013



Questions?



Get Involved and Stay Informed



- Attend Final Design Open Houses
 - Learn more about your neighborhood station's design including bike facilities, pedestrian and bike connections and public art
- Sign Up to Receive Email Updates
 - www.soundtransit.org/subscribe
- Sound Transit Website
 - www.soundtransit.org/northlink
- Contact Rhonda Dixon:
 - 206.398.5300
 - northlink@soundtransit.org