

A low-angle shot of a white and blue Sound Transit train. The train features large, stylized teal and blue mountain graphics on its side. Several windows are visible, reflecting the sky and the station structure. The train is positioned under a glass and steel station canopy.

# Maple Leaf Portal Construction

Oct. 24, 2013 – Open House

 **SOUNDTRANSIT**

- 6 p.m. Open house
- 6:30 p.m. Presentation – Fred Wilhelm
- Introduction
  - Project overview
  - Building a tunnel boring machine launch pit and portal
  - Noise mitigation
  - Nearby or related projects
- 7 p.m. Questions and answers
- 7:30 p.m. Open house
- 8 p.m. Close

## Tonight's agenda



- 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

## Link Light Rail System



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

## Northgate Link Extension








**Artist drawing of finished portal**



 Duration of noise variance and nighttime work

# Northgate area construction schedule

**Maple Leaf Portal**

Staging

1st Ave NE

NE 92nd St

NE 94th St

NE 95th St

NE 100th St

NE 103rd St

- 6' Construction Fencing
- 12' Construction Wall
- Construction Staging
- Truck Entrance/Exit

Northgate  
Transit  
Center

**Portal construction area**





## Site preparation

- Tree and shrub removal
- Erosion control
- Utility relocation
- Install construction fencing
- Soil stabilizing grout injection
- Develop access, egress and staging areas

## Construction sequencing





## Portal excavation

- Install construction wall
- Drill and install soldier piles
- Excavation and shoring
- Build retaining walls
- Build tunnel boring machine launch and support platform



**Construction sequencing**

# Tunneling

- Assemble and launch tunnel boring machines
- Remove tunneling spoils
- Supply tunnel construction materials



**Construction sequencing**

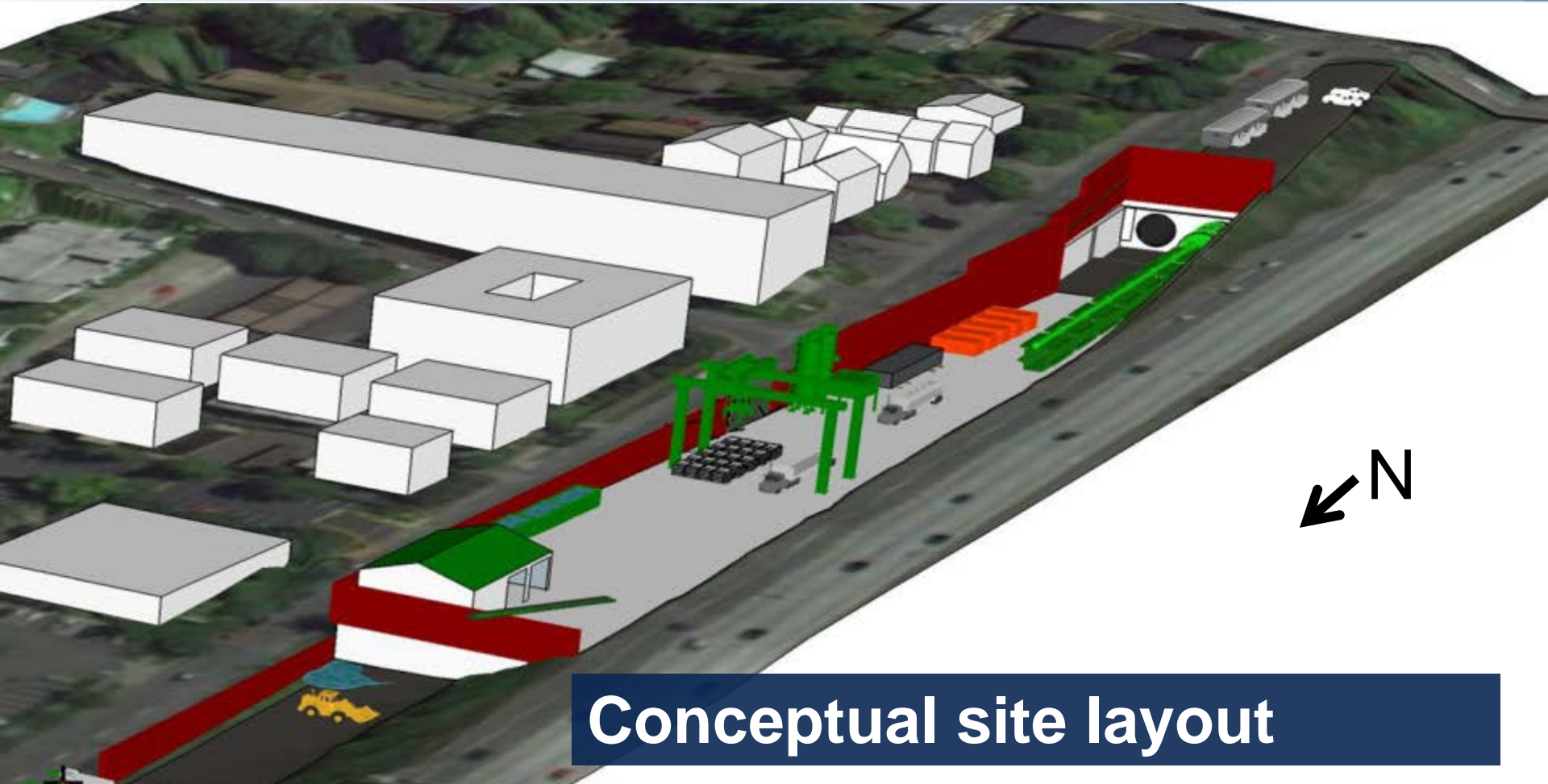
## Portal construction

- Build portal facade
- Build tunnel support facilities
- Install permanent noise and screening walls



**Construction sequencing**





**Conceptual site layout**





**Maple Leaf Portal**



1st Ave NE

Northgate  
Transit  
Center

-  Tunnel Portal Construction Limits
-  Truck Haul Routes

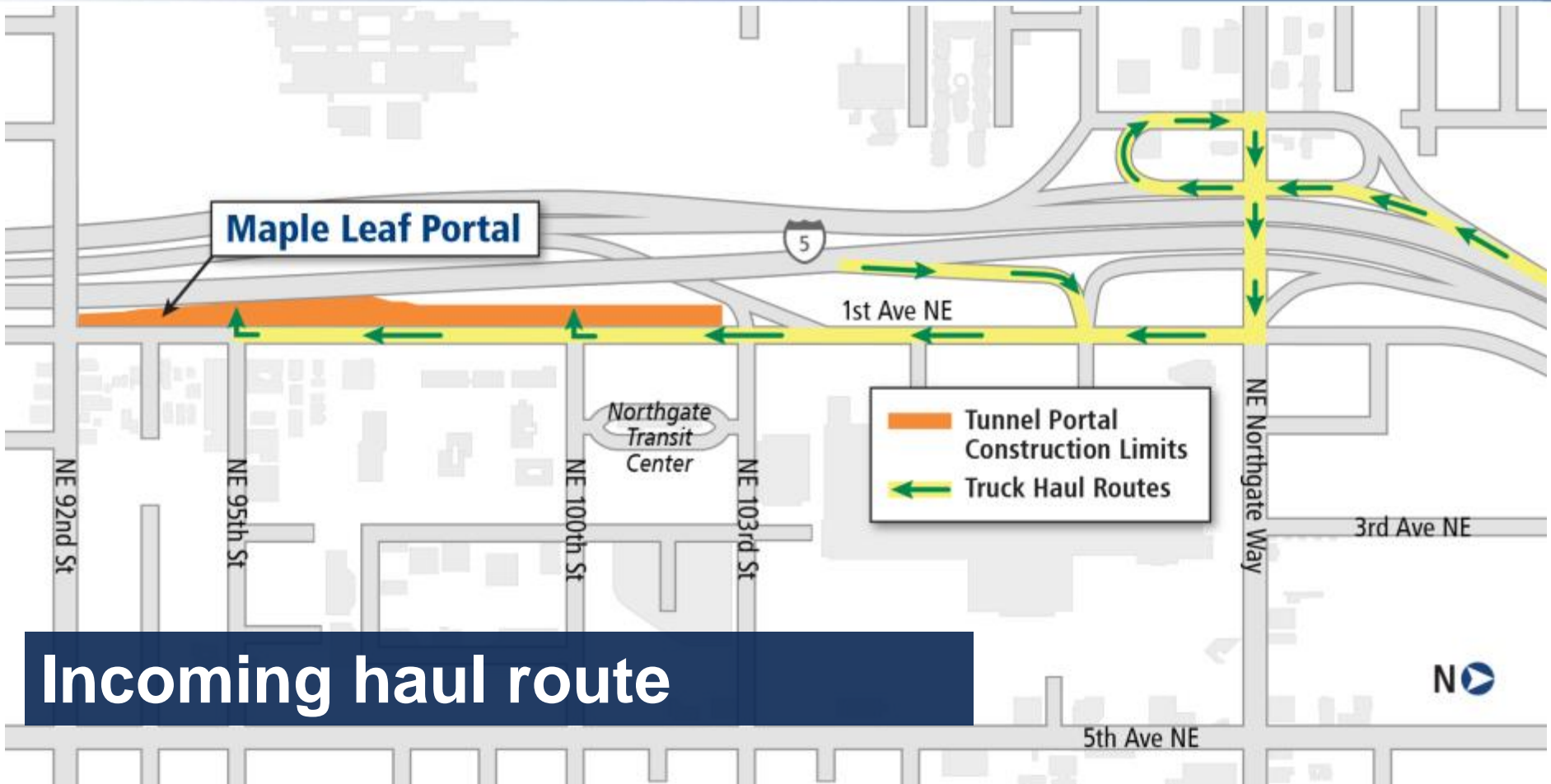
NE Northgate Way

3rd Ave NE

**Incoming haul route**





5th Ave NE



**Maple Leaf Portal**

1st Ave NE

Northgate  
Transit  
Center

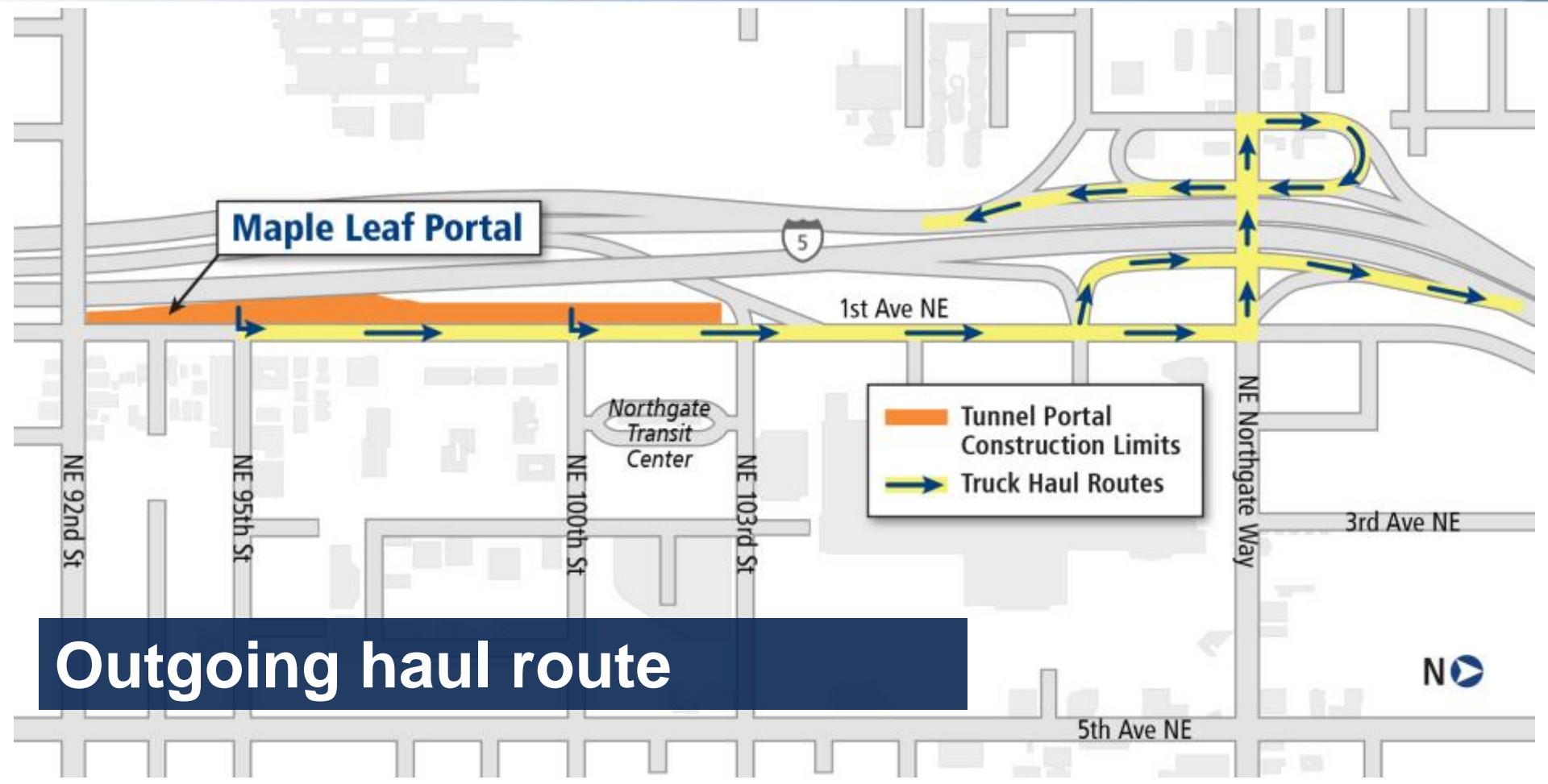
 Tunnel Portal  
Construction Limits  
 Truck Haul Routes

3rd Ave NE

**Outgoing haul route**

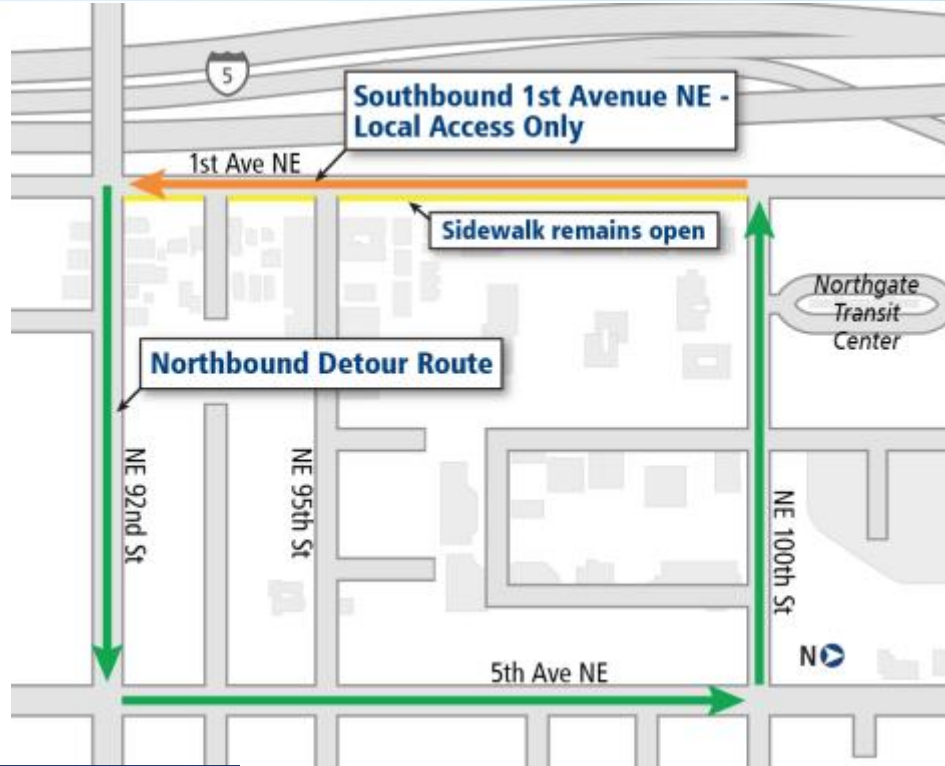


5th Ave NE



Starting as soon as Monday, Oct. 28:

- Southbound only between NE 100th Street and NE 92nd Street
- Around-the-clock for up to three months
- Northbound detour route via NE 92nd Street, Fifth Avenue NE and NE 100th Street



**First Ave. NE traffic changes**

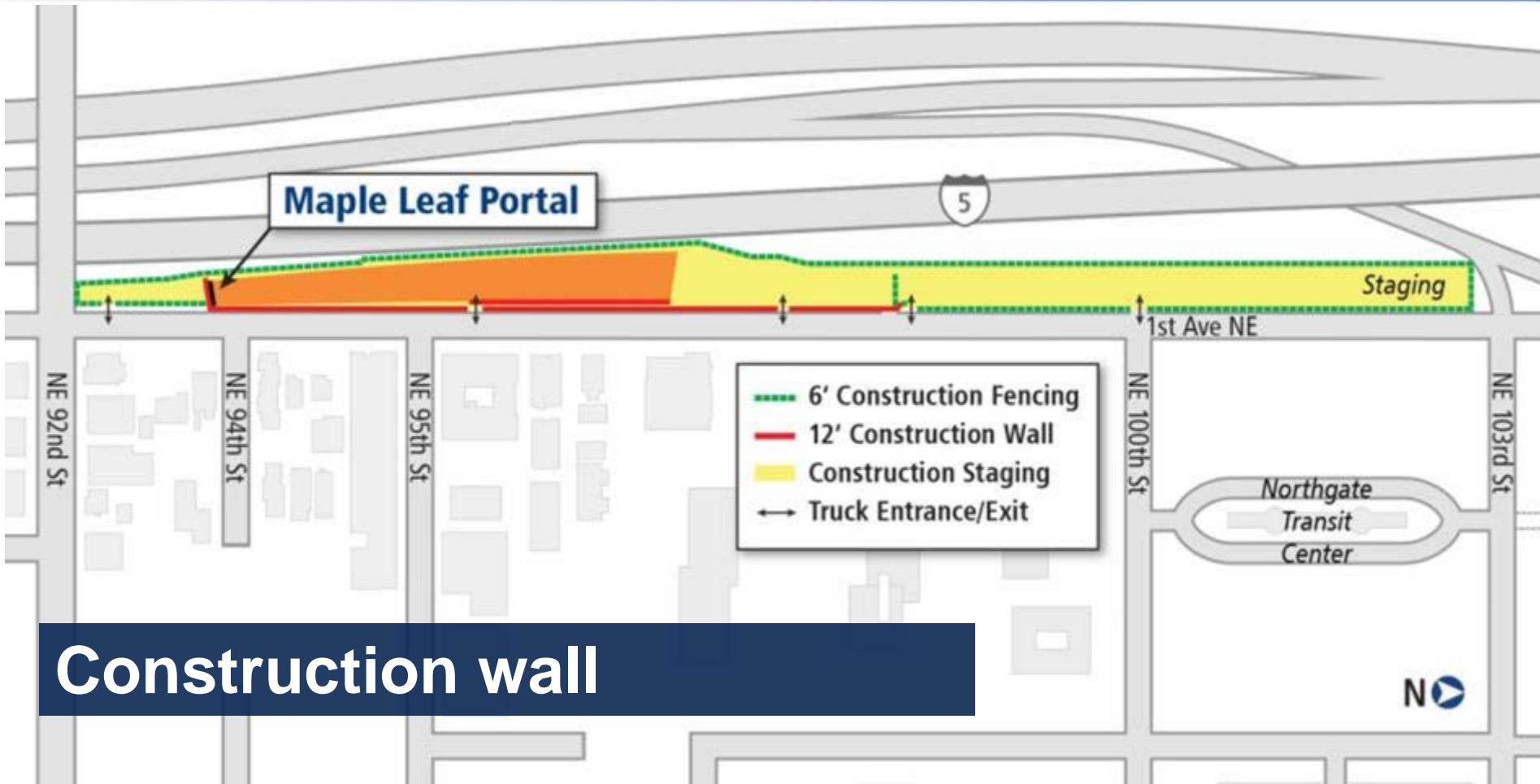


- Construction wall installed before night work begins
- No “beeping” back-up alarms
- Idling construction vehicles not directly involved in work activities turned off after five minutes
- Dirt hauling containers lined with noise dampening material



## Nighttime noise mitigation







**Construction wall concept**  
*Looking north from NE 94th Street*



Before



After

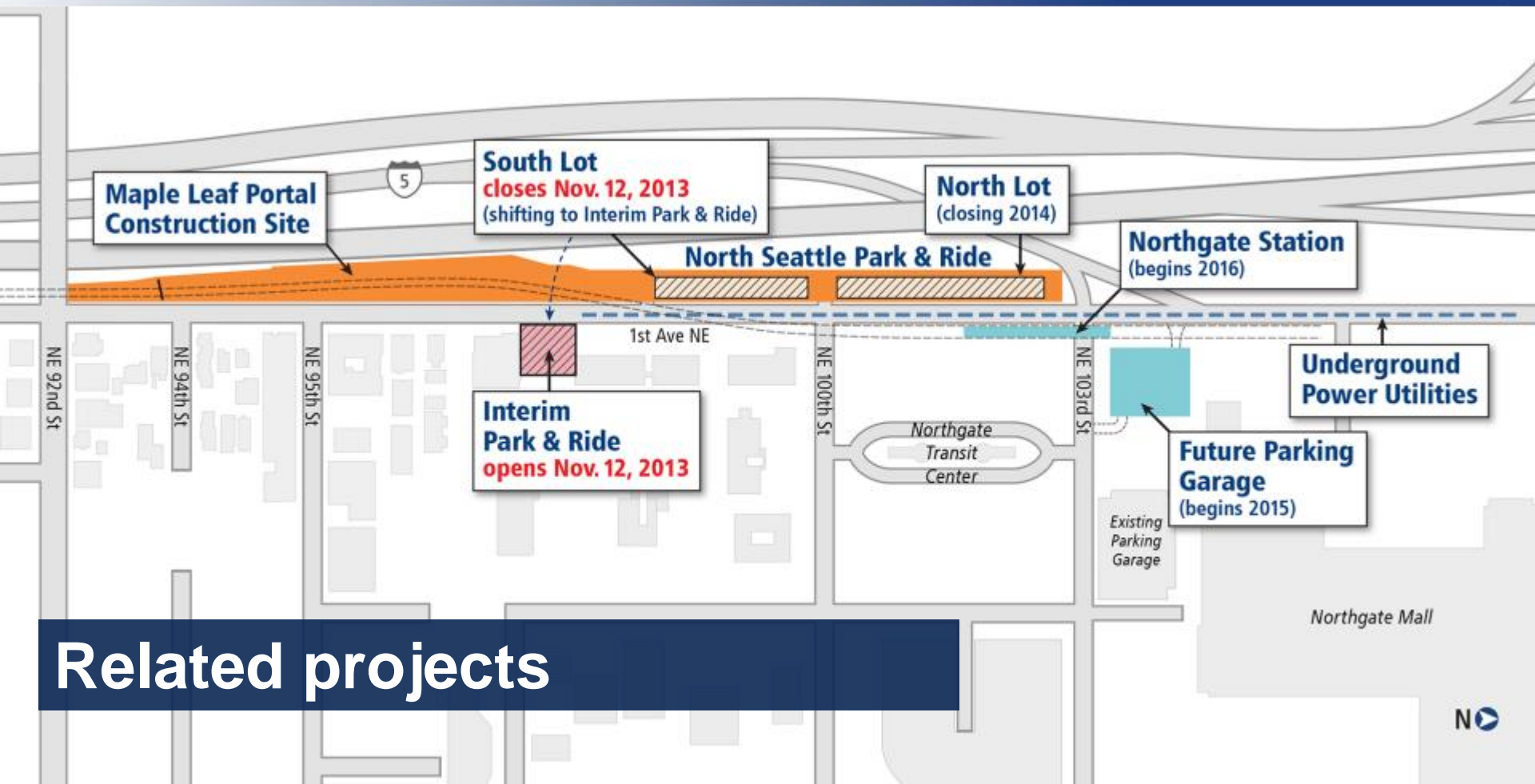


Before

**Construction fence concept**  
*Looking north from NE 92nd Street*



After



## Related projects

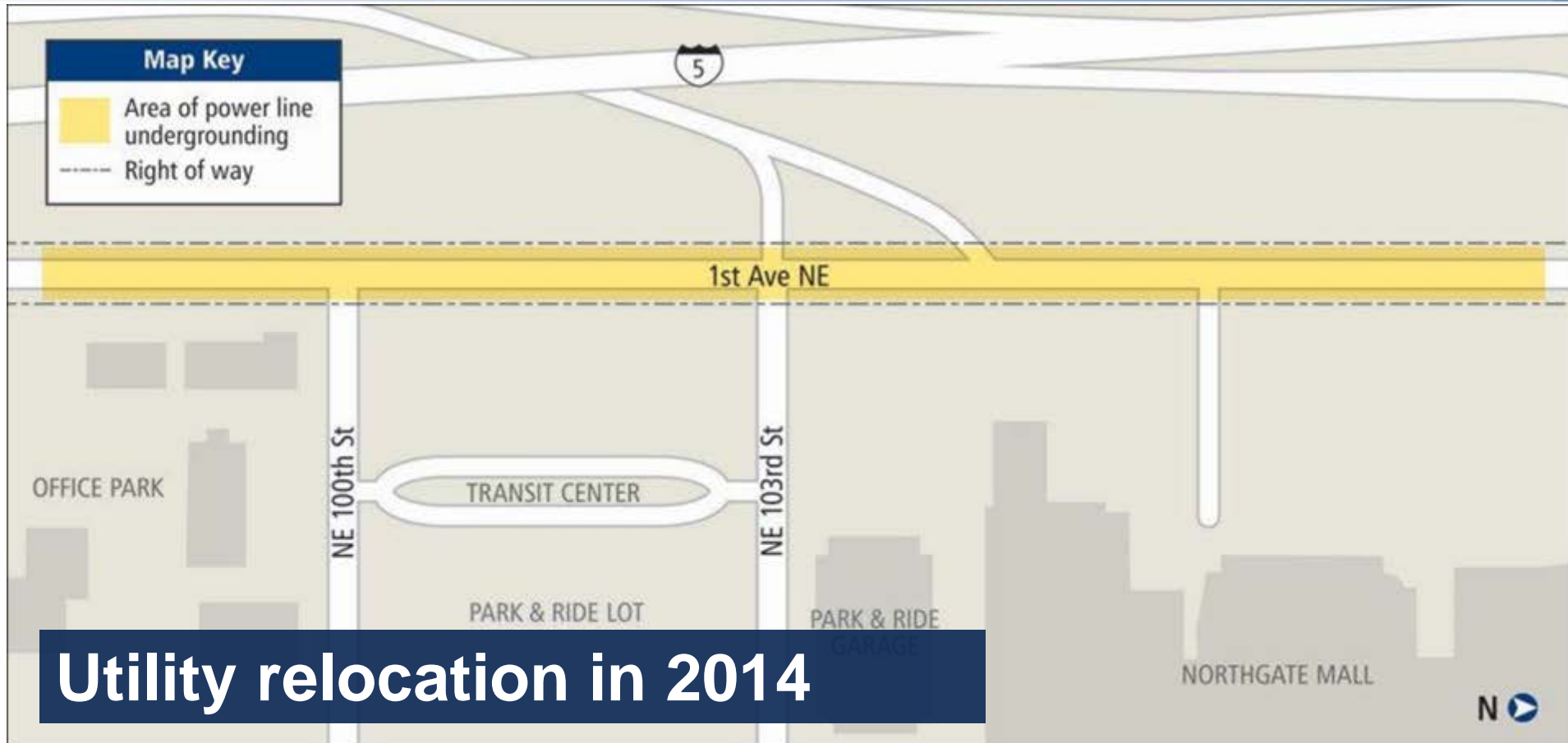




**Park and ride lot shift Tue. Nov. 12**

**Map Key**

- Area of power line undergrounding
- Right of way



# Utility relocation in 2014

## **What do you do if you have a noise or other construction concern?**

- Call the 24-hour Construction Hotline call 888-298-2395
- For non-urgent issues call 206-398-5300 or email [northlink@soundtransit.org](mailto:northlink@soundtransit.org)
- Contact Ryan Bianchi at [Ryan.Bianchi@soundtransit.org](mailto:Ryan.Bianchi@soundtransit.org) or 206-398-5070

**Construction monitoring**