

Cascadia High Speed Rail Corridor

Between Seattle, WA and Vancouver, BC



Legend



CHSR Station in Tunnel





CHSR Station on Flyovers



CHSR Station on Ground

 On ground

 Cuts

 Fills

 Flyovers

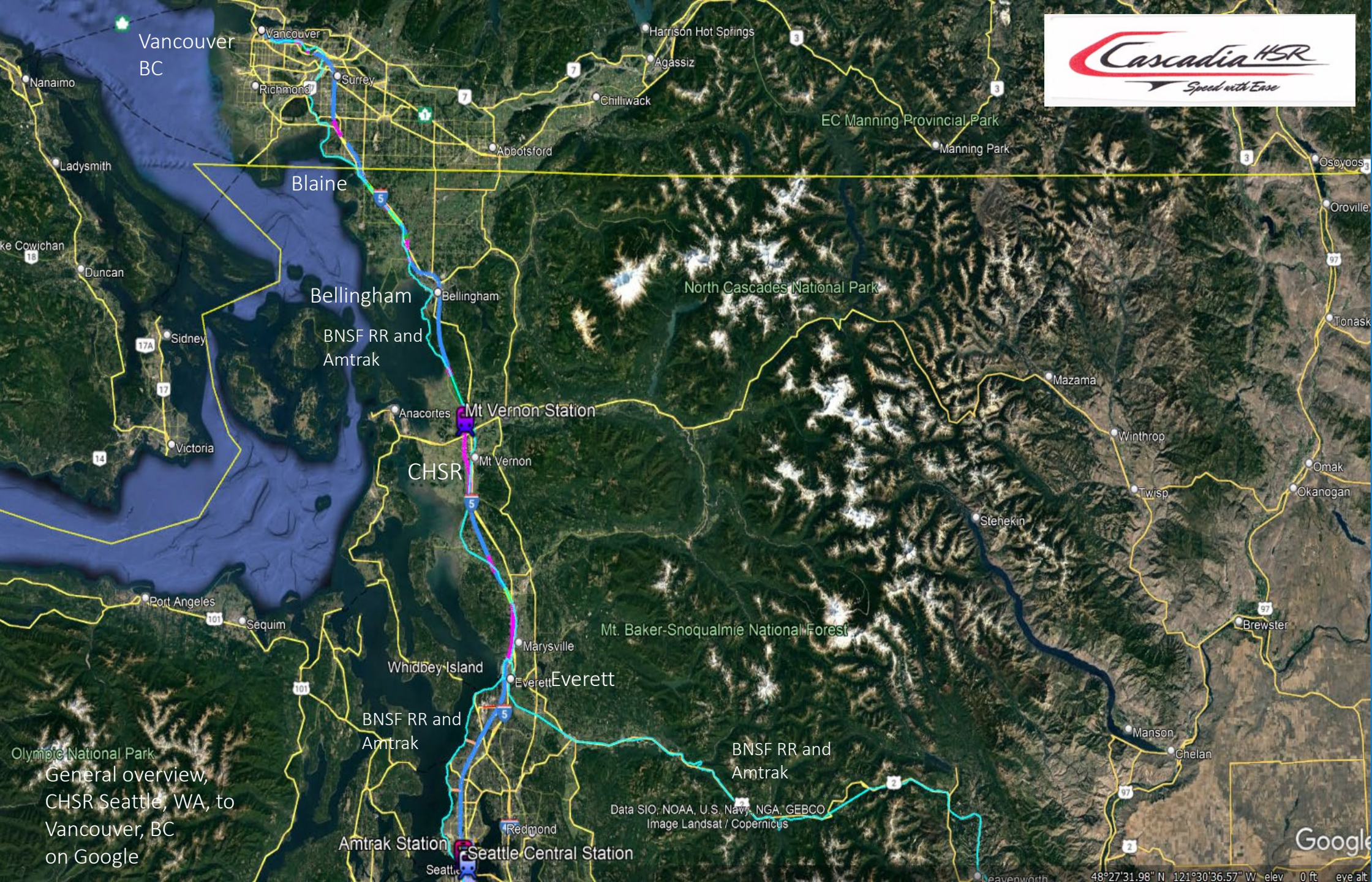
 Tunnels

 Existing Freight Railroads, other than BNSF and UP RR

 Existing Freight Railroads

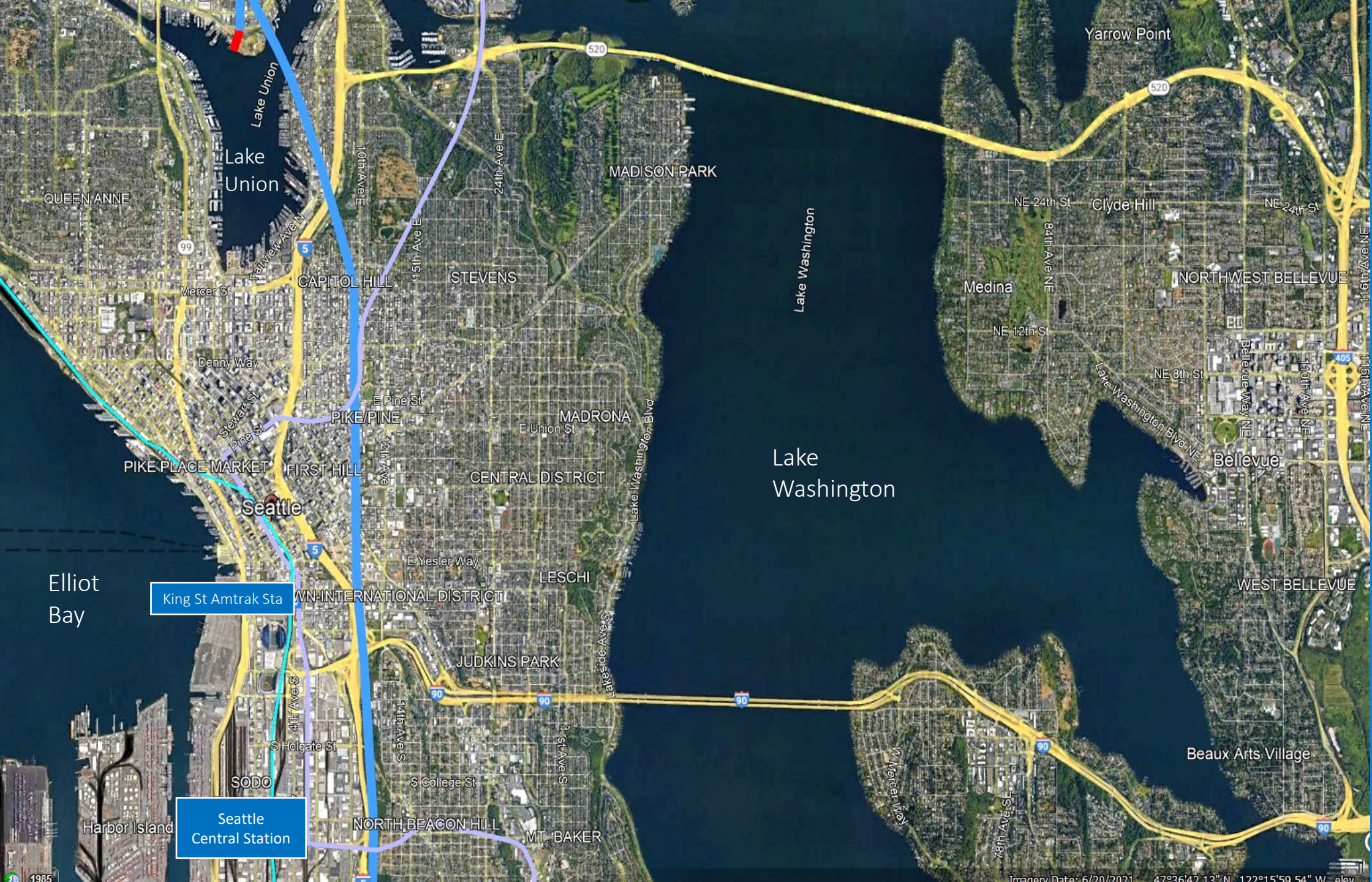
C-ICE: Cascadia Inter-City Express

CCE: Cascadia Commuter Express



The CHSR
Corridor
between
Seattle and
Vancouver, BC

General overview,
CHSR Seattle, WA, to
Vancouver, BC
on Google

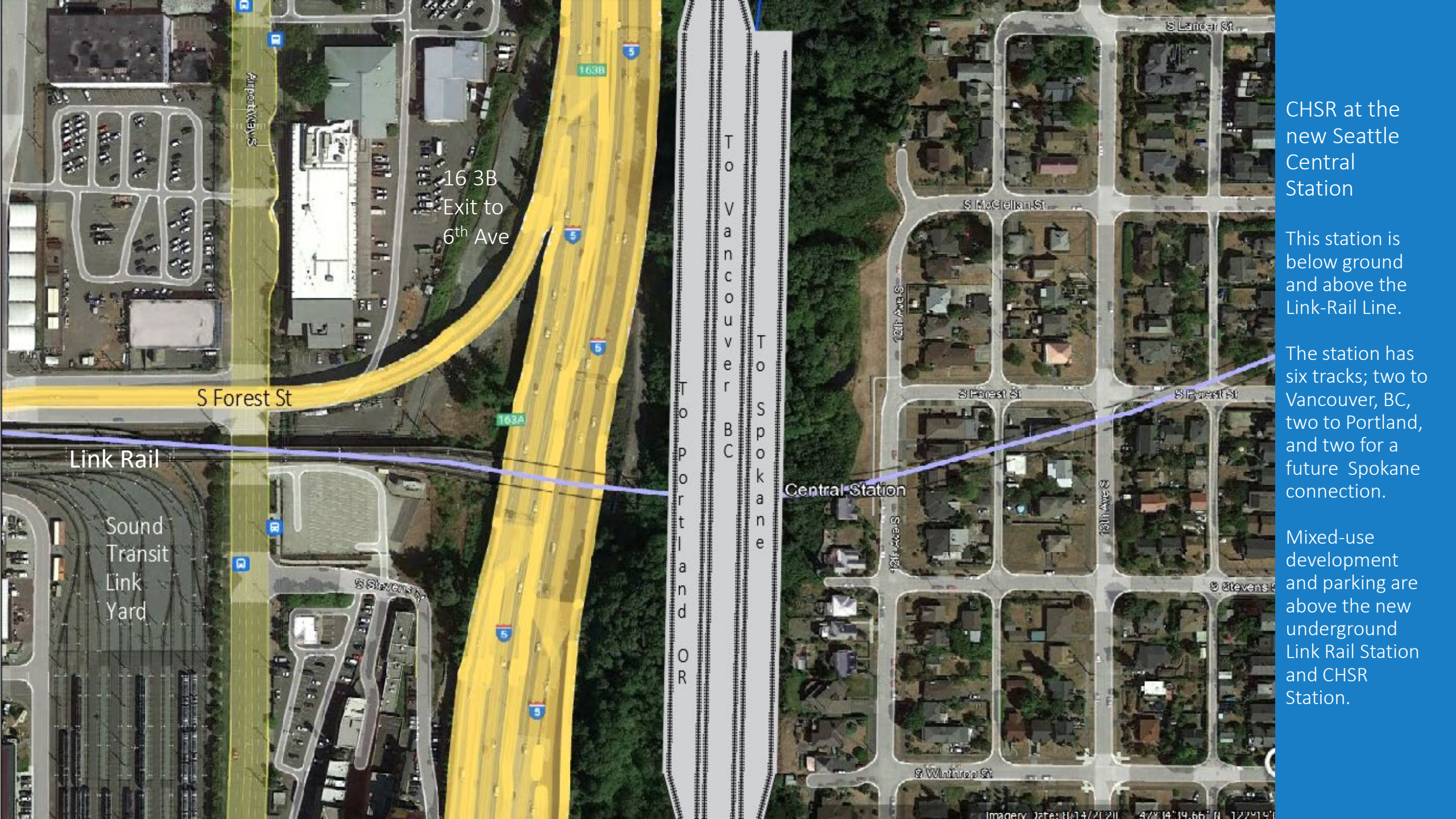


CHSR between Seattle Central Transportation Hub and Lake Union

The CHSR is partly below Broadway public right-of-way to reduce land acquisition costs.

King St Amtrak Sta

Seattle Central Station



CHSR at the new Seattle Central Station

This station is below ground and above the Link-Rail Line.

The station has six tracks; two to Vancouver, BC, two to Portland, and two for a future Spokane connection.

Mixed-use development and parking are above the new underground Link Rail Station and CHSR Station.



VARIETY OF HOUSING OPTIONS

RAIL TRANSFER
CHSR TO LIGHT RAIL

STATION ENTRANCE

STATION SQUARE

LIGHT RAIL TRANSIT YARD

PROPOSED DEVELOPMENT BOUNDARY	
MAX GSF (3:1 FAR) =	15,300,000 SF
RECOMMENDED GSF (2:1 FAR) =	10,200,000 SF
EXISTING MAX FAR (1:1) =	5.1 mil. SF

The Seattle Central Station and Possible Development Plan by Ankrom Moisan Architects



CHSR is below Lake Union.

Excavated tunnel material will be barged to possible infill locations nearby for development opportunities.

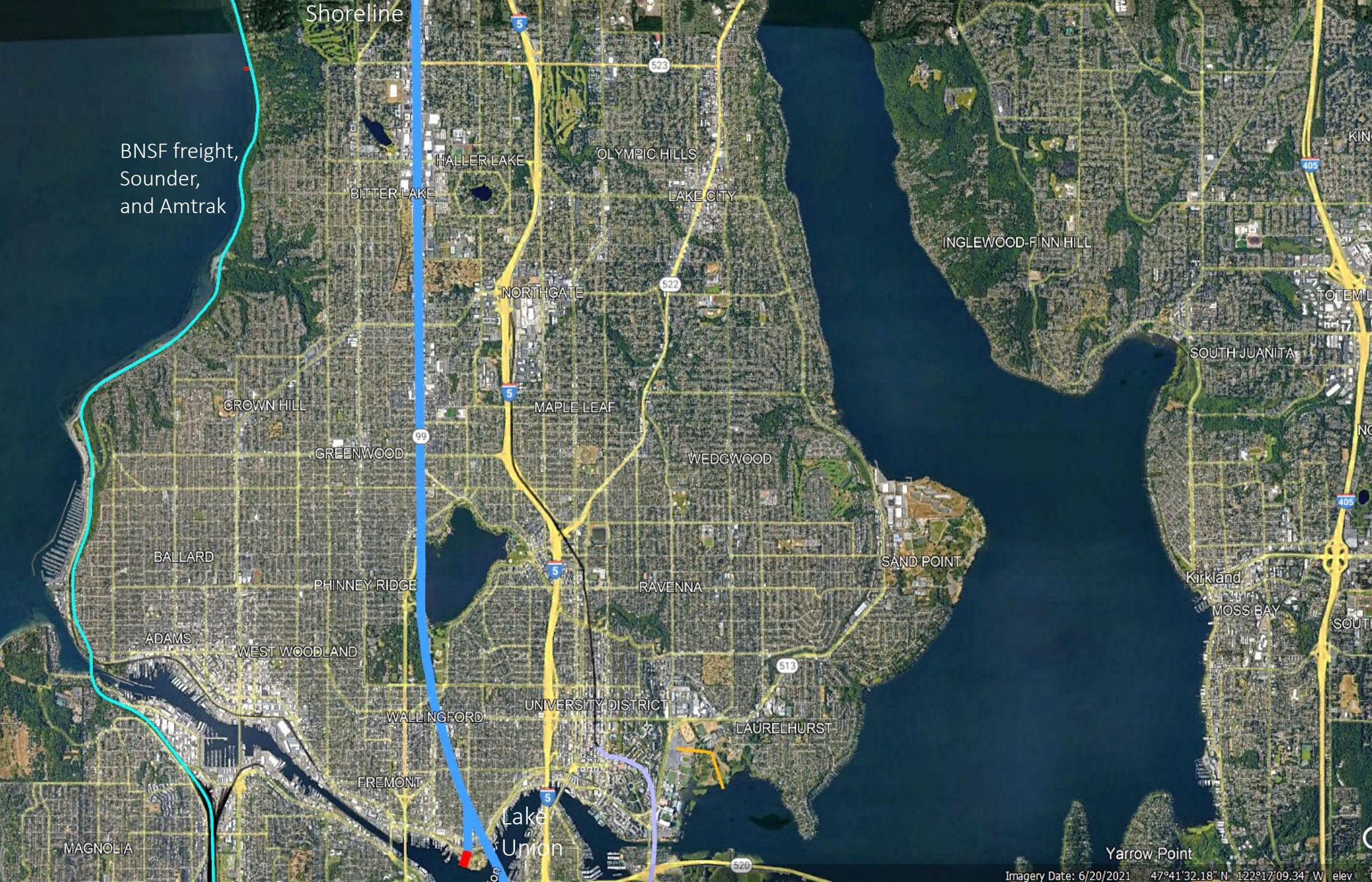
The addit tunnel is used for tunnel excavation removal and TBM installations.

Addit, conveyor system, and barge loading

CHSR Tunnel

Lake Union



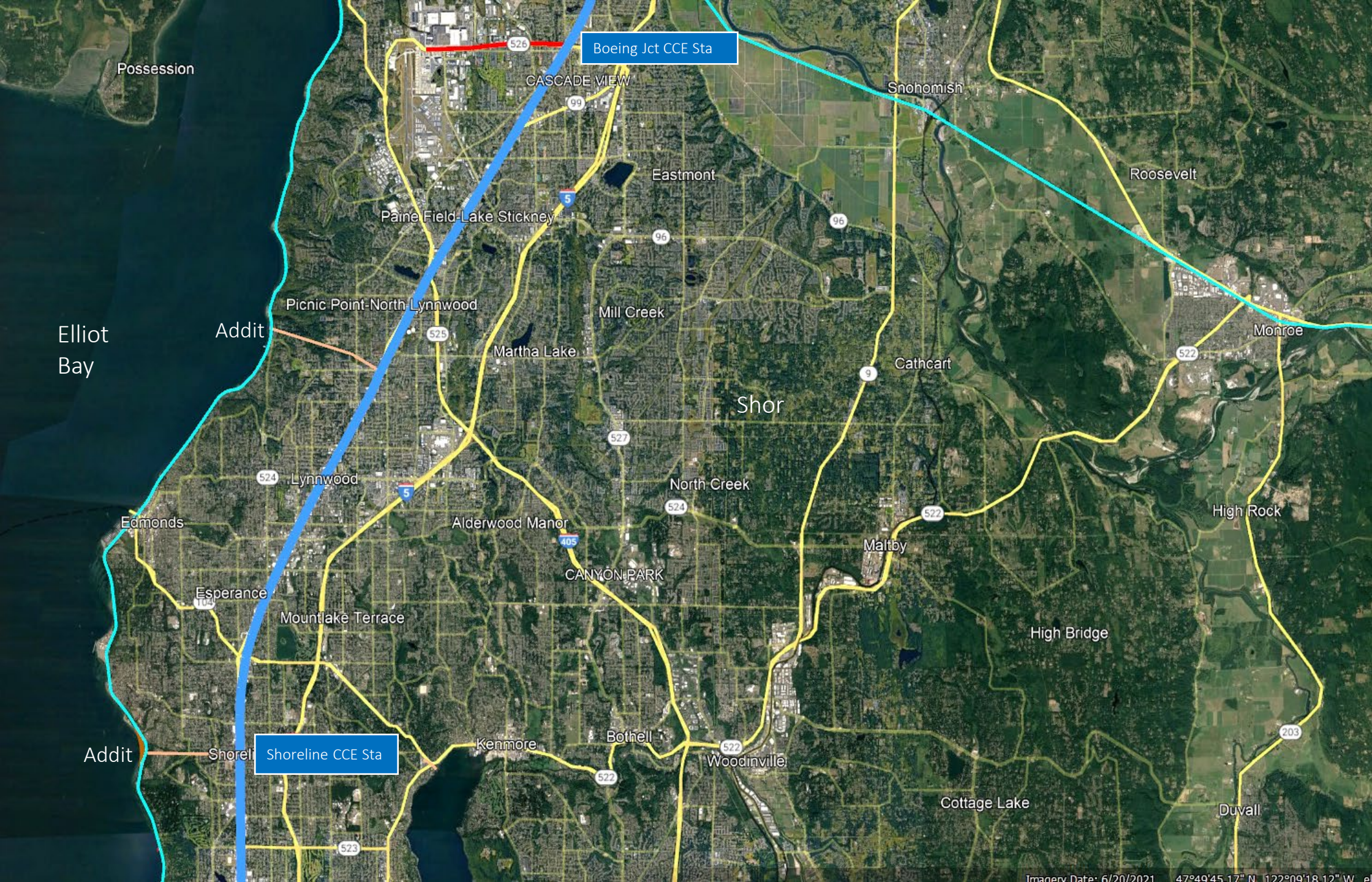


BNSF freight,
Sounder,
and Amtrak

Shoreline

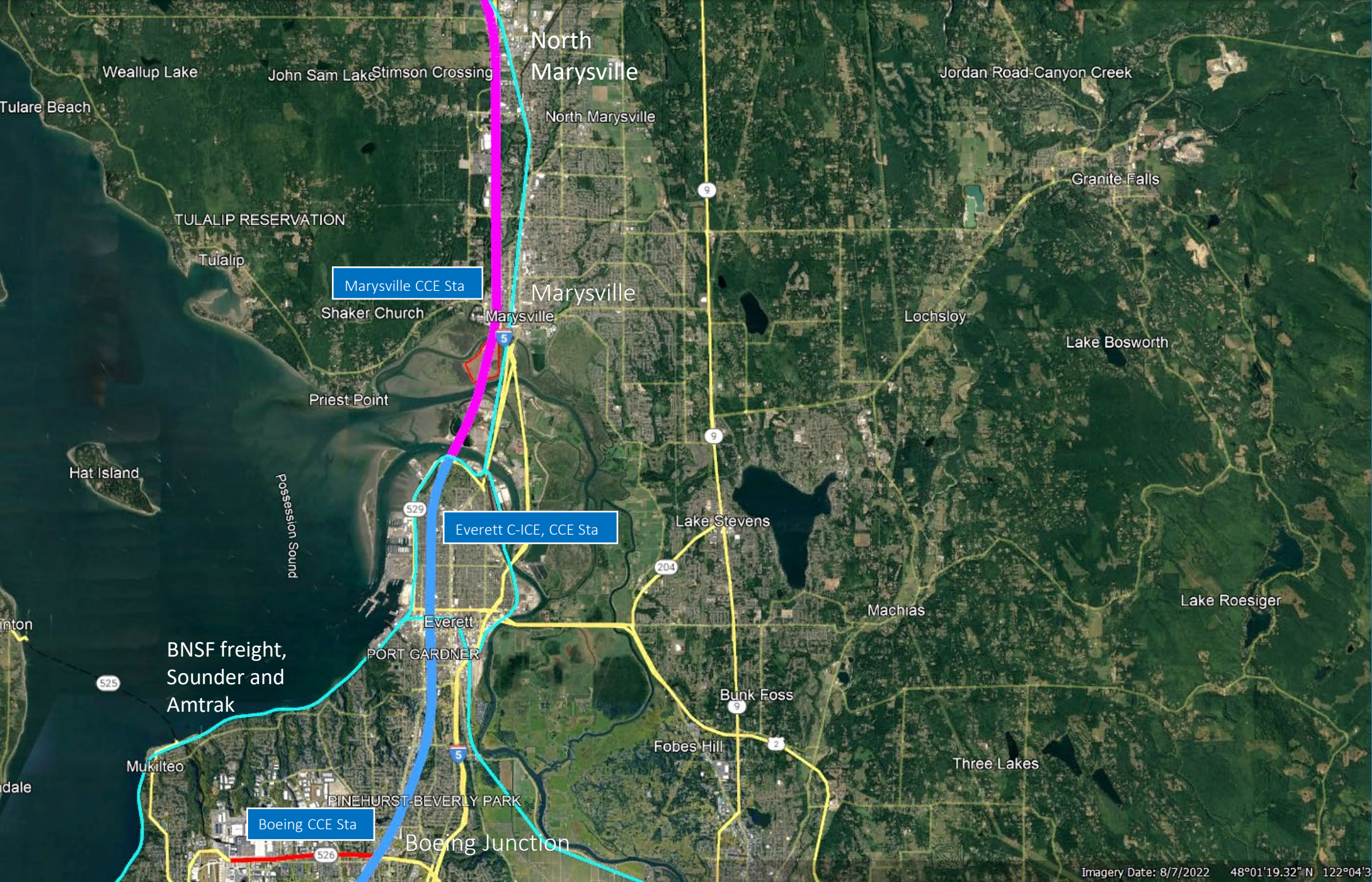
CHSR Corridor
between Lake
Union and
Shoreline

The CHSR is
below Hwy 99
to reduce the
right-of-way
costs to
construct the
new CHSR
corridor.



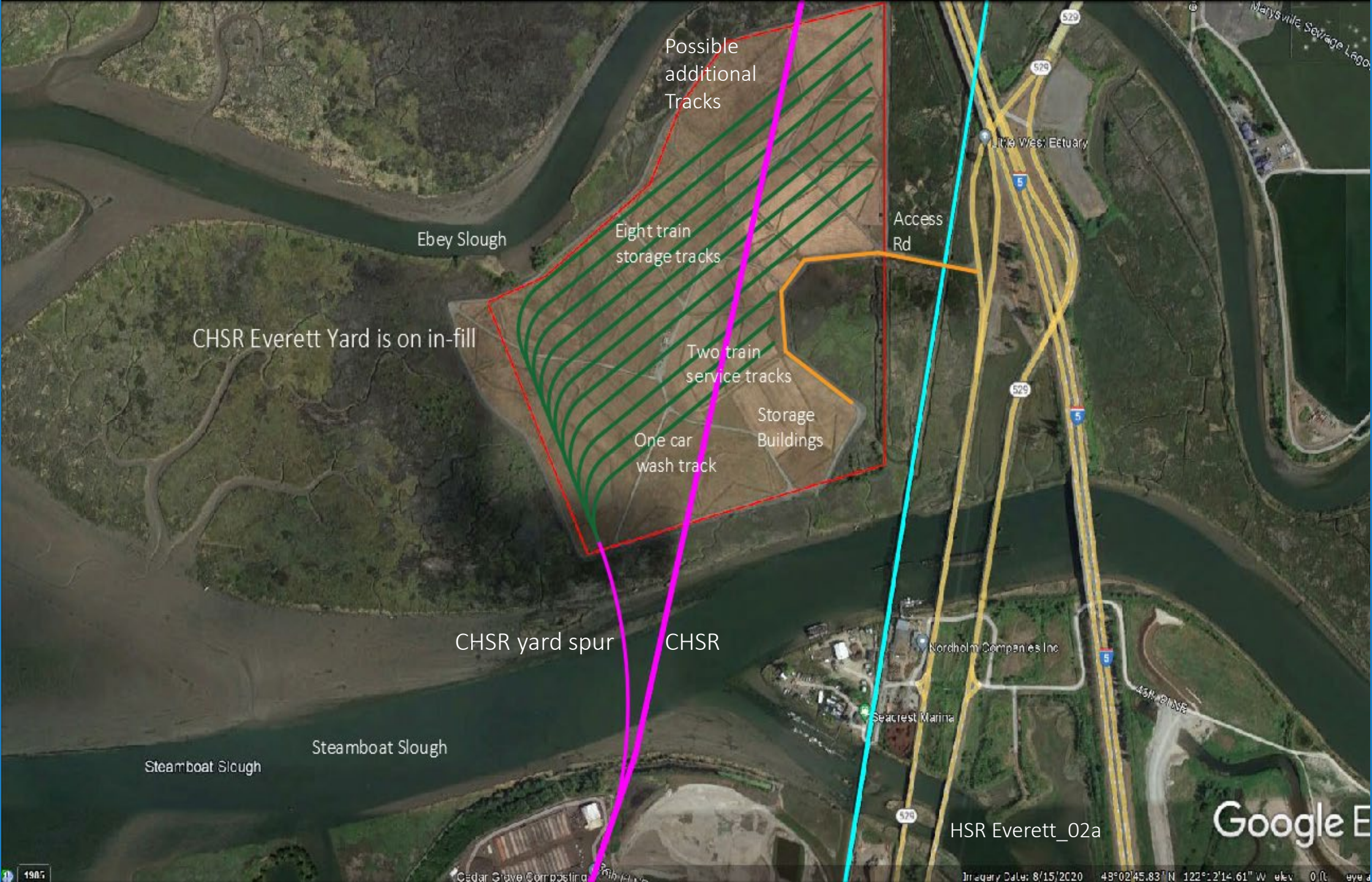
CHSR Corridor between Shoreline and Boeing CCE Station

The CHSR twin-bore tunnel has adds for tunnel boring material removal to Elliot Bay shoreline infill.



CHSR Corridor between Boeing Junction and North of Marysville

The Everett CHSR station is at Hewitt and Colby Ave.



Possible additional Tracks

Ebey Slough

Eight train storage tracks

Access Rd

CHSR Everett Yard is on in-fill

Two train service tracks

One car wash track

Storage Buildings

CHSR yard spur

CHSR

Steamboat Slough

Steamboat Slough

Northholm Companies Inc

Seacrest Marina

HSR Everett_02a

Google E

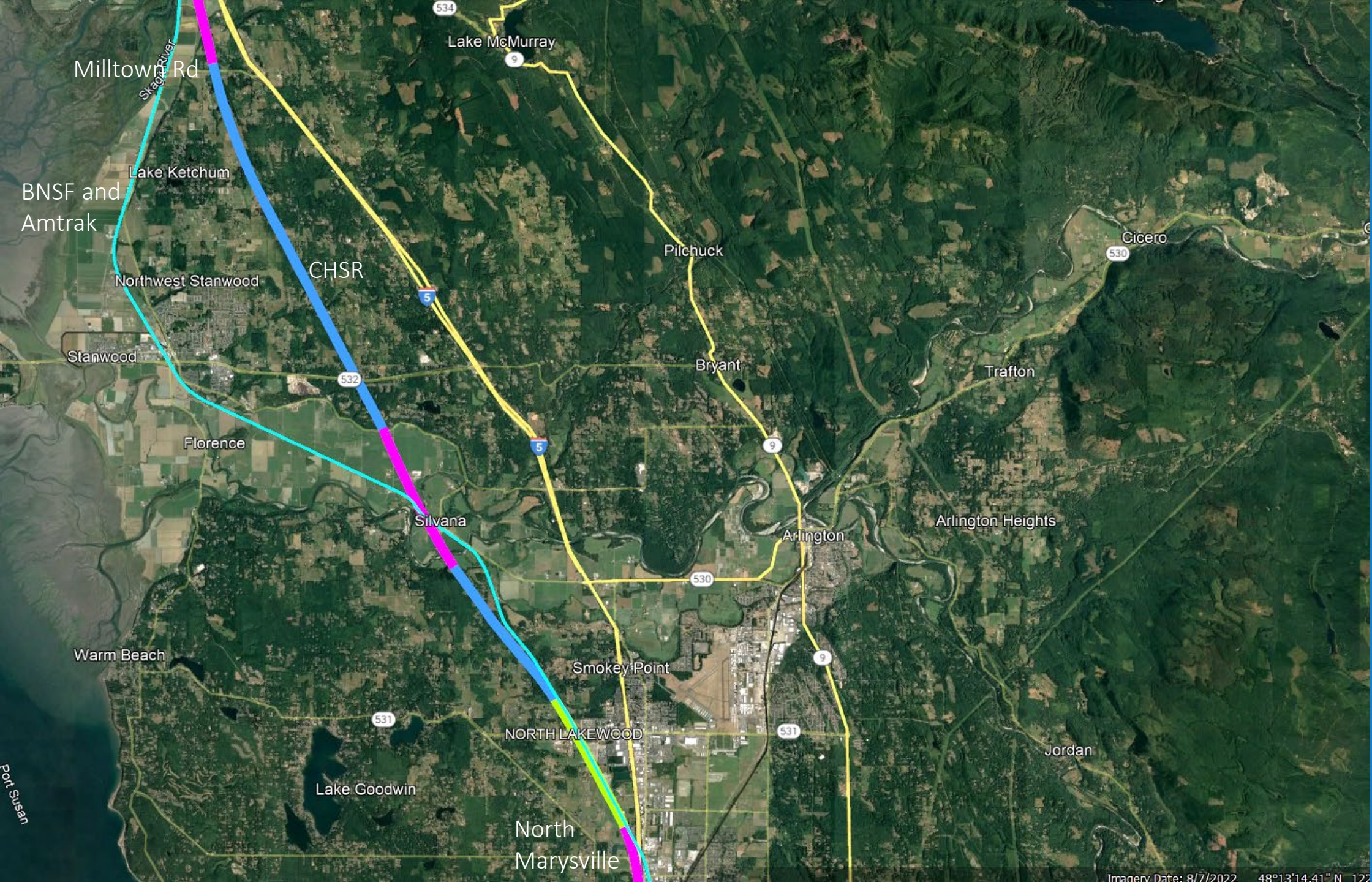
CHSR Corridor at the North Everett Maintenance Yard

The 154-acre yard is on compacted infill from the tunnel excavation.

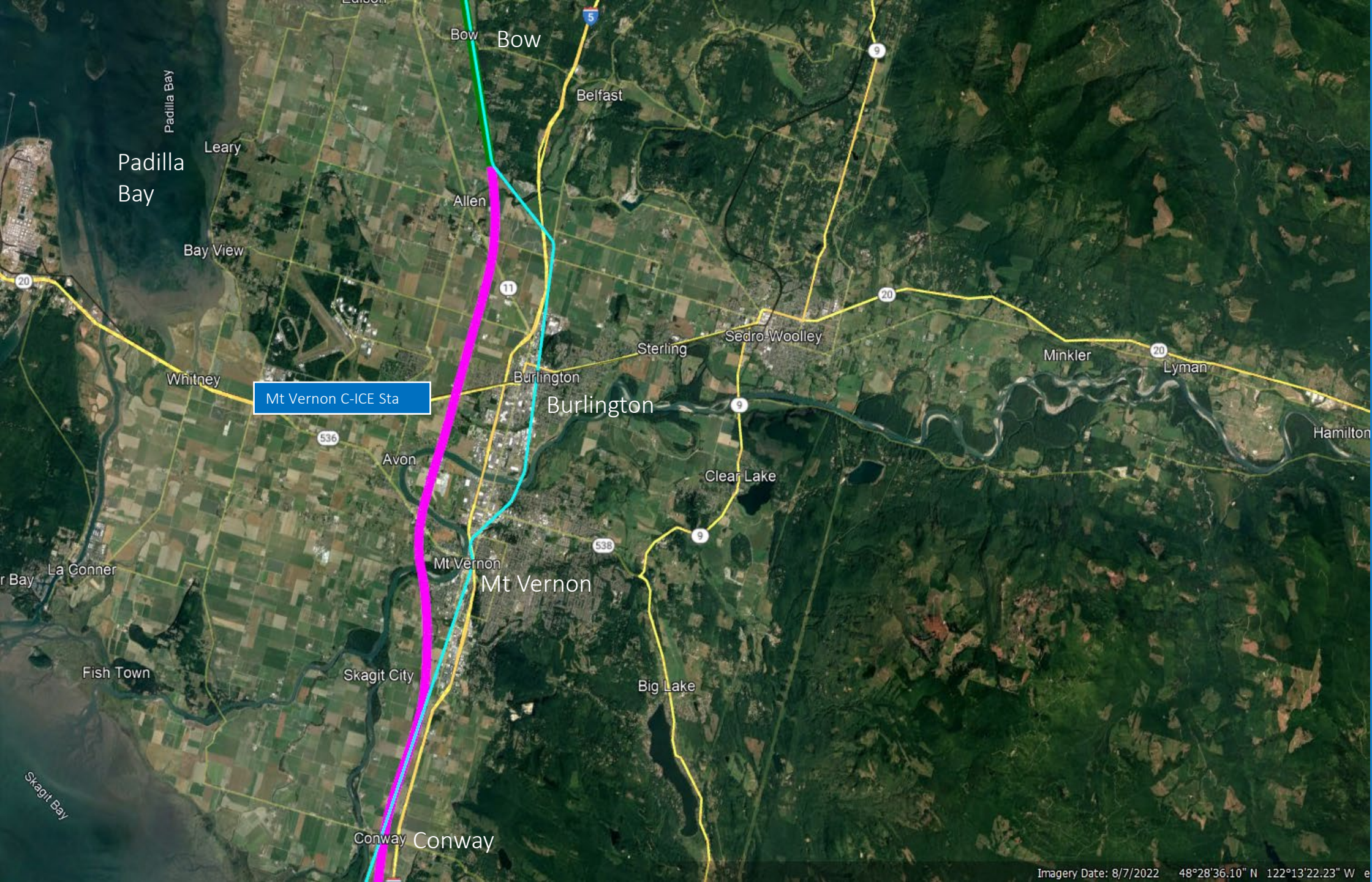
The train storage tracks are 2600 feet long. The train service and carwash tracks are up to 1500 feet long. All yard tracks are below the CHSR flyover.

Modified access to the yard is from Hwy 529.

The CHSR Company has the profile drawings.

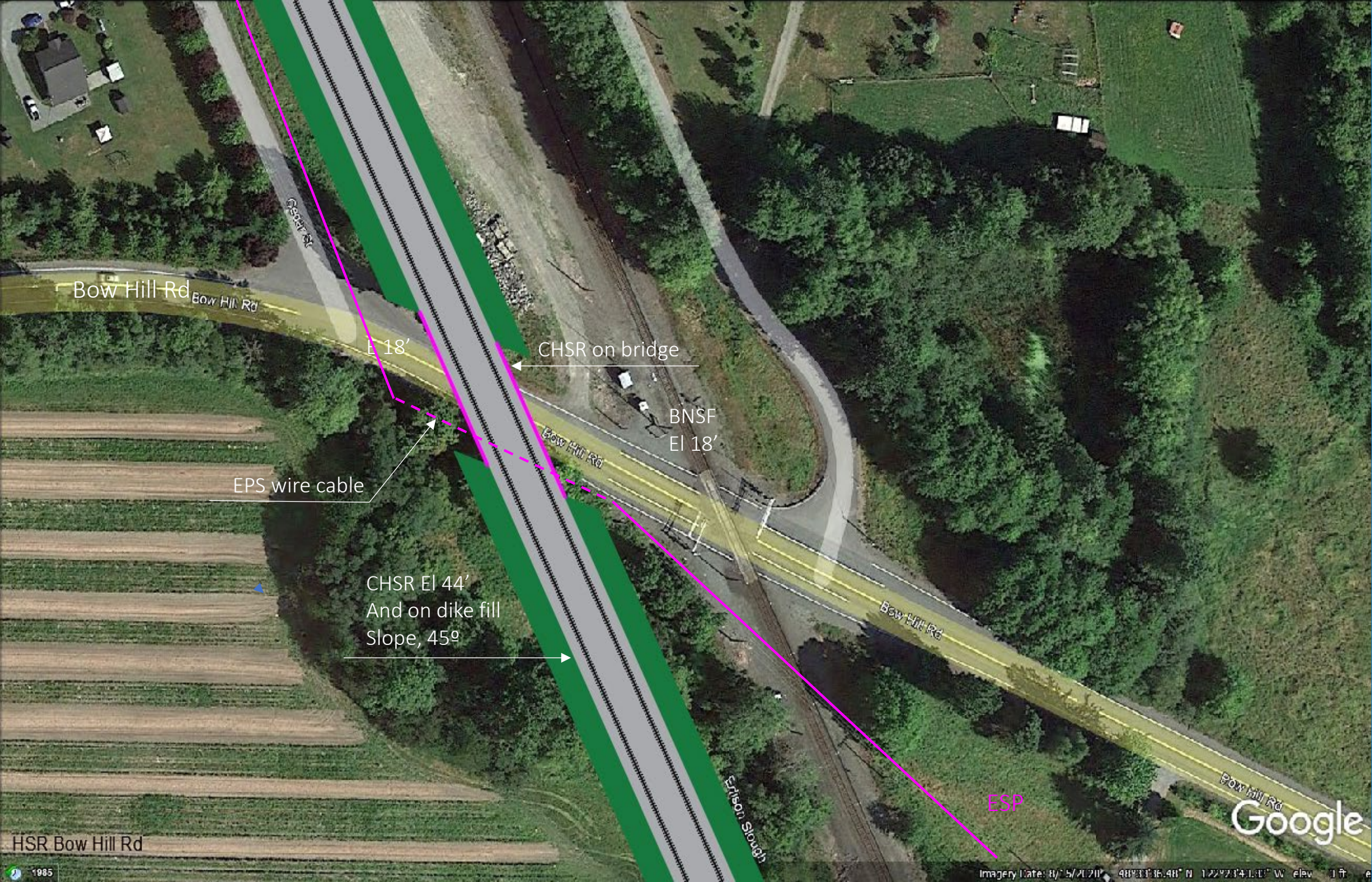


CHSR Corridor
between
North
Marysville and
Milltown Rd



CHSR Corridor
between
Milltown
Rd/Conway
and Bow

Mt Vernon C-ICE
station will
serve Burlington
as well.

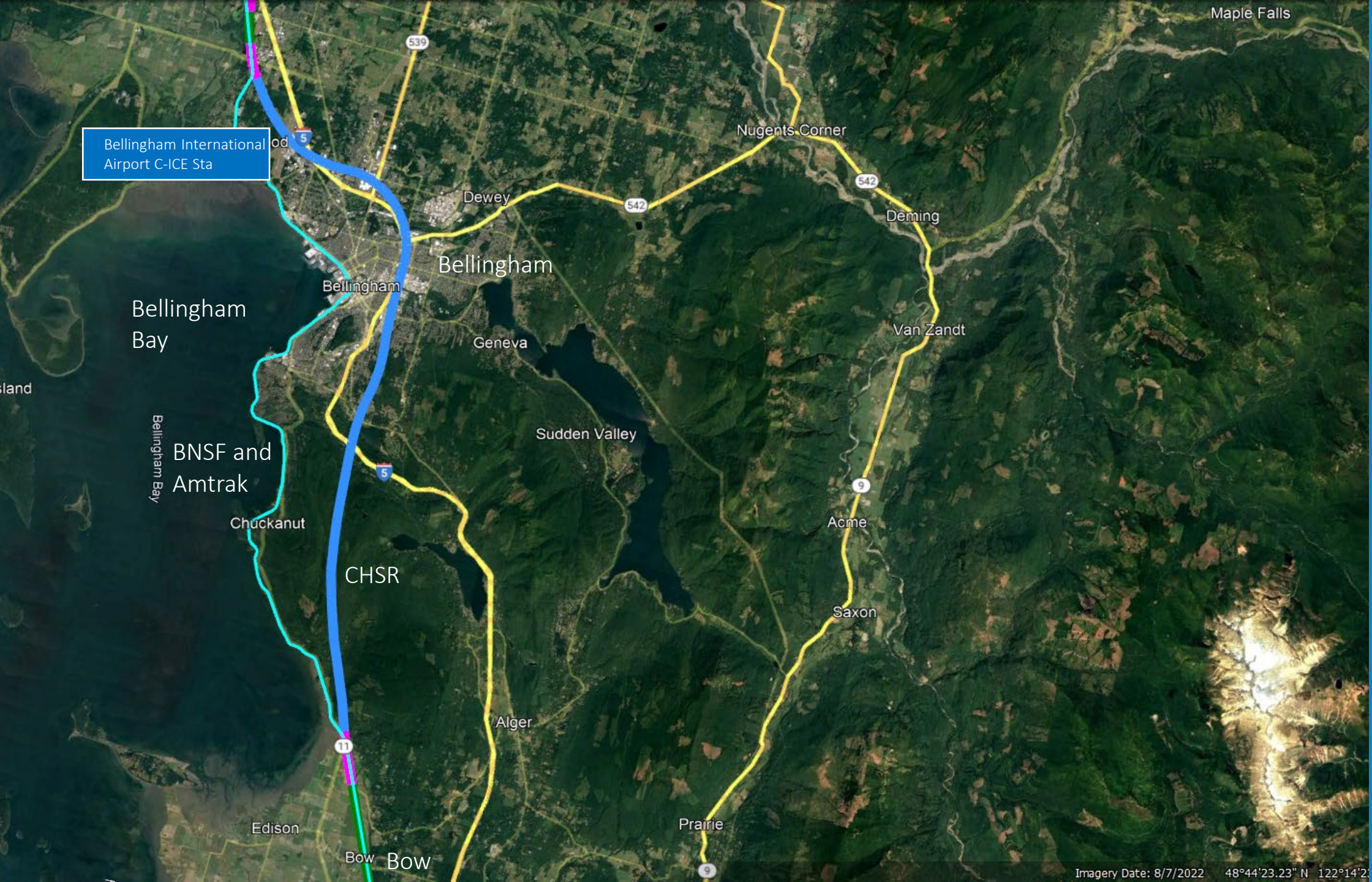


CHSR at Bow Hill Rd

All fill will come from the TBM excavations.

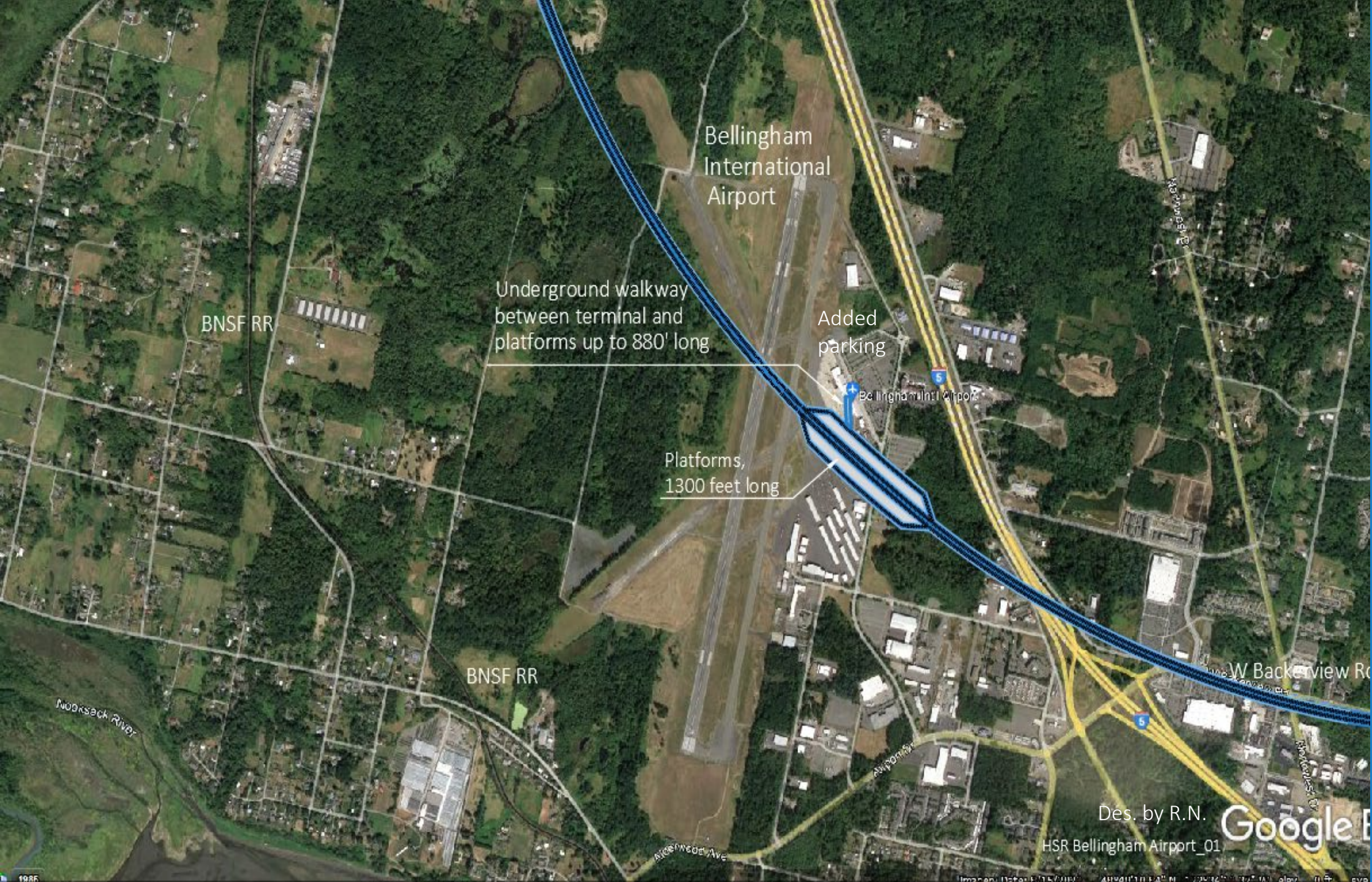
Needed fill volumetrics have yet to be calculated. The footprint is ± 88 feet.

The power lines will go below the CHSR bridge with insulated wire cable, length as required.



Bellingham International Airport C-ICE Sta

CHSR Corridor between Bow Rd and Bellingham International Airport



The CHSR C-ICE Station is below the Bellingham International Airport

The CHSR is well below the runways and can take the brunt of landing airplanes.

The CHSR Company has all the profile drawings for the corridors.



Existing Portal Way

CHSR

BNSF

New Portal Way overpass

Et 80'

New Birch Bay Lynden overpass

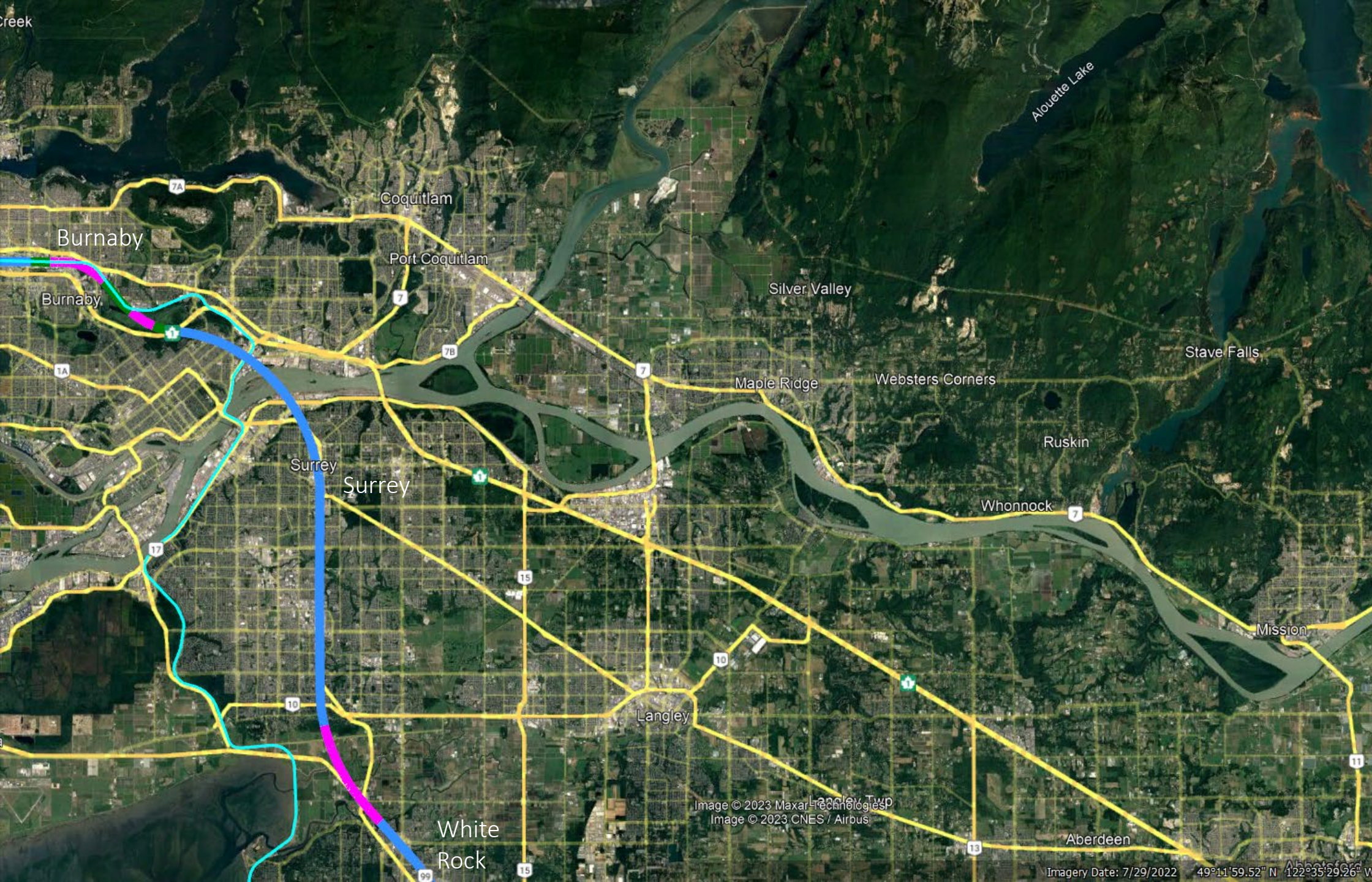
Birch Bay Lynden Rd

— = new connecting roads

CHSR at Birch Bay Lynden Rd Rail Crossing

This new Birch Bay Lynden Rd rail overpass will also help BNSF RR. All four Portal Way and Birch Bay Lynden Rd ramps grades are 5.7%.

This is a typical arrangement for combined overpasses with adjacent connecting roads.



CHSR Corridor
between
White Rock
and Burnaby

Image © 2023 Maxar Technologies
Image © 2023 CNES / Airbus

Imagery Date: 7/29/2022 49°11'59.52" N 122°35'29.26" W

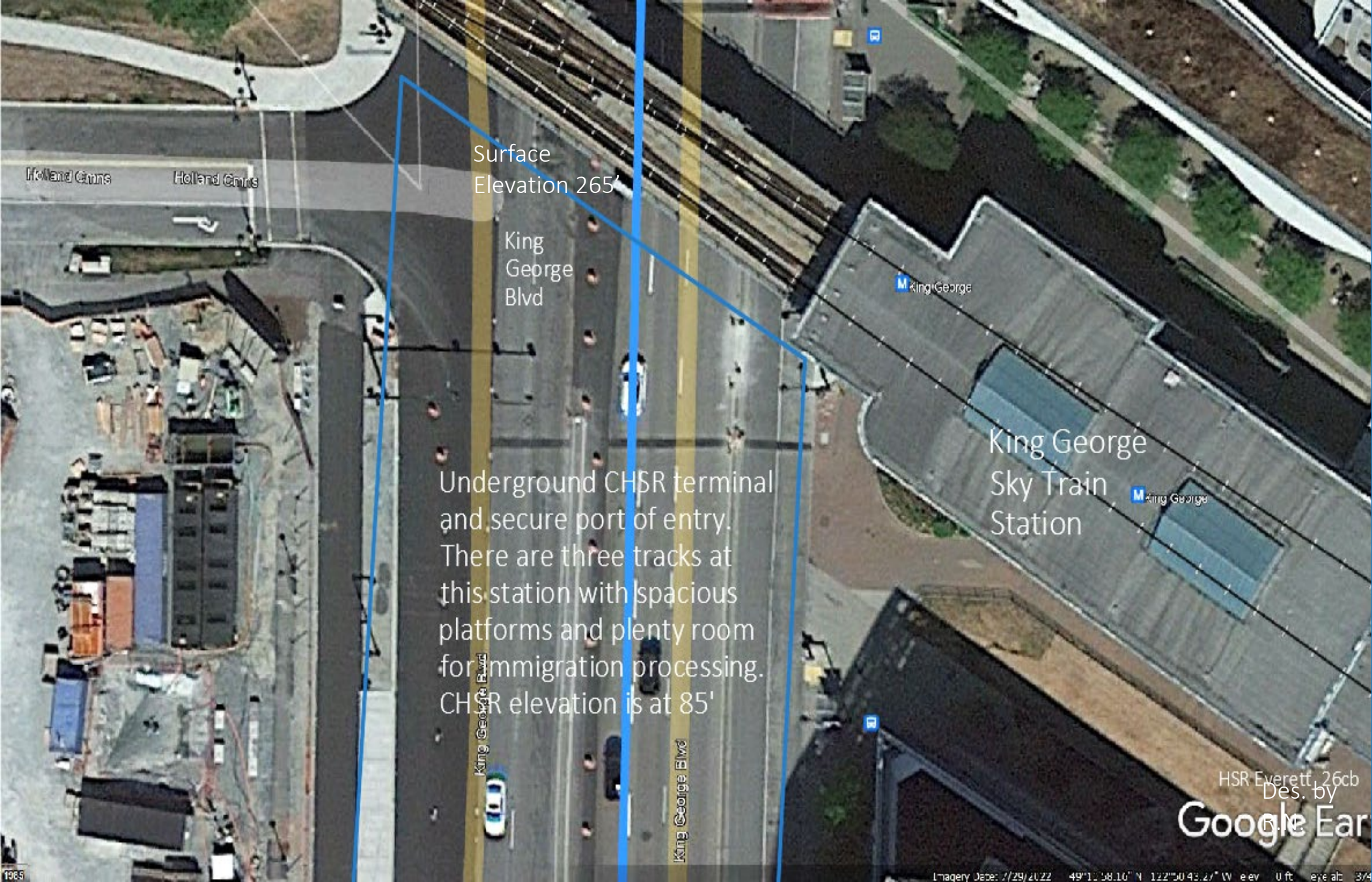


The CHSR Corridor in White Rock, BC

The White Rock Station is only for Canadian commuter train stops. Train storage and service facilities are needed for the Canadian system.

International CHSR trains do not stop here.

Ferguson Creek can easily be rerouted for the service facility.



CHSR and King George Sky Train Station at Surrey, BC

The Surrey CHSR station will connect to the Sky Train station.

The CHSR station is below ground, allowing secure border crossing for passengers.

Passengers with improper documentation must return to the point of origin.

Establish agreements for border control personnel to work at this locality.

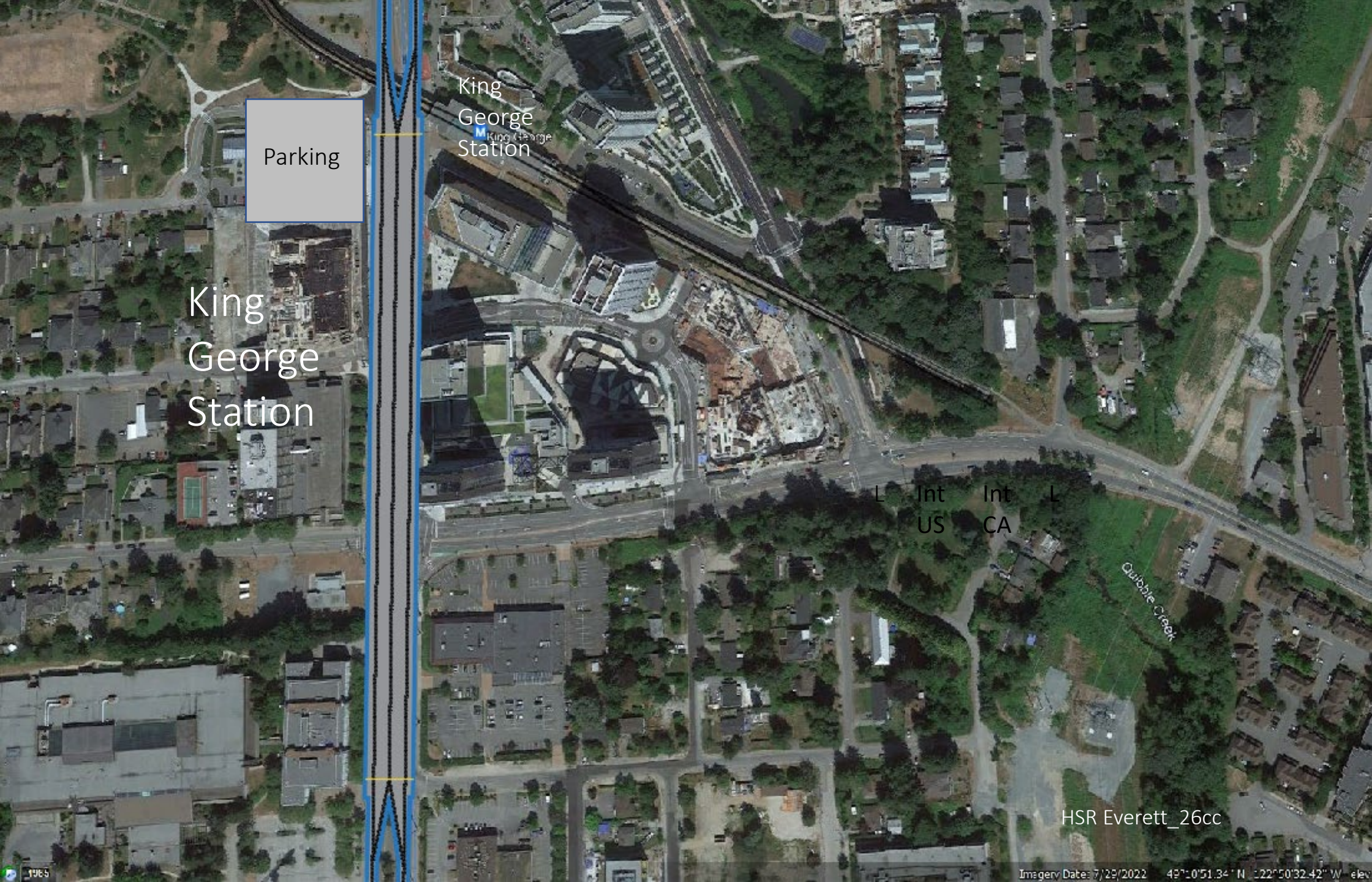
Surface Elevation 265'

King George Blvd

Underground CHSR terminal and secure port of entry. There are three tracks at this station with spacious platforms and plenty room for immigration processing. CHSR elevation is at 85'

King George Sky Train Station

HSR Everett, 26cb
Des. by
Google Earth



Parking

King
George
Station

King
George
Station

L Int US L
L Int CA L

Quibble Creek

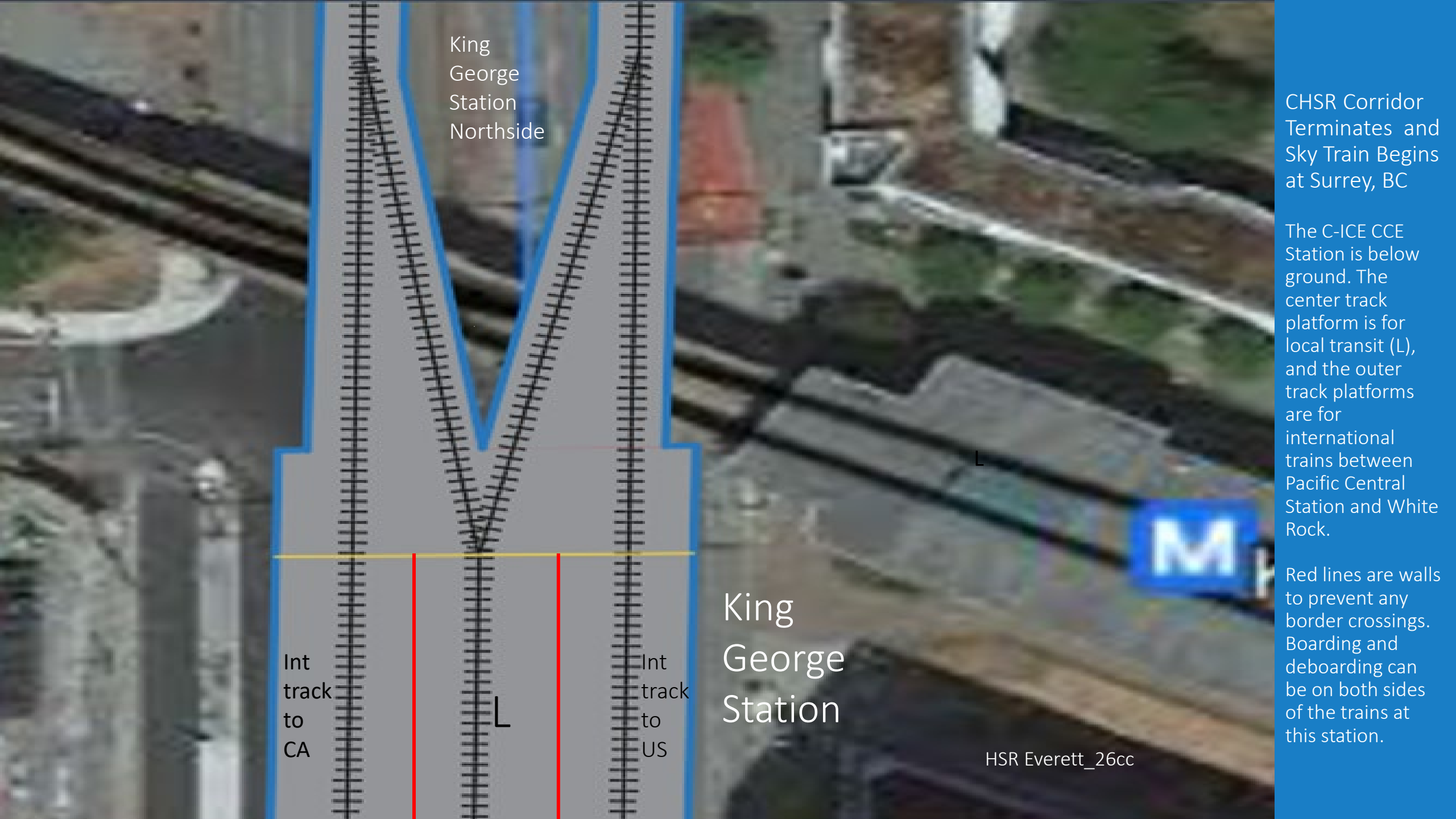
HSR Everett_26cc

Imagery Date: 7/29/2022 49°10'51.34" N 122°50'32.42" W elev

CHSR Corridor
Terminates and
Sky Train Begins
at Surrey, BC

The C-ICE, CCE
Station is below
ground. The
center track
platform is for
international
transit, and the
outer track
platforms (L)
are for local
trains between
Pacific Central
Station and
White Rock.

Red lines are
walls to prevent
any border
crossings.



King
George
Station
Northside

King
George
Station

Int
track
to
CA

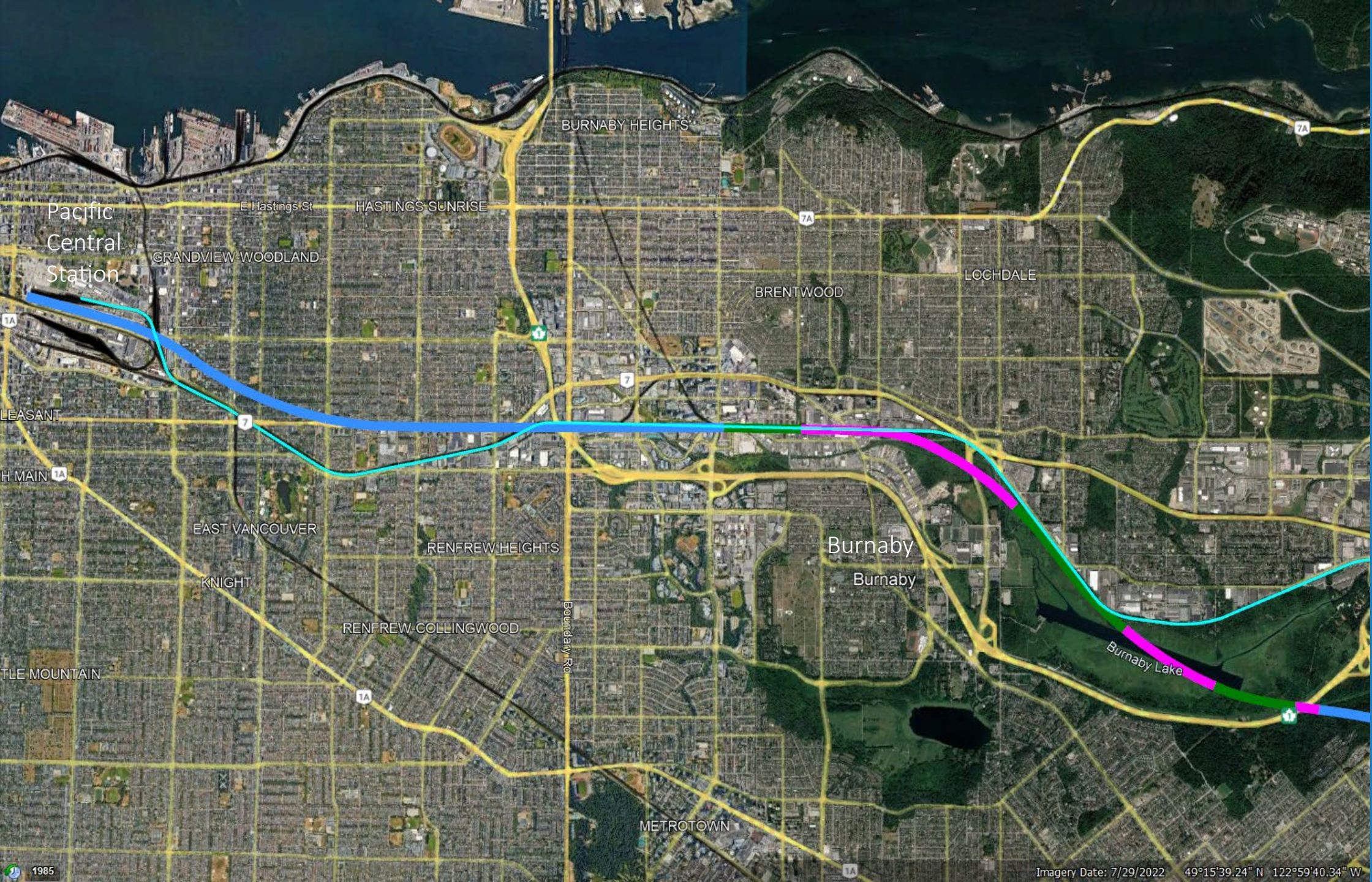
Int
track
to
US

HSR Everett_26cc

CHSR Corridor
Terminates and
Sky Train Begins
at Surrey, BC

The C-ICE CCE
Station is below
ground. The
center track
platform is for
local transit (L),
and the outer
track platforms
are for
international
trains between
Pacific Central
Station and White
Rock.

Red lines are walls
to prevent any
border crossings.
Boarding and
deboarding can
be on both sides
of the trains at
this station.



Possible CHSR
Corridor
between
Surrey and
Pacific Central
Station



CHSR Wildlife Under Crossing as Needed

This is an example of providing wildlife under passing. The underpass has open access with trees, shrubs, and greenery to copy the approach sides.

Freight Rail

CHSR

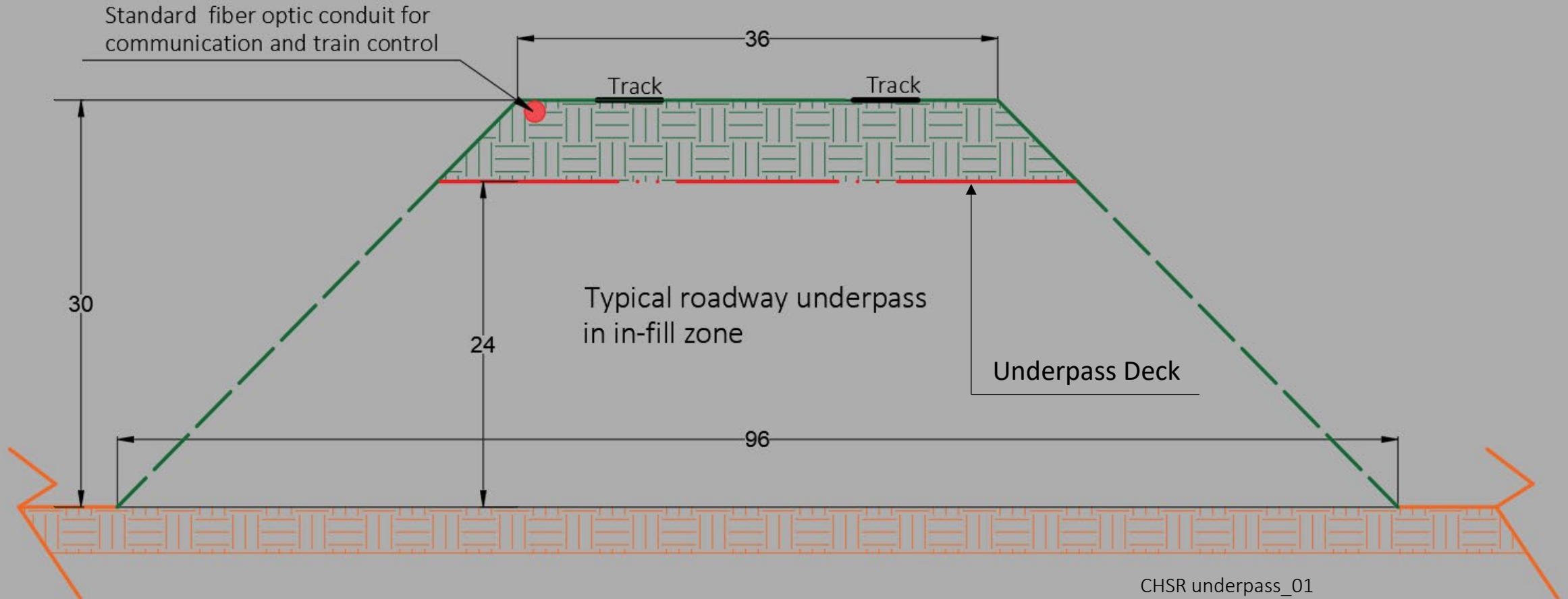
HSR wildlife underpass



CHSR Wildlife Crossing as Needed

This is an example to provide wildlife overpassing. The overpass is fenced with trees, shrubs, and greenery to copy the approach sides.

This is a typical illustration of roadway underpass arrangements along the CHSR corridor where we have in-fills. In-fills will work as tunnel excavation material deposits. This underpass has a 24-foot clearance with a deck height of 6 feet which is enough to cross a 54' broad highway. Also, note the communication conduit along all the CHSR corridor lines.



Seattle Central CHSR Station to Vancouver BC Pacific Central CHSR Station Mileage and Times

Number one = Priority, Number Two = Secondary Stops

Station to Station	CHSR Corridor Milage	Estimated Travel Time
Seattle Central-Shoreline # 1	12.48 miles	10 minutes
Shoreline-Boeing # 2	13.19 miles	11 minutes
Boeing-Everett # 2	3.30 miles	5 minutes
Everett-Marysville # 2	3.30 miles	5 minutes
Marysville-Mt Vernon # 2	28.57 miles	16 minutes
Mt Vernon-Bellingham Airport # 1	32.78 miles	17 minutes
Bellingham Airport-US Border # 2	17.78 miles	11 minutes
US Border-Surrey King George Sta # 1	14.21 miles	11 minutes
King George Sta-Pacific Central Sta # 2	14.30 miles	12 minutes

Transportation Mode Comparison	Stop to Stop	Estimated Travel Time
157 miles (Amtrak)	Seattle King Sta-Vancouver Pacific Central Sta	4 Hr 20 minutes
142.6 miles (Autos/Buses)	Seattle-Vancouver BC	2 Hr 53 minutes
139.91 miles (CHSR)	Seattle Central Sta-Vancouver Pacific Central Sta	49 minutes, one-stop (Bellingham)

CHSR Miles between Seattle Central and Vancouver, BC

On Ground	Cut/Fill	Flyover or Bridges	Tunnel or Underpass
2.36 Mi SV_009 BNSF	4.33 Mi SV_014 BNSF	5.10 Mi SV_007 I-5 *	5.24 Mi SV_001 new
2.59 Mi SV_024 BNSF	0.76 Mi SV_021 BNSF *	4.43 Mi SV_008 I-5 *	7.24 Mi SV_003 Hwy 99 *
3.35 Mi SV_027 BNSF		2.53 Mi SV_011 new	6.79 Mi SV_004 Hwy 99
			6.40 Mi SV_005 Evergreen Hwy
	1.78 Mi SV_022 new	15.30 Mi SV_013 new	6.59 Mi SV_006 new
	0.41 Mi SV_023 new	1.30 Mi SV_015 BNSF	2.69 Mi SV_010 new
	0.21 Mi SV_026 BNSF	0.87 Mi SV_020 BNSF *	6.56 Mi SV_012 new
	0.62 Mi SV_028 BNSF	1.00 Mi SV_025 BNSF	8.31 Mi SV_016 new
		0.14 Mi SV_029 BNSF	5.85 Mi SV_017 I-5 *
			1.79 Mi SV_018 W Bakerview Rd
			1.68 Mi SV_019 new
			2.00 Mi SV_024 new *
	0.21 Mi SV_030 Peace Portal Dr		
		2.72 Mi SV_035 new *	2.10 Mi SV_031 new US
			2.96 Mi SV_032 new BC
			1.51 Mi SV_033 Hwy 99
			1.25 Mi SV_034 Hwy 99
			5.67 Mi SV_036 K George
8.30 Miles 6.66%	8.32 Miles 6.67%	33.39 Miles 26.79%	74.63 Miles HSR 59.89%
			124.64 Miles Total CHSR
			128 Miles Total Amtrak
0.51 Mi SV_039 new	1.13 Mi SV_041 C Nat.	0.15 Mi SV_038 new	5.55 Mi SV_037 new
	0.48 Mi SV_043 C Nat.	0.65 Mi SV_040 new	2.15 Mi SV_044 C Nat. +
		1.45 Mi SV_042 new	2.33 Mi SV_045 new
0.51 Miles to PC Station	1.61 Miles to PC Station	2.25 Miles to PC Station	10.03 Miles to PC Station
			14.40 Miles total
			139.04 Miles to PC Sta.
			157 Miles Total Amtrak

New and existing Right of Way (RoW) declaration.

60.87 miles in a new corridor, USA and Canada	78.17 miles in an existing right of way, BNSF, or Hwy
43.79 % of this CHSR RoW must be acquired	56.23 % may be shared
Tunnel miles may be excluded from the RoW purchase.	

* = Some deviation, as some miles are aside from the named corridor segment.

The upper columns indicate the miles from Seattle Central to the Surrey King George Sky Train Station.

The lower columns indicate the miles from Surrey King George Station to the Vancouver Pacific Central Station.