

Los Angeles to Las Vegas



Proposed
Electrified
Brightline
West

This is not an
official website
document, but
an illustration
of the HSR
corridor
between Los
Angeles and
Las Vegas

The Proposed Cajon HSR Pass Tunnel

- This is a tunnel proposal from San Bernardino to Oro Grande CA to lower the track grade percentage.
- This twin-bore tunnel will reduce train run-aways, conserve much energy and reduce regional emissions. The corridor will be electrified.
- The elevation climb for the railroad is reduced by 1119' (341m.) Existing rail grades are 2% and I-15 has up to 5% grades. In addition, the I-15 Cajon Pass corridor is too narrow to accommodate HSR trains in the median. Adding rail tracks along this I-15 section will be enormously costly, so allocate this to build the tunnel. Also, we cannot use the freight rail tracks; they are needed to move fast amounts of freight.
- This corridor tunnel can also connect HSR trains to Las Vegas continuing from Barstow.
- BNSF can use this proposed electrified corridor to the Long Beach Marine Terminal for express freight movements, thus reducing diesel exhaust in the vicinity. The tunnel bore size may be increased to accommodate multi-modal double-stack container trains. Heavy trains will use the existing route.

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

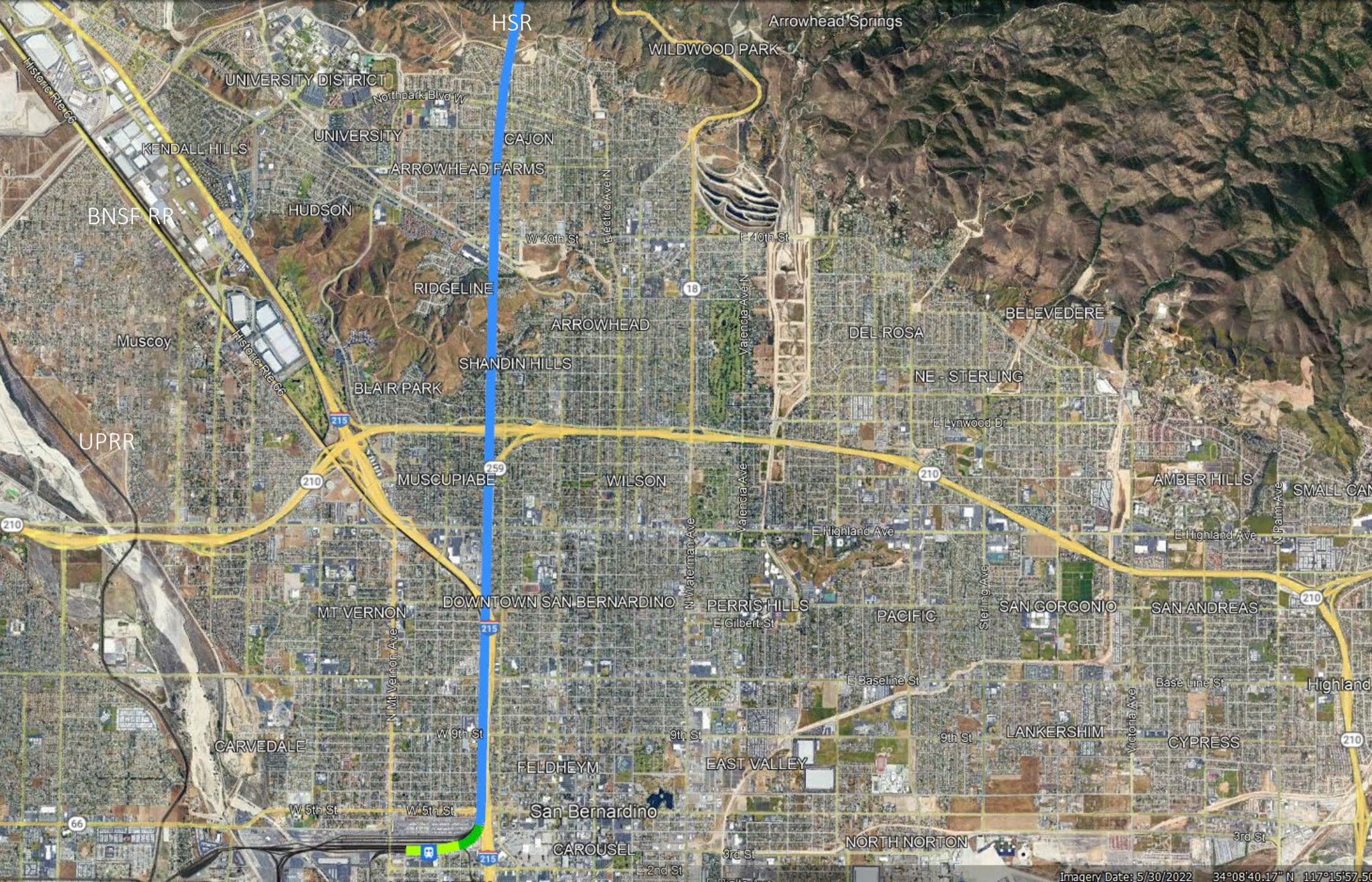


HSR at San Bernardino

The HSR will go into a trench before entering the Cajon Pass Tunnel. The trench is along the south side of the existing BNSF RR tracks and in a single track for one mile or to W 9th St.

The westside on/off ramps may need a short closing time during the tunneling construction.

E = natural elevations.
El = built elevations.

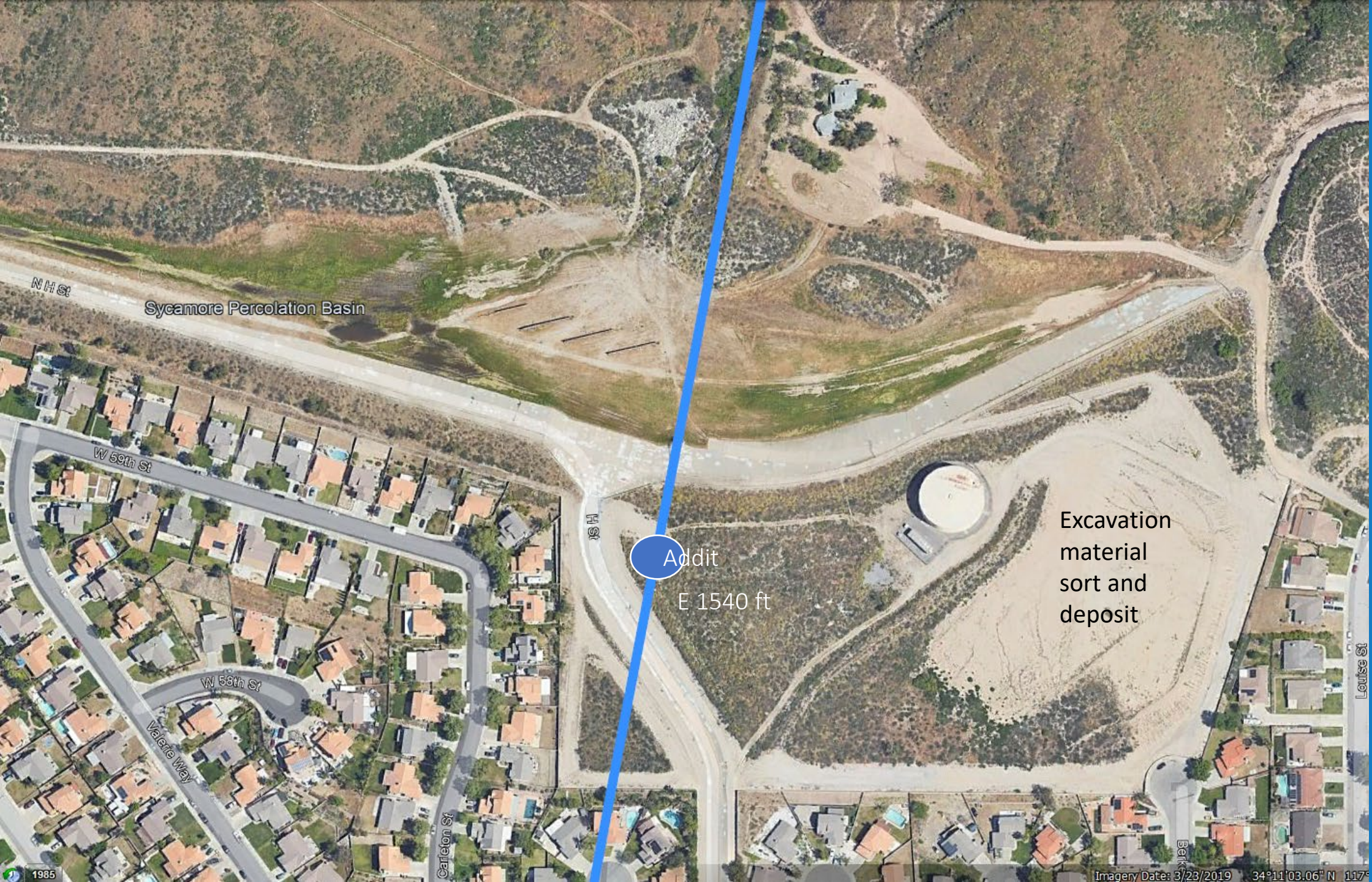


HSR Tunnel between San Bernardino and Sycamore Percolation Ponds

The tunnel is in twin bores from W 9th St and East.

The tunnels are below the I-15 and Hwy 259 till West 27th St and a section between W 40th St/W48th St. to reduce right-of-way (RoW) acquisition costs.

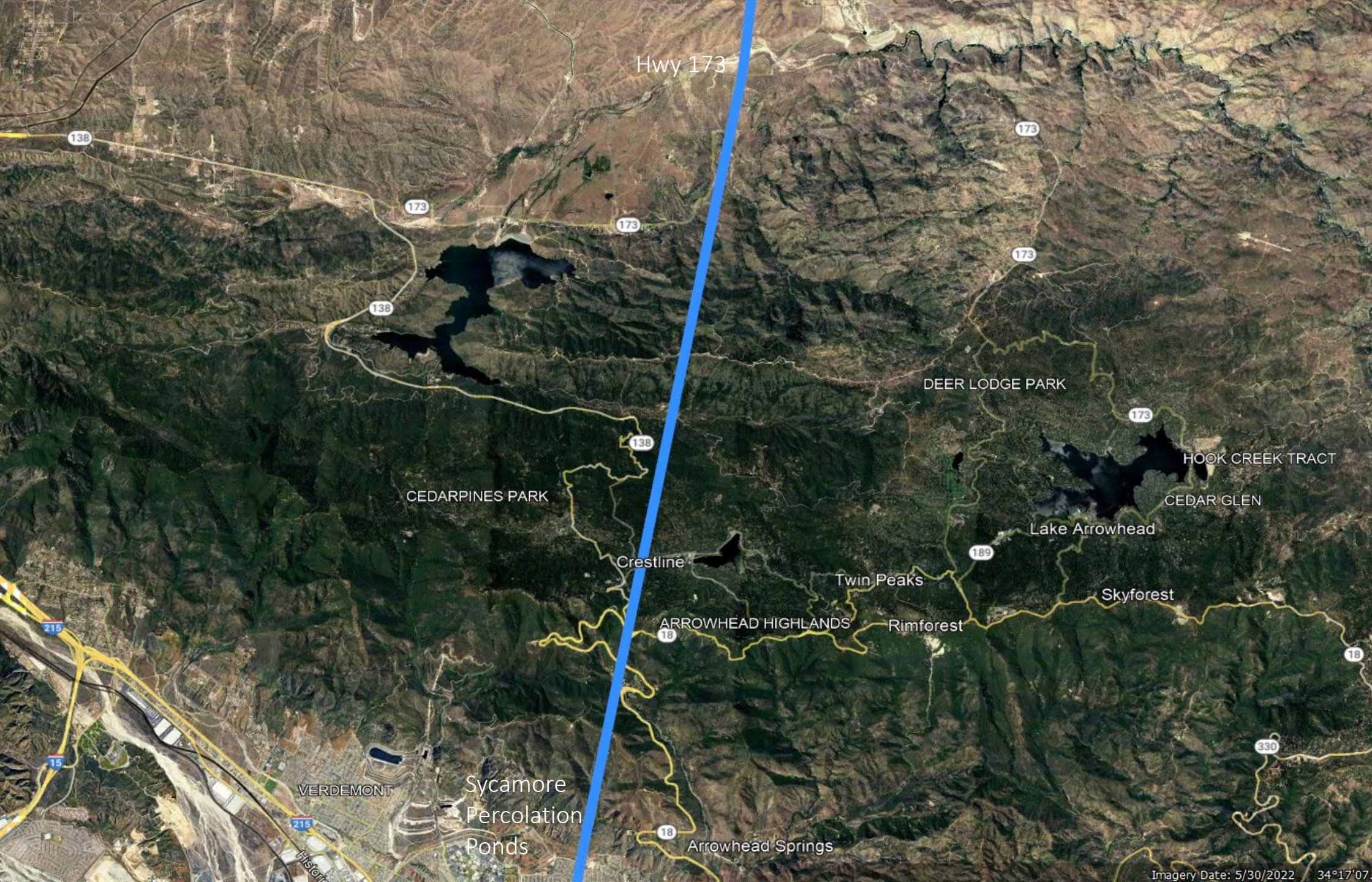
BNSF RR and UPRR use the Cajon Pass corridor.



HSR at Sycamore Percolation Basin

There is an addit at this place. The base of the addit is at El 1128'. The shaft depth is 412', or 125m.

Begin the tunnel boring from here toward San Bernardino and Hwy 173.

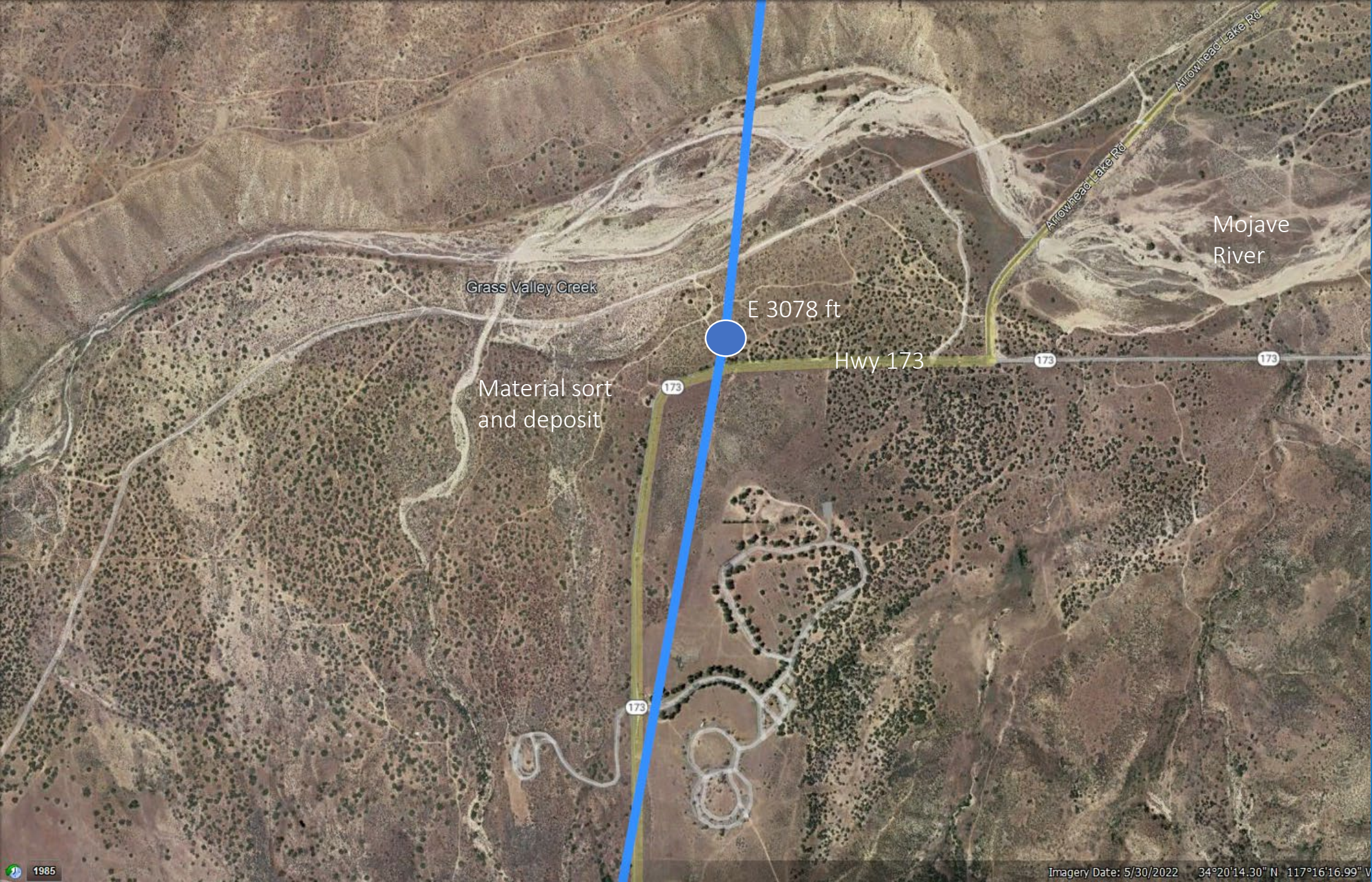


Hwy 173

HSR
between
Sycamore
Percolation
Ponds and
Hwy 173

The HSR is in
twin tunnels.

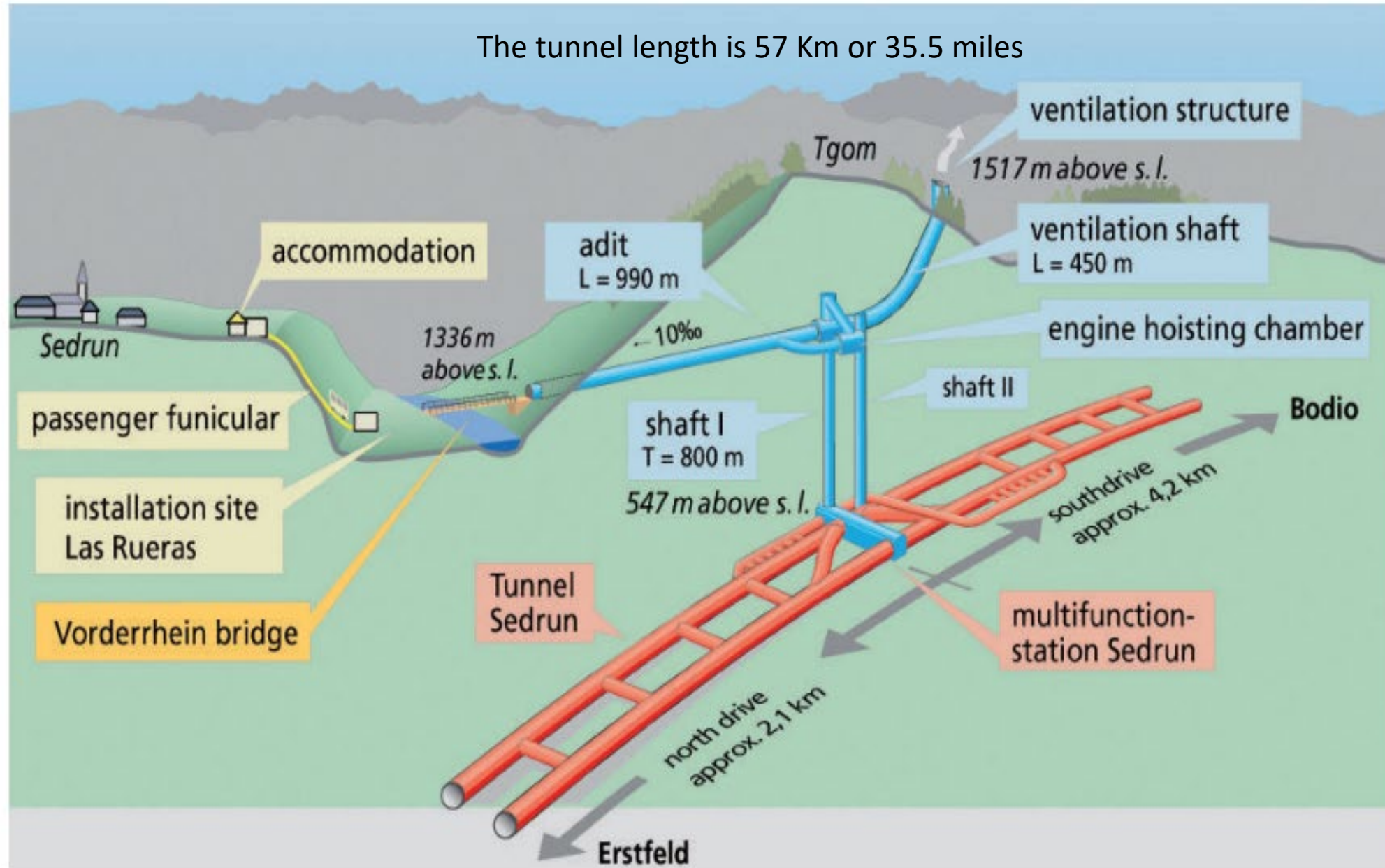
The next addit
is at Hwy 173.



HSR at Hwy 173

There is an addit at this place. The base of the addit is at El 1354'. The shaft depth is 1724' or 575m. See the next frame.

Excavation material sort and deposit area. Sort material for ballast, concrete aggregate, and other use. Landfill only none usable material.1724



The adit shaft in Sedrun Switzerland is 800m deep, or 2600'

Hoisting equipment was provided by

https://library.e.abb.com/public/05c1e12696513423c1257384004b5d78/3AST002863_Sedrun.pdf



Jess Ranch

JESS RANCH

BNSF
RR

Mojave
River

Mitsubishi
Cement
Plant RR

Hesperia

Hesperia

Mariana Ranchos

Lugo

Hwy 173

HSR
between
Hwy 173 and
Jess Ranch

There is a
possible adit
here. The
TBMs will bore
from Hwy 173
toward Jess
Ranch and Oro
Grande toward
Jess Ranch.



Possible Hesperia Adit

The HSR base elevation is 2025 ft, the sloped adit is 0.8 miles long; the access grade is 3.5%.

Load material via conveyor to the Mitsubishi RR and ship to deposit areas. Process usable material for marketing.

Omiya CA, Specialty Minerals, Mitsubishi Cement Plant may be able to use suitable materials.

Adit entrance
El 2942'

Excavation material
sorting and out
loading area

Mitsubishi
Cement
Plant RR



HSR between Jess Ranch and Oro Grande and to Las Vegas

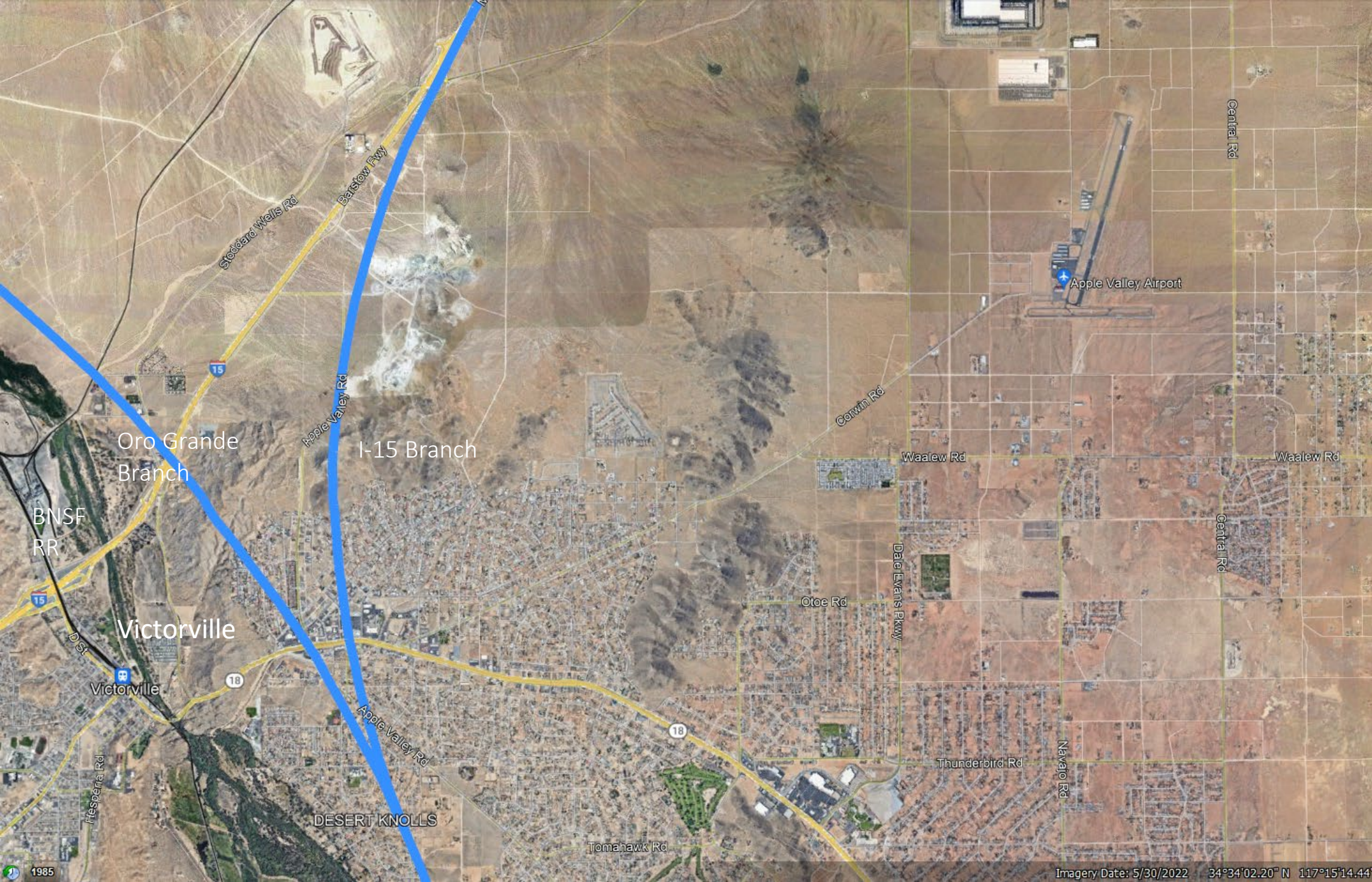
The TBMs will start boring from Oro Grande and I-15 toward Jess Ranch. The I-15 TBM will merge at Desert Knolls.

Option; HSR will re-connect with the existing BNSF corridor. BNSF can use the HSR tracks for express container shipment to Long Beach, CA.



HSR at Oro Grande

Here the Cajon Pass Tunnel will merge with the BNSF tracks. The proposal for the BNSF is to electrify the Corridor from Barstow to the Long Beach harbor. This electrified corridor is for express freight shipping. The HSR to Las Vegas will use the same corridor from San Bernardino via Desert Knolls to Las Vegas.



HSR Branch Tunnels between Desert Knolls, Oro Grande, and I-15 median intersection.

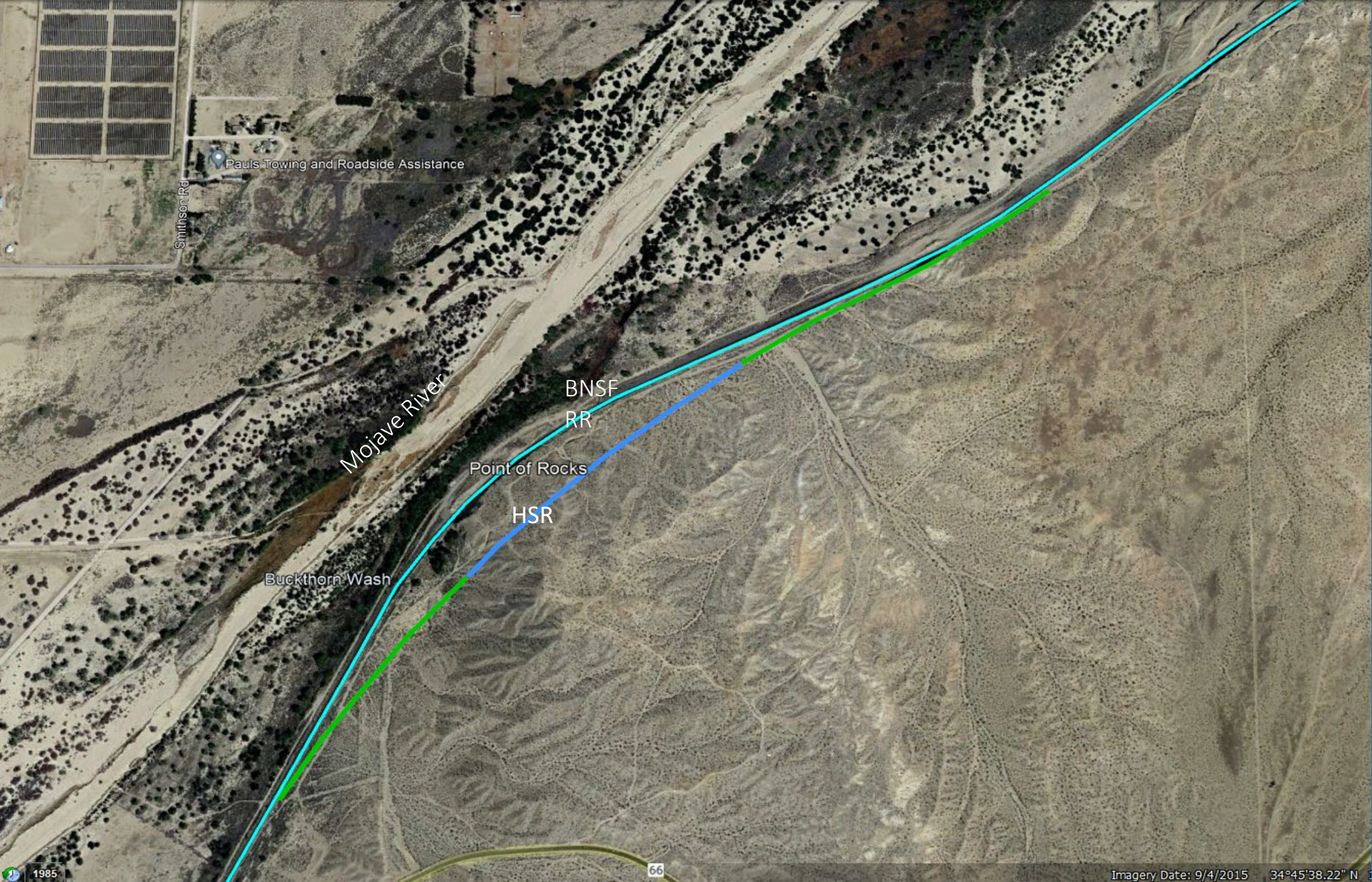
The Oro Grande to Desert Knoll is a single-track tunnel. The I-15 to Desert Knolls is a single-track tunnel.

From San Bernardino to Desert Knolls, the tunnels are in twin bores. At Desert Knolls, the tracks have cross-overs.



Proposed
HSR
Corridors
between Oro
Grande and
Bell
Mountain

There are two
corridor
options in this
region.
Oro Grande to
Barstow would
follow the
BNSF RR
corridor and
the other
would follow
the I-15.
The I-15 has
median
clearance
problems in
the Barstow
area.



HSR at Point of Rocks

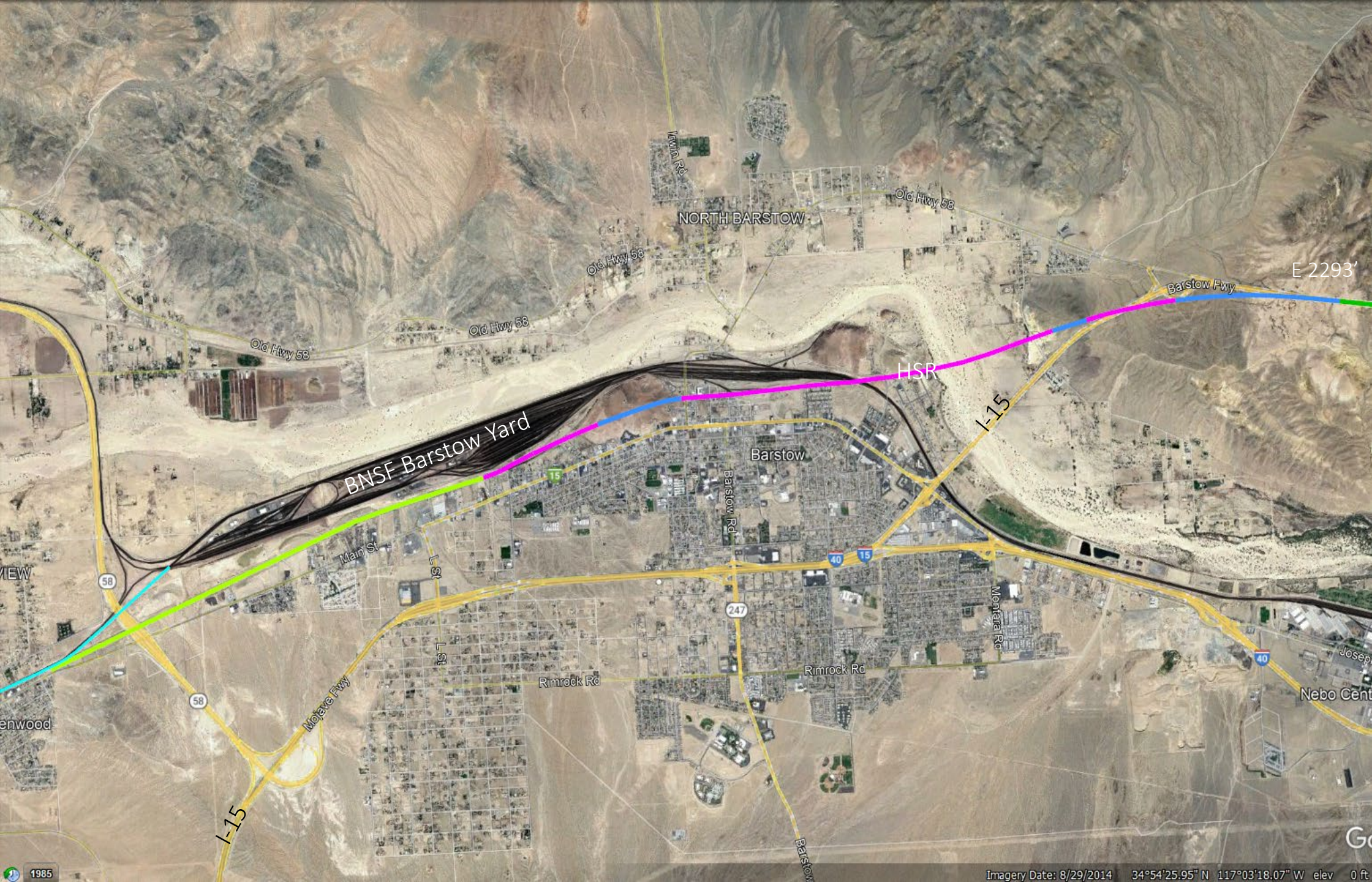
Here we have a cut, short tunnel, and cut to allow HSR train speeds of 140 mph.

The HSR will depart the BNSF and then rejoin the BNSF corridor again.



HSR at Indian Trail and Lords Rd

Here again, we have a cut to up step the HSR train speed to 170 mph.



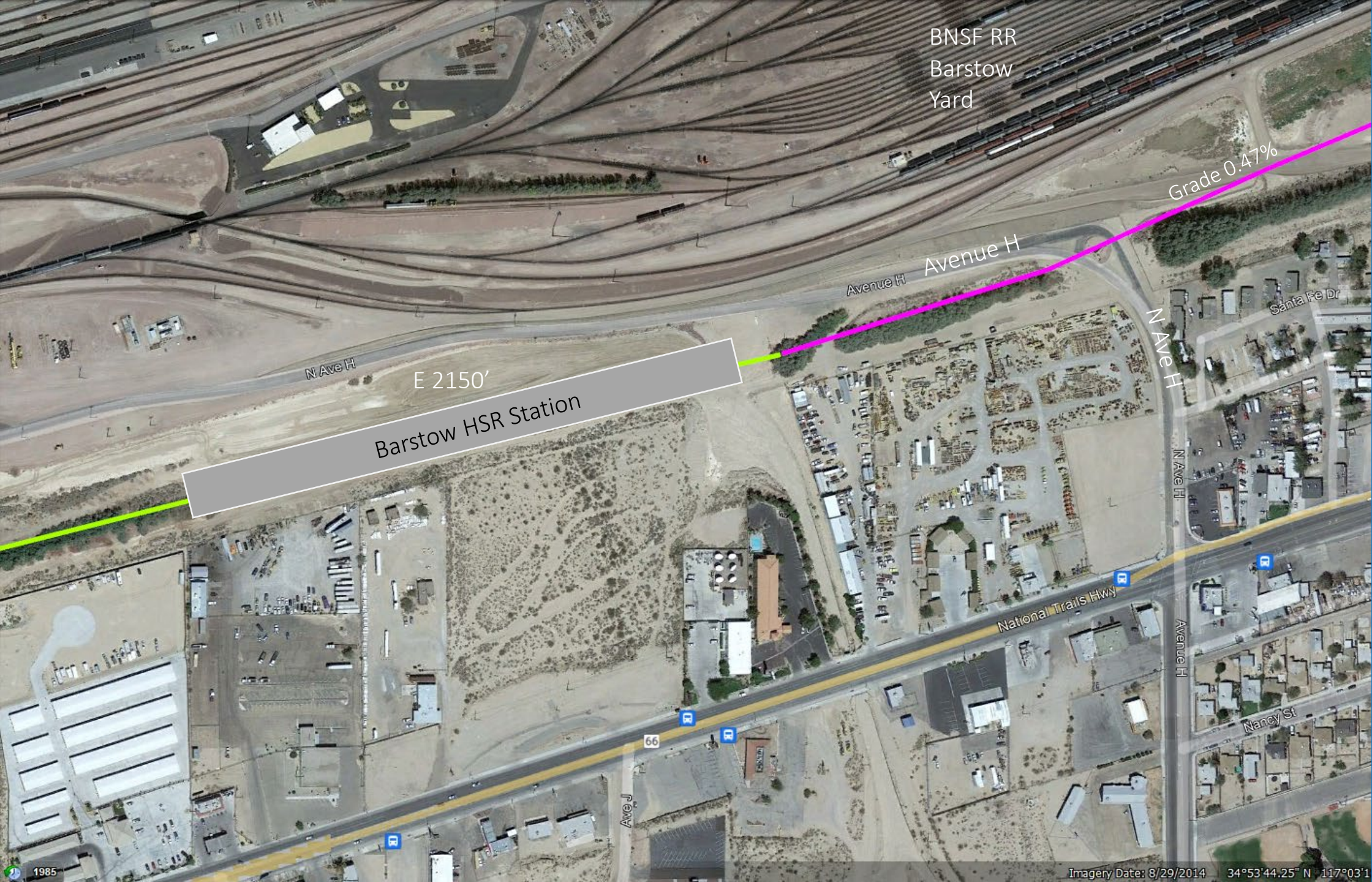
HSR at Barstow

General overview of Barstow area.

The I-15 median is often too narrow to accommodate the HSR double tracks.

The I-15 between Desert Knolls and Barstow also has several tight curves, which will not allow HSR speeds.

The BNSF corridor is the better choice.



BNSF RR
Barstow
Yard

Grade 0.47%

E 2150'
Barstow HSR Station

Avenue H

N Ave H

National Trails Hwy

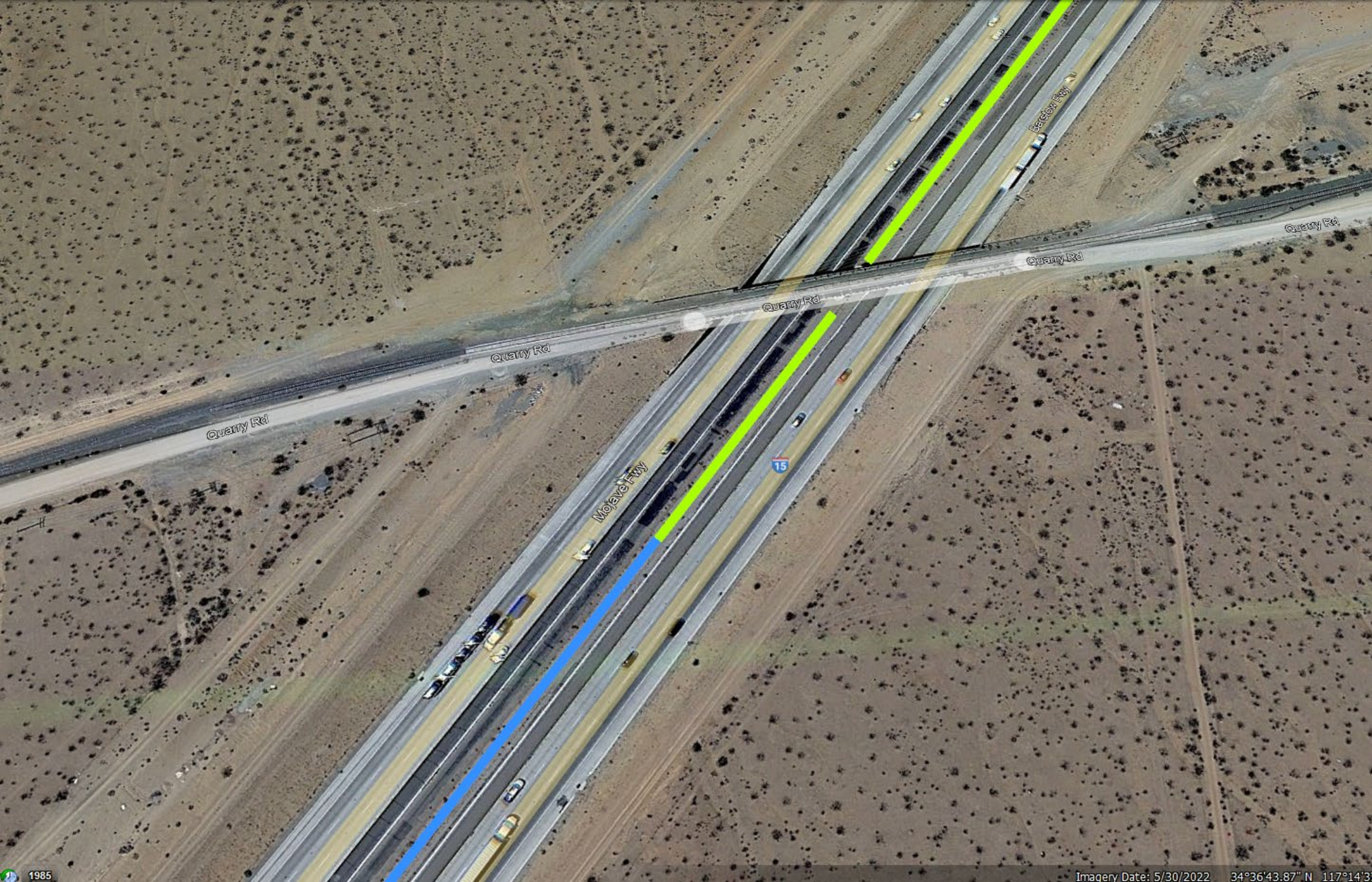
Avenue H

Nancy St

HSR at
Barstow
Station

The BNSF
corridor will
allow an HSR
station in
Barstow. The
room for
parking is
ample.

Avenue H/N
Ave H will
get an
overpass.



HSR to Las Vegas at Quarry Rd

From then on, the HSR is mostly in the median of I-15.

There are problems in Barstow, “insufficient room” and, later, tight curves that HSR trains can’t negotiate.

The I-15 HSR corridor plan from Barstow to Las Vegas is not drawn yet.

Cajon Pass Profile

