TRUTH, TEJON AND TEHACHAPI:
FOSS $5 BILLION CHEAPER

by Richard F. Tolmach

A Bay Area high-speed rail expert and aerospace engineer has released a slashing critique of the California High Speed Rail Authority's routing decisions between Bakersfield and Tehachapi involving the Southern Mountain Crossing, arguing the most technically challenging mileage of the California project.

The web-published piece and its supporting documents appear to represent hundreds of hours of research and analysis, but are highly readable and accessible, with all calculations out in the open, contrary to the style of the Authority's work. Clem Tillier’s documentation absolutely demolishes the case for the Antelope Valley high-speed rail (HSR) route, along with the Authority’s claims regarding cost, distance, speed and elapsed travel time.

With two lawsuits focusing squarely on false claims by the Authority pending in California courts, the independent analysis poses both legal and technical problems for the project, especially because its findings are very strong, worded in common English, and meticulously supported. Tillier takes aim at 12 myths about the southern mountain crossing which have been used to support the Tehachapi alignment via the Antelope Valley and Palmdale:

1. Tejon Pass HSR alignments can’t cross into Tejon Mountain Village property
2. Tejon Pass HSR requires more tunneling than the Antelope Valley
3. Tehachapi is the easier mountain crossing, as the Southern Pacific Railroad figured out in the 1870s
4. Tejon Pass HSR suffers from greater sustained steep grades and tunnels and bridges of considerable length.
5. Antelope Valley HSR via Tehachapi. That travel time is viewed as highly convenient, considered for high-speed rail. The Authority views its route choice of Antelope Valley as being irrevocable, but investors who have examined the project see Antelope as fatally flawed.

The fault-bounded Tehachapi Mountain range is a barrier and requires one of the highest-elevation high-speed rail segments in the world. Even the lowest passes require a roughly 1000 m (3300 ft) vertical climb from the floor of the Central Valley, with the Tehachapi Pass tunnels and bridges to be built on "greenfield" land.

For political reasons that will not be discussed here, Tejon Pass was never seriously considered for high-speed rail. The Authority views its route choice of Antelope Valley as being irrevocable, but investors who have examined the project see Antelope as fatally flawed. The fault-bounded Tehachapi Mountain range is a barrier and requires one of the highest-elevation high-speed rail segments in the world. Even the lowest passes require a roughly 1000 m (3300 ft) vertical climb from the floor of the Central Valley, with the Tehachapi Pass tunnels and bridges to be built on "greenfield" land.

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6. Tehachapi Pass is the easier mountain crossing, as the Southern Pacific Railroad figured out in the 1870s
7. Bakersfield can be crossed at 220 mph on the Antelope Valley route, along with the Authority’s documentation absolutely demolishes the “Grapevine” or I-5 alignment.

8. Antelope Valley HSR via Tehachapi: The technical rationale for dismissing Tejon is $5 Billion cheaper
9. Among the more extreme assumptions were HSRA’s claim of 29 miles of Antelope Valley HSR (20% of $68 billion budgeted overall), and the $13 billion extra required to build a billion to the $5 billion Tillier cited for Tejon is $5 Billion cheaper.

10. Tejon Ranch is $5 Billion cheaper
11. Tejon largely avoids political discussions about the Authority’s claim of 29 miles of Antelope Valley HSR (20% of $68 billion budgeted overall), and the $13 billion extra required to build a billion to the $5 billion Tillier cited for Tejon is $5 Billion cheaper.

12. Tejon Pass HSR screws Palmdale, Palmdale will not get fast service to LA unless it is on the HSR main line

As part of his presentation, Tillier even takes on the notion that HSR would be too expensive to pull off in Palmdale, by pointing out a profit-driven HSR operator would limit Palmdale’s frequency during off-peak hours and increase prices to discourage low-yielding passengers. He suggests that HSR service will fall short of Palmdale’s hopes, and fail to produce as much travel as Metrolink enhancements.

In a self-effacing way, Tillier asks “how some guy on the internet can come up with this stuff and claim it that undermines years of studies by professional consultant teams.”

The Authority, of course, hopes, and fail to produce as much travel as Metrolink enhancements. As part of his presentation, Tillier even takes on the notion that HSR would be too expensive to pull off in Palmdale, by pointing out a profit-driven HSR operator would limit Palmdale’s frequency during off-peak hours and increase prices to discourage low-yielding passengers. He suggests that HSR service will fall short of Palmdale’s hopes, and fail to produce as much travel as Metrolink enhancements.

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