

# LLNL Site 300 LBNE far site concept

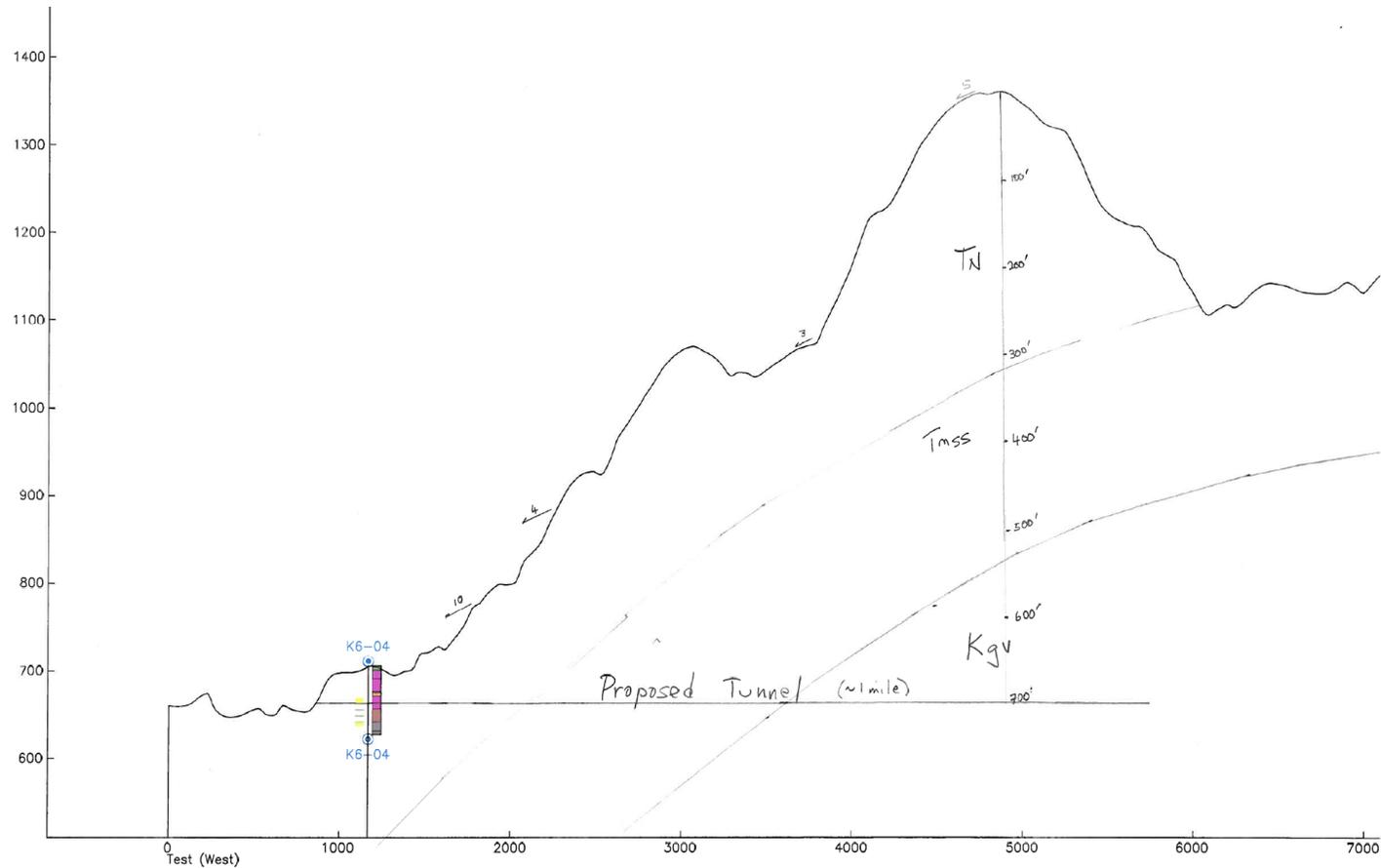
## Wayne Shotts, Jesse Yow, (Ed Hartouni presenting)

LLNL Site 300: 37.634210°N, 121.5018213°W, 170 m

Fermilab: 41.830497°N, 88.264546°W, 741m

Neutrino flight distance: ~2800 km

- 15 minutes east of Lawrence Livermore National Laboratory, 60 minutes from SFO, San Jose & Oakland airports, LBNL, UCB, 90 minutes from SLAC, Stanford U., UCD, UCM.
- 7000 acre DOE owned site
- 17.5 MW unused electrical capacity
- Water supply from the Hetch Hetchy aqueduct system
- Topology: possible 1000' overburden with 4000' tunnel inclined down at 10° other options are possible to shorten the tunnel but maintain 600' of overburden.
- Geology: inter-bedded layers of sandstone and shale, easy excavation, shotcrete and rock bolt standard tunnel with re-enforced cavity. More characterization necessary.
- Water Table: excavation likely below varying regional water table level.
- Existing EIS would require modifications.
- Livermore Valley Open Campus (LVOC); a collaboration between LLNL and SNL/CA can serve as a staging area for LBNE personnel.



Topography (vertically exaggerated) along possible alignment of tunnel at Site 300. Y-axis is elevation in feet above mean sea level; X-axis is distance in feet. Sketch shows a horizontal tunnel to achieve 700 ft of overburden depth; additional depth is available by sloping tunnel down below horizontal.