





Shonan Rail, Japan



SUSPENDED LIGHT RAIL (SLR).

- VARIATION ON MONORAIL, WITH SIGNIFICANT DIFFERENCES.
 - A FRENCH INVENTION, ELECTRIC, ON RUBBER WHEELS
 - SHONAN (DEPICTED) 50 YEARS IN OPERATION
 - CAPACITY SIMILAR TO LRT 228 SEATED IN 3 CAR TRAIN (OR 496 STANDING)
 - TRACK DOES NOT MOVE TO CHANGE LINES NORMAL SWITCHING POINTS

- ✓ No risk of pedestrians on path;
- ✓ Does not cause ground-based emergencies (vehicle collisions, near-misses).
- ✓ Independent of road safety hotspots (intersections, emergency callouts).
- ✓ No need to slow during ground-based congestion.
- ✓ Change in track direction no hazard to ground-based transport.
- ✓ BOTTOM LINE these safety features permit SLR to be Reliably Faster.

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Because SLR is separated from ground-level traffic – No risk of pedestrians on path;

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- ✓ Not limited by road speed limits;
- ✓ Not affected by road emergencies.
- ✓ Not affected by ground-based traffic lights & intersections.
- ✓ Not affected by road congestion at peak or other times.
- ✓ Can swing from kerbside to road centre, even off-road no impact on road traffic, so no undue slowing for corners...

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- ✓ NO tunnels. Climbs hills up to 1 in 10 gradient.
- ✓ Less on-site construction pylon footings 35 metres apart; other hardware prefabricated, craned in outside business hours.
- ✓ Pylon footings 35 metres apart minimise digging up and repositioning underground service access a significant LR expense.
 SO...
- ✓ SLR construction has less impact on local businesses & residents.
- ✓ Swifter construction in a single stage (less than 3 years total), so the more substantial benefits #1 & 2 achieved sooner!
- ✓ Economically competitive with ground-based options.

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- ✓ Mobility Access level at stations, and lifts give access from ground to platform level.
- Overhead stations give safety, shelter and ticketing before boarding; space beneath for bikes!
- ✓ On Golden Mile stations can combine with local retailers at 1st floor.
- ✓ Regional Hospital sheltered access to building, above road level.
- ✓ At **Central Rail station**, above-ground pedestrian access can be **behind/above** station building and platforms no pedestrian or road congestion
 - + a real asset for massed Stadium pedestrian traffic.

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- ✓ Can retain most of Golden Mile; yet include waterfront route & Te Papa station.
- ✓ Need not disrupt Basin Reserve roundabout during construction; can instead go via Taranaki / Wallace St to serve school, university/polytechnic.
- ✓ Newtown Regional Hospital station see previous; less disruption from Newtown's narrower roads; Constable St route (+ station) avoids need for any tunnel.
- ✓ Station for Hataitai at Wellington Rd.
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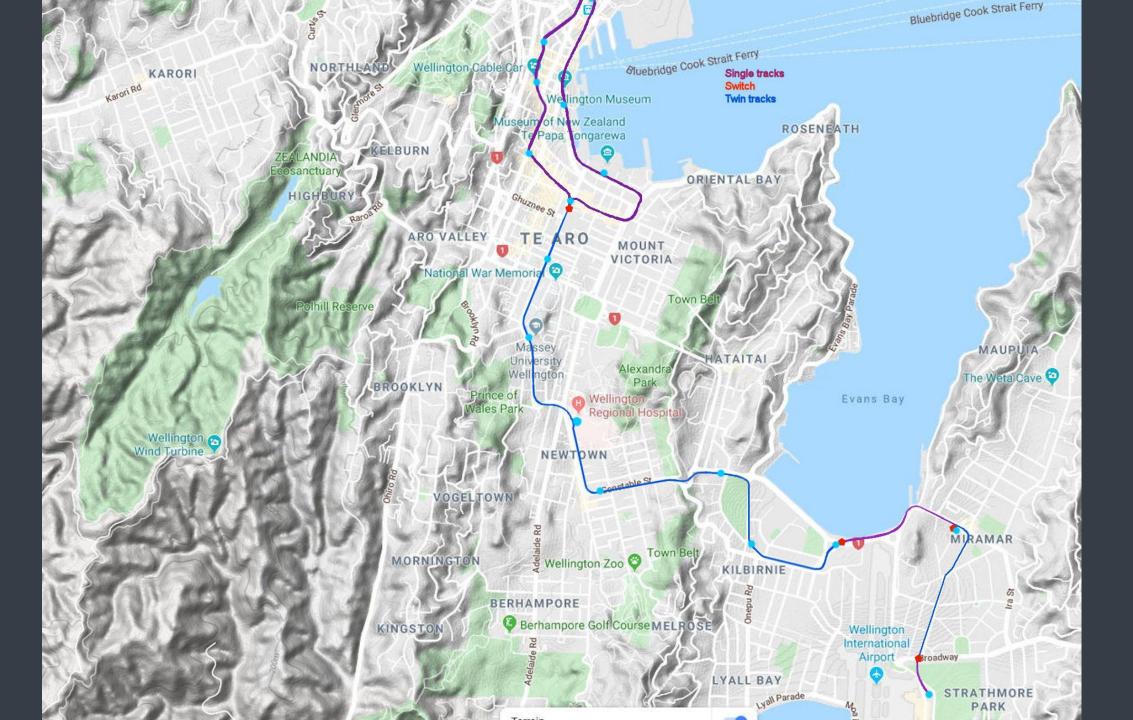
- ✓ Evans Bay sports stadium station combined with pedestrian overpass at roundabout;
- ✓ Can use Miramar Cutting (cabs to ground level across airport threshold); No Cutting excavation needed.
- ✓ Overhead Station at Miramar Ave Miramar commuters not delayed by prior airport stop.
- ✓ Terminate at overhead Airport station.
- ✓ Ideal mode for later extending mass transport to other suburbs (Karori, Island Bay, Newlands, Churton Park). No need of formed roadway for its route.

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- 🗸 Less noise (65dB at 15m) runs on rubber tyres, not metal wheel on rail.
- ✓ No tunnels so reduced carbon footprint from excavation and reinforced concrete.
- ✓ Electric, not contributing to ground-based traffic congestion/pollution.
- ✓ Visual impact? Can be managed/mitigated to negligible compared with the above advantages over other options.
- ✓ We believe the city will embrace and celebrate SLR as a visible symbol of our
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