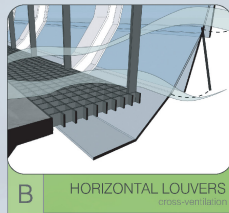
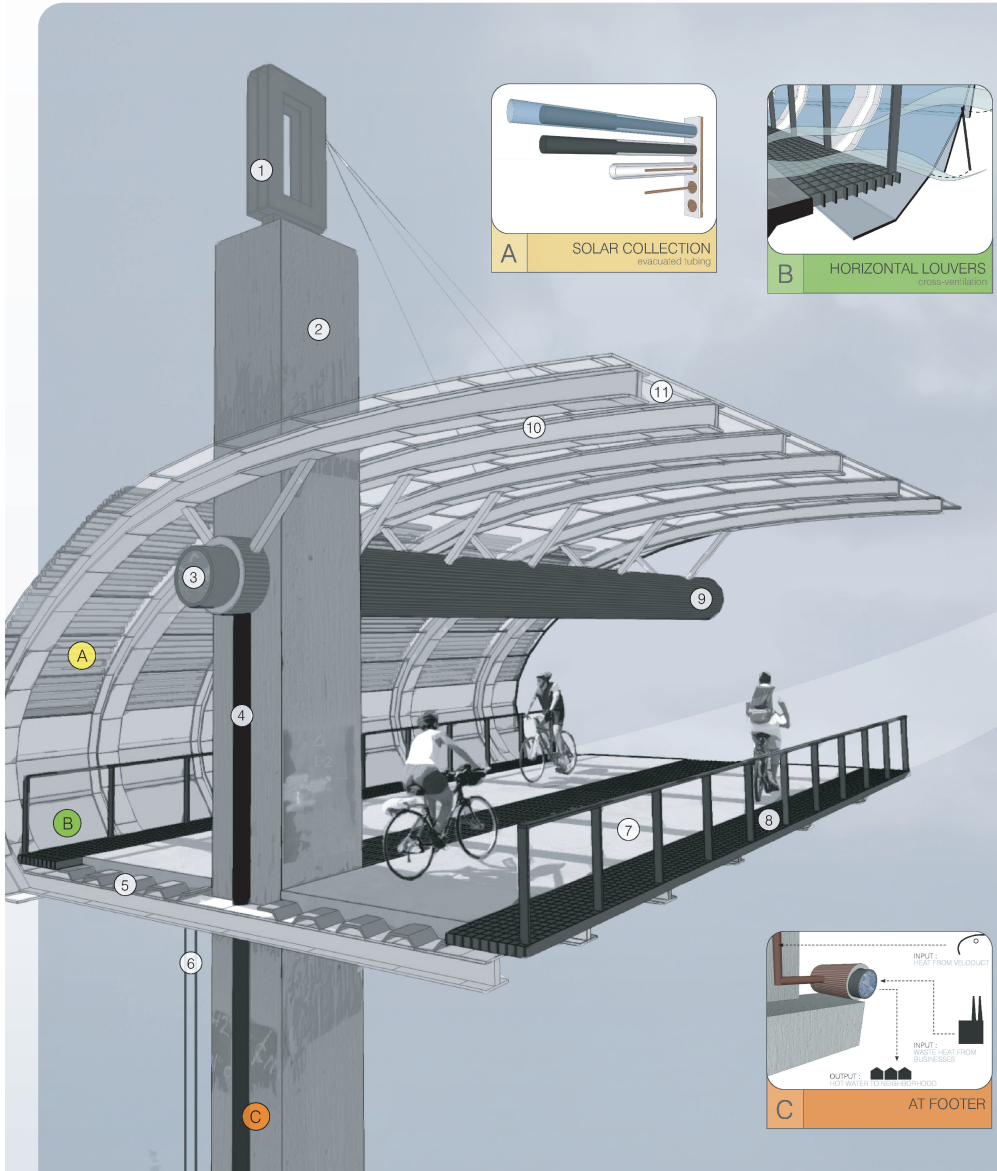


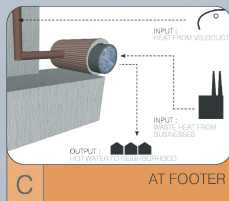
VELODUCT

seattle solves climate crisis



This CROSS-SECTION represents the prototypical VELODUCT as it passes through Downtown. Column supports would be modified at each location. The pathway is made of large aggregate concrete (made from crushed viaduct structure) and topped with either high fly-ash concrete or "glass-phalt". The lightweight steel structure is suspended by cables and allows significant deflection (send complaints to architect).

- 01 CABLE ANCHOR
plate steel
- 02 EXISTING VIADUCT PIER
- 03 PRIMARY HEAT TRANSFER
insulated tube
- 04 VERTICAL HEAT TRANSFER
- 05 METAL DECKING
spans between structural ribs
- 06 RAIN WATER DISTRIBUTION
to rain gardens below via steel cables
- 07 RIDING SURFACE
concrete slab from ground-up viaduct with fly ash
- 08 GRATING
velo-duct shoulder
- 09 SPINE
ties into existing viaduct pipes
- 10 STRUCTURAL RIBS
tie into structural spine
- 11 PROTECTIVE SHELL
faces south and west for prevailing storm winds



The VELODUCT is an elevated bicycle freeway designed for the City of Seattle. It is anticipated that tens of thousands of people will use the VELODUCT daily, making a huge dent in Seattle's carbon emissions while at the same time promoting a healthy citizenry.

This proposal shows an initial route that starts downtown in the ruins of the viaduct and then heads north past the sculpture park/Myrtle Edwards, then across the Aurora Bridge to Green Lake.

Why will tens of thousands ride the VELODUCT each day?

- 01 It is above the traffic. No stop lights. No flipping over the hood of errant left turning cell-phone distracted driver's car.
- 02 It is protected from the wind and rain with gradual inclines.
- 03 The "Inconvenient Truth" is looming. It is time to act.
- 04 Fees are reversed to provide economic incentive to "do the right thing". The city pays you \$1 each time you ride one way, and charges cars \$1 each way for using SR-99 through downtown.
- 05 It is a joy to ride, as you hang 90 feet above the water suspended from the Aurora Bridge, move through the treetops on the east side of Queen Anne Hill, and then zip across the waterfront just like the viaduct once did.

What about cars?

Although the viaduct is gone, cars and trucks can still get around. Two non-stop express lanes run each way through downtown. The express lanes are at-grade, elevated, and tunneled at different locations as appropriate and economically sensible. Downtown ramps at Seneca and Columbia are removed in favor of a feeder system at Royal Brougham/Edgar Martinez Way.

Green Design Specifics.

The VELODUCT generates hot water by using vacuum tube solar panels as its wind/rain screen. Hot water produced by the panels feeds surrounding neighborhoods with energy for domestic heating. Adjacent businesses can also feed their waste heat into the system (this is similar to a system in place in Malmo, Sweden).

Rainwater is collected from the roof and fed into rain gardens that run alongside the VELODUCT. The rain-gardens also receive run-off from surrounding streets

Materials - it is only fitting that the Viaduct be ground up and used to surface the new VELODUCT.

Conclusion

The VELODUCT is significantly cheaper than either of the previous viaduct proposals and will symbolize Seattle's continued leadership in technological development—from jets in the '60's, to computers in the '80's, to solving climate change in the '00's.

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