

She Sails the Willamette

City Design Matters • Jerry Diethelm • Mar. '07

In late April ODOT will be asking for a community reaction to some bridge-type choices they are suggesting as possible replacements for the I-5 Bridge across the Willamette.



A cable stayed bridge

With an overall budget of \$180 million, we have before us the dream of creating a signature bridge at this special Willamette River crossing, where we enter and leave the Willamette Valley or drop down into Eugene-Glenwood-Springfield on the river's south bank.

Take a closer look at the numbers, however, and that brief buss of promise starts to fade.

Taking out the old bridges – not including the old Millrace diversion dam, which has become dangerous and ought to be removed in the process - leaves a construction budget of around \$150 million. Using the least expensive construction, the rebuilding of the bridge's land portion on the south bank costs about half that amount, leaving only around \$75 million for the span across the river.

A tied arch bridge such as the Fremont Bridge in Portland, the cheapest alternative that could span the 800 feet from bank to bank, is estimated at around \$88 million. Single-span cable stayed and suspension bridges supposedly cost even more.

The dream begins to fade as the options become fewer.

The ODOT design team already knows that a full signature bridge is looking less and less likely. Gently, they are dishing out the news and dampening down expectations. Of course they would like to build a great bridge. But the state's main objective has to remain the restoration of the continuity of the I-5 corridor, using the money that they have. "Must a signature structure always 'jump out' or should it 'blend in'?" the Citizen Advisory group was being asked at its last meeting.

Local goals and objectives when they are affordable will no doubt be embraced, but the important ones - be they city entrances, inspirational engineering, the marking of great moments in the landscape – seem fated to be written down on those flip charts that get locked away where no one ever looks.

And so it's coming down to this: The public process will have proven a success if the locals can be made to feel good, perhaps even grateful, about a modest improvement to their present I-5 Willamette River overpass.

When I look at the present I-5 Bridge with its six spans of 143 feet - a bit more than 800 feet - I know I would be grateful to end up with fewer columns in the river.

I would be pleased to see the new bridge return to grade more slowly on the north bank, leaving a larger riparian zone for river health and river continuity.

The present set of bridge possibilities under consideration includes some acceptable highway overpass designs. They all reduce the number of river spans from six to three or two. A two-span crossing does make some river sense here because there are two main channels, one near each bank of the river, plus there is a conveniently located island outcrop in the middle.

Two spans of 400 feet is affordable using pre-stressed and/or concrete arch technology. The underside openings can be treated to resemble something like an arch. One of the proposals shapes the piers like fat v's so that the space under the spans get a little more arched as in: $v \sim v \sim v$.

“Why not put some of the structure up in the air so people know they are crossing over a bridge?” asked one citizen at the last meeting, reminding me of the time I'd crossed the Ross Island Bridge at night and was already over in SE Portland before I realized where I was.

Which reawakens my belief that major public works like the I-5 Bridge need to be recognized as the big players for shaping community identity that they are – and that city design really matters. State highway-type overpass bridges, however tarted-up and well intentioned, will never light up the landscape or make many hearts go thump-thump-thump.

For whatever reason, bridge designs have that unique capacity to orient us in our world and to inspire. Think Brooklyn Bridge, an engineering poem. Think North Bend-Coos Bay Bridge, that mile-long Conde McCullough cat's cradle across the Coos Bay estuary. An opportunity like this comes but once every 50 -100 years. Isn't this the time to get it right?

A three-pier, two-span cable stayed bridge across the river would get it right for me. A cable stayed bridge with its three pairs of sail-like fans holding up a floating deck would be a unique and inspiring addition to the I-5 corridor and an instant landmark for Eugene-Glenwood-Springfield at valley end.

You would know when you were on such a bridge. You would know where you were, and would, if only for a few minutes, become part of the poem.

In my dream, enough people cared and - after three long years of construction - I am approaching the river on I-5 with Kitty Piercy, Peter DeFazio and Sid Leiken in my car, and when we spy the masts and cable sails ahead I can't help but emotionally exclaim:

“What ho, governor, you really did it. She sails the Willamette!” “She sails the Willamette!”