

# IBR's plan to sabotage the moveable span option

By Joe Cortright : 10-13 minutes : 4/5/2023

*IBR officials are planning to sabotage the analysis of a moveable span options as part of the Interstate Bridge Project*

*The Coast Guard has said a replacement for the existing I-5 bridges would need a 178 foot navigation clearance. The highway departments want a 116' clearance fixed span.*

*The Oregon and Washington DOTs say they are going to study a "moveable span" as a "design option" but are plainly aiming to produce a costly design that just grafts a lift-span on to their current bridge design.*

*A moveable span would enable a lower crossing, eliminate the need for lengthy viaducts, and reduce construction costs—but ODOT is refusing to design an option that takes advantage of these features.*

*And the DOTs have completely ignored an immersed tube tunnel option, implying that the Coast Guard directed them to study the moveable span (which it didn't).*

*IBR staff have signaled they have no intention of seriously considering the fixed span, and are engaged in malicious compliance*

Our story so far: Oregon and Washington highway departments have proposed a new, fixed span highway bridge over the Columbia River between Portland and Vancouver as part of their massive [\\$7.5 billion I-5 freeway widening project](#). The bridge would have a 116 foot clearance over the river, but that's not enough to satisfy the Coast Guard—which regulates bridge heights—and says a 178 foot navigation clearance is needed.

IBR simply chose to ignore the Coast Guard's determination, and decided to move ahead with only the 116 foot clearance fixed span design.

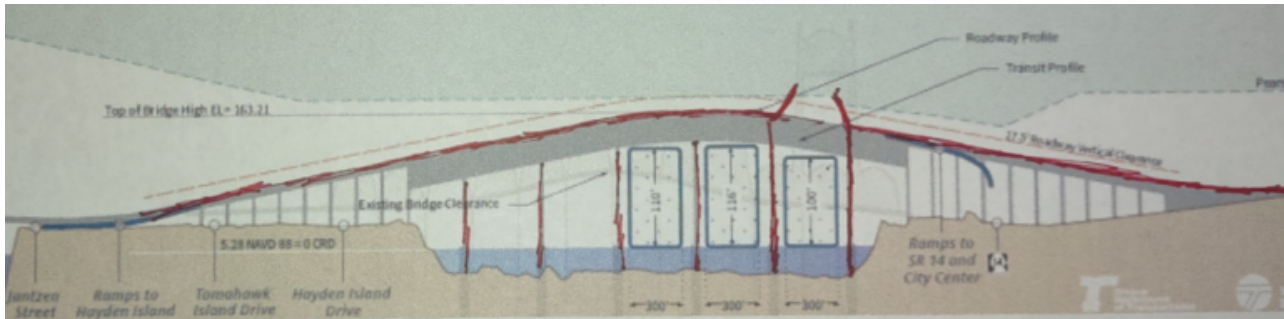
The Coast Guard objected, saying this violated the terms of a 2014 memorandum of agreement between USDOT and the USCG. (Ironically the MOA was created in the wake of the highway agency's efforts to subvert and undercut Coast Guard review of the Columbia River Crossing, the previous iteration of this project).

Coast Guard officials wrote the FHWA and FTA to insist that they include an alternative in the project's supplemental environmental impact statement that complies with the 178 foot height requirement. The Coast Guard warned that the IBR should not proceed with an environmental impact statement that omitted a 178 foot clearance option: "Including only one alternative in the Supplemental Environmental Impact Statement (SEIS) introduces risk that no permissible alternative will be evaluated in the SEIS."

Importantly, USCG did *not* specify whether this should be a moveable span or a tunnel.

In response, IBR said it would look at a moveable span as a "design option" for the IBR. That may sound like an "alternative," but in fact when it comes to complying with environmental review requirements, it plainly is not. A "design option" means that IBR will build exactly the same bridge it would build if it were a 116 foot fixed span,

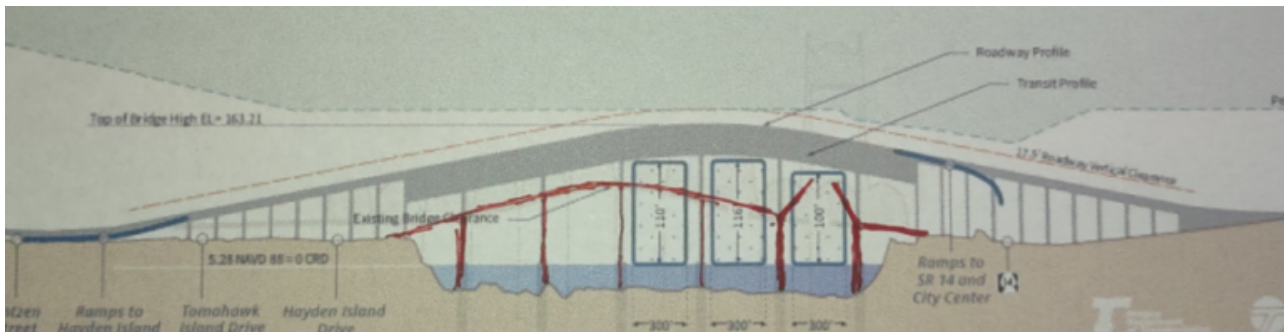
but they'd simply graft a moveable span (either a lift span or a bascule bridge) onto that very tall structure. The IBR plan will likely look something very much like this:



“High Bascule”. — Bascule bridge grafted on to IBR’s 116 foot clearance fixed span

## A camel is a horse designed by an devious highway engineer

Simply adding a moveable span to a high-level fixed span design eliminates the key design and cost advantage of the moveable span. Because the moveable span allows tall vessels to pass through a very high (178' in the case of lift span, or unlimited height, in the case of a bascule) there's no reason why the remaining fixed portions of the bridge need to be nearly as high as the IBR's current 116' design. The bridge can be built at a much lower level. Conceptually, a bascule bridge would allow a much lower and shorter bridge structure, roughly like this:



“Low Bascule”. — Bascule bridge at profile of current I-5 bridges

That's hugely important because the bridge can be much cheaper: The current high IBR design requires half mile long elevated viaducts on both the North and South ends of the bridge in order to get the I-5 roadway from ground level in Vancouver up to the 150 height of the bridge roadway (the road level of the bridge is about 35' to 40' feet above the bottom of the double-deck bridge structure). Lowering the height of the bridge makes it much cheaper to build; it also eliminates the need to rebuild intersections North and South of the river to reach up to the new higher bridge. In addition, the lift span will have different and mostly fewer environmental impacts. Because it will be less tall, it will be less steep, meaning trucks can get over it without slowing (which is a hazard to other traffic), plus all vehicles will burn less fuel (and create less pollution) on a shorter, less steep bridge.

It's clear, however, that IBR officials have no intention of looking at using the lift span to reduce costs or minimize environmental impacts. Greg Johnson, the IBR administrator, has fully indicated his intent to sabotage the moveable span design. It is highly likely that they will specify a moveable span that is impractical and excessively expensive. Greg Johnson telegraphed as much in his comments to the [Columbian](#)

The “movable span” option, which came **at the request of the Coast Guard** and federal government, will be explored in addition to the program’s original plan of a fixed-span bridge with 116 feet of vertical clearance.

The program will study both a lift span like the current Interstate 5 Bridge and a bascule bridge like the Burnside Bridge in Portland.

**Program Administrator Greg Johnson said he believes a fixed-span bridge will ultimately end up spanning the Columbia.**

He said a movable span would likely cost \$500 million more than a fixed-span bridge and noted that the Columbia River Crossing project received a record of decision from the Federal Highway Administration and Federal Transportation Agency for a fixed-span bridge with the lower river clearance.

**“I would be totally shocked if we can’t get to a fixed-span,”** Johnson said.

(emphasis added)

### The missing tunnel option

Press accounts, fueled by IBR statements, create the false impression that it was the Coast Guard that insisted on the inclusion of a moveable span option. [Oregon Public Broadcasting](#) reported:

Planners in charge of the new, multibillion-dollar overhaul have recently been told by federal regulators they must include plans for “moveable span” on the bridge. Greg Johnson, who is leading the team of planners, said federal regulators made the order in late February.

The [Vancouver Columbian](#) reported:

The “movable span” option, which came at the request of the Coast Guard and federal government, will be explored in addition to the program’s original plan of a fixed-span bridge with 116 feet of vertical clearance.

In fact, the Coast Guard made **no recommendation** as to the kind of option that the project should study. Either a moveable span or a tunnel under the river could satisfy the Coast Guard’s 178 foot height requirement. Here’s what the Coast Guard letter, from Rear Admiral M. W. Bouboulis (not included in any press accounts) actually says:

I recommend that the Notice to Supplement clearly state the alternatives to be evaluated in the SEIS to include the no build alternative, the locally preferred alternative (116-foot vertical clearance), and **an alternative that meets the 178-foot vertical clearance** established in the PNCD. This will ensure that an alternative that meets the initially identified needs of navigation is evaluated in the SEIS and could be adopted by the Coast Guard.

(emphasis added)

This wasn’t the Coast Guard asking for something new in February, 2023—it was actually the Coast Guard repeating pretty much exactly what it asked for in its Preliminary Navigation Clearance Decision in June of 2022. The Coast Guard made it clear that a 116 foot bridge interfered with river navigation:

Our PNCD concluded that **the current proposed bridge with 116 feet VNC** [vertical navigation clearance], as depicted in the NOPN [Navigation Only Public Notice], **would create an unreasonable obstruction to navigation** for vessels with a VNC greater than 116 feet and in fact would completely obstruct navigation for such vessels for the service life of the bridge which is approximately 100 years or longer.

B.J. Harris, US Coast Guard, to FHWA, June 17, 2022, emphasis added.

In response to the Bouboulis letter, IBR (through the FHWA and FTA) replied that it would study a moveable span. This was IBR's decision, not Coast Guard's decision.

What ends up on the cutting room floor, here, is the possibility of an immersed tube tunnel, a technology that is widely used around the world, and which would provide unlimited vertical (and horizontal) navigation clearance. The immersed tunnel would also remove the visual blight and noise pollution from downtown Vancouver and its rapidly redeveloping waterfront. To hear the IBR tell it, the reason the immersed tube tunnel isn't being considered is because the Coast Guard directed them to study a moveable span. That's simply untrue. In its June 2022 preliminary determination of navigation clearance, the Coast Guard specifically identified the tunnel option as one way to comply with its navigation requirements. It is IBR, not the Coast Guard, that is declining to take a hard look at the immersed tube tunnel. This seems likely to be a violation of the National Environmental Policy Act, because the immersed tube tunnel would have very different (and much reduced) environmental impacts than the bridge options.

### **A “Design Option” not an “Alternative”**

There's one other seemingly minor wrinkle in the IBR's latest gambit. They're talking about including the moveable span as a “design option.” While that might sound like an “alternative” to the layman, it actually has important legal and practical implications. “Design option” means they'll look at the moveable span not as a full fledged separate alternative, but rather as just simply one feature grafted on to the existing IBR design. As noted above, this means we'll get something that looks almost exactly like the IBR 116' clearance bridge with a bascule or lift-span “cut and pasted” on it.

The reason for calling it a “design option” rather than an alternative is to escape a requirement that the highway department's fully evaluate the environmental and other impacts of the moveable span design. A moveable span would be expected to have very different cost, traffic, and environmental impacts than IBR's proposed high fixed span. Under the National Environmental Policy Act (NEPA) the two state highway departments should fully flesh out this alternative, and evaluate those differing impacts. Treating the moveable span as a design option is a transparent ruse to avoid NEPA scrutiny. This could turn out to be a fatal legal error by the project: NEPA is clear that sponsoring agencies have to give a “hard look” to reasonable alternatives, something this “design option” approach is designed to avoid.

### **Coast Guard Letter, February 8, 2023**