

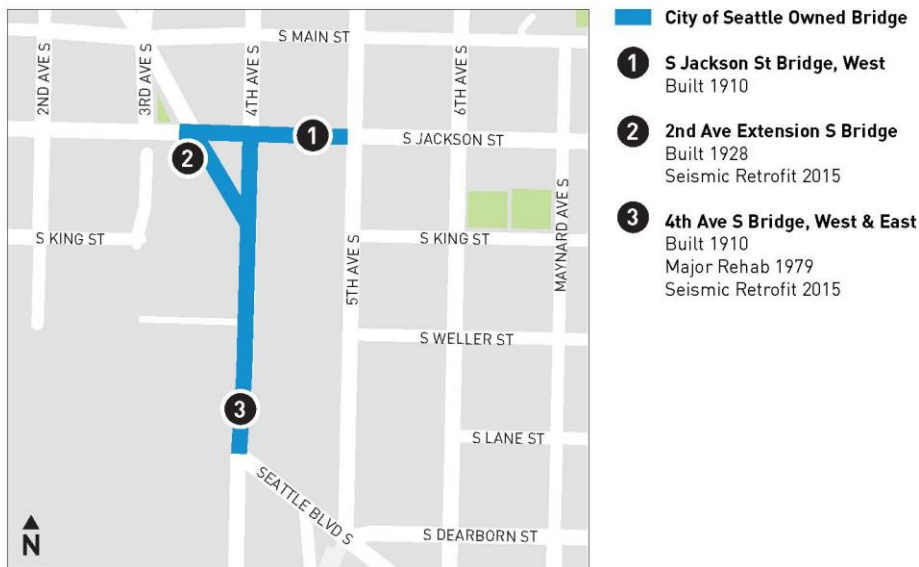


City-provided responses to commonly asked questions about roadway structures in Seattle's Chinatown-International District (CID)

March 2023

Why do bridges keep coming up as part of WSBLE discussions related to the 4th Avenue shallow and shallower alternatives in the CID?

Bridges frequently come up as part of the discussion related to a station at 4th Avenue, because 4th Avenue is made up of multiple bridges and is connected to other bridges. In fact, there are numerous bridge structures in the downtown area. The map below shows the bridges in the vicinity of the 4th Avenue Station option.



Historic Context

- Putting Seattle's downtown streets into historical context, the city has regraded over 100 blocks in the downtown to make streets more accessible by helping level out steep grades. The Jackson Regrade, constructed between 1907 and 1910 covered the largest surface area, over 56 blocks, and lowered the elevation of the hill 85 feet.
- The soil from the Jackson Regrade filled the area from King Street south into SODO. This area is built on fill over tidal flats, including the area around 4th Avenue.



The historical photo shown below is from the area around 5th and Weller (near the present location of Uwajimaya) helps illustrate that condition.



Fifth and Weller Streets in the Seattle Chinatown during the Jackson regrade c.1908.

Courtesy of the Museum of History and Industry

Building the CID station on 4th Avenue would require replacing the 4th Avenue Bridge. Is the viaduct due for replacement anyway?

- SDOT has no current plans to replace the 4th Avenue Bridge (or 4th Avenue Viaduct). Barring unforeseen and unexpected events that compromise this structure, our current plan remains to continue to monitor and maintain this structure to preserve and extend its usefulness as long as is safe and feasible. In the event that this structure would need to be replaced in the future, the cost, impact, and duration of the construction would be an order of magnitude smaller than the construction costs and impacts proposed under the 4th Ave South WSBLE station alternative.
- Most recently, the 4th Avenue Bridge had a seismic retrofit in 2015.
- The two bridge structures that make up 4th Ave S between S Jackson and S Seattle Blvd are rated as fair, the same condition rating as 77 other bridges in Seattle. (“Fair” is a term provided by the National Bridge Inventory and is used when conditions of all primary structural elements are sound, but the bridge is exhibiting some signs of aging. Other terms used are “Good” and “Poor.”) In general, replacing a structure is considerably more impactful and expensive than proactive maintenance and/or rehabilitation.
- SDOT will take appropriate action when needed including conducting engineering studies to better inform the complex decision-making process that goes into repairing or replacing their structures.

Is SDOT currently studying these bridges?

- As part of the Levy to Move Seattle, funds have been allocated to study two bridges along the corridor: Bridge 33 W (South Jackson Street between 4th and 5th Avenues) and Bridge 7 (2nd Ave Extension between South Jackson and 4th Ave).
- The scope of this work is to study the transportation needs and opportunities in this corridor and will help us know more about the magnitude of cost and impacts associated with rehabilitation or replacement.
- The project team will be in close coordination with adjacent projects including, but not limited to Sound Transit’s West Seattle to Ballard Link Extension project.



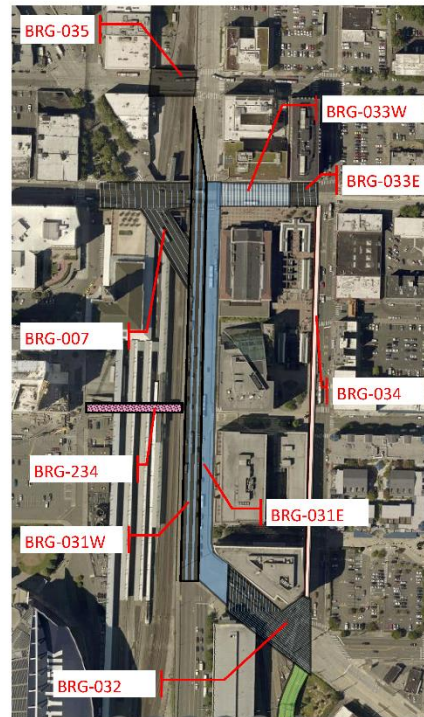
Is bundling light rail construction and bridge replacement more efficient? Would that help minimize traffic and construction impacts for the community?

- Bundling projects, while occasionally a strategy the City and other jurisdictions use to streamline and reduce the impacts of construction, can also introduce additional project complexity.
- For some context, the construction of the 4th Avenue Shallow option for Sound Transit would result in 10-12 years of construction impacting the operation of 4th Avenue S. Most of that time would be spent excavating and constructing the station box.
- In addition, there are significant construction risks in constructing the station under 4th Avenue S that could potentially lengthen the duration of construction.
- In comparison, the North and South of CID options that Sound Transit recently presented have an estimated construction timeline of five years with fewer construction impacts during that period and minimal road closures.
- Given that the 2nd Avenue Extension and Jackson Street bridges have been identified by Sound Transit as the detour route for 4th Avenue Station construction, bundling light rail station construction on 4th Avenue and multiple bridge replacement projects would be unlikely to respond to the community request to reduce impacts.

Attachment A: Detailed map of roadway structures in the CID

BRIDGES NEAR CID

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|---|--|
| <p> BRG-035: Main St Bridge</p> <ul style="list-style-type: none"> • Built: 1983 • Condition State: Fair • Deck Area: 8,580 sqft | <p> BRG-007: 2nd Ave Extension Bridge</p> <ul style="list-style-type: none"> • Built: 1928 • Seismic Retrofit: 2015 • Condition State: Poor • Deck Area: 16,432 sqft |
| <p> BRG-031W: 4th Ave S St (West) Bridge</p> <ul style="list-style-type: none"> • Built: 1910 • Major Rehab: 1979 • Seismic Retrofit: 2015 • Condition State: Fair • Deck Area: 52,421 sqft | <p> BRG-031E: 4th Ave S St (East) Bridge</p> <ul style="list-style-type: none"> • Built: 1910 • Major Rehab: 1979 • Seismic Retrofit: 2015 • Condition State: Fair • Deck Area: 52,421 sqft |
| <p> BRG-033W: S. Jackson St (West) Bridge</p> <ul style="list-style-type: none"> • Built: 1910 • Bridge Rehab: 1987 (repairs) • Seismic Retrofit: 2015 • Condition State: Fair • Deck Area: 12,870 sqft | <p> BRG-033E: S. Jackson St (East) Bridge</p> <ul style="list-style-type: none"> • Built: 1987 • Condition State: Fair • Deck Area: 13,140 sqft |
| <p> BRG-032: Seattle Blvd Bridge</p> <ul style="list-style-type: none"> • Built: 1910 • Rehab: 1981 • Modification: 1988 • Seismic Retrofit: 2015 • Condition State: Fair • Deck Area: 29,440 sqft | <p> BRG-034: King County Bridge</p> <ul style="list-style-type: none"> • Built: circa 1910 <p> WSDOT BRIDGE/SOUND TRANSIT</p> <p> BRG-234: Sound Transit</p> <ul style="list-style-type: none"> • Built: 2000 |





Attachment B: Detailed information about roadway structures in the CID and potential WSBLE implications (information about potential affects to WSBLE project provided by Sound Transit)

| Structure | Year built | Condition state | Potentially affected by WSBLE project? |
|--|--|-----------------|--|
| Yesler bridge | Rebuilt 2017 | Good | CID 4 th Shallower would require that structure be demolished and rebuilt |
| Main St Bridge | Built 1983 | Fair | CID 4 th Shallow would require that structure be demolished and rebuilt |
| 2 nd Ave Extension Bridge | Built 1928, Seismic retrofit 2015 | Poor | Would not be affected |
| 4 th Ave S St (West and East) bridges | Built 1910, Major rehab 1979, Seismic retrofit 2015 | Fair | CID 4 th Shallow and CID 4 th Shallower would require that structure be demolished and rebuilt |
| S. Jackson St (West and East) bridges | Built 1910 (West) and 1987 (East), Bridge rehab 1987 (West) Seismic retrofit 2015 (West) | Fair | CID 4 th Shallow and CID 4 th Shallower would require rebuild of 4 th /Jackson intersection and east approach |
| Seattle Blvd Bridge | Built 1910, Rehab 1981, Modification 1988, Seismic retrofit 2015 | Fair | Would not be affected |