

**U.S. District Court**

**United States District Court for the Western District of Washington**

**Notice of Electronic Filing**

The following transaction was entered on 3/26/2010 at 10:54 AM PDT and filed on 3/26/2010

**Case Name:** Campbell et al v. Jilik et al

**Case Number:** [2:09-cv-1305](#)

**Filer:** Elizabeth A Campbell

**Document Number:** [9](#)

**Docket Text:**

**MOTION for Temporary Restraining Order by Plaintiff Elizabeth A Campbell.**

**(Attachments: # (1) Exhibit Exhibit D Part 1, # (2) Exhibit Exhibit D Part 2, # (3) Exhibit Exhibit E, # (4) Exhibit Exhibit F, # (5) Exhibit Exhibit G, # (6) Exhibit Exhibit G Part 2) Noting Date 4/23/2010, (Campbell, Elizabeth)**

**2:09-cv-1305 Notice has been electronically mailed to:**

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**Document description:**Exhibit Exhibit D Part 1

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**Document description:**Exhibit Exhibit D Part 2

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**Document description:**Exhibit Exhibit E

**Original filename:**n/a

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**Document description:**Exhibit Exhibit F

**Original filename:**n/a

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**Document description:**Exhibit Exhibit G

**Original filename:**n/a

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**Document description:**Exhibit Exhibit G Part 2

**Original filename:**n/a

**Electronic document Stamp:**

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UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF WASHINGTON AT SEATTLE

**ELIZABETH A. CAMPBELL**, a single woman, and **SEATTLE CITIZENS AGAINST THE TUNNEL**, a Washington State Non-profit corporation, **HARVEY FRIEDMAN**, a single man, and **SHARON J. PRICE**, a married woman,

Plaintiffs,

vs.

**PETER JILIK**, in his official capacity as Urban Area Engineer of the **FEDERAL HIGHWAY ADMINISTRATION**, an agency of the United States, **WASHINGTON STATE DEPARTMENT OF TRANSPORTATION**, an agency of the State of Washington,

Defendants.

CIV. NO. CO9-1305 JCC  
MOTION AND MEMORANDUM IN SUPPORT FOR A TEMPORARY RESTRAINING ORDER AND CERTIFICATE OF SERVICE

Hearing Date: April 23, 2010

(National Environmental Policy Act and Washington State Environmental Protection Act)

**PLAINTIFF'S MOTION FOR  
TEMPORARY RESTRAINING ORDER**

1 Plaintiff, Elizabeth A. Campbell (“Plaintiff”), pursuant to Western District Local Rule  
2 7(d)(3), respectfully requests that this Court issue an Order enjoining construction of Phase 2 of  
3 the SR99 S. Holgate St. to S. King St. Project (“the H2K Project”), an undertaking of the Federal  
4 Highway Administration (“FHWA”) and the Washington State Department of Transportation  
5 (“WSDOT”), until such time as an environmental impact statement is prepared for the project  
6 that is consistent with the H2K Project’s present scope and a decision rendered thereunder *and*  
7 until such time as the environmental review for the Central Waterfront Viaduct Replacement  
8 Project is completed and a record of decision is issued in that matter; or in the alternative, for an  
9 order directing the FHWA and WSDOT to consolidate the multiple projects it is undertaking  
10 under the aegis of the “Alaskan Way Viaduct and Seawall Replacement Program” (“AWVSR  
11 Program”), and to prepare an environmental review of the consolidated projects pursuant to  
12 NEPA and CEQ regulations (40 CFR Parts 1500-1508), and pursuant to Washington State  
13 Environmental Protection Act (“SEPA”) (RCW 41.23C).

14 This lawsuit was commenced in order to invalidate the Finding of No Significant Impact  
15 (“FONSI”) issued by the Defendants on February 11, 2008 for the H2K Project, and to seek an  
16 injunction against further design and development of the H2K Project as an integral element of  
17 the Defendant’s SR 99 Alaskan Way Bored Tunnel Project, and to seek an order directing the  
18 Defendants to prepare a consolidated environmental review of the H2K Project along with the  
19 Central Waterfront Viaduct Replacement Project and associated AWVSR Program projects, in  
20 order that the cumulative effects of the projects can be considered together.

21 The FHWA and WSDOT modification of the H2K Project so that it comports with their  
22 decision and final actions to implement the bored tunnel alternative under the FONSI for the  
23 H2K project and otherwise, is arbitrary and capricious under the judicial review provisions of the  
24 Administrative Procedure Act, 5 U.S.C. section 701 et seq., (“APA”) and is made without  
25 observance of NEPA procedures required by law.  
26



1 By also failing to ensure the integrity of the environmental review process for the Central  
2 Waterfront Project, by segmenting the original “Alaskan Way Viaduct and Seawall Replacement  
3 *Project*” and thereby avoiding having to consider all reasonably foreseeable cumulative and  
4 indirect impacts of the project; by failing to take the requisite “hard look” at all relevant  
5 environmental concerns for the H2K Project *and* all the other projects associated with the  
6 AWVSR Program, the FHWA and WSDOT have acted arbitrarily and capriciously.

7 The current actions by FHWA and WSDOT in the H2K Project, and the implementation  
8 of their de facto decision to proceed with the construction of a deep bored tunnel, are all  
9 proceeding without the benefit of the statutorily required environmental review and analysis  
10 required by NEPA and CEQ regulations (40 CFR Parts 1500-1508), and without that of the  
11 Washington State Environmental Protection Act (“SEPA”) (RCW 41.23C). Those acts are  
12 arbitrary and capricious.

13 The Defendants’ final actions include proceeding with all the acts necessary to construct  
14 an elevated roadway between S. Holgate and S. King streets, a sizable bridge structure crossing  
15 over that roadway, a bored tunnel, the realignment and replacement of existing railroad tracks,  
16 moving existing roadways from their present locations, destruction of the historic Alaskan Way  
17 Viaduct (“Viaduct”), redevelopment of the Central Waterfront of Seattle, the facilitation of  
18 concomitant major private real estate development in the area that will be made possible by the  
19 elimination of the Viaduct, as well as engaging in activities that threaten the environmental  
20 integrity of the historic Pioneer Square district, and the economically important South of  
21 Downtown district (“SoDo”) area of Seattle.

22 Each of the foregoing actions threatens to result in irreparable harm to environmental  
23 resources, to Plaintiff’s interests, and to the interests of the taxpayers, generally. Construction  
24 authorization for the H2K Project Phase 2 will not only result in immediate ground-disturbing  
25 activities as trenches are dug, pipes laid, foundations are excavated and poured, but it will also  
26 open the door for WSDOT to begin environmentally destructive construction activities on a

1 project which has not been properly analyzed for its environmental impacts as a “connected  
2 action” with respect to areas which are not properly part of the Environmental Assessment  
3 (“EA”) and in violation of CEQ regulations in 40 CFR § 1508.35 mandating EIS scope.

4 The irreparable harm will also include, among other things, degradation of the  
5 irreplaceable historic and urban environments of Pioneer Square and SoDo, destruction of the  
6 historic and vital Alaskan Way Viaduct, which is statutorily a) a highway of statewide  
7 significance and b) an essential public facility, c) eligible for listing in the National Register of  
8 Historic Places, substantial harm to the 100,000 plus daily users who traverse the SR 99 Alaskan  
9 Way Viaduct highway and corridor, and by extension the public in general harmed will be  
10 harmed by the congestion, economic disruption, and the land development that this project  
11 represents. Further, the harm results from the danger signals arising from the failure of WSDOT  
12 and the FHWA to take a “hard look” at serious environmental problems that have been  
13 inadequately analyzed and proposed to be mitigated.

14 Construction of H2K Project Phase 1 began in late 2008, albeit on a relatively minor  
15 scale. Plaintiff does have a good faith belief however, that construction on a much larger scale  
16 will begin immediately following the opening of the bids for Phase 2 of H2K Project on April  
17 14, 2010.

18 Specifically, whomever is the winning contractor will be directed by WSDOT to  
19 promptly commence work on what is a large scale highway construction project that now  
20 includes major highway and bridge elements, along with their impacts, the impacts of the change  
21 of scope to include conformity of the project with the bored tunnel that is to be built next to the  
22 H2K Project; and more importantly, will be directed to construct a project that will have a  
23 prejudicial effect on the outcome of Central Waterfront Project environmental review; to wit, the  
24 H2K Project as now designed and to be constructed in a manner that is consistent with a bored  
25 tunnel alternative to replace the Viaduct; i.e. consistent with FHWA’s and WSDOT’s decision to  
26 replace the Viaduct with a bored tunnel.

1 The present scope of the H2K project is *not* consistent with the Finding of No Significant  
2 Impact that was issued for it - a bored tunnel connection was *not included* in the  
3 FHWA's/WSDOT's H2K Project Environmental Assessment. The harm arising from the  
4 imminent opening of the bids and commencement of construction on Phase 2 is the type of  
5 irreparable harm to the public interest which NEPA is designed to avoid or otherwise mitigate.

## 6 **I. STATEMENT OF FACTS**

7  
8 1. The H2K Project was created by segmenting out a portion of another project that had  
9 undergone substantial environmental review, the "Alaskan Way Viaduct and Seawall  
10 Replacement Project" (AWVSR Project). The section of the SR99 roadway between S. Holgate  
11 and S. King streets was never considered to be a separate element under that project's scope, nor  
12 under the NEPA environmental review which was conducted pursuant to the FHWA's Notice of  
13 Intent, dated June 22, 2001, and pursuant to the amended NOI's thereto.

14 The now H2K Project elements were never considered to be separate elements either in  
15 the Draft Environmental Impact Statement ("DEIS") issued for the AWVSR Project in 2004, and  
16 in the subsequent Supplemental Draft Environmental Impact Statement ("SDEIS") that was  
17 issued for it in 2006.

18 2. Following a Governor-mandated public vote regarding replacement options for the  
19 Alaskan Way Viaduct in 2007, that was nullified due to the intentional mis-drafting of the ballot  
20 language (see attached Exhibit A), the FHWA and WSDOT segmented the "Alaskan Way  
21 Viaduct and Seawall Replacement *Project*" ("AWVSR Project"), creating an appellation known  
22 as the "Alaskan Way Viaduct and Seawall Replacement *Program*" ("AWVSR Program") (see  
23 attached Exhibit B).

24 The AWVSR *Program* consists of portions of the former AWVSR *Project* which have  
25 been segmented out as standalone projects - a group of projects identified as the "Moving  
26 Forward Projects", and four standalone projects, the Alaskan Way Seawall replacement (AWV

1 Seawall Project”), the City of Seattle Utilities projects, the Central Waterfront Viaduct  
2 Replacement project (“Central Waterfront Project”), and the SR99 S. Holgate St. to S. King St.  
3 project (“H2K Project”), the latter the subject of this case.

4           Only one of the four standalone projects, the Central Waterfront project, is being  
5 subjected to a substantial environmental review (a full EIS is being prepared for it). The rest of  
6 the projects have all received greatly reduced levels of environmental review, including the H2K  
7 Project. Even though the H2K Project makes up over 40% of the former AWVSR Project, it was  
8 reviewed through an environmental assessment (“EA”) which did not consider any cumulative  
9 impacts of the projects that are literally on either side of it. On February 11, 2008 the Federal  
10 Highway Administration and WSDOT issued a Finding of No Significant Impact (“FONSI”) for  
11 the SR 99 S. Holgate St. to S. King Street Project.

12           3. At the time the FONSI for the H2K Project was issued, the H2K Project was presented  
13 as being “Viaduct replacement alternative *neutral*”, in other words it was designed so that when  
14 it was constructed it would be suitable for whatever structure was chosen to replace the Alaskan  
15 Way Viaduct. The original four main components of the H2K Project included:

- 16           • New grade-separated access for freight and general purpose traffic between the Seattle  
17 International Gateway Railyard, SR 519, Port of Seattle and the stadiums.
- 18           • Improvements to Colorado Avenue South.
- 19           • New Alaskan Way South frontage road that would provide access between Alaskan Way  
20 South at South King Street and South Atlantic Street.
- 21           • Reconfigured intersections where South Atlantic Street meets Alaskan Way South, the  
22 new U-shaped undercrossing, Colorado Avenue South, the new Alaskan Way South  
23 frontage road, and First Avenue South.

24 Since that time, according to the FHWA and WSDOT documents, the H2K project has been 1)  
25 dramatically scaled back - \$100 Million worth of project elements have been eliminated from the  
26 project; 2) the U-shaped undercrossing at Colorado Avenue South has been eliminated, in its

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stead an elevated bridge is to be constructed; and the most dramatic change to the project's scope are the changes made to the project so that when Phase 2 of H2K is completed the necessary roadway connections and structures will be in place for the H2K roadway to connect with the 9,200 foot long, 52' diameter, deep bored tunnel (see Exhibit C).

Any replacement option chosen to replace the Viaduct portion of SR99 must eventually be connected to the H2K Project roadway, and therefore at some point the H2K roadway must be constructed to conform with the replacement alternative chosen.

However, despite there being an environmental review underway for the Viaduct replacement portion of the AWVSR Program, the Central Waterfront Project, *and no Record of Decision being issued*, the H2K Project, as well as all the other projects spawned out of the AWVSRP Project no longer remain neutral in their design and construction - they are beyond having a prejudicial effect on the outcome of the Central Waterfront Project environmental review that is underway – they reflect the FHWA's and WSDOT's decision to proceed with the bored tunnel alternative.

One such example of that is the Massachusetts Street to Union Street Moving Forward Project that was under construction. WSDOT suspended work on it “between S. Royal Brougham Way and Railroad Way S., until further design is complete on the southern portal for the bored tunnel section of the central waterfront section of SR 99.” (see attached Exhibit D).

4. There have been many public statements made by representatives of WSDOT, the Governor of Washington, and there are a considerable number of internal WSDOT documents and WSDOT presentations, that indicate that WSDOT the lead agency and its co-lead agency, the FHWA, have made a final decision to proceed with the bored tunnel project; the documents indicate that they continue to take ongoing final actions, to let contracts and engage in construction activities as part of their intent to proceed with the construction of a deep bored tunnel to replace the Alaskan Way Viaduct, despite the NEPA and SEPA bars against such actions. Relevant WSDOT documents that provide evidence of Plaintiff's claims are attached as

1 Exhibits E and G. Conversely, they provide proof also that the other two Viaduct replacement  
2 options, the elevated and surface alternatives are no longer proceeding under credible  
3 consideration or environmental review.

4 5. In 2008 and 2009 Plaintiff contacted Defendants FHWA and WSDOT to request that  
5 the AWVSR Program projects be consolidated and reviewed for the cumulative impacts, and has  
6 also requested that the Defendants cease their assorted construction and construction-related  
7 activities pursuant to their decision to proceed with the deep bored tunnel (see attached Exhibit  
8 G). Defendants have ignored Plaintiff's overtures and have continued to pursue the mobilization  
9 of the AWVSR Program in a manner that ensures that a deep bored tunnel will be built as a  
10 replacement for the Viaduct.

11 6. Plaintiff requests that this Court issue an injunction to maintain the status quo  
12 until this Court makes its ruling on a remedy. Plaintiff requests that a hearing be held on this  
13 motion as expeditiously as the Court may provide in order to maintain the status quo  
14 and preserve the Court's full range of remedies.

#### 15 **STANDARD FOR INJUNCTIVE RELIEF**

16 7. The issuance of a temporary restraining order is within the Court's discretion. The  
17 standard of review elements of a temporary restraining order are: 1) a substantial likelihood that  
18 plaintiffs will succeed on the merits of their claims; 2) a substantial threat that plaintiffs will  
19 suffer irreparable injury if the injunction is not granted; 3) the injury to plaintiffs outweighs the  
20 harm that an injunction may cause defendant; and 4) the granting of the temporary restraining  
21 order will not disserve the public interest. *National Wildlife Federation v. Marsh*, 721 F.2d 767  
(11th Cir. 1983).

#### 22 **ARGUMENT**

#### 23 **A. Plaintiffs are Likely to Prevail on the Merits**

##### 24 **i. The FHWA Failed to Analyze the Impacts of Public and Private "Connected** 25 **Actions" with Cumulative Impacts in the EA and FONSI**

1 The FHWA and WSDOT violated NEPA by failing to analyze the cumulative effects of  
2 connected and cumulative public actions which are scheduled to occur as depicted in Exhibits A  
3 and B. Cumulative effects result from the incremental impact of past, present, or “reasonably  
4 foreseeable” future actions, whether the action is taken by federal agencies or private parties.  
5 (See 40 CFR § 1508.7)

6 The construction of a \$2 Billion deep bored tunnel, associated redevelopment of the  
7 Central Waterfront, destruction of the historic Alaskan Way Viaduct, the private development  
8 that will follow, is certainly reasonably foreseeable as some is already planned, financed, and  
9 even some of the construction has started.

10 NEPA requires FHWA and WSDOT to address connected actions in the same impact  
11 statement. *40 C.F.R. § 1508.25(a)(1)*. Cumulative impacts can result from individually minor but  
12 collectively significant actions taking place over a period of time. Without doubt, a cumulative  
13 impact analysis for the consolidated AWVSR Program projects would have to include all the  
14 actions that are connected, interrelated, and depend at least in part on the federal action taking  
15 place.

16 As the 10th Circuit has stated:

17 A connected action is defined as being closely related to other actions is identified based on three  
18 factors:

- 19 i) Automatically triggers other actions which may require environmental impact statements.
- 20 ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.
- 21 iii) Are interdependent parts of a larger action and depend on the larger action for their  
22 justification. *40 C.F.R. § 1508.25(a)(1)*.

23 In *Custer County Action Assoc. v. Garvey*, 256 F.3d 1024, 1037 (10th Cir. 2001), the  
24 Court noted that projects that have independent utility are not connected actions under 40 C.F.R.  
25 § 1508.25(a)(1)(iii). An inquiry into independent utility reveals whether the project is indeed a  
26 separate project, justifying consideration of the environmental effects of that project alone.

1 [Piedmont Heights Civic Club, Inc. v. Moreland, 637 F.2d 430, 400 (5th Cir. 1981)]. *Utahans for*  
2 *Better Transportation v. U.S. Dept. of Transportation*, 305 F.3d 1152, 1182-83 (10th Cir. 2002).

3 Here, commencement of the H2K project that is part and parcel of the Central Waterfront  
4 Project immediately to north and in the immediate vicinity of all the other Program projects,  
5 none is feasible without the other, as such denotes that the projects and the actions thereunder are  
6 connected. Connected actions and cumulative actions with incremental impacts must be  
7 analyzed in the same EIS. *Save Our Sonoran, Inc. v. Flowers*, 408 F.3d 1113,1121-22 (9th Cir.  
8 2005) (entire private development must be analyzed in EIS even though federal permit triggering  
9 EIS extended to only portion of property).

10 The actions associated with the H2K Project will have the same or similar impacts as the  
11 Central Waterfront Project. They include, but are not limited to, those on air quality,  
12 construction traffic impacts, historic resources, noise, and visual resources. Simply put, the  
13 FHWA and WSDOT had the responsibility under NEPA to analyze all of the environmental  
14 aspects of the Alaskan Way Viaduct and Seawall Replacement Program *together*, and its failure  
15 to do so renders the H2K EA flawed as a matter of law.

16 **ii. The Alaskan Way Viaduct and Seawall Replacement Program is**  
17 **Improperly Segmented between the Central Waterfront, the H2K &**  
18 **Other Related Program Elements**

19 The segmentation issue arises when an EA or EIS is prepared on an individual action  
20 rather than a group of public actions that are closely interrelated or connected. *City of Davis v.*  
21 *Coleman*, 521 F.2d 661 (9th Cir. 1975). This type of piecemealing occurs when agencies limit  
22 the impact analysis to the "federally-assisted" parts of a project thereby segmenting other actions,  
23 e.g. building a bored tunnel, redeveloping a waterfront, destroying an historic highway, all made  
24 possible by the federal assistance being provided.



1 To determine the appropriate scope of an EIS, an agency is required to analyze three  
2 types of actions: (1) connected actions; (2) cumulative actions; and (3) similar actions. *32 C.F.R.*  
3 *§ 651.51; 40 C.F.R. § 1508.25(a).*

4 Actions that are "connected" must be analyzed together in the same EIS. *40 C.F.R.*  
5 *§§1508.25(a)(1); Id. § 1502.4(a); Earth Island Institute v. U.S. Forest Service, 351 F.3d 1291,*  
6 *1305 (9th Cir. 2003); Churchill County v. Norton, 276 F.3d 1060, 1076 (9th Cir. 2001).* The  
7 purpose of the connected action rule is to prevent agencies from segmenting a single action into  
8 individual components, thereby understating the overall environmental impacts. *Wetlands Action*  
9 *Network v. U.S. Army Corps of Eng'rs., 222 F.3d 1105, 1108 (9th Cir. 2000).*

10 Actions are connected if they "are interdependent parts of a larger action and depend on  
11 the larger action for their justification." *40 C.F.R. § 1508.25(a)(1).* Although connected action  
12 analysis is generally applied to two separate federal actions, courts have also applied the test to  
13 allegedly improperly segmented federal and private/local action. See *Citizens' Committee to Save*  
14 *our Canyons v. U.S. Forest Service, 297 F.3d 1012, 1028 (10th Cir. 2002)* (applying the  
15 connected action test to allegedly connected ski area development on federal and private lands).  
16 See also *Village of Los Ranchos De Albuquerque v. Barnhart, 906 F.2d 1477, 1483 (10th Cir.*  
17 *1990)* (federal and local highway projects).

18 All of the now separate elements of the AWVSR Program were analyzed and planned  
19 together in the 2004 Alaskan Way Viaduct and Seawall Replacement Project Draft EIS, and in  
20 the 2006 SDEIS. The project elements are described in those documents as intertwined and  
21 mutually supportive.

22 **iii. The H2K EA Fails to Evaluate the New Project Elements and the**  
23 **Environmental Impacts of those Elements.**

24 NEPA requires federal agencies to consider "alternatives to the proposed action" in an  
25 EIS. 42 U.S.C. § 4332(2) (C) (iii). An agency is thus required to "rigorously explore and  
26 objectively evaluate all reasonable alternatives" 40 C.F.R. § 1502.14. Reasonable alternatives

1 are those that would achieve the objectives stated in the purpose and need section of the NEPA  
2 document. *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991).

3 The CEQ regulations, the NEPA literature, including a number of law review articles,  
4 consider comprehensive environmental review to be the “heart” of an EIS (40 CFR §1502.14).  
5 The intent of the requirement is to ensure that the entire scope of the project is reviewed, and that  
6 any impacts are identified and mitigated as needed. When new major elements are added to a  
7 project post-final decision (ROD or FONSI), the public is denied the assurance that the project  
8 will be undertaken in a way that ensures it is an environmentally sound project.

### 9 **B. The Equities and the Public Interest Favor a Temporary restraining order**

10 Not only will Plaintiffs prevail on the merits of this case, but the harm to the Plaintiffs  
11 and the harm to the Alaskan Way Viaduct and Seawall Replacement Project proponents and the  
12 public interest favor granting an injunction.

#### 13 **i. Plaintiffs Will Suffer Irreparable Injury**

14 It is important to note that although the Court must weigh the equities even where a  
15 NEPA violation has been found, harm to the environment and the Plaintiff is usually found  
16 where NEPA has been violated, and it is the rare case indeed where a plaintiff has been found to  
17 have suffered irreparable harm on the merits of a substantial NEPA claim but has been refused  
18 an injunction because of lack of harm or a balancing of the equities.

19 As the Tenth Circuit has stated: “[W]e hold that harm to the environment may be  
20 presumed when an agency fails to comply with the required NEPA procedure.” *Davis v. Mineta*,  
21 302 F.3d 1104, 1115 (10th Cir. 2002). See also *Catron County v. U.S. Fish and Wildlife Service*,  
22 75 F.3d 1429, 1440(10th Cir. 1996) (“An environmental injury usually is of an enduring or  
23 permanent nature, seldom remedied by money damages and generally considered irreparable.”)  
24 Further, as the Tenth Circuit has stated in regards to NEPA, the statute creates a procedural right,  
25 the violation of which creates the risk of “real environmental harm [as a result of] inadequate  
26 foresight and deliberation.” *Catron County*, 75 F.3d at 1433.

1           Additionally, the risk of irreparable harm is impossible to assess because the studies that  
2 would assess that harm are incomplete due to the inadequacy of the FHWA’s and WSDOT’s  
3 environmental review processes – both in the H2K Project matter and in the Central Waterfront  
4 matter. Legal remedies are inadequate, however, because permitting the H2K Project  
5 construction to proceed before the NEPA studies have been completed would defeat the purpose  
6 of undertaking the studies, whose purpose is to make the agency aware of relevant environmental  
7 considerations before acting. *Sierra Club v. Hodel*, 848 F.2d at 1097.

8           Some courts have adopted what is known as the “NEPA exception.” In *State of*  
9 *California v. Bergland*, 483 F. Supp, 465 (E.D. Cal. 1980), the court stated:  
10 Normally, once a substantial NEPA violation has been shown, an injunction should issue without  
11 detailed consideration of traditional equity principles. . .Congress has weighed the equities and  
12 determined that failure to examine environmental issues represents irreparable injury. . . .

13           The court also noted that if the agency was allowed to proceed before it complies with  
14 NEPA, the Act would be an “exercise in futility.” *Id.* At 498-499.

15           Likewise, Plaintiff will suffer irreparable informational injury, which translates into “real  
16 environmental harm” under NEPA, as a consequence of “inadequate foresight and deliberation,”  
17 (*Catron County*, 75 F.3d at 1433) if the Defendants are allowed to pursue construction without  
18 first ceasing their prejudicial actions, without secondly, conducting required NEPA analysis of  
19 the cumulative impacts of the H2K Project *and* the other associated projects in the AWVSR  
20 Program.

21           NEPA is frequently referred to as “an environmental disclosure Act.” The CEQ  
22 regulations in 40 CFR § 1500.1 state: NEPA procedures must insure that environmental  
23 information is available to public officials and citizens before decisions are made and before  
24 actions are taken. The information must be of high quality. Accurate scientific analysis, expert  
25 agency comments, and public scrutiny are essential to implementing NEPA.  
26

1 A lead agency's NEPA violations inflict substantial and irreparable informational harm  
2 upon Plaintiffs and the general public. The substantial harm to Plaintiffs and the public "is a  
3 harm to the environment, but the harm consists of the added risk to the environment that takes  
4 place when governmental decision-makers make up their minds without having before them an  
5 analysis (with prior public comment) of the likely effects of their decision upon the  
6 environment." *Sierra Club v. Marsh*, 872 F.2d 497, 500 (1st Cir. 1989) (*emph. in original*);  
7 *National Parks & Conservation Association v. Babbitt*, 241 F.3d 722, 738 n.18 (9th Cir. 2001)  
8 (harm to environmentally informed decision-making justified injunction). The principle in  
9 *Sierra Club* that a violation of NEPA constitutes an irreparable injury rests on NEPA's purpose  
10 to foster informed decision-making. *Sierra Club*, 872 F.2d at 500. In the context of NEPA,  
11 irreparable harm to the environment occurs because uninformed or irresponsible decision-makers  
12 commit themselves to a course of action that rarely can be undone given "a chain of bureaucratic  
13 commitment that will become progressively harder to undo the longer it continues." *Id.* at 500.  
14 Allowing the FHWA to proceed with this action amounts to "irreversible and irretrievable  
15 commitments of resources" NEPA § 102(2)(C)(v), 40 USC § 4332.

16 **ii. Irreparable Environmental Harm and Harm Arising From FHWA's**  
17 **and WSDOT's Uninformed Decision-Making Outweigh Any Potential**  
18 **Competing Harm to Third Parties.**

19 Regarding potential economic losses to FHWA, WSDOT, and third party interests, such  
20 as the contractors, from construction delays pursuant to a temporary restraining order, Courts  
21 have repeatedly held that economic interests are not irreparable and, therefore, as a matter of law,  
22 they do not outweigh threatened irreparable environmental harm.

23 Where there is a threat of irreparable environmental harm, "more than pecuniary harm  
24 must be demonstrated" in order to avoid preliminary injunctive relief. *Northern Alaska Envtl.*  
25 *Ctr. v. Hodel*, 803 F.2d 466, 471 (9th Cir. 1986). In *National Parks Conservation Assn. v.*  
26 *Babbitt*, the Court found that economic harm does not outweigh the public interest in ensuring

1 that agencies comply with NEPA. 241 F.3d 722, 738 (9th Cir. 2001) (enjoining National Park  
2 Service action pending EIS despite economic harm to third parties, holding that a “loss of  
3 anticipated revenues does not outweigh the potential irreparable damage to the environment.”)  
4 See also, *Alaska Wilderness Recreation and Tourism Ass’n. v. Morrison*, 67 F.3d 723, 732 (9th  
5 Cir. 1995) (enjoining timber sales awarded to third parties pending the Forest Service’s  
6 compliance with NEPA); *Idaho Sporting Congress v. Alexander*, 222 F.3d 562, 569 (9th Cir.  
7 2000) (finding that potential financial harm to Forest Service, intervening timber companies and  
8 surrounding communities, was outweighed by irreparable environmental harm.)

9 In *National Wildlife Federation v. National Marine Fisheries Service*, 235 F. Supp. 2d  
10 1143, 1162 (W.D. Wash. 2002), the U.S. Army Corps of Engineers sought to avoid a temporary  
11 restraining order by arguing that delaying dredging would cost the government \$10,000 per day  
12 and demobilizing the contractor could cost up to \$800,000. The court found that these harms  
13 were “economic, and therefore, not irreparable,” and it concluded that these concerns did not  
14 outweigh the threat of irreparable environmental injury resulting from the proposed dredging  
15 activities. *Id.*

16 Therefore, even if an injunction would cause the FHWA, WSDOT, or any contractors  
17 substantial financial hardship, economic harm is not irreparable and, as a matter of law, it does  
18 not override a threat of irreparable environmental harm. See *Save Our Sonoran*, 408 F.3d at 1125  
19 (affirming a temporary restraining order because, while the developer “may suffer financial  
20 harm,” without injunction, irreparable environmental harm was likely, and emphasizing that this  
21 is a “classic, and quite proper, examination of the relative hardships in an environmental case”).

### 22 **iii. The Public Interest Favors an Injunction**

23 The public interest favors an injunction. There is an overriding public interest in  
24 preservation of the Alaskan Way Viaduct, the preservation of the urban and natural environment  
25 of the Central Waterfront, Pioneer Square, and SoDo neighborhoods “recognized by [NEPA].  
26 This public interest in preserving the character of the environment is one that the plaintiffs may

1 seek to protect by obtaining equitable relief.” *Wyoming Outdoor Coordinating Council v. Butz*,  
2 484 F.2d 1244 at 1250 (10th Cir. 1973) (citations omitted). See also *Sierra Club v. Lujan*, 716 F.  
3 Supp. 1289, 1293. (D. Ariz., 1989) (Where environmental laws have been violated and harm to  
4 the environment is imminent, “[t]he public interest is obvious,” and an injunction should issue.)

5 The great differences between the H2K Project FONSI and the project as now conceived  
6 harm the public interest. Because of these differences, the FONSI has evolved into a document  
7 with insufficient to no relationship to the H2K Project. One form of relief would be requiring  
8 the FHWA and WSDOT to prepare an DEIS and FEIS based on the ongoing Central Waterfront  
9 Supplemental Supplemental Draft EIS, with a new scope, new public comments.

#### 10 **iv. No Bond, or a Nominal Bond, is Required**

11 The Courts have recognized that “only nominal bonds and nominal liabilities for  
12 wrongful injunctions are imposed in NEPA cases. The imposition of substantial liability would,  
13 according to the [district] court, frustrate the policy of Congress ‘to encourage actions on  
14 environmental grounds.’” *State of Kansas Ex Rel. Stephan v. Adams*, 705 F.2d 1267, 1269 (10th  
15 Cir. 1983). See also *Von De Kamp v. Tahoe Regional Planning Agency*, 766 F.2d 1319, 1325-26  
16 (9th Cir. 1985), amended 775 F.2d 998 (no bond required; “special precautions to ensure access  
17 to the courts must be taken where Congress has provided for private enforcement of a statute.”;  
18 “The court has discretion to dispense with the security requirement, or to request mere nominal  
19 security, where requiring security would effectively deny access to judicial review.” If a bond  
20 were required, Plaintiff, an individual, would be unable to proceed with this case, the goals of  
21 NEPA could not be ensured, and the public interest would suffer. See Ex. B, Bidwell Decl. at ¶  
22 13; Ex. C, Canaly Decl. at ¶ 13.

### 23 **VII. CONCLUSION**

24 A temporary restraining order, prohibiting the identified agency actions and  
25 implementation of the EA and FONSI in general, of adequate duration to facilitate the  
26 conclusion of this case is appropriate given the distinct imbalance between the irreparable harm

1 Plaintiffs and the environment would suffer in the absence of an injunction, and the utter lack of  
2 harm to the Defendants resulting from postponing construction on site. For the foregoing  
3 reasons, Plaintiff's motion for temporary restraining order should be granted.  
4

5 Respectfully submitted this 26th day of March, 2010.  
6

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7 Elizabeth A. Campbell  
8 Pro Se  
9 3826 24<sup>th</sup> Avenue W.  
Seattle, WA 98199

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3 **CERTIFICATE OF SERVICE**

4 I certify that a true and correct copy of the following documents:

- 5 1. Note for Motion for April 23, 2010 (without oral argument) for a Motion for  
6 Temporary Restraining Order;  
7 2. Plaintiff's Motion for Temporary restraining order;  
8 3. Proposed Order; and  
9 4. Certificate of Service.

10 were served on the following as indicated below:

11 Amanda Phily, Attorney General's Office  
12 Deborah Cade, Attorney General's Office  
13 State of Washington  
14 7141 Clearwater Drive SW  
15 Tumwater WA 98501

16 Via Electronic Filing, and E-mail

17 I certify under penalty of perjury under the laws of the State of Washington that the  
18 foregoing is true and correct.

19 DATED this 26<sup>th</sup> Day of March, 2010 in Seattle, Washington.

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Elizabeth A. Campbell, Plaintiff  
Pro Se  
3826 24<sup>th</sup> Avenue W.  
Seattle, WA 98199

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UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF WASHINGTON AT SEATTLE

ELIZABETH A. CAMPBELL, a single woman, and SEATTLE CITIZENS AGAINST THE TUNNEL, a Washington State Non-profit corporation, HARVEY FRIEDMAN, a single man, and SHARON J. PRICE, a married woman,

Plaintiffs,

vs.

PETER JILIK, in his official capacity as Urban Area Engineer of the FEDERAL HIGHWAY ADMINISTRATION, an agency of the United States, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, an agency of the State of Washington,

Defendants.

CIV. NO. CO9-1305 JCC

ORDER GRANTING PLAINTIFF'S MOTION FOR A TEMPORARY RESTRAINING ORDER

(PROPOSED)

Hearing Date: April 16, 2010

This matter came before the Court on Plaintiff Elizabeth A. Campbell's motion for an order which provides the following relief:

1           1. Enjoining Defendants Federal Highway Administration and the Washington State  
2 Department of Transportation from proceeding with the Alaskan Way Viaduct and Seawall  
3 Replacement Program (“AWVSR Program”) until the assorted projects that comprise the  
4 AWVSR Program are consolidated into one project, and an environmental review of the project  
5 is undertaken and completed pursuant to NEPA and CEQ regulations (40 CFR Parts 1500-1508),  
6 and pursuant to Washington State Environmental Protection Act (“SEPA”) (RCW 41.23C).

7           The Court considered the pleadings filed in this action and the motion, response(s) and  
8 declarations filed by the parties. For the foregoing reasons, the Court GRANTS Plaintiffs’  
9 motion for a temporary restraining order.

10  
11 **IT IS SO ORDERED.**

12           DATED: \_\_\_\_\_, 2010.

13  
14  
15 \_\_\_\_\_  
16           JOHN C. COUGHENOUR  
              UNITED STATES DISTRICT JUDGE

17 Presented by:

18 \_\_\_\_\_  
19 Elizabeth A. Campbell, Plaintiff  
20 Pro Se  
21 3826 24<sup>th</sup> Avenue W.  
Seattle, WA 98199

22 Approved as to form and notice of presentation waived:  
23 \_\_\_\_\_  
24

25 Defendant  
26



# Best of 2009: How Jan Drago dragooned a Viaduct solution

After 15 years on the City Council, Jan Drago is bringing home some big, complex transportation projects. Here's how she does it.

**By C.R. Douglas**

**December 27, 2009.**

*Editor's note: This article, first posted on Jan. 15, 2009, is part of our year-end Best Crosscuts of 2009 series.*

**The revival of the Viaduct tunnel** is one of the great political comeback stories of our region. After all, it was left for dead two years ago when Seattle voters turned down the idea by nearly 70 percent. The boring machine hasn't started turning, of course, but the fact that Gov. Gregoire, County Executive Sims, and Mayor Nickels are on the same page (as opposed to three different pages when the last round of alternatives was being debated) means that the chance of real movement on this long-stalled project may be upon us.

There are many who can take credit for this outcome. One of the most central, if unrecognized, figures in this drama is Seattle City Councilmember Jan Drago, chair of the council's transportation committee and an experienced dealmaker. "I wrote the script," says the veteran lawmaker with a clear sense of confidence.

That self-assuredness seems justified. "She did the due diligence on bored tunnels and talked with the experts far sooner than any elected official," notes Tayloe Washburn, chair of the Greater Seattle Chamber of Commerce and a member of the Viaduct Stakeholders Group. Furthermore, says Washburn, himself a key player in forging the ultimate plan, "she played a very important role in developing consensus among the stakeholder members."

Exhibit A

Drago's behind-the-scenes effort to achieve a nearly united front for the deep bored tunnel by the time the group met for the final time in late December enabled that eclectic assembly of 29 stakeholders to find common ground. That pulled the three transportation agencies and the politicians away from preliminary proposals to build a new viaduct or to make do with existing downtown streets, an expanded I-5, and new bus service.

Drago wasn't the only one working the group or the issue, of course. The business community (notably the Downtown Seattle Association, the Chamber, and Boeing) was a key player in this as well. But Drago was in every important meeting (many of which she convened), made some significant recommendations with respect to financing, and became an important liaison to City government when things got serious these last several months.

**But there is more to Drago's Viaduct "script"** than her maneuvering. In fact, it was she who masterminded the key milestone that allowed Viaduct Planning 2.0 to even happen in the first place. Remember that quirky two-part vote in March of 2007, where voters of Seattle said "No" (to an elevated, by 57 percent) and "Hell No" (to a tunnel, by 70 percent)? Splitting it into two was a Drago idea — and it made all the difference. "Had it been a single vote, tunnel vs. elevated," she now says, "we [tunnel supporters] would have been dead on arrival."

The Governor mandated that Seattle vote over the options (something City leaders didn't want to do), but failed to imagine just how clever ballot drafters could be. Drago knew voters were opposed to the more expensive tunnel (polls showed that), but she also knew they were opposed (though not as heavily) to the elevated option. A split vote would send them both down. "I presented the idea to [Deputy Mayor Tim] Ceis and it took him about two seconds before he said perfect," remembers Drago. And perfect it was for the script she was writing. "We lived to see another day," she says proudly.

Another day meant the chance to work quietly behind the scenes to develop a different tunnel scenario — a deep bored tunnel instead of the disruptive cut-and-cover one that had been presented up to that point. Of course, the vote (and the time out it created) allowed Viaduct supporters to regroup as well. It gave Speaker Frank Chopp time to work on and lobby for his plan for a structure with highway lanes, retail, office space, and a park on top.

But the break in the action over the last two years has clearly favored Drago and the other tunnel supporters. They were able to gather a wide spectrum of support from labor leaders, environmental groups, transit advocates, waterfront park advocates, and business interests. The idea now goes to the Legislature (and federal funders) with an unusually solid front of local political consensus.

**Jan Drago has other transportation scripts** that are playing out as well. Indeed, her current, fourth term (which ends this year) is easily her most productive and

influential since being elected 15 years ago. (She's the most senior member of the City Council.) Perhaps that's because she's expected to retire at the end of 2009 and wants to leave with a bang. She has not formally announced either way, but most say this year will be her swan song. She's certainly approaching it with energy and focus. "I want to get all these projects to the point of no return," she says, referring to the Viaduct, the Streetcar network, Mercer Street, and some other transportation items now in play.

That's got at least one colleague frustrated. "Jan doesn't seem concerned with the bottom line," says Councilmember Nick Licata, her nemesis over the years, "which is ironic given that she has a business background." Licata, who holds down the populist wing of the Council, much as Drago anchors the pro-business end, has been a reliable critic of most of what Drago has done in transportation, especially with regard to Mercer and streetcars. "She always seems to favor the big solutions," he notes. "I favor the more practical ones."

Practical or not, Drago's projects seem to be winning the day. Consider the legacy she is likely to leave:

**Streetcars.** "That's been my baby since day one," says Drago. Indeed, it was she who, after going to Portland and seeing the nascent network there, came back to Seattle and started shopping the idea to the Mayor and property interests in South Lake Union (especially Vulcan). While Nickels formally presented the plan for the first line and for the overall network, notes Drago, "I always had to round up the votes." Which she did — every time. The South Lake Union Streetcar recently celebrated its first year of service, and the City Council recently endorsed, in concept, a five-line network.

**The Mercer Mess.** Drago has been the Council's most vocal champion of the Mayor's \$200 million plan to create a two-way Mercer Street. On several occasions she has corralled her colleagues to vote for the plan, something that hasn't been easy, especially beating back Licata, who has fought her at every step of the way, including a recent push he made to cut funding to the project. "It should never have been in the budget," fumes Drago about the latest (fourth) vote on the project. "Nick maneuvered to make it so." But, once again, Licata failed to derail Drago, and the vote was 8 to 1. Still, says Licata, "there's no grassroots support for the project."

**Bridging the Gap Levy.** It's easy to forget now just how large the 2006 Roads Maintenance measure was going to be. When the Mayor first floated the idea the price tag was a gargantuan \$1.6 billion. Drago pushed to bring that down to \$1.1 billion (still huge), and then later fought to bring it down even further, to \$360 million, an amount that was ultimately approved by voters. Drago's pruning certainly helped save the proposal and paved the way for a record pot of money for basic road maintenance. Without that 2006 levy, dramatically fewer road projects would have been possible these last few years.

Drago's success in transportation and otherwise is certainly not because of her

soaring rhetoric or commanding presence. Her speaking style is typically plodding and uninspired. She is skilled, however, at working the halls and being a forceful player behind the scenes. She works tirelessly and shows up at hundreds of meetings a year. She has been able to win four Council elections against some tough opposition.

In what is likely her final year in office, we'll now get to see how these various complicated scripts play out in the final scene. Especially interesting will be the big finale as Frank Chopp's Legislature weighs in on the tunnel plan for the waterfront.

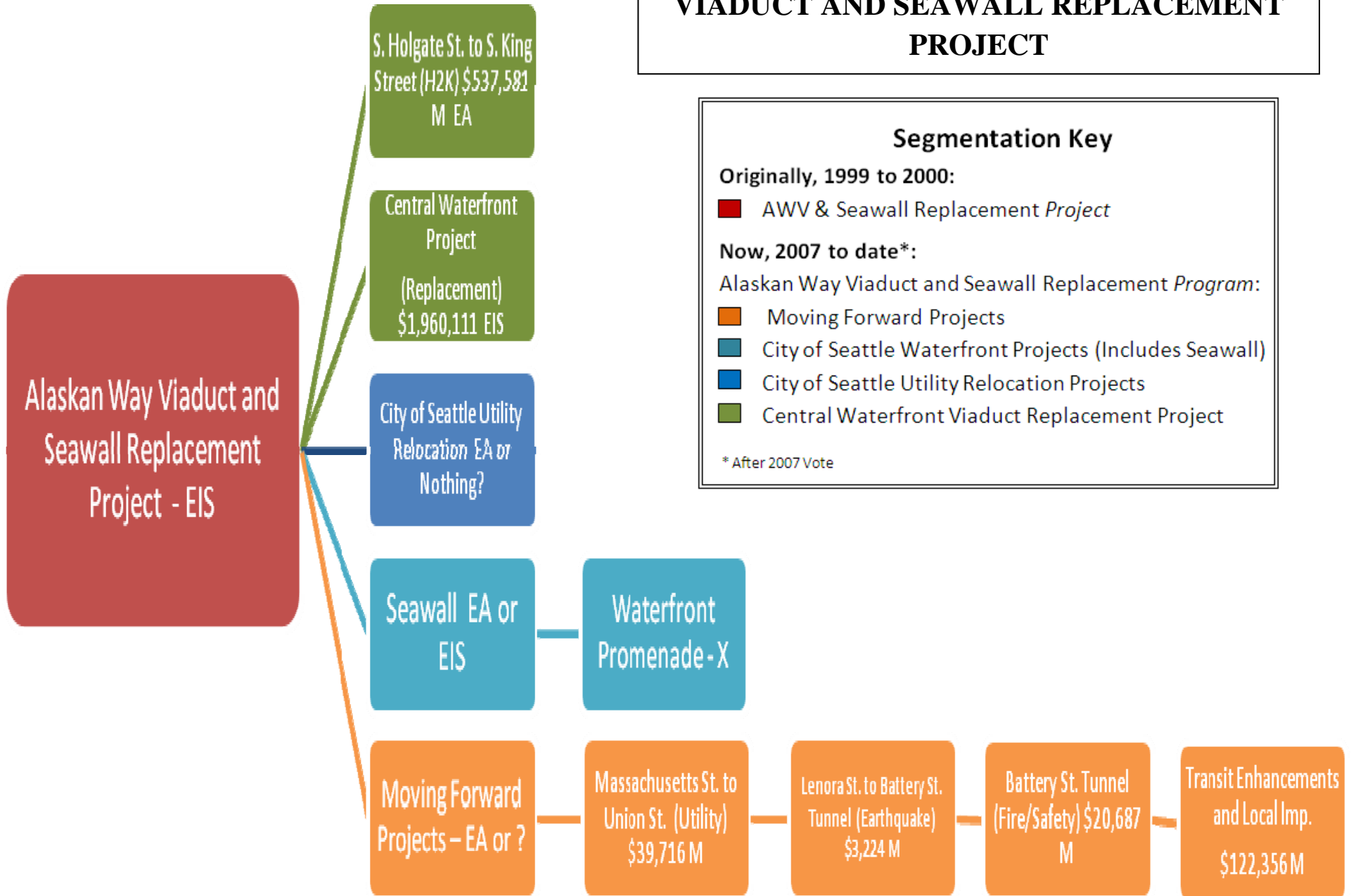
*C.R. Douglas is a  
veteran Seattle  
reporter and host of  
City Inside/Out  
Fridays at 7 p.m. on  
The Seattle Channel  
cable 21.*

**View this story online at: <http://crosscut.com/2009/12/27/seattle-city-hall/18780/>**

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# SEGMENTATION OF ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROJECT



**Segmentation Key**

**Originally, 1999 to 2000:**

- AWV & Seawall Replacement *Project*

**Now, 2007 to date\*:**

Alaskan Way Viaduct and Seawall Replacement *Program*:

- Moving Forward Projects
- City of Seattle Waterfront Projects (Includes Seawall)
- City of Seattle Utility Relocation Projects
- Central Waterfront Viaduct Replacement Project

\* After 2007 Vote

# AGENDA

## SR 520/Alaskan Way Viaduct Quarterly Presentations

Wednesday December 9, 2009

1:00 PM to 4:00 PM

SR 520 Project Office, Plaza 600 Bldg., Seattle

HQ Conf. Rm. SD-11, 310 W. Maple Lane, Olympia

Go To Meeting Link: <https://www1.gotomeeting.com/join/639188265>

Time	Subject	Description	Presenter	GNB
1:00 PM	<b>Safety Update, Introductions</b>			
1:05 PM	<b>Opening Remarks</b>		Jerry Lenzi	
1:10 PM	<b>HQ Program Delivery</b>	Quarterly Update	Jay Alexander	
	<b>Toll Division</b>			
1:20 PM	<b>Urban Partnership Agreement / Lake Washington Congestion Management</b>	Progress Update, Needs	Craig Stone	
	<b>SR 520 Program</b>			
1:35 PM	<b>SR 520 Bridge Replacement &amp; HOV</b>	Program Overview	Julie Meredith	
	<b>SR 520/I-5 to Medina Westside</b>	Progress Update and Forecast	Staff	
	<b>SR 520/Medina to SR 202 Eastside</b>	Progress Update and Forecast	Staff	
	<b>SR 520 Pontoon Construction</b>	Progress Update and Forecast	Staff	
	<b>AWV Program</b>			
2:05 PM	<b>I-5/SR 161/SR 18 - Interchange</b>	Progress Update	Bruce Nebbitt	
2:20 PM	<b>SR 99 Alaskan Way Viaduct &amp; Seawall</b>	Program Overview	Ron Paananen	
	<b>SR 99/S Massachusetts to Union St. Electrical Line Relocation</b>	Progress Update and Forecast	Staff	
	<b>SR 99/S Holgate St to S King St</b>	Progress Update and Forecast	Staff	
	<b>SR 99/Central Waterfront Replacement</b>	Progress Update and Forecast	Staff	
2:50 PM	<b>Wrap-Up</b>		Jay Alexander	
	<b>Construction Cost Summary</b>			
	<b>SR 518 Third Lane</b>	Construction Cost Summary	Placeholder for notebook, no presentation	
	<b>SR 519/ I-90 to SR 99 Intermodal Access</b>			
	<b>I-5/5th Ave NE to NE 92nd St Stg 2</b>			





**SR 99/Alaskan Way Viaduct - Replacement  
PROGRAM ITEM NUMBERS (PINs)**

- SR 99/S Massachusetts St to Union St - Electrical Line Relocation (809936A)
- SR 99/Lenora St to Battery St Tunnel - Earthquake Upgrade (809936B)
- SR 99/Battery St Tunnel - Fire and Safety Improvement (809936C)
- SR 99/S Holgate St to S King St - Viaduct Replacement (809936D)
- SR 99/S King St to Lenora St - Central Waterfront Replacement (809936E)
- SR 99/Viaduct Project - Transit Enhancements and Local Improvements (809936F)
- SR 99/Alaskan Way Viaduct Yesler Way Vicinity - Stabilize Foundation (809936P)
- SR 99/Alaskan Way Viaduct Demolition and Surface Streets (809936T, Unfunded)
- SR 99/Active Traffic Management, Signs, ITS & Software (809936W)



**REGION**

Alaskan Way Viaduct Replacement Project

**ADMINISTRATOR**

Ron Paananen

**CURRENT PROJECT PHASE**

Pre- Construction and Construction

**PROJECT DESCRIPTION**

The existing seismically vulnerable Alaskan Way Viaduct is at the end of its useful life. Staged work has begun.

**BUDGET COMPARISON (\$ in Thousands)**

'09-11 Expenditures					Total Project Cost			
Phase	'09-11 Budget	Last Approved (09 LEGFIN)	Current Plan (2010 Sup)	Current - Last Approved	'09-11 Budget	Last Approved (09 LEGFIN)	Est. at Completion	EAC - Last Approved
<b>SR 99/S Massachusetts St to Union St - Electrical Line Relocation (809936A)</b>								
PE	\$1,372	\$1,372	\$0	-\$1,372	\$12,300	\$12,300	\$10,924	-\$1,376
RW	\$1,000	\$1,000	\$0	-\$1,000	\$1,498	\$1,498	\$497	-\$1,002
CN	\$7,030	\$7,030	\$10,923	<b>\$3,892</b>	\$45,790	\$45,790	\$28,295	-\$17,495
<b>Total</b>	<b>\$9,402</b>	<b>\$9,402</b>	<b>\$10,923</b>	<b>\$1,521</b>	<b>\$59,588</b>	<b>\$59,588</b>	<b>\$39,716</b>	<b>-\$19,872</b>
<b>SR 99/Lenora St to Battery St Tunnel - Earthquake Upgrade (809936B)</b>								
PE	\$0	\$0	\$0	\$0	\$3,294	\$3,294	\$3,224	-\$70
RW	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CN	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,294</b>	<b>\$3,294</b>	<b>\$3,224</b>	<b>-\$70</b>
<b>SR 99/Battery St Tunnel - Fire and Safety Improvement (809936C)</b>								
PE	\$921	\$921	<b>\$1,685</b>	<b>\$764</b>	\$12,966	\$12,966	\$12,919	-\$47
RW	\$0	\$0	<b>\$114</b>	<b>\$114</b>	\$1,688	\$1,688	\$1,148	-\$540
CN	\$5,041	\$5,041	<b>\$5,671</b>	<b>\$630</b>	\$5,991	\$5,991	\$6,620	<b>\$629</b>
<b>Total</b>	<b>\$5,962</b>	<b>\$5,962</b>	<b>\$7,469</b>	<b>\$1,508</b>	<b>\$20,644</b>	<b>\$20,644</b>	<b>\$20,687</b>	<b>\$43</b>
<b>SR 99/S Holgate St to S King St - Viaduct Replacement (809936D)</b>								
PE	\$8,267	\$8,267	<b>\$16,668</b>	<b>\$8,401</b>	\$77,721	\$77,721	\$77,721	\$0
RW	\$53,710	\$53,710	<b>\$54,358</b>	<b>\$648</b>	\$74,784	\$74,784	\$73,379	-\$1,406
CN	\$184,859	\$184,859	<b>\$185,119</b>	<b>\$260</b>	\$385,075	\$385,075	\$386,481	<b>\$1,406</b>
<b>Total</b>	<b>\$246,836</b>	<b>\$246,836</b>	<b>\$256,145</b>	<b>\$9,309</b>	<b>\$537,581</b>	<b>\$537,581</b>	<b>\$537,581</b>	<b>\$0</b>

Note: Highlight increases over the Last Approved amount(s) with red text. Positive amounts indicate an increase in cost.

**QUARTERLY REPORT, DECEMBER 2009**

<b>BUDGET COMPARISON (\$ in Thousands)</b>								
'09-11 Expenditures					Total Project Cost			
Phase	'09-11 Budget	Last Approved (09 LEGFIN)	Current Plan	Current - Last Approved	'09-11 Budget	Last Approved (09 LEGFIN)	Est. at Completion	EAC - Last Approved
<b>SR 99/S King St to Lenora St - Central Waterfront Replacement (809936E)</b>								
PE	\$49,000	\$49,000	\$157,781	\$108,781	\$118,916	\$118,916	\$198,586	\$79,670
RW	\$92,331	\$92,331	\$95,850	\$3,520	\$163,322	\$163,322	\$180,995	\$17,673
CN	\$95,912	\$95,912	\$73,000	-\$22,912	\$1,208,429	\$1,208,429	\$1,520,530	\$312,101
<b>Total</b>	<b>\$237,242</b>	<b>\$237,242</b>	<b>\$326,631</b>	<b>\$89,389</b>	<b>\$1,490,667</b>	<b>\$1,490,667</b>	<b>\$1,900,111</b>	<b>\$409,444</b>
<b>SR 99/Viaduct Project - Transit Enhancements and Local Improvements (809936F)</b>								
PE	\$1,119	\$1,119	\$6,629	\$5,510	\$5,398	\$5,398	\$11,340	\$5,942
RW	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CN	\$77,488	\$77,488	\$72,651	-\$4,837	\$96,837	\$96,837	\$111,016	\$14,179
<b>Total</b>	<b>\$78,607</b>	<b>\$78,607</b>	<b>\$79,280</b>	<b>\$673</b>	<b>\$102,235</b>	<b>\$102,235</b>	<b>\$122,356</b>	<b>\$20,121</b>
<b>SR 99/Alaskan Way Viaduct Yesler Way Vicinity - Stabilize Foundation (809936P)</b>								
PE	\$0	\$0	\$0	\$0	\$258	\$258	\$258	\$0
RW	\$0	\$0	\$0	\$0	\$72	\$72	\$72	\$0
CN	\$0	\$0	\$0	\$0	\$3,720	\$3,720	\$3,539	-\$181
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,050</b>	<b>\$4,050</b>	<b>\$3,869</b>	<b>-\$181</b>
<b>SR 99/Alaskan Way Viaduct Demolition and Surface Streets (809936T)</b>								
PE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
RW	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CN	\$0	\$0	\$0	\$0	\$0	\$0	\$290,667	\$290,667
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$290,667</b>	<b>\$290,667</b>
<b>SR 99/Active Traffic Management, Signs, ITS &amp; Software (809936W)</b>								
PE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
RW	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CN	\$16,815	\$16,815	\$16,815	\$0	\$16,815	\$16,815	\$16,815	\$0
<b>Total</b>	<b>\$16,815</b>	<b>\$16,815</b>	<b>\$16,815</b>	<b>\$0</b>	<b>\$16,815</b>	<b>\$16,815</b>	<b>\$16,815</b>	<b>\$0</b>
<b>SR 99/Alaskan Way Viaduct and Seawall - Replacement EIS (809936K)</b>								
PE	\$0	\$0	\$0	\$0	\$17,730	\$17,730	\$17,730	\$0
RW	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CN	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$17,730</b>	<b>\$17,730</b>	<b>\$17,730</b>	<b>\$0</b>
<b>SR 99/Alaskan Way Viaduct and Seawall - Replacement R/W (809936L)</b>								
PE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
RW	\$0	\$0	\$0	\$0	\$48,505	\$48,505	\$48,505	\$0
CN	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$48,505</b>	<b>\$48,505</b>	<b>\$48,505</b>	<b>\$0</b>
<b>SR 99/Alaskan Way Viaduct and Seawall - Replacement Corridor Design (809936M)</b>								
PE	\$2,403	\$2,403	\$2,258	-\$145	\$99,558	\$99,558	\$99,558	\$0
RW	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CN	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$2,403</b>	<b>\$2,403</b>	<b>\$2,258</b>	<b>-\$145</b>	<b>\$99,558</b>	<b>\$99,558</b>	<b>\$99,558</b>	<b>\$0</b>
<i>Note: Highlight increases over the Last Approved amount(s) with red text. Positive amounts indicate an increase in cost.</i>								

<b>Project Total</b>	<b>\$597,267</b>	<b>\$597,267</b>	<b>\$699,521</b>	<b>\$102,254</b>	<b>\$2,400,667</b>	<b>\$2,400,667</b>	<b>\$3,100,667</b>	<b>\$700,152</b>
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QUARTERLY REPORT, DECEMBER 2009

SCHEDULE COMPARISON						
Milestone	09-11 Budget	Current (incl. Pending PCRFS)	Current - '09 Budget (Mos.)	Attained	Comments	
<b>SR 99/S Massachusetts St to Union St - Electrical Line Relocation (809936A)</b>						
Ad	April-08	May-08	1	May 27, 2008	WSDOT has completed Stage 1 scope and turned over to Seattle City Light which is responsible for Transmission Line repair and energization	
OC	November-09	December-09	1			
<b>SR 99/Lenora St to Battery St Tunnel - Earthquake Upgrade (809936B)</b>						
Ad	May-10	N/A	N/A		Project cancelled and funds reprogramed to Central Waterfront Replacement	
OC	January-13	N/A	N/A			
<b>SR 99/Battery St Tunnel - Fire and Safety Improvement (809936C)</b>						
Ad	June-09	N/A	N/A		Project to be rescoped as a maintenance project. Decommissioning planned after Bored Tunnel opening.	
OC	October-17	October-17	N/A			
<b>SR 99/S Holgate St to S King St - Viaduct Replacement (809936D)</b>						
Ad	June-09	March-09	2	March 27, 2009	Stage 1 Contract	
OC	December-12	September-13	9		NB Elevated Holgate to S. Royal Brougham	
<b>SR 99/S King St to Lenora St - Central Waterfront Replacement (809936E)</b>						
Ad	April-10	March-10	1			
OC	December-15	December-15	0		Tunnel open to Traffic: 12/2015	
<b>SR 99/Viaduct Project - Transit Enhancements and Local Improvements (809936F)</b>						
Ad	October-08	October-08	0	October 27, 2008	4th Avenue Loop Offramp Advertisement	
OC	April-13	December-12	3		by City of Seattle Oct 08	
<b>SR 99/Active Traffic Management, Signs, ITS &amp; Software (809936W)</b>						
Ad	April-09	April-09	0	April 6, 2009	Design Build Contractor has mobilized	
OC	November-10	May-10	7		Substantial Completion F/C for I-5 Sign Scope	
Note: Highlight increases over the Last Approved dates with red text. Positive amounts indicate a delay.						

SUMMARY OF PROJECT HIGHLIGHTS

**DESIGN STRATEGIES & ELEMENTS:**

Governor Gregoire signed SSB 5768 into law calling for a Deep Bored Tunnel alternative along a 1st Avenue alignment. With confirmation of the new program direction, AWV initiated conceptual engineering work for the bored tunnel alternative to support both the Supplemental Draft Environmental Impact Statement - as well as the Request for Qualifications and Request for Proposal for a Design Build contract. The S. Holgate to S. King St. Viaduct Replacement Project modified its design to accommodate the Bored Tunnel alternative and removed the below-grade undercrossing of the BNSF tail track to implement a potentially more efficient design that also allows for a direct connection from Alaskan Way to East Marginal Way. The viaduct structure north of King Street will remain mostly open to traffic during construction of the bored tunnel alternative. In addition, design work culminated in advertisement for the SR99 Intelligent Transportation Systems (ITS) Projects as part of the mitigation strategy for traffic impacts; the Urban Partnership is implementing Active Traffic Management scope on Interstate 5 combined with AWV funding. The Battery Street Tunnel will be mostly open to traffic during construction of the bored tunnel but will be decommissioned in 2017 after the bored tunnel is open to traffic in 2015.

**BUDGET:**

Existing State and Federal funding provided by the 2009 Legislature is \$2.4 billion. Previous estimates for the bored tunnel alternative were \$1.9 billion, however, recent value engineering studies and estimates conducted on the program indicate an estimate-at-completion for the bored tunnel of \$2.0 billion; and for the Moving Forward projects of \$800 million. The \$100 million increase in estimated bored tunnel alternative cost is offset by a like reduction in the estimated cost for the Holgate-to-King Viaduct Replacement Project. The additional \$400 million in funding required to meet project needs will be provided by Toll Revenue bonds. Port of Seattle funding contributions of \$300 million, when received, will be programmed to complete the Alaskan Way Viaduct Demolition and Surface Street Project, which will follow the opening of the bored tunnel alternative to traffic. The total program estimate at completion, including both State and Port of Seattle funding, remains at \$3.1 billion.

**SCHEDULE:**

Electrical Line Relocation from S. Massachusetts St. to Railroad Way S is forecast to be substantially complete in early December and the facility has been turned back to Seattle City Light (SCL). WSDOT is providing support to SCL to repair an oil leak in the north end of the cable in the vicinity of University and Western Avenue. The S. Holgate to S. King Viaduct Replacement Stage 1 is 18% complete. The S. Holgate to S. King St. Viaduct Replacement Stage 2 design removed the undercrossing as described above and will be issuing a re-conformed bid set in February, 2010. On the Bored Tunnel Alternative, the base cost estimate was completed and the CEVP performed. A more efficient alignment was included as an opportunity for the CEVP. Work continues on the Supplemental Draft Environmental Impact Statement with a Record of Decision goal of Spring 2011.

# SR99/ S. Holgate to S. King St. – Viaduct Replacement

**Quarterly Progress Report  
December 2009**

**SR 99 / S. Holgate St. To S. King St. – Viaduct Replacement**

Accomplishments from October 1, 2009 – November 30, 2009

Stage 1 (In Construction)

- Preconstruction Survey and Building Settlement Monitoring has been completed.
- New bike and pedestrian path was opened to the public.
- Completed 26kV duct bank from Station 2+25 to Station 6+13.
- Removed underground storage tank from Port of Seattle property.
- Completed installation of duct bank across East Marginal Way to Pacific Maritime.
- Commenced installation of 26kV duct bank at south end of East Marginal Way.

Stage 2 (In Design)

- Updated railroad relocation plans, including a section that shows vertical and horizontal clearances for poles and utilities, were submitted to Burlington Northern Santa Fe (BNSF) for concurrence based on C-2A decision.
- Detention Exemption was approved by the Washington Department of Fish and Wildlife. Detention vaults under Colorado Avenue S. were removed from the design and the proof and AD plan sets.
- The Railroad Construction and Maintenance agreement with BNSF was approved and signed.
- The project was advertised for construction bids on October 26, 2009.
- Program-wide value engineering (VE) studies were held in November that resulted in recommendations to provide efficiencies and cost savings to the program. These recommendations included the following changes to the Stage 2 contract:
  - Remove the retained cut “U-Tube” and associated bridges that would have spanned over the U-Tube cut.
  - Replace the U-Tube with an elevated structure that will likewise allow for Port traffic to bypass the railroad crossing on Atlantic Street (this will be packaged as a separate contract).
  - Provide for a detour through the WOSCA property.
- Above listed Stage 2 design revisions will be issued in one or more addenda and will delay the bid opening date to March 24, 2010.

Challenges and Opportunities Over the Next 6 Months

- Reaching agreement on Railroad pre-emption at Atlantic Street with the City and BNSF.
- Completing design changes and packaging Final Addenda so Bid opening is not delayed past March 31, 2010.

# SR99/ S. King St. to Lenora St. Central Waterfront Replacement

**Quarterly Progress Report  
December 2009**

**SR 99 / S. King Street to Lenora Street – Central Waterfront Viaduct Replacement**

Accomplishments from October 1, 2009 – November 30, 2009

- Tunnel Corridor
  - In October, the project team held cooperating agency EIS review kickoff meetings with the Port of Seattle and King County; it also completed the first co-lead agency reviews of several discipline reports. During November the project team completed the second round of co-lead and cooperating/interested agency reviews of discipline reports. In the next 60 to 90 days, the team will continue development and co-lead review of SDEIS background information, including summary chapters, the outline, and selected appendices; and receive and utilize a revised EIS design snapshot that is expected to be completed in January 2010.
  - The team has identified preliminary locations of utility conflicts and is preparing to plan for utility relocations along the new alignment option (see below). Additionally, right-of-way and building settlement impacts along this alignment are being addressed.
  - The team met with SUE contractor and identified the first round of pothole locations along 6th Avenue and Thomas Street.
  - The team developed a geometric configuration for the new 6th Avenue tunnel alignment.
  - The team met with ROMA design group and the City to discuss Urban Design plans for Aurora Avenue and cross-street configuration.
  - The team developed south end Preliminary Construction Staging concepts, and updated the right-of-way exhibit that identifies tie-back, staging and acquisition areas.
  - The team selected consultants to provide design services for the South Access and for 1<sup>st</sup> Avenue Ground Improvements, however their scope is being revised given the selection of the new alignment option.
- Alignment
  - Various CEVP and VE workshops have been held during the summer and fall in an effort to maximize efficiencies and achieve cost savings on the bored tunnel alternative. These workshops lead to the selection of a new alignment option that is located along Alaskan Way in the South; transitions to 1<sup>st</sup> Avenue between Columbia and University; is located along 1<sup>st</sup> Avenue from University to Stewart; and then transitions to being located along 6<sup>th</sup> Avenue in the north as it connects to SR 99 at Mercer.
  - The scope of the project has changed with the realignment of the tunnel portal to 6th Avenue. The construction of the detour for SR 99 and the temporary structure on Harrison Street over SR 99 have been removed from the project.
- Request for Proposals (RFP)
  - The Design Schedule continues to be developed and revised as needed to reflect latest strategies for the construction contract packages. The tunnel bore will be design-build; all other packages will be design-bid-build. Each contract will have its own project delivery schedule and budget.
  - The geotechnical investigation program is leading to the development of a Geotechnical Baseline Report. This document is key to risk management on the bored tunnel alternative, and will accompany the RFP.



- Request for Proposals (RFP) (continued)
  - The Bored Tunnel Alternative draft RFP is in review, to include reviews conducted by the City of Seattle. The draft RFP is forecast to be complete in February, at which time the Department will be in consultations with short-listed potential proposers. The final RFP is forecast to be released in June, with proposals due to the Department in October. Award of the design-build contract for the bored tunnel alternative is forecast for January 2011.
  - Four teams submitted Statements of Qualifications (SOQ's) in response Request for Qualifications (RFQ) issued by the department in September. These SOQ's will be evaluated in December.

#### Challenges and Opportunities Over the Next 6 Months

- The analysis of potential effects of settlement on buildings and utilities is ongoing, as is the design of associated mitigation measures. Soil borings are planned to investigate potential for archaeological discovery.
- The EIS schedule is very aggressive and requires significant close coordination with co-lead and cooperating agencies as well as reviewers. With recent modifications to the north and south portals, the SDEIS schedule has slipped. The team is working on a revised SDEIS schedule.

<b>Project:</b> AWW&SRP - SR99 BORED TUNNEL CENTRAL WATERFRONT VIADUCT REPLACEMENT					
<b>Project Status:</b>	PE	<b>Region:</b>	UCO	<b>Report Period:</b>	November 2009
<b>Project Title:</b>	Alaskan Way Viaduct Replacement Project			<b>Presentation Date:</b>	Nov 4, 2009
<b>WIN:</b>	U09936E	<b>Federal Funds CN:</b>	TBD	<b>TPA:</b>	TBD
				<b>Nickel Project:</b>	TBD

PIN #	PIN Title	BMP	EMP	Sub Program
809936E	SR99 King St to Roy – Viaduct Replacement	29.89	32.83	

<b>PE Project Engineer:</b>	Dawn McIntosh	<b>Designer:</b>	Ben Rodenbough, PB America	<b>Project Office:</b>	AWV&SRP
<b>Project Scope/Description:</b>	<p>The existing Alaskan Way Viaduct and Battery Street tunnel will be replaced with a deep bore tunnel, which follows a new alignment under 1<sup>st</sup> Avenue. The project is comprised of a deep bore tunnel containing two stacked roadway decks (northbound traffic on the bottom deck and southbound traffic on the top deck) with cut-n-cover sections at both the south and north ends. The alignment will consist of a minimum of two lanes in each direction. Both the south and north access points will contain fully directional movements connecting with the city surface street grid system.</p>				

	Date Entered	Comments
<b>Scope Change Date &amp; Comments</b>		
<b>Project Objectives:</b>	6/2009	<p>Address structural safety concerns associated with the seismic vulnerability of the existing viaduct.</p> <p>Address traffic safety along the corridor associated with recurrent and incident related congestion</p> <p>Enhance a vital link in the regional transportation system</p>
<b>Accomplishments:</b>	10/2009	<p>PB Task Order CQ: CEVP Round #2 occurred in conjunction with a VE study to further define project elements for potential cost and risk reductions.</p> <p>PB Task Order CL, Cost Account CL.02 Civil, Design: Design Approval Package under development, with Draft due in December 2009. Interchange Plans for approval will not be required as part of the DAP by HQ. However, all known deviations will be required as part of the package approval. The Interchange Plans for approval will be required as part of the DDP for Project Development Approvals to be completed by the respective South and North Access Design Teams.</p> <p>PB Task Order CN Building Surveys. 97% of the building internal surveys have been scheduled. This is 287 of the 295 buildings.</p> <p>PB Task Order CJ Survey base mapping. This work is proceeding on schedule with base maps for the north and south expected by the end of September. \</p> <p>Prepared memo to Jerry Lenzi outlining the current contract packaging proposal.</p>
<b>Current &amp; Upcoming Activities:</b>	11/2009	<p>Task Order CQ: Finalize work efforts associated with the CEVP #2 and associated VE Study. Review and comment on Draft SEIS Discipline Reports</p> <p>Task Order CL, Cost Account CL.02: Enter into final completion of the Design Approval Package, including the Design Parameters, Design Variance Inventory, and Deviations.</p> <p>Need to revise Contract Packaging Notebook to reflect outcome of CEVP and memo to Jerry Lenzi.</p>

Legislative & UCO Milestones	CPMS Baseline Date	Approved Trend Date	Current Forecast
Project definition complete			
Begin Pre-Construction Engineering			
30% PS&E Submittal			
60% PS&E Submittal			
90% PS&E Submittal			

100% PS&E Submittal			
Environmental Documentation Complete			
Right of Way Certification Completed			
Contract Advertisement (Ad Date)			
Contract Bid Opening			
Contract Award			
Contract Execution			
Start of Construction			
Operationally Complete			
Final Contract Completion			

<b>MDL Ad Date:</b>		<b>Ad Date CPMS File:</b>	(Baseline AD)
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<b>Group and Commenter:</b>	<b>Comments</b> <span style="color: green;">GREEN</span> <span style="color: yellow;">YELLOW</span> <span style="color: red;">RED</span> <b>PLEASE NOTE: Use red delineation only if ad date may be affected! If comment is yellow or red you must provide a remedy or course of action after initial comment.</b>		
<b>Design Schedule: Dawn McIntosh</b>	<b>Date:</b>	11-04-09	<span style="color: red;">RED</span>
<b>Design Schedule Comments:</b>	Design Schedule is under development for construction contract packages. The Tunnel bore will be design-build, all other packages will be design-bid-build. Each contract will have its own project delivery schedule and budget.		
<b>Environmental: Angela Freudenstein</b>	<b>Date:</b>	11-24-09	<span style="color: red;">RED</span>
<b>Environmental Comments:</b>	<p>The EIS schedule is very aggressive and requires significant close coordination with co-lead and cooperating agencies as well as reviewers. We are implementing a streamlined strategy to assist with this extensive coordination. The schedule relies heavily on quick reviews, resolving issues quickly and aggressive 106 and ESA consultations. With recent modifications to the north and south portals, the SDEIS schedule has slipped. We are currently working on a revised SDEIS schedule.</p> <p>The team is working to prepare internal and external reviewers for shorter review times (emails, schedule notifications, meetings, etc). Many items (ESA, Section 106) are on the critical path at this time.</p>		
<b>Env-Hydraulics &amp; Water: Commenter</b>	<b>Date:</b>		
<b>Env-Hydraulics &amp; Water Comments:</b>			
<b>Env-Permits: Adam Gale/Heather Page</b>	<b>Date:</b>	11-24-09	<span style="color: red;">RED</span>
<b>Env-Permits Comments:</b>	<p><b>Bored Tunnel RFP:</b> Awaiting south portal location and tunnel alignment decision before proceeding with agency coordination. If the alignment occurs within the shoreline (within 200 feet from the shoreline) a Shoreline Substantial Development Permit from the City will be required.</p> <p>Follow-up meeting required with Ecology to determine if NPDES General(s) or NPDES Individual is required. NPDES Individual could cause significant delay in the DB's ability to start construction. Obtained feedback from King County and DPD on the wastewater permit/authorization and noise variance conditions for inclusion in the RFP. Received DRAFT Street Use Permit conditions from SDOT and working with AWW team and SDOT to resolve concerns and discrepancies.</p> <p><b>North Portal:</b> Same as above.</p>		
<b>Env-Biology/ESA: Angela Freudenstein</b>	<b>Date:</b>	11-24-09	<span style="color: yellow;">YELLOW</span>

<p><b>Group and Commenter:</b></p>	<p><b>Comments</b> <span style="float: right;"><b>GREEN</b> <b>YELLOW</b> <b>RED</b></span>  <b>PLEASE NOTE: Use red delineation only if ad date may be affected! If comment is yellow or red you must provide a remedy or course of action after initial comment.</b></p>		
<p><b>Env-Biology/ESA Comments:</b></p>	<p>ESA consultation has not yet been initiated. We working to finalize Stormwater assumptions. It is likely that this project will be a formal consultation (255 day Services review).</p> <p>We are working with the Services to engage them in early and often reviews of the BA prior to submittal. Design modifications to the north and south portals and corresponding slip in the SDEIS dates, have created a buffer for ESA completion. We are currently working on a revised ESA schedule.</p>		
<p><b>Right of Way: Paul Lacy/Larry Ellington</b></p>	<p><b>Date:</b></p>	<p>10/06/09</p>	<p><b>YELLOW</b></p>
<p><b>Right of Way Plans</b></p>	<p>5 parcels at the north portal and one parcel at the south parcel have been authorized for acquisition. The revised plan in the south, adding the WOSCA parcel, has been approved. We are expecting the revised plan for the north to be approved in early October. A Draft R/W plan for the central section should be available for review in October. This is Yellow because of the issue of acquisition prior to the ROD. An updated ROW acquisition cost estimate is being prepared for CVEP.</p>		
<p><b>Traffic: Mark Bandy</b></p>	<p><b>Date:</b></p>	<p>10/05/09</p>	<p><b>GREEN</b></p>
<p><b>Traffic Comments:</b></p>	<p>Transportation Discipline Report will be out for lead agency review on October 9, 2009. Preliminary traffic volumes and travel times have been shared with Seattle, Port, and King County.</p>		
<p><b>Systems: J. Sims</b></p>	<p><b>Date:</b></p>	<p>10/05/09</p>	<p><b>RED</b></p>
	<p>PB finalizing work on cross sectional systems verification including 3D rendering. PB working on section of tunnel constrained by ramp. PB has completed first draft of Chapter 2 RFP requirements and is conducting an internal review. PB has is finalizing their preliminary plans for tunnel systems. PB has completed construction estimates for systems work. PB addressing system comments on Draft Cross-section Report.</p> <p>PB completed fire size presentation to SFD. PB proposed reducing the design fire size from 200 to 100 MW. Awaiting comments from SFD.</p> <p>Submitted VE responses related to tunnel systems. Responded to SFD conditions in their letter of concurrence with the tunnel design criteria. Conducting meetings with WSDOT stakeholders for concept of operations and design criteria recommendations. Conducted meetings to establish uniform control between the proposed tunnel and existing tunnel systems. Proposal is to have proposed tunnel operate the same as ARINC system recently incorporated for the I-90 tunnels. Developing a plan of action to deal with "proprietary items", "ITS system engineering approach" and "buy America" FHWA requirements. Established RFP reviewers for system sections of Chapter 2. Setting up kickoff meeting for system reviewers.</p>		
<p><b>Utilities: Mark Anderson</b></p>	<p><b>Date:</b></p>	<p>10/07/09</p>	<p><b>YELLOW</b></p>

<b>Group and Commenter:</b>	<b>Comments</b>	<b>GREEN</b>	<b>YELLOW</b>	<b>RED</b>
	<b>PLEASE NOTE: Use red delineation only if ad date may be affected! If comment is yellow or red you must provide a remedy or course of action after initial comment.</b>			
<b>Utilities Comments:</b>	The Ground Improvement team (KPFF) will need to coordinate with SCL to support in place the 115kV Transmission Lines 3 & 4 under Railroad Avenue Ramps by May 2011. Design changes and discussion with SCL indicates that now the transmission lines can be supported without relocation and geotechnical walls can be constructed under them. Ground Improvement contract will have to relocate utilities south of King Street before lid can be placed at street level. Construction sequencing for re-relocation of 115kV and distribution ductbanks on WOSCA needs to be finalized, now part of DB contract. Long suspension of 115kV transmission line at North Portal needs to be confirmed with SCL. Construction substation now part of DB contract, but 26kV lines serving it must be brought to WOSCA site somewhere. PB/Power Engineers investigating whether 230 kV transmission lines can be placed in tunnel for SCL. Inventory prepared for utilities potentially impacted by tunnel settlement, indicates need to reconstruct/retrofit/monitor many along First Avenue alignment. Strategies for protecting in development, meetings with City utilities being held weekly. Much work has been done on settlement of utilities in corridor, risk groupings of "A" and "B" are being developed. Current PB contract will be extended through biennium for Utilities Team to continue working in lieu of separate on-call contracts for each subconsultant.			
<b>Agreements: Rachelle Hein</b>	<b>Date:</b>	10/06/09	<b>RED</b>	
<b>Agreements Comments:</b>	Management level discussions are underway with the City of Seattle on a master utilities agreement, of which some decisions will feed into the RFP.			
<b>Bridge &amp; Structure: Tim Moore</b>	<b>Date:</b>	10/05/09	<b>YELLOW</b>	
<b>Bridge &amp; Structures Comments:</b>	Task CL.03 Structural Design – 26 RFP drawings of bored tunnel liner wall, interior tunnel structure, cut & cover North and South Access to be completed by 11/02. Design, drawings and criteria development at 58% complete. FLAC models checking settlement trough and internal structural forces due to seismic demand displacement. Additional development of seismic design criteria for the bored tunnel and cut & cover tunnel sections is part of this scope to be included in RFP.			
<b>Landscape: Deb Peters</b>	<b>Date:</b>	10/5/09		
<b>Landscape Comments:</b>	Weekly coordination with PB developing visual guidelines. Need further development to provide input on landscape guidelines for RFP. No scoring because no schedule or due date has been received to date.			
<b>Materials/Geotech: Jim Struthers</b>	<b>Date:</b>	10/6/09	<b>YELLOW</b>	
<b>Materials/Geotech Comments:</b>	Phase 2 exploration borings are concluding this week with the exception of one boring with property access issues. Installation of wells for the pumping tests is underway and pumping tests will continue through late October. Requests for structural design parameters are being handled on an as-requested basis with earth pressures, liner design parameters, and settlement calculation delivered to date. Seismic design parameters currently under development. Groundwater modeling for south end dewatering andand FLAC modeling for the BNSF and EBI are underway.			
<b>Constructability: Commenter</b>	<b>Date</b>			
<b>Constructability Comments</b>				
<b>MOT: Commenter</b>	<b>Date</b>			
<b>MOT Comments</b>				
<b>Staging: Commenter</b>	<b>Date</b>			
<b>Staging Comments:</b>				
<b>Local Programs: Commenter</b>	<b>Date:</b>			
<b>Local Programs Comments:</b>				
<b>Budget: Dawn McIntosh</b>	<b>Date:</b>	10/5/09	<b>RED</b>	

<b>Group and Commenter:</b>	<b>Comments</b> <b>PLEASE NOTE: Use red delineation only if ad date may be affected! If comment is yellow or red you must provide a remedy or course of action after initial comment.</b>
<b>Budget Comments:</b>	Budget is under refinement to address VE and CEVP Study results. Intent is to have an updated budget following the mid-Oct CEVP. Note, the PE budget data, below, is for Design (\$108.2M) and EIS (\$15.6M) work orders. Work Order authorization includes \$8M funding authorized for the EIS Work Order

<b>Design Work Order:</b>	XL3238 (Design), XL3460 (EIS)	<b>R/W Work Order:</b>	RW5043
<b>Project Development Budget Summary</b>			

Legislative Final 2009	PE	R/W	CN	TOTAL
Leg. Budget Baseline Pin 1	268,170,000	181,370,000	1,041,130,000	1,490,670,000
Leg. Budget Baseline Pin 2				0
Leg. Budget Baseline Pin 3				0
Leg. Budget Baseline Pin 4				0
Leg. Budget Baseline Total				
	268,170,000	181,370,000	1,041,130,000	1,490,670,000
Production Month End 2009– Month#7	PE	R/W	CN	TOTAL
CPMS Production Win U00937K	15,600,000	0	0	15,600,000
CPMS Production Win U09936E	108,179,063	163,321,711	0	271,500,774
CPMS Production Pin 3				0
CPMS Production Pin 4				0
CPMS Production Total	123,779,063	163,321,711	0	287,100,774
	PE	R/W	CN	TOTAL
Current WO Authorization	55,298,614	14,862,027	0	70,160,641
Actual Expenditures	29,067,571	14,689,192	0	43,756,763
Authorized WO Remaining Balance	26,231,043	172,835	0	26,403,878
% of Current Authorized Spent	52.6%	98.8%	%	
% of Phase Complete	10%	8.0%		
Budget Confidence Level				
Current Estimate at Completion	289,100,000	181,370,000	1,429,530,000	1,900,000,000
Project Balance	1	1	1	3

<b>Construction Project Engineer:</b>		<b>Expected Construction Completion:</b>	
<b>Construction Team Leader:</b>		<b>Estimated Open to Traffic:</b>	

**Scheduling Tasks**

Task #	Task Name	B/L Start	B/L Finish	Sch. Start	Sch. Finish	Act. Finish	% Comp.
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<b>Project:</b> AWV Replacement Project South Access Site & 1 <sup>st</sup> Avenue Preparation					
<b>Project Status:</b> PE		<b>Region:</b> UCO		<b>Report Date:</b> November 2009	
<b>Project Title:</b> AWV Replacement Project South Access Site & 1 <sup>st</sup> Avenue Preparation			<b>Presentation Date:</b> Dec 2, 2009		
<b>WIN:</b> U09901A	<b>Federal Funds CN:</b>	TBD	<b>TPA:</b> TBD	<b>Nickel Project:</b> TBD	

PIN #	PIN Title	BMP	EMP	Sub Program
809936E	SR99 King St to Roy – Viaduct Replacement	29.89	32.83	

<b>PE Project Engineer:</b> Bruce Nebbitt	<b>Designer:</b> KPFF	<b>Project Office:</b> AWV&SRP
<b>Project Scope/Description:</b>	The existing Alaskan Way Viaduct and Battery Street tunnel will be replaced. One of the replacement alternatives is a deep bore tunnel. This project will remove poor soils, protect and relocate utilities, and remove existing building tie backs. This work will be done in advance of the tunnel bore project to minimize the risk of design-build construction schedule delays.	
	<b>Date Entered</b>	<b>Comments</b>
<b>Scope Change Date &amp; Comments</b>	10/16/09	Scope of consultant work finalized, for 25% design phase.
<b>Project Objectives:</b>	10/2009	Advance the design work to define a successful way to accomplish the work and minimize overall program risk.  Bring design to 25% for inclusion in the Draft Tunnel RFP and then complete the design for the tunnel design-builder.
<b>Accomplishments:</b>	11/17/09	10% Design Memo was submitted by the consultant.  Consultant submitted the Draft 25% Report & Plans (Nov. 2009).
<b>Current &amp; Upcoming Activities:</b>	10/22/09 11/19/09	Review and comment on the RFP.  Review and comment on the Draft 25% Report & Plans.  Consultant to submit final Report & Plans(Complete on 12/23/09).  Revisions to RFP section 2.43.

Legislative & UCO Milestones	CPMS Baseline Date	Approved Trend Date	Current Forecast
Project definition complete			
Begin Pre-Construction Engineering	Oct. 08, 2009		
30% PS&E Submittal	Jan. 04, 2010		
60% PS&E Submittal	N/A		
90% PS&E Submittal	N/A		
100% PS&E Submittal	Sept. 7, 2010		
Environmental Documentation Complete (ROD)	Mar. 31, 2011		
Right of Way Certification Completed	Jan. 4, 2011		
Contract Advertisement (Ad Date)	Jan. 12, 2011		
Contract Bid Opening	N/A		
Contract Award	April 2011		
Contract Execution	May 2011		
Start of Construction	May 2011		
Operationally Complete	Dec. 24, 2015		
Final Contract Completion	June 30, 2017		

<b>MDL Ad Date:</b>	<b>Ad Date CPMS File:</b> (Baseline AD)
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<b>Group and Commenter:</b>	<b>Comments</b> <span style="color: green;">GREEN</span> <span style="color: yellow;">YELLOW</span> <span style="color: red;">RED</span> PLEASE NOTE: Use red delineation only if ad date may be affected! If comment is yellow or red you must provide a remedy or course of action after initial comment.
<b>Design Schedule: Jim Farris</b>	<b>Date:</b> 11/19/09 <span style="color: green;">GREEN</span>
<b>Design Schedule Comments:</b>	Consultant is on schedule to complete the 25% report.



<b>Group and Commenter:</b>	<b>Comments</b> <span style="float: right;"><b>GREEN</b> <b>YELLOW</b> <b>RED</b></span>		
	<b>PLEASE NOTE: Use red delineation only if ad date may be affected! If comment is yellow or red you must provide a remedy or course of action after initial comment.</b>		
<b>Environmental:</b>	<b>Date:</b>		
<b>Environmental Comments:</b>			
<b>Env-Hydraulics &amp; Water:</b>	<b>Date:</b>		
<b>Env-Hydraulics &amp; Water Comments:</b>			
<b>Env-Permits:</b>	<b>Date:</b>		
<b>Env-Permits Comments:</b>			
<b>Env-Biology/ESA:</b>	<b>Date:</b>		
<b>Env-Biology/ESA Comments:</b>			
<b>Right of Way: Jim Farris</b>	<b>Date:</b>	11/19/09	<b>GREEN</b>
<b>Right of Way Plans</b>	We do not need to purchase the Triangle Tavern building or move it, but we will need an easement of some kind, either for work associated with temporarily filling the areaway, or possibly subterranean.		
<b>Traffic:</b>	<b>Date:</b>		
<b>Traffic Comments:</b>			
<b>Systems:</b>	<b>Date:</b>		
<b>Utilities:</b>	<b>Date:</b>	10/07/09	<b>YELLOW</b>
<b>Utilities Comments:</b> <b>Mark Anderson</b>	The Ground Improvement team (KPFF) will need to coordinate with SCL to support in place the 115kV Transmission Lines 3 & 4 under Railroad Avenue Ramps by May 2011. Design changes and discussion with SCL indicates that now the transmission lines can be supported without relocation and geotechnical walls can be constructed under them. Ground Improvement contract will have to (protect or) relocate utilities south of King Street before lid can be placed at street level. Construction sequencing for re-relocation of 115kV and distribution ductbanks on WOSCA needs to be finalized, now part of DB contract. Long suspension of 115kV transmission line at North Portal needs to be confirmed with SCL.		
<b>Jim Farris</b>	Consultant KPFF has begun coordinating with private and public utilities.		
<b>Agreements:</b>	<b>Date:</b>		
<b>Agreements Comments:</b>			
<b>Bridge &amp; Structure:</b>	<b>Date:</b>		
<b>Bridge &amp; Structures Comments:</b>			
<b>Landscape:</b>	<b>Date:</b>		
<b>Landscape Comments:</b>			
<b>Materials/Geotech:</b>	<b>Date:</b>		
<b>Materials/Geotech Comments:</b>			
<b>Constructability:</b>	<b>Date</b>	11/19/09	<b>GREEN</b>
<b>Constructability Comments</b> <b>Jim Farris</b>	This work is part of the Direct Bore contract, the contractor will need to interface with both H2K and the South Access projects. Will need to identify all interface issues in the RFP.		
<b>MOT:</b>	<b>Date</b>		
<b>MOT Comments</b>			
<b>Staging:</b>	<b>Date</b>		
<b>Staging Comments:</b>			
<b>Local Programs:</b>	<b>Date:</b>		
<b>Local Programs Comments:</b>			
<b>Budget: Jim Farris</b>	<b>Date:</b>	11/19/09	<b>GREEN</b>
<b>Budget Comments:</b>	The consultant billing will not show up until the next report, at which time the current scope for 25% will be mostly completed. Consultant agreement \$1,304,166.		



<b>Design Work Order:</b> XL3683	<b>R/W Work Order:</b> RW 5109
<b>Project Development Budget Summary</b>	

Legislative 2010 Supplemental	PE	R/W	CN	TOTAL
Leg. Budget Baseline Pin 1	7,800,000	1,00,000	0	8,800,000
Leg. Budget Baseline Pin 2				0
Leg. Budget Baseline Pin 3				0
Leg. Budget Baseline Pin 4				0
Leg. Budget Baseline Total				
	7,800,000	1,00,000	0	8,800,000
Production Month End 2009– Month#7	PE	R/W	CN	TOTAL
CPMS Production Win U09901A	0	0	0	0
CPMS Production Pin 3				0
CPMS Production Pin 4				0
CPMS Production Total	0	0	0	0
	PE	R/W	CN	TOTAL
Current WO Authorization	3,900,000	1,000,000	0	4,900,000
Actual Expenditures	18,731	0	0	18,731
Authorized WO Remaining Balance	3,881,269	1,000,000	0	3,881,269
% of Current Authorized Spent	0.5%	0%		
% of Phase Complete	15%	0%		
Budget Confidence Level				
Current Estimate at Completion	3,900,000	1,000,000		4,900,000
Project Balance	3,881,269	1,000,000		4,881,269

<b>Construction Project Engineer:</b>	TBD	<b>Expected Construction Completion:</b>	
<b>Construction Team Leader:</b>	TBD	<b>Estimated Open to Traffic:</b>	

**Scheduling Tasks**

Task #	Task Name	B/L Start	B/L Finish	Sch. Start	Sch. Finish	Act. Finish	% Comp.
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<b>Project:</b> AWV Replacement Project South Access Connection					
<b>Project Status:</b>	PE	<b>Region:</b>	UCO	<b>Report Date:</b>	November 2009
<b>Project Title:</b>	AWV Replacement Project South Access Connection			<b>Presentation Date:</b>	Dec 2, 2009
<b>WIN:</b>	U09904A	<b>Federal Funds CN:</b>	TBD	<b>TPA:</b>	TBD
				<b>Nickel Project:</b>	TBD

PIN #	PIN Title	BMP	EMP	Sub Program
809936E	SR99 King St to Roy – Viaduct Replacement	29.89	32.83	

<b>PE Project Engineer:</b>	Bruce Nebbitt	<b>Designer:</b>	Jacobs/WSDOT	<b>Project Office:</b>	AWV&SRP
<b>Project Scope/Description:</b>	This project will complete the section of at grade and elevated roadways connecting the Holgate to King project to the southern end cut and cover section of the deep bore tunnel approach alternative.				
		<b>Date Entered</b>	<b>Comments</b>		
<b>Scope Change Date &amp; Comments</b>		11/17/09	Scope of work is being reviewed. Scoping effort will support RFP (15% design).		
<b>Project Objectives:</b>		10/23/09	Connect the Holgate to King project to the southern end of the tunnel approach.		
<b>Accomplishments:</b>		11/17/09	Consultant submitted Scope of Work and it is currently being reviewed.		
			Work on staging & sequencing.		
		11/19/09	Submitted comments on RFP section 1 as concerns to this project. – Order of work, contractor shared access.		
<b>Current &amp; Upcoming Activities:</b>		11/19/09	Review RFP for possible alignment revision and update interface coordination between South Access and tunnel design-build contract.		
		11/19/09	Continue working on staging & sequencing concepts.		
			Finalize scope, negotiate hours, hold kickoff meeting.		

Legislative & UCO Milestones	CPMS Baseline Date	Approved Trend Date	Current Forecast
Project definition complete			
Begin Pre-Construction Engineering	Nov. 01, 2009		
30% PS&E Submittal			
60% PS&E Submittal			
90% PS&E Submittal			
100% PS&E Submittal	Aug. 19, 2013		
Environmental Documentation Complete	Mar. 31, 2011		
Right of Way Certification Completed	Oct. 21, 2013		
Contract Advertisement (Ad Date)	Nov. 04, 2013		
Contract Bid Opening	Dec. 18, 2013		
Contract Award	Feb. 20, 2014		
Contract Execution	Mar. 12, 2014		
Start of Construction	Mar. 20, 2014		
Operationally Complete	Dec. 28, 2015		
Final Contract Completion	May 31, 2016		

<b>MDL Ad Date:</b>		<b>Ad Date CPMS File:</b>	(Baseline AD)
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<b>Group and Commenter:</b>	<b>Comments</b> <span style="color: green;">GREEN</span> <span style="color: yellow;">YELLOW</span> <span style="color: red;">RED</span> PLEASE NOTE: Use red delineation only if ad date may be affected! If comment is yellow or red you must provide a remedy or course of action after initial comment.
<b>Design Schedule: Commenter</b>	<b>Date:</b>
<b>Design Schedule Comments:</b>	
<b>Environmental: Commenter</b>	<b>Date:</b>
<b>Environmental Comments:</b>	

<b>Group and Commenter:</b>	<b>Comments</b>			<b>GREEN</b>	<b>YELLOW</b>	<b>RED</b>
	PLEASE NOTE: Use red delineation only if ad date may be affected! If comment is yellow or red you must provide a remedy or course of action after initial comment.					
Env-Hydraulics & Water: Commenter	Date:					
Env-Hydraulics & Water Comments:						
Env-Permits: Commenter	Date:					
Env-Permits Comments:						
Env-Biology/ESA: Commenter	Date:					
Env-Biology/ESA Comments:						
Right of Way: Jim Farris	Date:	11/19/09		<b>GREEN</b>		
Right of Way Plans	There is a \$100,000 place holder for Right of Way but there are no actual dollars budgeted for R/W.					
Traffic: Commenter	Date:					
Traffic Comments:						
Systems: Commenter	Date:					
Utilities: Commenter	Date:					
Utilities Comments:						
Agreements: Commenter	Date:					
Agreements Comments:						
Bridge & Structure: Commenter	Date:					
Bridge & Structures Comments:						
Landscape: Commenter	Date:					
Landscape Comments:						
Materials/Geotech: Commenter	Date:					
Materials/Geotech Comments:						
Constructability: Commenter	Date:					
Constructability Comments:						
MOT: Commenter	Date:					
MOT Comments:						
Staging: Commenter	Date:					
Staging Comments:						
Local Programs: Commenter	Date:					
Local Programs Comments:						
Budget: Commenter	Date:					
Budget Comments:						

<b>Design Work Order:</b>	XL3685	<b>R/W Work Order:</b>	
<b>Project Development Budget Summary</b>			

Legislative 2010 Supplemental	PE	R/W	CN	TOTAL
Leg. Budget Baseline Pin 1	22,300,000	0	112,800,000	135,100,000
Leg. Budget Baseline Pin 2				
Leg. Budget Baseline Pin 3				
Leg. Budget Baseline Pin 4				
Leg. Budget Baseline Total	22,300,000	0	112,800,000	135,100,000

Legislative 2010 Supplemental Production Month End 2009– Month#7	PE	R/W	CN	TOTAL
	PE	R/W	CN	TOTAL
CPMS Production Win U09904A	22,300,000			22,300,000
CPMS Production Win U09936E				
CPMS Production Pin 3				
CPMS Production Pin 4				
CPMS Production Total	22,300,000			22,300,000
	PE	R/W	CN	TOTAL
Current WO Authorization	9,300,000	0	0	9,300,000
Actual Expenditures	20707	0	0	20707
Authorized WO Remaining Balance	9,279,293	0	0	9,279,293
% of Current Authorized Spent	0.2%			
% of Phase Complete	0%			
Budget Confidence Level				
Current Estimate at Completion				
Project Balance	22,279,293			

Construction Project Engineer:	TBD	Expected Construction Completion:	05/3/16
Construction Team Leader:	TBD	Estimated Open to Traffic:	12/31/15

**Scheduling Tasks**

Task #	Task Name	B/L Start	B/L Finish	Sch. Start	Sch. Finish	Act. Finish	% Comp.
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<b>Project:</b> AWW & SRP Contract ND – North Access Utility Relocation					
<b>Project Status:</b>	PE	<b>Region:</b>	AWV	<b>Report Date:</b>	November 2009
<b>Project Title:</b>	Viaduct project, North Access Detour			<b>Presentation Date:</b>	
<b>WIN:</b>	U09906A	<b>Federal Funds CN:</b>	TBD	<b>TPA:</b>	TBD
				<b>Nickel Project:</b>	N/A

PIN #	PIN Title	BMP	EMP	Sub Program
809936E	SR99/S King St to Lenora St, Central Waterfront Viaduct Replacement	SR 99	SR 99	

<b>PE Project Manager:</b>	Kirk Wilcox, PE	<b>Designer:</b>	WSDOT	<b>Project Office:</b>	588124
<b>Project Scope/Description:</b>	Relocation of utilities in preparation for construction of the North Access Connection of SR 99 to the bored tunnel along 6 <sup>th</sup> Avenue.				

Scope Change Date & Comments	Date Entered	Comments
	11/25/09	The scope of the project changed with the realignment of the tunnel portal to 6 <sup>th</sup> Avenue. The construction of the detour for SR 99 and the temporary structure on Harrison Street over SR 99 have been removed from the project.
<b>Project Objectives:</b>		
<b>Accomplishments:</b>	11/24/09	<ul style="list-style-type: none"> <li>- Identified preliminary location for utility conflicts</li> <li>- Met with SUE contractor and identified 1<sup>st</sup> round of pothole locations along 6<sup>th</sup> and Thomas St.</li> <li>- Setup meeting with City utilities to discuss new alignment and impacts</li> </ul>
<b>Current &amp; Upcoming Activities:</b>		<ul style="list-style-type: none"> <li>- Complete detailed PE schedule</li> <li>- Complete survey request for utility location on Taylor Ave and cross streets</li> <li>- Prepare Work Plans (Project Management Plans)</li> </ul>

Legislative & UCO Milestones	CPM Baseline Date	Approved Trend Date	Pending Trend Date
Project definition complete			
Begin Pre-Construction Engineering	Oct 2009		
30% PS&E Submittal			
60% PS&E Submittal			
90% PS&E Submittal			
100% PS&E Submittal			
Environmental Documentation Complete			
Right of Way Certification Completed			
Contract Advertisement (Ad Date)	Jan 2011		
Contract Bid Opening			
Contract Award			
Contract Execution			
Start of Construction	Apr 2011		
Operationally Complete			
Final Contract Completion			

<b>MDL Ad Date:</b>		<b>Ad Date CPMS File:</b>	(Baseline AD) April
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Group and Commenter:	Comments	GREEN	YELLOW	RED
<b>Design Schedule: Jason Biggs</b>	<b>Date:</b> 11/24/09	GREEN		
<b>Design Schedule Comments:</b>	Preparing draft Design schedule, submit December 1 <sup>st</sup> .			
<b>Environmental:</b>	<b>Date:</b>	GREEN		
<b>Environmental Comments:</b>				
<b>Env-Hydraulics &amp; Water:</b>	<b>Date:</b>	GREEN		
<b>Env-Hydraulics &amp; Water Comments:</b>				
<b>Env-Permits:</b>	<b>Date:</b>	GREEN		

Group and Commenter:	Comments			GREEN	YELLOW	RED
Env-Permits Comments:	Permits list being developed					
Env-Biology/ESA:	Date:					
Env-Biology/ESA Comments:						
Right of Way:	Date:		GREEN			
Right of Way Comments:						
Traffic:	Date:		GREEN			
Traffic Comments:						
Utilities: Jason Biggs	Date:	11/24/09	GREEN			
Utilities Comments:	<p>Developing list of impacted utilities for North Access project area. Need to work with Mark Anderson on format of information for City Preliminary Engineering Funding Utility agreement.</p> <p>Meeting has been established with the City to discuss change in alignment and anticipated utility impacts.</p>					
Agreements:	Date:	11/24/09	GREEN			
Agreements Comments:	Developing list of anticipated utility agreements for North Access project area.					
Bridge & Structure:	Date:		GREEN			
Bridge & Structures Comments:						
Landscape:	Date:					
Landscape Comments:						
Materials/Geotech:	Date:		GREEN			
Materials/Geotech Comments:						
Constructability:	Date:		GREEN			
Constructability Comments:						
MOT:	Date:					
MOT Comments:						
Staging	Date:		GREEN			
Staging Comments:						
Local Programs:	Date:					
Local Programs Comments:						
Budget: Don Bullard	Date:	11/24/09	GREEN			
Budget Comments:	WIN & PE Work Order created.					

Design Work Order:	XL-3686	R/W Work Order:	TBD
<b>Project Development Budget Summary</b>			

Legislative Sup. 2010	PE	R/W	CN	TOTAL
Leg. Budget Baseline Pin 1	5,000,000	46,000,000	6,800,000	57,800,000
Leg. Budget Baseline Pin 2				
Leg. Budget Baseline Pin 3				
Leg. Budget Baseline Pin 4				
Leg. Budget Baseline Total	5,000,000	46,000,000	6,800,000	57,800,000
<b>Production Month End 2010 – Month 04</b>				
	PE	R/W	CN	TOTAL
CPMS Production Pin 1	5,000,000	46,000,000	6,800,000	57,800,000
CPMS Production Pin 2				
CPMS Production Pin 3				
CPMS Production Pin 4				
CPMS Production Total	5,000,000	46,000,000	6,800,000	57,800,000
	PE	R/W	CN	TOTAL
Current WO Authorization	2,000,000	0	0	2,000,000
Actual Expenditures	12,683	0	0	12,683

Legislative Sup. 2010	PE	R/W	CN	TOTAL
Authorized WO Remaining Balance	2,000,000	0	0	2,000,000
% of Current Authorized Spent	0.6%	%	%	
% of Phase Complete	0.5%			
Budget Confidence Level	<b>GREEN</b>			
Current Estimate at Completion	5,000,000	46,000,000	6,800,000	57,800,000
Project Balance	4,987,317	46,000,000	6,800,000	57,787,317

Construction Project Engineer:	Dave Lindburg	Expected Construction Completion:	
Construction Team Leader:		Estimated Open to Traffic:	

Scheduling Tasks

Task #	Task Name	B/L Start	B/L Finish	Sch. Start	Sch. Finish	Act. Finish	% Comp.
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<b>Project: AWW &amp; SRP Contract NA – North Access Connection</b>					
<b>Project Status:</b>	PE	<b>Region:</b>	AWV	<b>Report Date:</b>	November 2009
<b>Project Title:</b>	Viaduct project, North Access Connection			<b>Presentation Date:</b>	
<b>WIN:</b>	U09907A	<b>Federal Funds CN:</b>	TBD	<b>TPA:</b>	TBD
				<b>Nickel Project:</b>	N/A

PIN #	PIN Title	BMP	EMP	Sub Program
809936E	SR99/S King St to Lenora St, Central Waterfront Viaduct Replacement	SR 99	SR 99	

<b>PE Project Manager:</b>	Kirk Wilcox, PE	<b>Designer:</b>	WSDOT	<b>Project Office:</b>	588124
<b>Project Scope/Description:</b>	This Contract constructs the SR99 mainline and ramps starting at the North Tunnel Portal area and extending north to where it joins SR99 at Mercer Street. This contract also includes on and off ramps at Republican Street and the extension of 6 <sup>th</sup> Ave to Mercer St.				

	Date Entered	Comments
<b>Scope Change Date &amp; Comments</b>	11/24/09	The scope has been revised to include: <ul style="list-style-type: none"> <li>- Revision of the tunnel alignment to 6<sup>th</sup> Ave</li> <li>- New geometric roadway configuration connecting SR 99 from the tunnel to the Mercer St overcrossing.</li> <li>- Reduction of right of way impacts</li> </ul>
<b>Project Objectives:</b>		
<b>Accomplishments:</b>	11/24/09	<ul style="list-style-type: none"> <li>- Developed geometric configuration for new 6<sup>th</sup> Ave tunnel alignment.</li> <li>- Developed Preliminary Construction Staging Drawings</li> <li>- Updated R/W exhibit identifying tie-back, staging, and acquisition areas</li> <li>- Met with ROMA design group and City to discuss Urban Design plans for Aurora Ave. and cross street configuration.</li> </ul>
<b>Current &amp; Upcoming Activities:</b>		<ul style="list-style-type: none"> <li>- Submit Work Plans on 12/1/09</li> <li>- Complete detailed PE schedule</li> <li>- Refine Geometrics for ramp connections and 6<sup>th</sup> Ave.</li> <li>- Update base mapping limits for new alignment.</li> <li>- Prepare select EIS snapshot plans and RPF plans</li> </ul>

Legislative & UCO Milestones	CPM Baseline Date	Approved Trend Date	Pending Trend Date
Project definition complete			
Begin Pre-Construction Engineering	Oct 2009		
30% PS&E Submittal			
60% PS&E Submittal			
90% PS&E Submittal			
100% PS&E Submittal			
Environmental Documentation Complete			
Right of Way Certification Completed			
Contract Advertisement (Ad Date)			
Contract Bid Opening			
Contract Award	Jul 2012		
Contract Execution			
Start of Construction			
Operationally Complete			
Final Contract Completion			

<b>MDL Ad Date:</b>		<b>Ad Date CPMS File:</b>	(Baseline AD) April
---------------------	--	---------------------------	---------------------

Group and Commenter:	Comments	GREEN	YELLOW	RED
<b>Design Schedule: Jason Biggs</b>	<b>Date:</b> 11/24/09		<b>YELLOW</b>	
<b>Design Schedule Comments:</b>	Preparing draft Design schedule and Work plan, submit December 1 <sup>st</sup> .			
<b>Environmental: Jason Biggs</b>	<b>Date:</b> 11/24/09		<b>YELLOW</b>	



Group and Commenter:	Comments	GREEN	YELLOW	RED
<b>Environmental Comments:</b>	Working with environmental group to discuss impacts to scope and schedule related to new geometric configuration.  Design office to provide updated EIS Snapshot plans for portal area, finals due 1/15/10.			
<b>Env-Hydraulics &amp; Water: Jason Biggs</b>	<b>Date:</b> 11/24/09	GREEN		
<b>Env-Hydraulics &amp; Water Comments:</b>	CH2MHill under contract to provide Draft TSL for corridor stormwater 12/31/09			
<b>Env-Permits: Jason Biggs</b>	<b>Date:</b> 10/6/09	GREEN		
<b>Env-Permits Comments:</b>	Permits list being developed			
<b>Env-Biology/ESA: TBD</b>	<b>Date:</b>			
<b>Env-Biology/ESA Comments:</b>				
<b>Right of Way: Jason Biggs</b>	<b>Date:</b> 11/24/09	GREEN		
<b>Right of Way Comments:</b>	Working with Larry on R/W needs and schedule. Will follow-up with Heather Page on Street Use permit for structure demolition conditions and timelines.  Need to update limits of limited access for new configuration.			
<b>Traffic:</b>	<b>Date:</b>	GREEN		
<b>Traffic Comments:</b>				
<b>Utilities:</b>	<b>Date:</b>	GREEN		
<b>Utilities Comments:</b>				
<b>Agreements: Jason Biggs</b>	<b>Date:</b> 10/6/09	GREEN		
<b>Agreements Comments:</b>	Developing list of anticipated agreements for North Access project area.			
<b>Bridge &amp; Structure: Jason Biggs</b>	<b>Date:</b> 11/24/09	GREEN		
<b>Bridge &amp; Structures Comments:</b>	Identified preliminary structure location and type for new geometric configuration.  Investigating tie-back requirements for shoring/cut walls and potential conflicts with building foundations.			
<b>Landscape:</b>	<b>Date:</b> 11/24/09	GREEN		
<b>Landscape Comments:</b>	Coordination with NW Region Landscape Design. Held preliminary discussion of project work with PE office and Region Design Lead.			
<b>Materials/Geotech: Jason Biggs</b>	<b>Date:</b> 11/24/09	GREEN		
<b>Materials/Geotech Comments:</b>	Developed Surfacing request for SR 99. Need further coordination with City of Seattle on surface street surfacing requirements.			
<b>Constructability: Jason Biggs</b>	<b>Date:</b> 11/24/09	GREEN		
<b>Constructability Comments:</b>	Coordinating with DB team on interface limits between TU and NU/NA contracts. Developed preliminary construction staging plans for NA contract and Mercer Widening.			
<b>MOT:</b>	<b>Date:</b>			
<b>MOT Comments:</b>				
<b>Staging: Jason Biggs</b>	<b>Date:</b> 10/6/09	GREEN		
<b>Staging Comments:</b>	Developed preliminary plans for use during CEVP. Need to review and get buy-in from upper management.			
<b>Local Programs:</b>	<b>Date:</b>			
<b>Local Programs Comments:</b>				
<b>Budget: Don Bullard</b>	<b>Date:</b> 11/23/09	GREEN		
<b>Budget Comments:</b>				

<b>Design Work Order:</b> XL-3687	<b>R/W Work Order:</b> TBD
<b>Project Development Budget Summary</b>	

Legislative Sup. 2010	PE	R/W	CN	TOTAL
Leg. Budget Baseline Pin 1	9,900,000	0	67,700,000	77,600,000
Leg. Budget Baseline Pin 2				
Leg. Budget Baseline Pin 3				
Leg. Budget Baseline Pin 4				
Leg. Budget Baseline Total	9,900,000	0	67,700,000	77,600,000

Legislative Sup. 2010	PE	R/W	CN	TOTAL
Production Month End 200X – Month#	PE	R/W	CN	TOTAL
CPMS Production Pin 1	9,900,000	0	67,700,000	77,600,000
CPMS Production Pin 2				
CPMS Production Pin 3				
CPMS Production Pin 4				
CPMS Production Total	9,900,000	0	67,700,000	77,600,000
	PE	R/W	CN	TOTAL
Current WO Authorization	2,700,000	0	0	2,700,000
Actual Expenditures	23,685	0	0	23,685
Authorized WO Remaining Balance	2,676,315	0	0	2,676,315
% of Current Authorized Spent	1%	%	%	
% of Phase Complete				
Budget Confidence Level	<b>GREEN</b>			
Current Estimate at Completion	9,900,000	0	67,700,000	77,600,000
Project Balance	9,876,315		67,700,00	77,576,315

Construction Project Engineer:	Dave Lindberg	Expected Construction Completion:	
Construction Team Leader:		Estimated Open to Traffic:	

Scheduling Tasks

Task #	Task Name	B/L Start	B/L Finish	Sch. Start	Sch. Finish	Act. Finish	% Comp.
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# **Alaskan Way Viaduct and Seawall Replacement Program**

**Matt Preedy & Linea Laird**

Directors of South, Central and North Projects  
Alaskan Way Viaduct and  
Seawall Replacement Program

**Northwest Region's 2010 Design-Construction Conference  
Shoreline, WA  
Feb. 23, 24, 2010**



**Washington State  
Department of Transportation**



# Agenda

- 2008 / 2009 activities
- Program overview – scope, schedule, budget
- Importance of CEVP and VE processes
- Construction coordination
- Begin removing the southern mile of the viaduct – Holgate to King
- Advancing proposed bored tunnel design
- Risk management







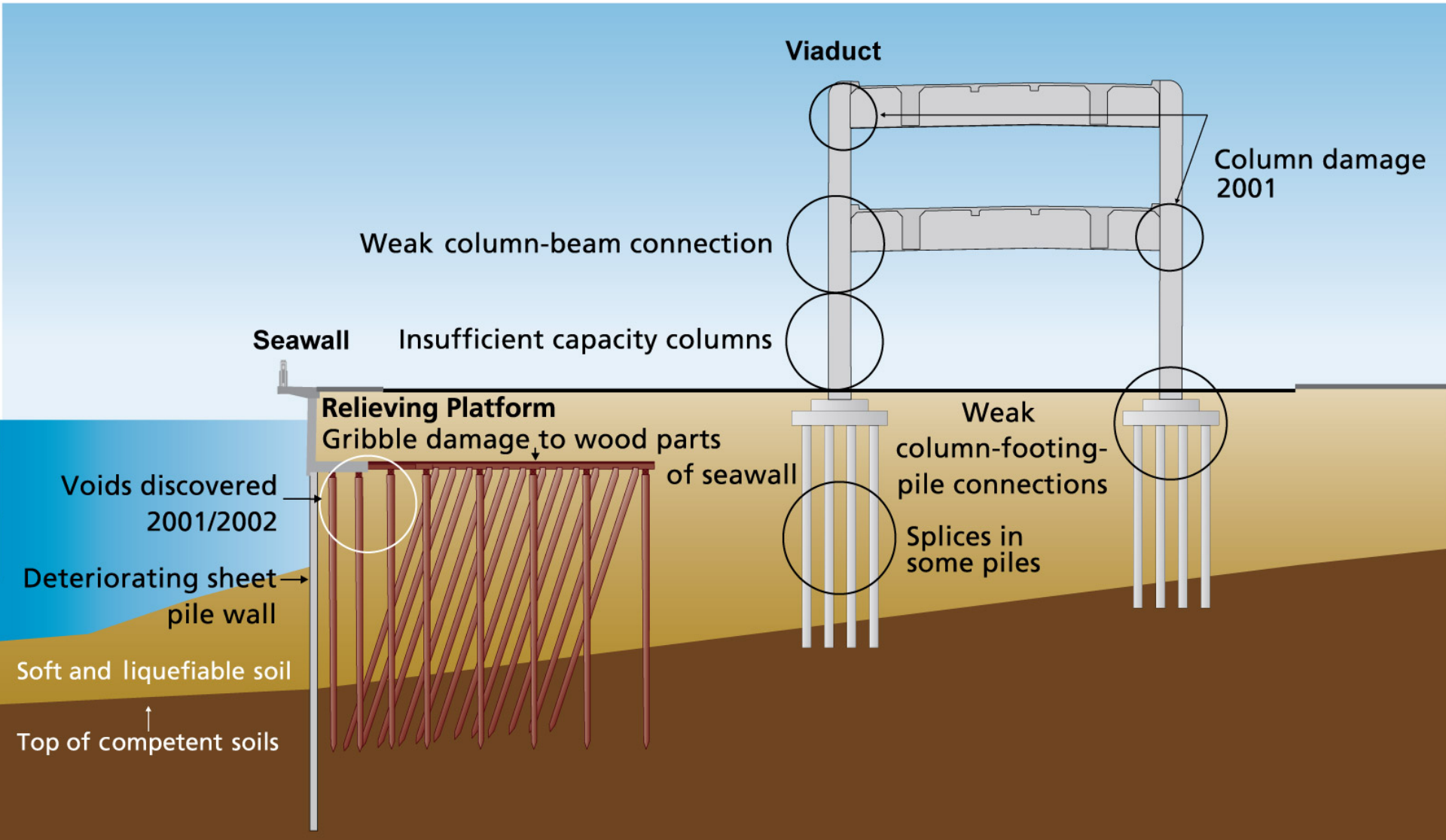
# Replacing the Alaskan Way Viaduct







# Replacing the Viaduct and Seawall



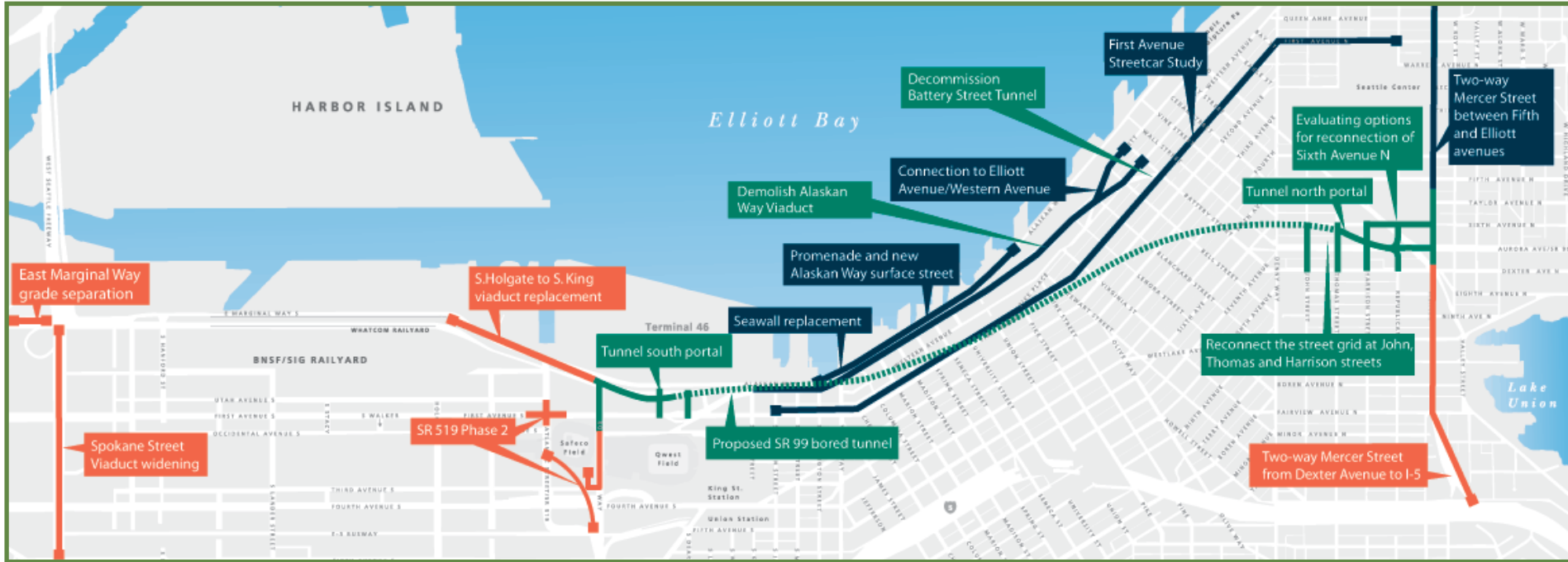


# 2009 - 2010 Milestones

- January 2009: Governor, County Executive Mayor and Port CEO recommended replacing viaduct with a bored tunnel.
- April 2009: Legislature passed a funding bill for the bored tunnel.
- June 2009: Holgate to King Stage 1 began.
- October 2009: Governor and Seattle Mayor signed a Memorandum of Agreement endorsing the bored tunnel.
- December 2009: Completed Electrical Line Relocation Project.
- January 2010: Updated program cost estimates and released tolling report.



# Bored Tunnel Alternative



## Necessary environmental analysis

- Detailed environmental review underway (SDEIS)
- Further environmental review needed
- To be completed before replacing the S. King Street to Battery Street Tunnel section of the viaduct





# Updated Program Cost Estimate

- WSDOT will be managing to the \$3.1 billion program budget, as well as reporting on each project budget.
- Estimate is based on extensive cost and risk workshops, value engineering and design changes.

<b>Project</b>	<b>2009 Cost Estimate (millions)*</b>	<b>2010 Cost Estimate (millions)*</b>
S. Holgate Street to S. King Street viaduct replacement	\$537	\$483
Other Moving Forward projects and prior expenditures	\$363	\$345
SR 99 bored tunnel and systems	\$1,900	\$1,960
Alaskan Way surface street and viaduct removal	\$290	\$290
Central waterfront construction mitigation	\$30	\$30
<b>Total Cost Estimate</b>	<b>\$3,120</b>	<b>\$3,108</b>

\* Estimates reflect year of expenditure dollars.

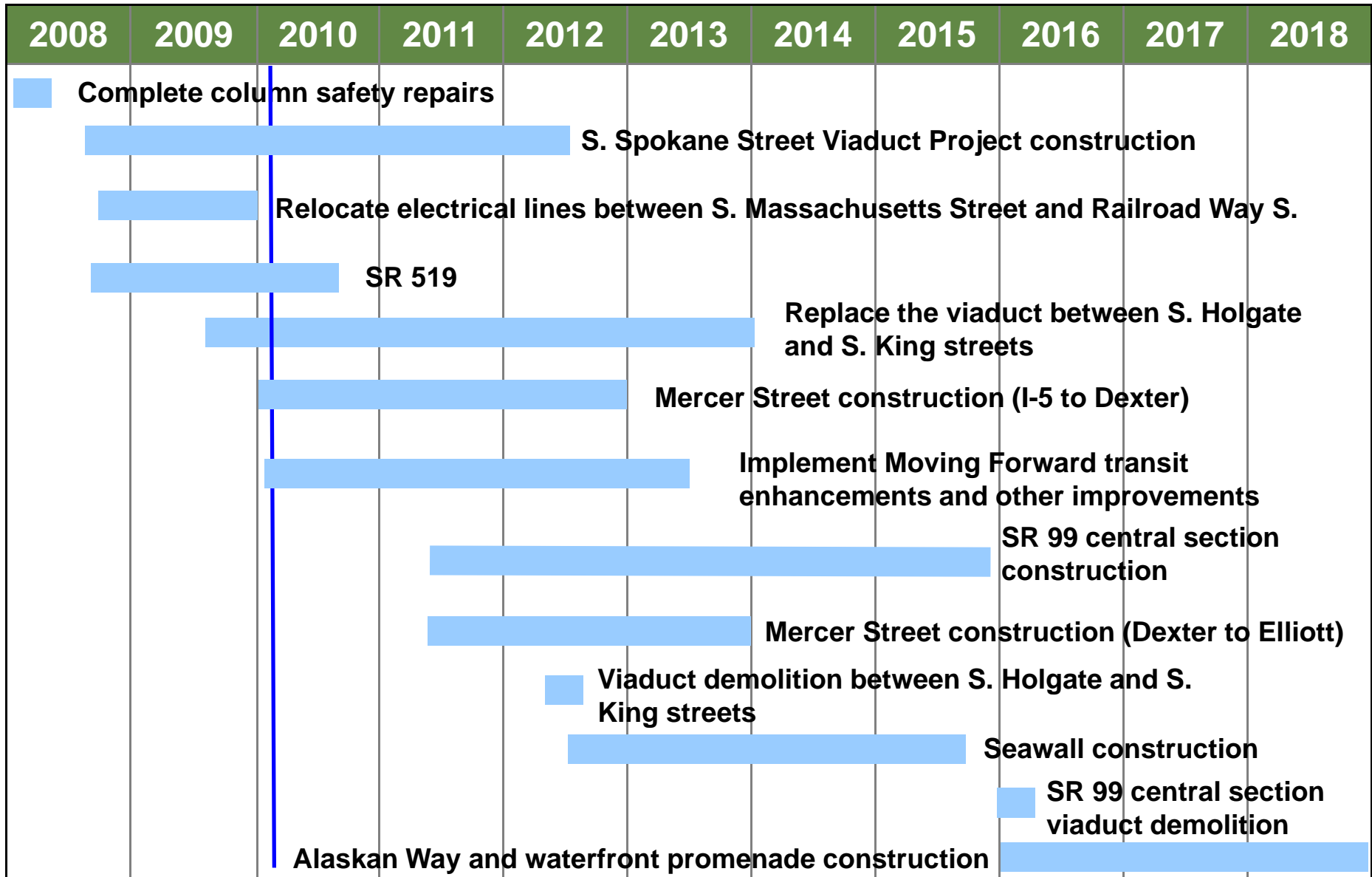


# Cost Estimate Process

- Systematic process for updating project cost estimates and risks.
- WSDOT's Cost Estimate Validation Process (CEVP):
  - Extensive cost and risk workshops. Identified risks such as:
    - Settlement.
    - Building protection.
    - Right of way condemnation potential.
    - Number of contracts.
    - Managing interfaces between contracts
  - Value engineering:
    - North portal location
    - South portal location
    - Tunnel interior
    - Holgate to King simplification
- Checks and balances for program team:
  - Strategic Technical Advisory Team.
  - Independent Cost Estimate Review Team.



# Timeline



# Construction Coordination



# Coordination Partners

- Public agencies working together.
- Identifying potential conflicts.
- Coordinating work to minimize impact to the public.
- Weekly meetings with agency partners and external stakeholders.



**Washington State  
Department of Transportation**



# Long-Term Construction Coordination

- Construction coordination and planning for 6-8 years out.
- Include special events.
- Quarterly updates of project schedules.
- City/State have developed a GIS-based tool to help track and analyze data both geographically and across time.



# Duwamish Area Construction Projects\*

Note: Not all planned construction in this geographical area is shown on the map below.  
This map shows data that is temporal in nature and is updated often to reflect current conditions.



LAST MODIFIED: JANUARY 15, 2010

AWV and Concurrent Projects	2010				2011				2012				2013				2014			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Alaskan Way Viaduct Replacement SR 99 Bored Tunnel (proposed alignment)																				
Alaskan Way Viaduct Replacement S Holgate to S King - Phases 1 and 2																				
Seawall Replacement Project (Note: project north of map extent)																				
Alaskan Way Viaduct Replacement Central Waterfront - King to Battery																				
South Spokane Street Viaduct Widening and 4th Ave EB Off-Ramp																				
East Marginal Way Grade Separation																				
SR 519 Phase 2 South Seattle Intermodal Access																				
SDOT Arterial Asphalt and Concrete Paving Projects																				
SR 99 Spokane Street Overcrossing																				
Jose Rizal Bridge Rehabilitation																				
East Marginal Way at Horton Street Bridge Rehab and Replacement																				
Planned Sporting Events																				



# Short-Term Construction Coordination

- Weekly coordination meetings: WSDOT, SDOT, Seattle City Light and others
- Working together daily to spot and resolve conflicts
- Information feeds communication tools

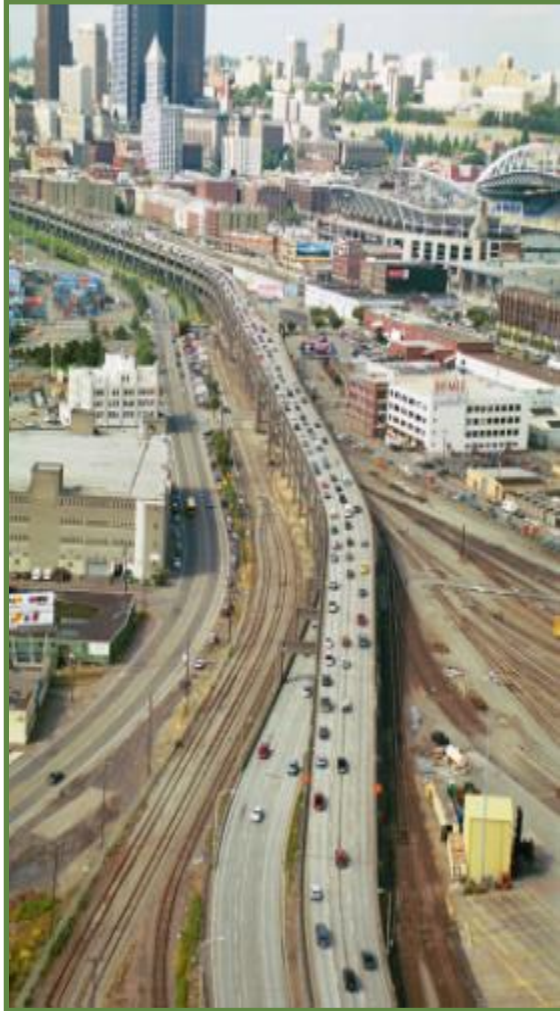




Replacing the South End of the Viaduct  
S. Holgate Street to S. King Street Viaduct  
Replacement Project



# S. Holgate to S. King Viaduct Replacement



## Construction timeline

2009	2010	2011	2012	2013
Preliminary construction				
	Road and bridge construction			

- Replaces nearly half of the existing viaduct.
- Keeps SR 99 traffic moving during replacement of the waterfront section of the viaduct.
- Improves access to Port of Seattle's Terminal 46 and provides a grade-separated crossing.
- Maintains safe pedestrian and bicycle access.
- Provides new access in stadium area.

# S. Holgate to S. King Viaduct Replacement Previous Proposal







# S. Holgate to S. King Viaduct Replacement Current Proposal





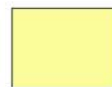
# SR 99 South End Detour



Existing structure demolished



New northbound SR 99 and on-ramp



New city street



Existing structure retained



New southbound SR 99 and off-ramp



Construction area to connect south and central viaduct replacements



# Updated Proposed Holgate to King Cost Estimate

- Estimate is based on a higher level of engineering design, extensive cost and risk identification, value engineering and independent review of estimates.

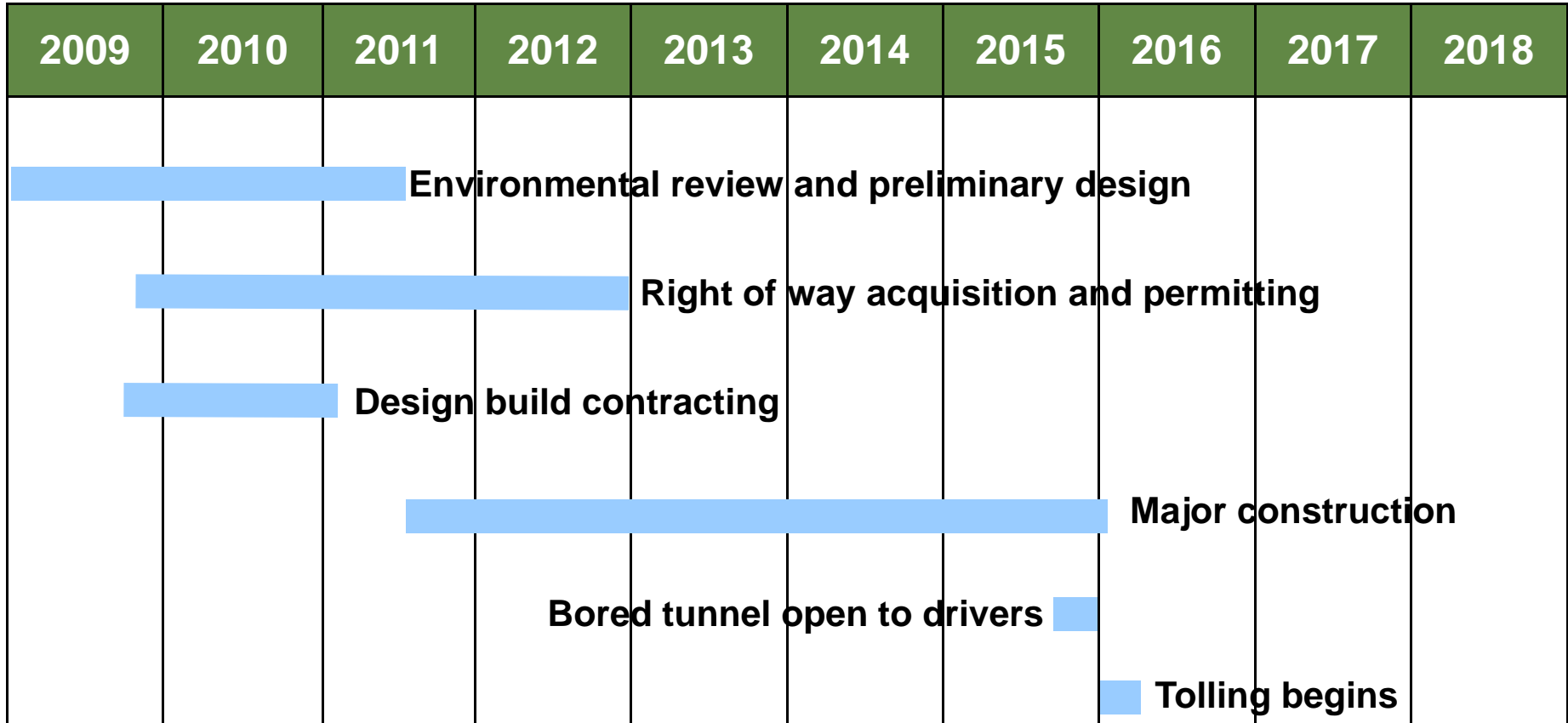
<b>S. Holgate to S. King Viaduct Replacement Project</b>	<b>2009 Cost Estimate (millions)</b>	<b>2010 Updated Cost Estimate (millions)*</b>
Construction	\$385	\$330
Right of way costs	\$75	\$63
Preliminary and final design	\$77	\$90
<b>Total</b>	<b>\$537</b>	<b>\$483</b>

\* All costs are rounded in year of expenditure dollars.

# Central Waterfront Update



# Proposed Bored Tunnel Timeline



\*Assumes Record of Decision (ROD) for the bored tunnel alternative is issued in 2011.



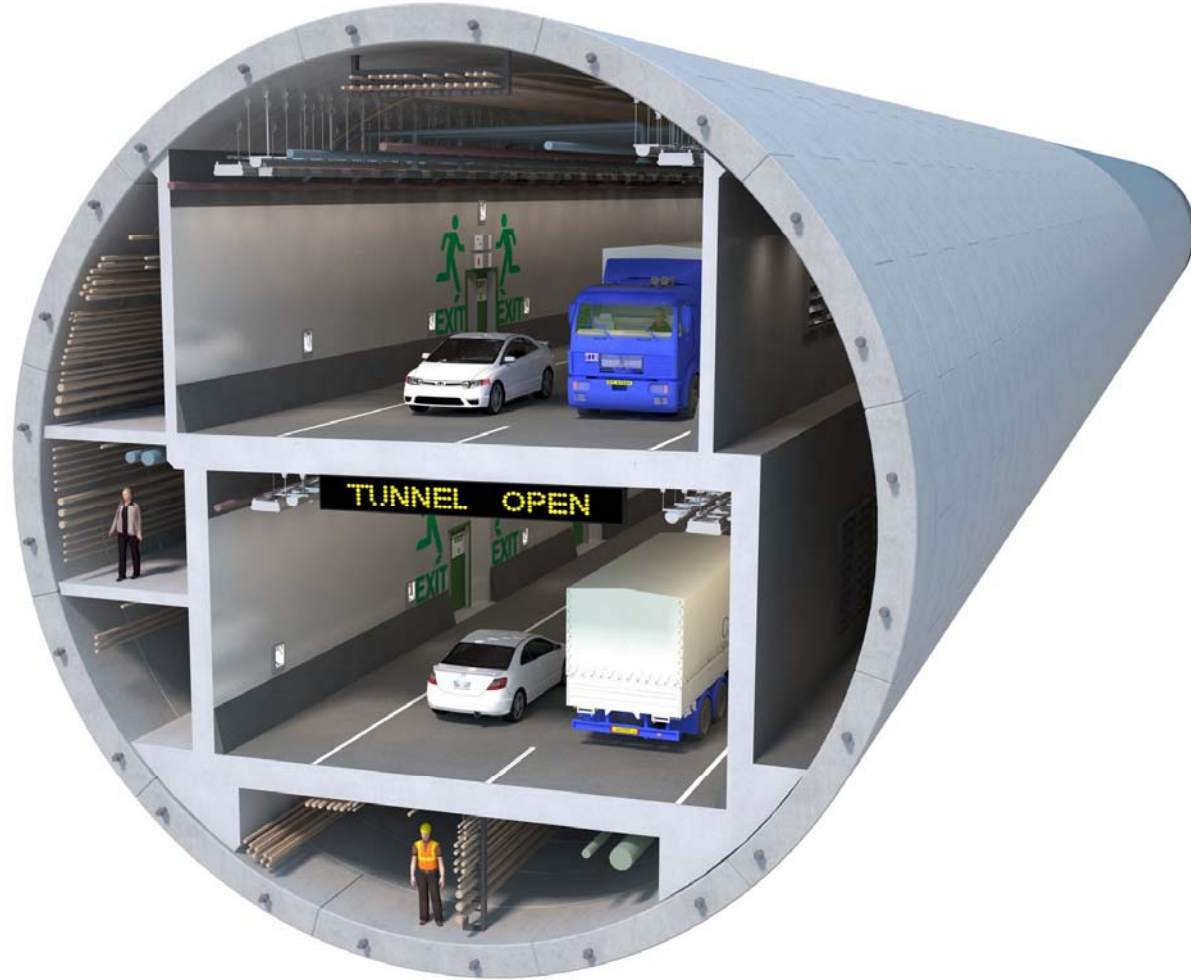


# SR 99 Bored Tunnel Project Contracting Schedule

Issue Request for Qualifications	September 15, 2009
Statement of Qualifications due	November 23, 2009
Notify short-listed submitters	December 23, 2009
Issue draft Request for Proposals	February 2010
Issue final Request for Proposals	May 2010
Proposals Due	Fall 2010
Announce apparent best value	January 2011

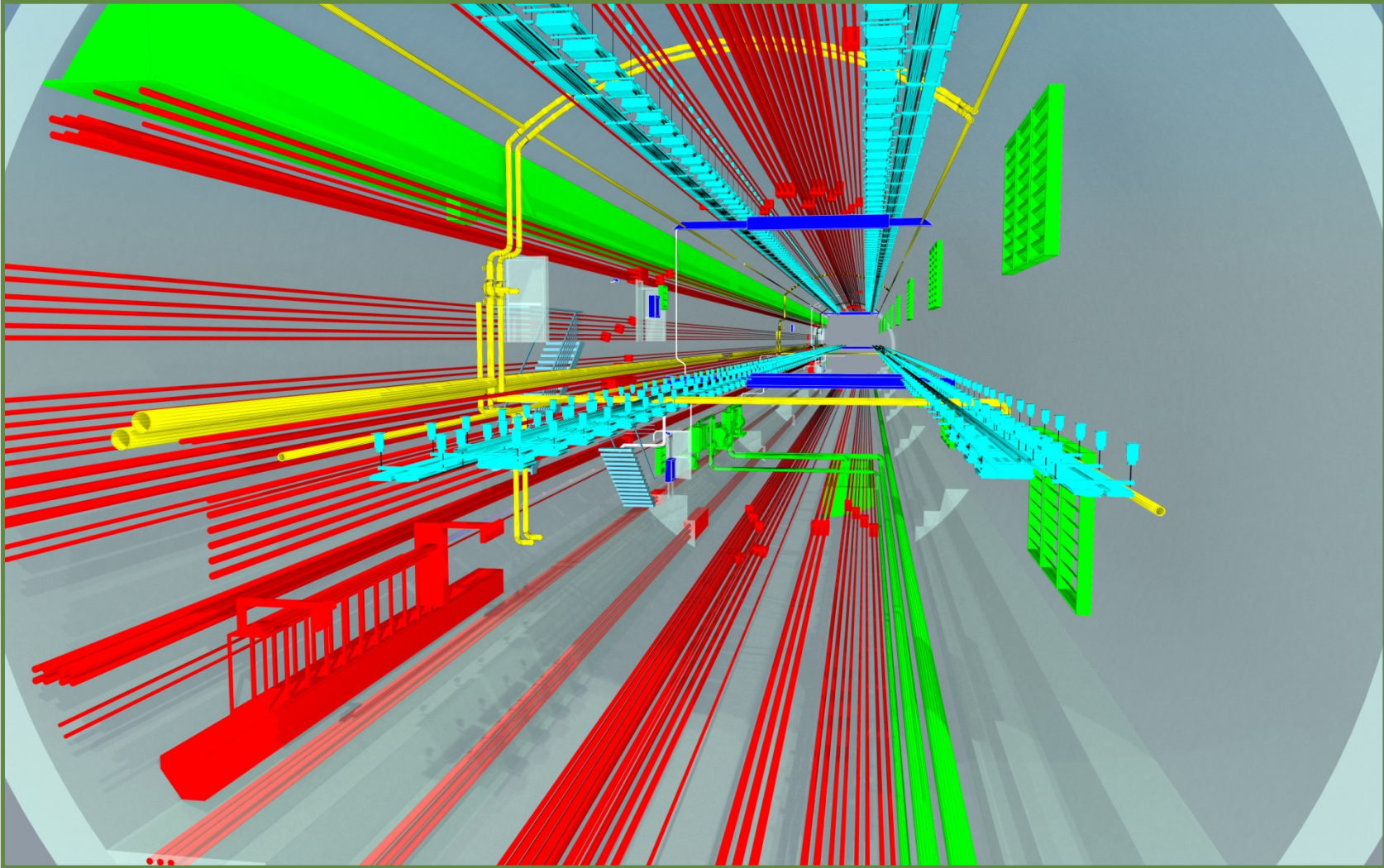


# Tunnel Cross Section



*Early design concept.*

# Tunnel Systems





# Tunneling in Seattle Soils

More than 150 tunnels have been constructed in Seattle since 1890, mostly in glacial soils. Examples of local projects include:

- Sound Transit Beacon Hill
- Denny Way CSO
- King County Brightwater



# Successful Delivery of Bored Tunnel Projects

## Examples of Tunnel Excavation in Urban Areas

1. 4th Elbe River, Hamburg: Successfully excavated 1.6 miles at 46.6-ft-diameter.
2. Lefortovo Tunnel, Moscow: Rebuilt Elbe TBM successfully excavated 2 bores each 1.4 miles long at 46.6-ft-diameter. Same machine refurbished for another 2 tunnels in Moscow.
3. Madrid M30 EPB: Successfully excavated 2 bores each 1.3 miles long at 50-ft-diameter by 2 closed-face TBMs built by different manufacturers. M30 diameter was about 10 ft larger than previous TBMs (~50% greater face area).
4. Shanghai Yangtze River Mixshield: Successfully excavated 2 bores each 4.6 miles long at 50.6-ft-diameter. This TBM is the current record holder for diameter. Tunnel completed about a year ahead of original schedule.

## Pending Record Holder

Moscow Road/Rail Tunnel: A 62-ft-diameter Mixshield has been ordered. This diameter is 11-ft larger than Shanghai TBM, the current record holder.

Elbe Tunnel Slurry Machine



Madrid Calle M30

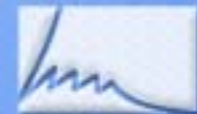
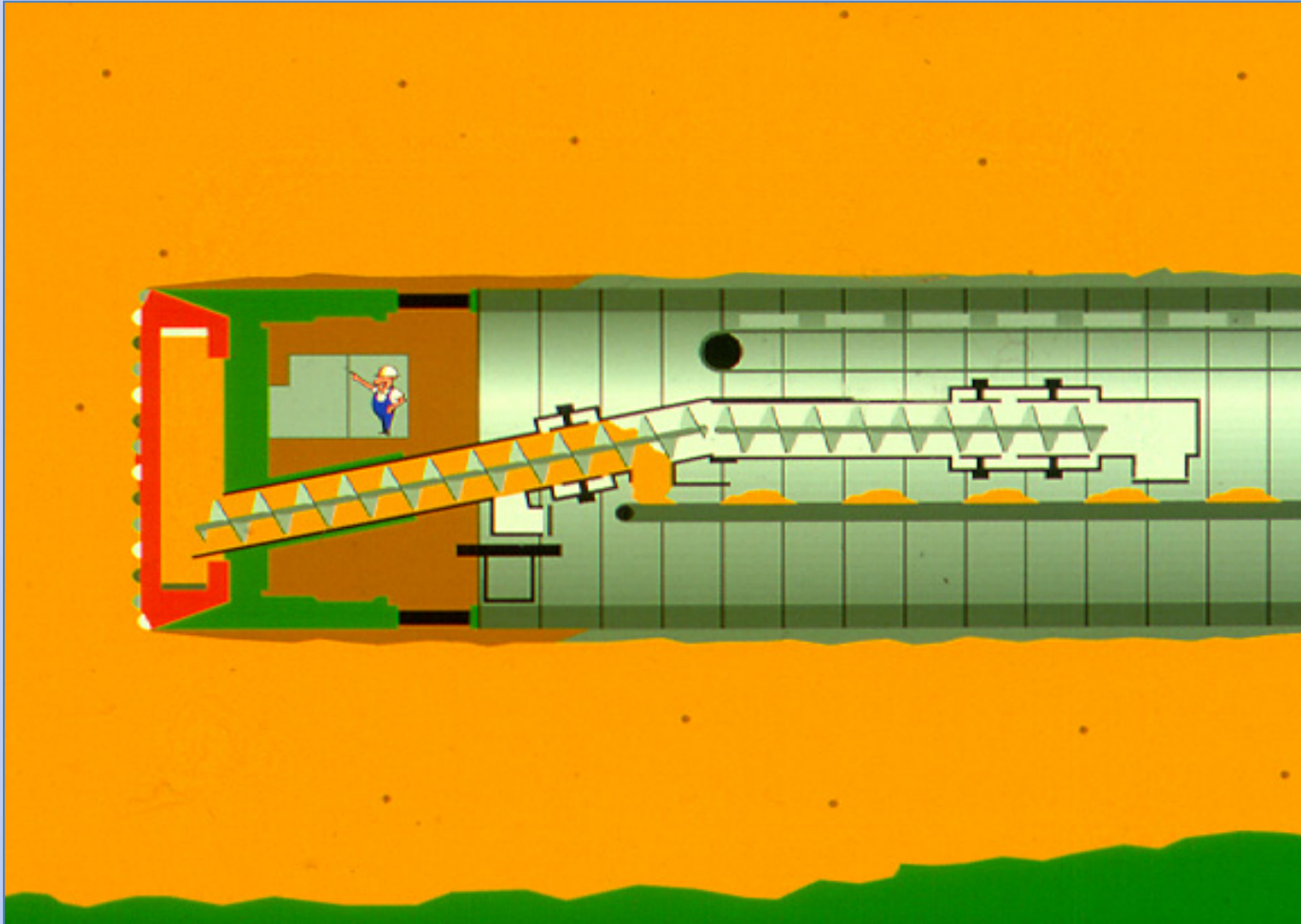


Seven tunnel boring machines will be used in the Madrid Calle 30 project

# CLOSED FACE TBMs

- For use in poor ground conditions, sands, silts, soft clays below the water table
- Replaced the use of compressed air
- Controls the ground and protect the work force while installing the tunnel support.
- Two main types:
  - Slurry
  - Earth Pressure Balance

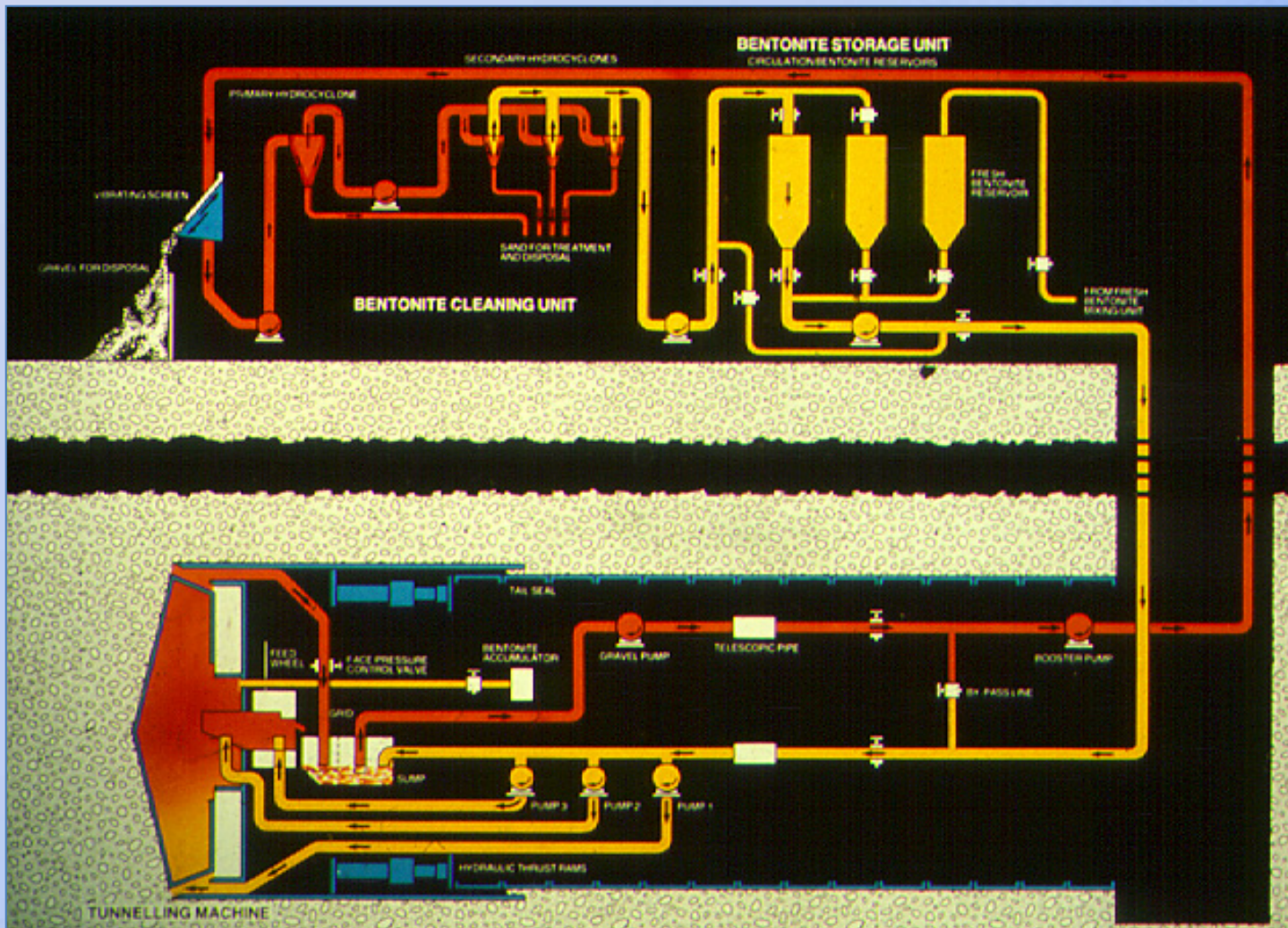
# Diagram of EPBM



Hatch Mott  
MacDonald



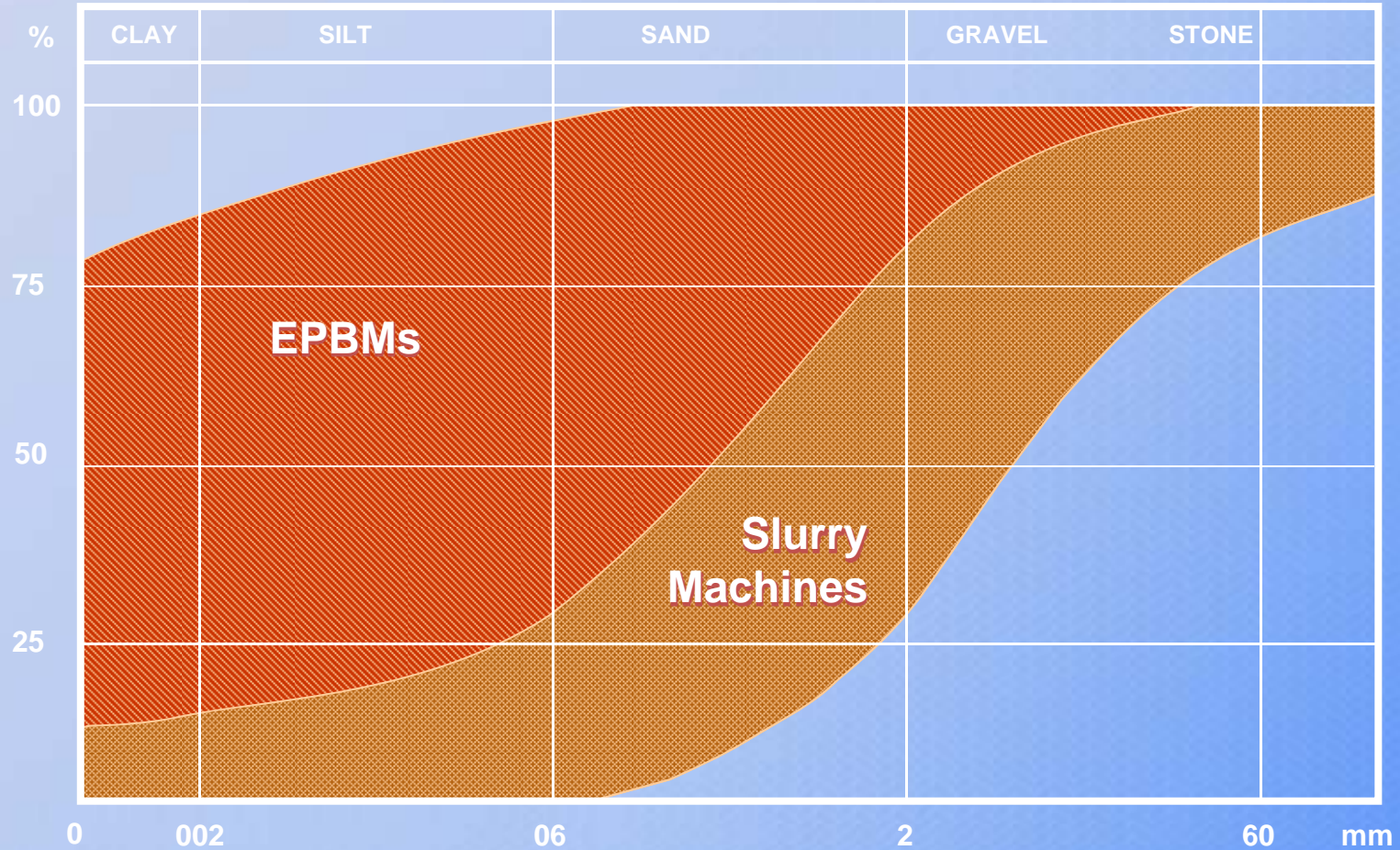
# Slurry Machine Circuit





# Soil Grading Curves

Range of Ground Conditions



# EPBM with Backup at Herrenknecht Factory





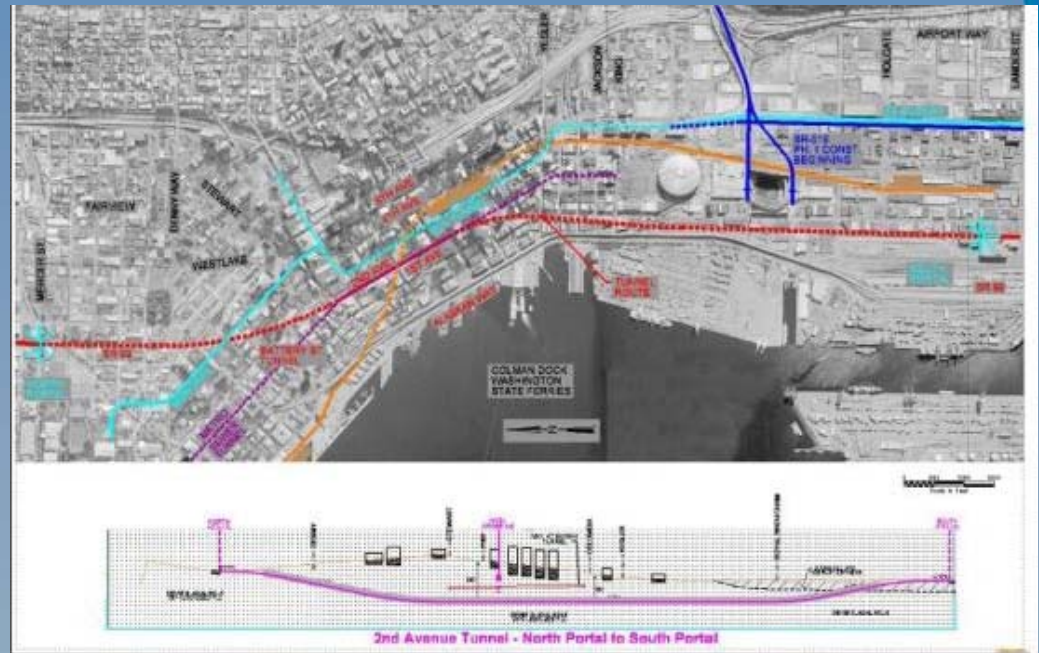
# Alaskan Way Viaduct and Seawall Replacement Program Tunnel Boring Machine Animation September 2009





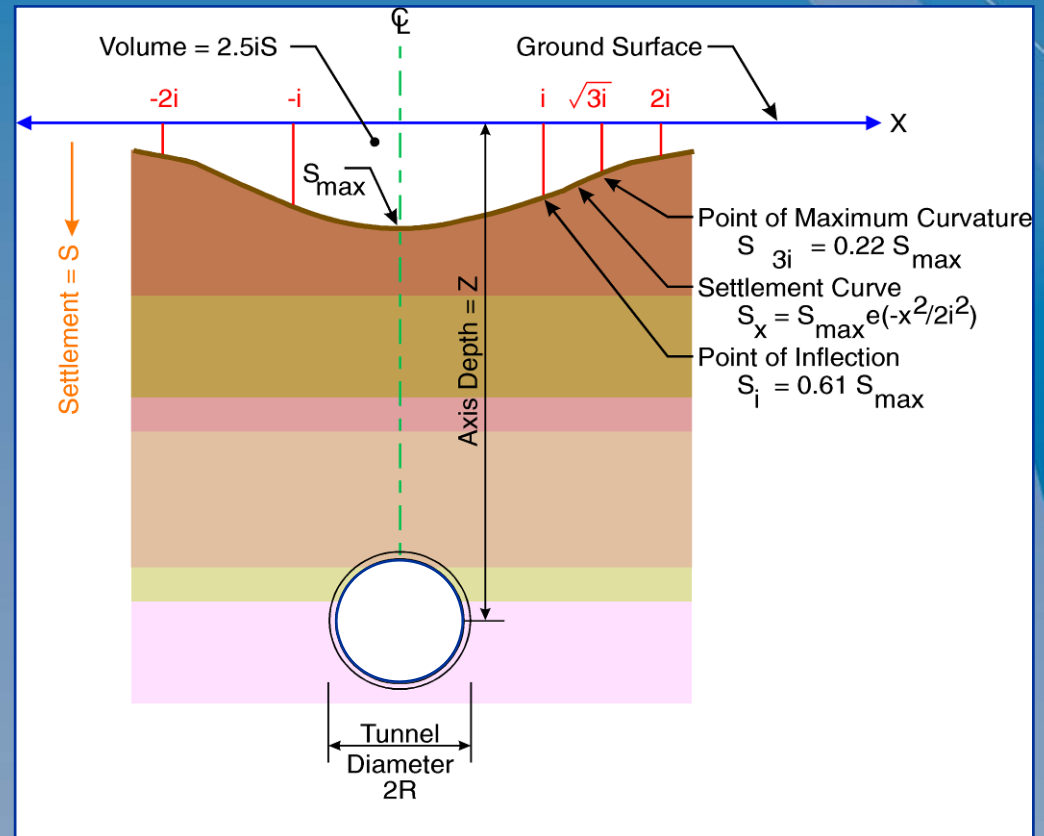
# Objectives

- Minimize impacts due to tunneling:
  - Surface settlement
  - Structure cracks and deflection
  - Buried utilities



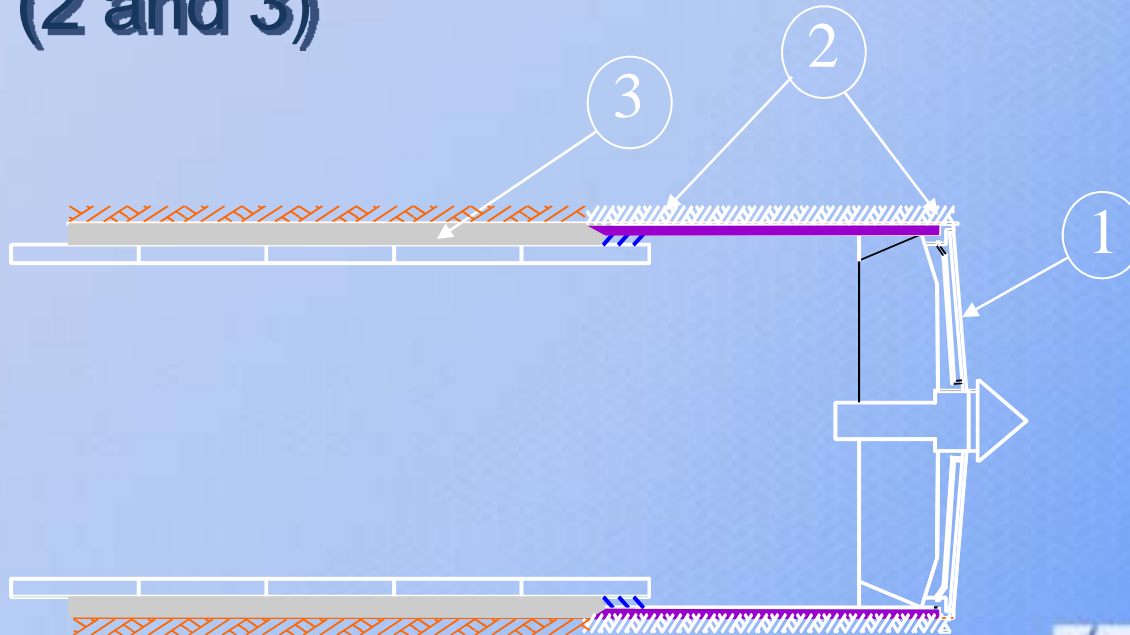
# Settlement Trough

- Volume loss
  - Will transfer to the surface
  - Well established equation for settlement trough



# Sources of $V_L$ during Tunneling

- Loss Through Face (1)
- Excessive Overcut for Steering (2)
- Filling of the Tail Void (3)
- Plowing (2 and 3)



# Instrumentation

## Measurement Objectives

- Vertical displacements
  - Surface settlement monitors
  - Deep settlement monitors
  - Structure settlement / distortion
- Lateral displacements
  - Ground – inclinometers
  - Structures – tilt meters
- Water level indicators
- Relative / absolute displacements
  - Tape / Rod Extensometers
- Temperature effects
  - Gages / thermocouples

INSTRUMENTATION - AMSTERDAM

One of the most extensive ground monitoring surveys ever attempted is now under way in Amsterdam, years before tunnelling starts for the city's metro. David Hayward reports.

## On the alert for settlement



Little moves in Amsterdam these days without the team of engineers planning the city's new \$985M underground metro knowing all about it. Every creak or groan from up to 1,600 city-centre buildings is being continuously monitored, while ground movements 50m beneath the streets will soon be meticulously recorded every hour.

A mammoth six year settlement survey, being carried out by French monitoring specialist Soldata, has just started. And with 140,000 readings currently being fed to the computers of the city's engineers every week, the \$12.5M survey is claimed to be the most extensive for any tunnelling project.

Close scrutiny of Amsterdam's infrastructure is seen as crucial in ensuring that driving the metro's twin tunnels, directly beneath the historic heart of the Dutch capital, causes minimal surface settlement. Yet, curiously, the start of tunnelling is still three years away.

"It is vital to establish, from an independent contractor, how these buildings behave naturally over the course of a full year and long before we begin tunnelling," explains Frank Kaalberg, design manager for Witteveen + Bos, Dutch consultant for metro client the Municipality of Amsterdam. "Our overriding aim during tunnelling is to cause no structural damage to any buildings."

To achieve this goal of negligible settlement, in a city where most old buildings are continually subsiding naturally in the weak ground at an average

1mm every year, demands the cooperation of engineers, surveyors, computer software experts and tunnelling machine manufacturers.

Kaalberg and his team are now 60% through an eight year pioneering research project to design and build an "intelligent" tunnel boring machine to drive the metro's 3.8km underground section. It will be a TBM designed to interact with, and respond to, 3D computer analysis of building and subsurface movements during tunnelling. The aim is both to predict and reduce ground settlement. Working with German TBM manufacturer Herrenknecht, the team is designing a full face EPB tunnelling machine capable of exerting minimal subsoil disturbance – and therefore minimal surface settlement (see box).

Kaalberg is confident that two \$9.8M intelligent machines will be off the drawing board and in the ground ready to start the twin 5.8m finished diameter drives by the end of 2004.

It is a technical challenge that must not fail, for the possibility of causing damaging surface settlement is politically just not acceptable. City residents are well aware of the potential for disruption.

The first time metro construction was planned, early in the 1970s, tunnelling technology was much less developed and the likelihood of considerable settlement ruled out bored tunnels altogether. Unfortunately, the chosen alternative for an east-west line – forming the tunnels by sinking pneumatic caissons – demanded such widespread building demolition that it triggered riots in the streets from annoyed inhabitants. Ensuring good public relations this time, for construction of the total 9km north-south line running right beneath the city centre, is seen as a major priority.

Extremities of the line will run at grade or in cut and cover. But the central 3.8km section will be routed through twin tunnels driven at an average depth of 30m directly beneath Amsterdam's main thoroughfares lined with many of the city's most architecturally important buildings.

Four of the nine stations will be formed in large cover and cut boxes lined with diaphragm walling



Left: The central 3.8km section of the 9km metro route will run in 5.8m diameter twin tunnels driven beneath Amsterdam's main streets. Four of the nine stations will be built within large 30m deep cut and cover boxes excavated 30m deep and only metres from historic timber piled buildings.

DECEMBER 2001 Tunnels & Tunnelling International 47



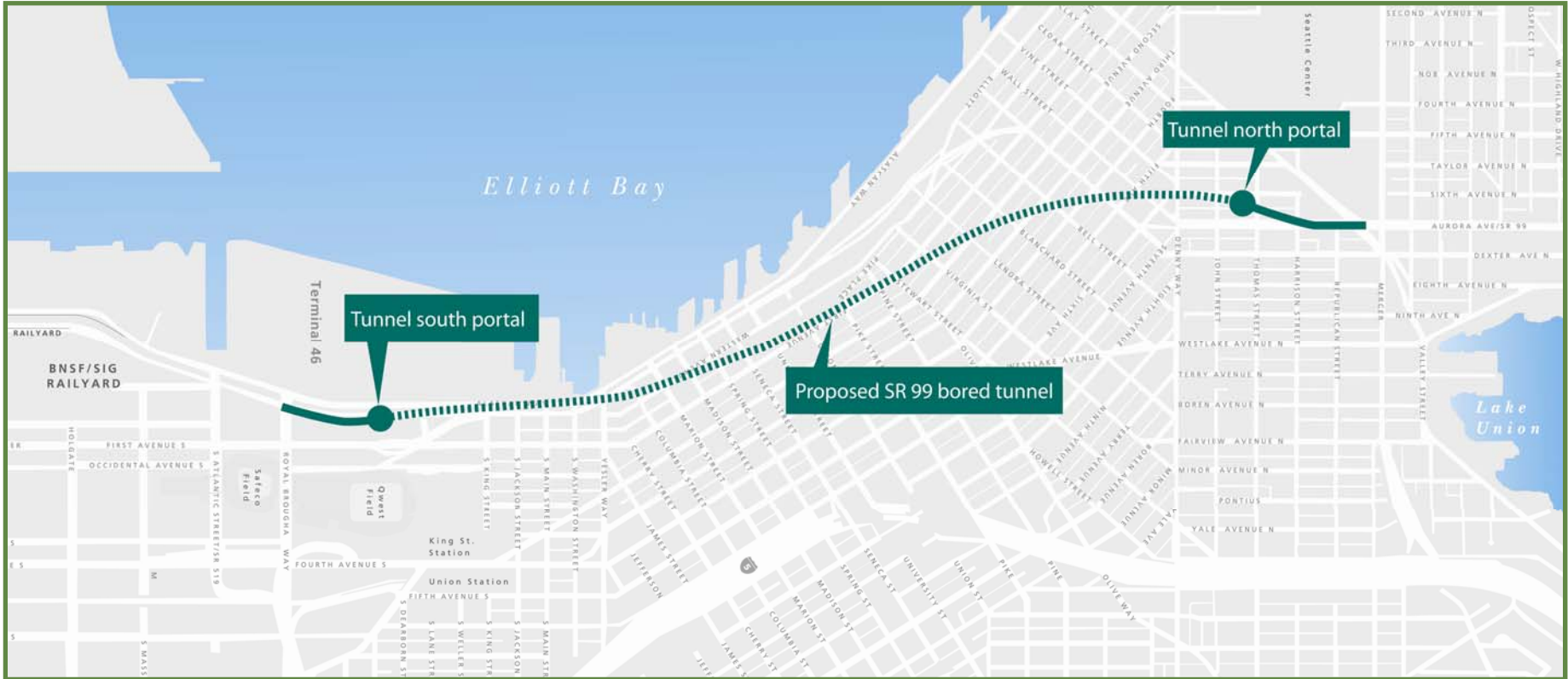
# Mitigation Measures

- Grouting Methods
- Freezing Methods
- Face Conditioning Agents

A stylized, handwritten signature in white ink, located in the bottom right corner of the slide. The signature is cursive and appears to be the initials 'LM'.

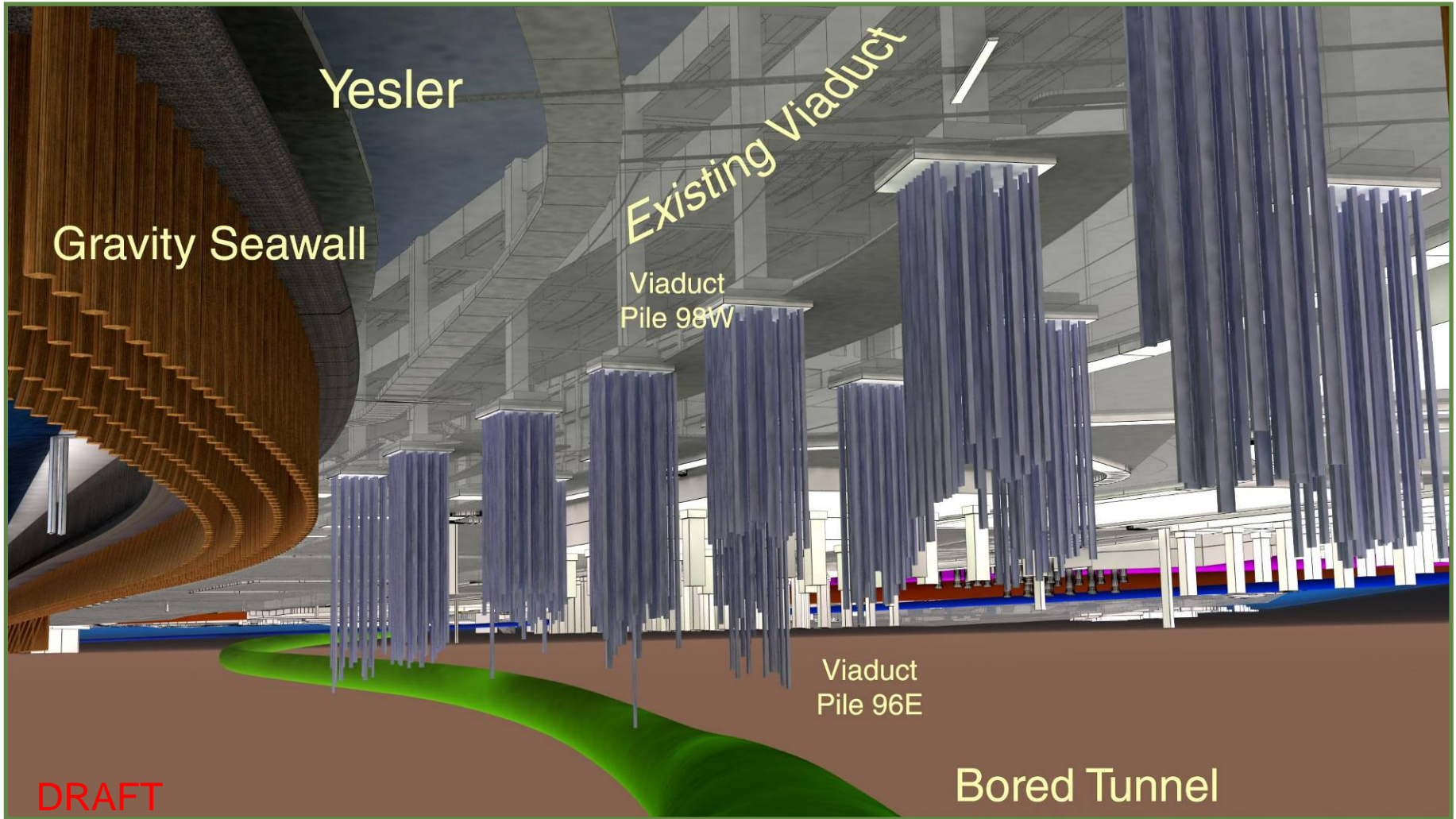


# Proposed SR 99 Bored Tunnel Alignment





# Underground View









# South Portal



DRAFT



 **South Portal**







# North Portal

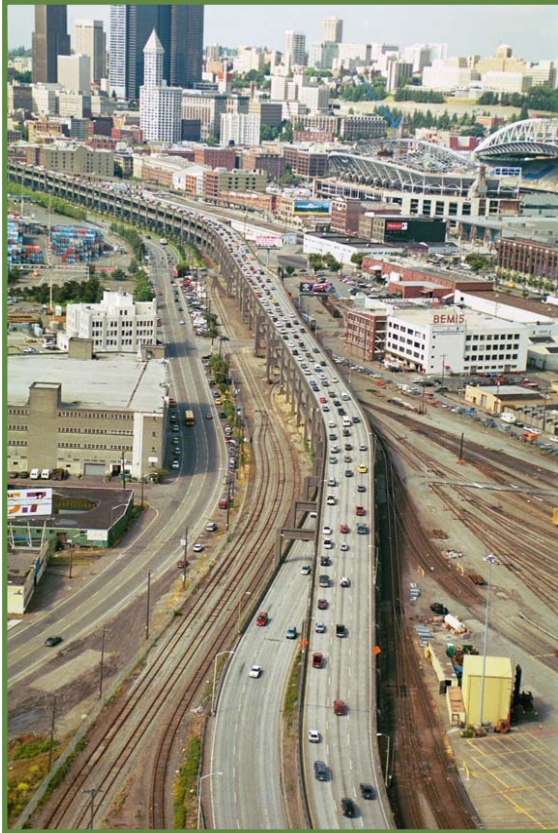








# Alaskan Way Viaduct and Seawall Replacement Program



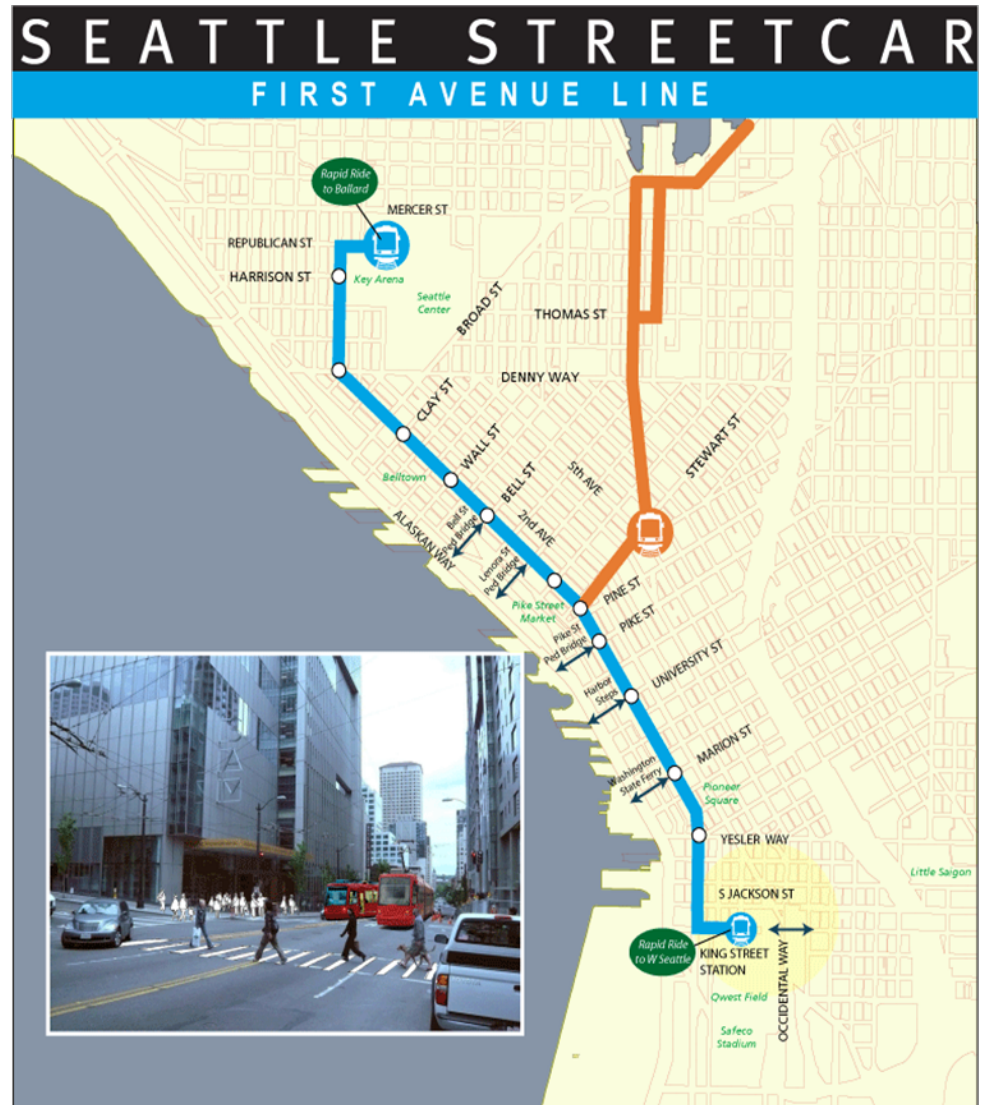
Follow our progress: [www.alaskanwayviaduct.org](http://www.alaskanwayviaduct.org)



Back Pocket

# First Avenue Streetcar

- Connects to the First Hill Streetcar.
- Connects to Ballard and West Seattle RapidRide lines.
- Connects to Amtrak, Commuter Rail and Light Rail at King Street Station.
- Provides easy access to Colman Dock.
- Connects major activity centers: Seattle Center, Pike Place Market and the stadium area.



# Transit Service Enhancements

Transit enhancements will provide important mobility during and after construction and are critical to the success of the bored tunnel solution.

- Enhanced service to accommodate demand
  - Additional bus service
  - First Ave. Streetcar
- Access to downtown
- Construction mitigation
- Environment





# Toll Scenarios

	Overall Toll Level	Extent of Tolling	Toll Variation
<b>Scenario A</b> <i>Medium Tolls Tunnel Only</i>	Medium	Tunnel Only	Toll Rates vary by Time of Day — Directionally Different
<b>Scenario B</b> <i>Medium Tolls Tunnel &amp; Corridor</i>		Corridor Tolling (Adds SR 99 N & S segments inbound AM peak outbound PM peak period)	
<b>Scenario C</b> <i>High Tolls Tunnel Only</i>	High	Tunnel Only	
<b>Scenario D</b> <i>Medium-High Tolls Tunnel &amp; Corridor</i>	Medium High	Corridor Tolling (Adds SR 99 S segment during AM & PM peak periods)	
<b>Scenario E</b> <i>Low Tolls Tunnel Only</i>	Low	Tunnel Only	

\*All scenarios assume full AWV Program improvements and a tunnel open date of Jan 1, 2016

Generates \$100M



# Relocate Electrical Lines

- Relocated electrical lines to locations east of the viaduct between Massachusetts and Railroad Way.
- Installed two man-hole vaults between Atlantic and Royal Brougham.
- Installed conduit between Atlantic and Royal Brougham.



Construction: September 2008 – December 2009

Status: Complete

**COMMENTS EXCERPT FROM FEBRUARY 23, 2010, NORTHWEST REGION'S 2010 DESIGN-  
CONSTRUCTION CONFERENCE, SHORELINE, WA; PRESENTED BY MATT PREEDY AND LINEA LAIRD  
DIRECTORS OF SOUTH, CENTRAL AND NORTH PROJECTS – ALASKAN WAY VIADUCT AND SEAWALL  
REPLACEMENT PROGRAM**

RE: MASSACHUSETTS TO UNION STREET MOVING FORWARD PROJECT

“As the city has grown up around the viaduct, so has the web of utility lines that weave around and under it. These lines need to be moved to better protect downtown’s power supply in the event of an earthquake, and to prepare us for taking down the viaduct south of S. King Street.

The project began in September 2008 and will take a little more than one year to complete. We do not anticipate any power outages for this work. The electrical systems are redundant. Even if one line must be shut down temporarily, it would not affect the city’s power supply.

Currently, ELR construction crews have work happening at all areas of the project site. The site runs between S. Massachusetts Street to the south and Railroad Way, S. to the north and between the viaduct to the west and to about a half a block east of the viaduct.

Crews are currently trenching along Colorado Avenue S. between S. Massachusetts Street and S. Atlantic Street. Crews have built a temporary by-pass road for freight traffic which will be opened starting Monday, March 2. Colorado Avenue S. will be closed to through traffic, but drivers will still be able to access the Bemis Building parking lot. Southbound freight traffic must use the temporary bypass road and northbound freight traffic must use Utah Avenue S. Drivers will notice a series of traffic revisions on Colorado Avenue S. for the next three months and should pay close attention to the signed detour. In the staging area between S. Atlantic Street and S. Royal Brougham Way, crews are installing conduit and have also already installed two manhole vaults.

Crews have relocated water lines and installed conduit under S. Royal Brougham Way and will repave that section of road this week.

**WSDOT suspended work between S. Royal Brougham Way and Railroad Way S., until further design is complete on the southern portal for the bored tunnel section of the central waterfront section of SR 99. However, crews have already shored and excavated for one vault and have removed abandoned railroad lines from the old WOSCA property. [Emphasis added]**

Additional work will be needed to relocate some of the remaining lines between Railroad Way S. and Union Street and others between Railroad Way South and electrical vaults on S. Washington Street and Yesler Way. The exact location, method and schedule for relocating these electrical lines will depend on the solution chosen for the viaduct’s central waterfront section.”

**EXHIBIT D**



# Transit Enhancements and Other Capital Improvements

WSDOT, King County and the City of Seattle have agreed upon a list of projects to keep people and goods moving during SR 99 construction.

These projects include:

- I-5 variable speed limits
- SR 519 freight connections
- Spokane Viaduct improvements
- Increased bus service
- Real-time traveler information



Construction: 2008-2011

Status: In Construction



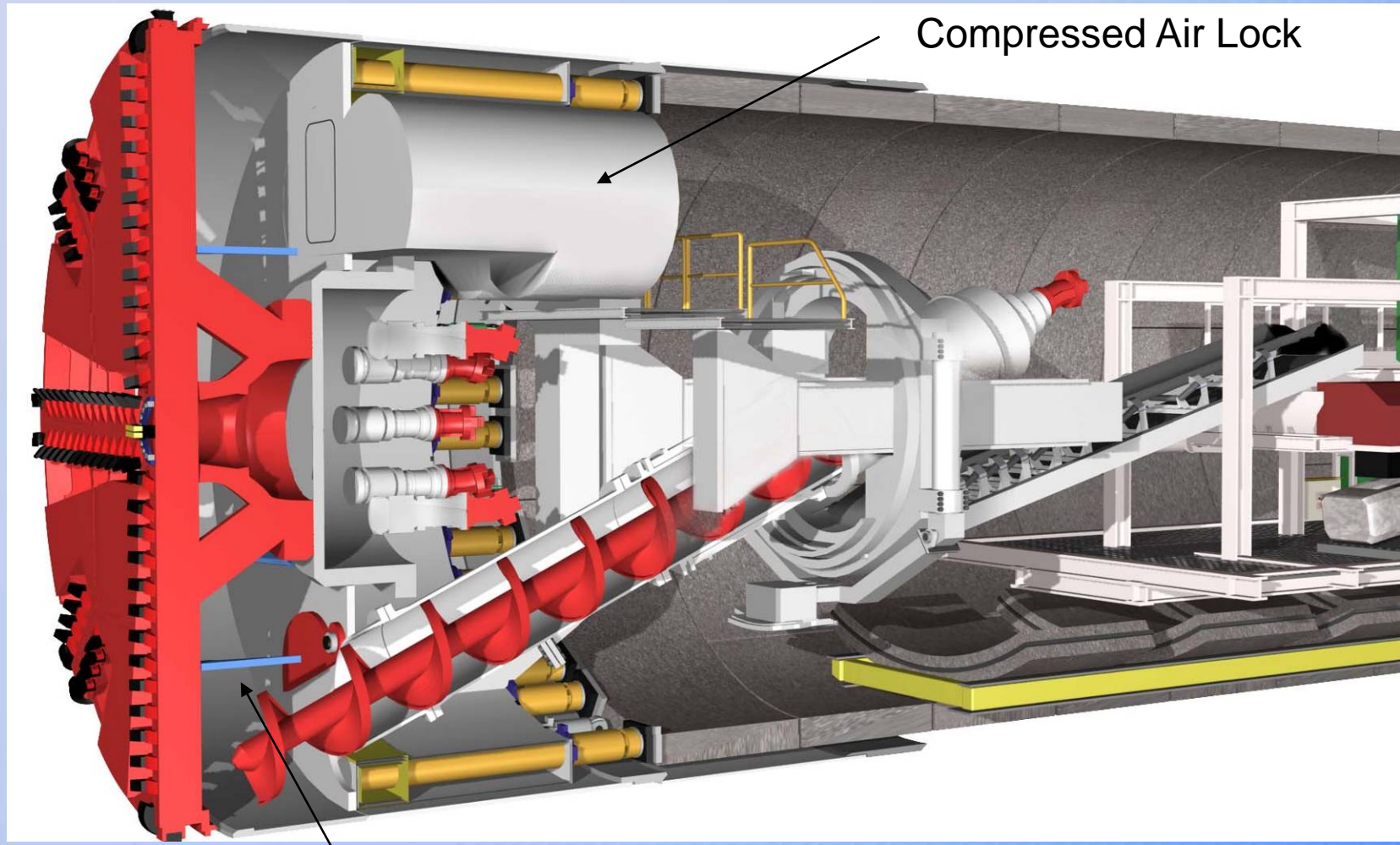
# Separation Plant



# Earth Pressure Balance Machines

- Developed by Japanese in mid 1970's
- Needed to broaden the range of applicable ground conditions
- Much simpler than the Slurry Machine
- Face supported by conditioned excavated material
- Excavated material removed from the face with a screw conveyor and transported by train or conveyor.
- Has to some extent replaced the use of Slurry Machines

# Access to Chamber and Cutter Head



Compressed Air Lock

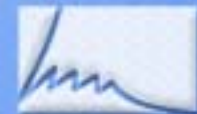
Pressurized Chamber



# Installing the Gaskets



# Mechanical Segment Erector



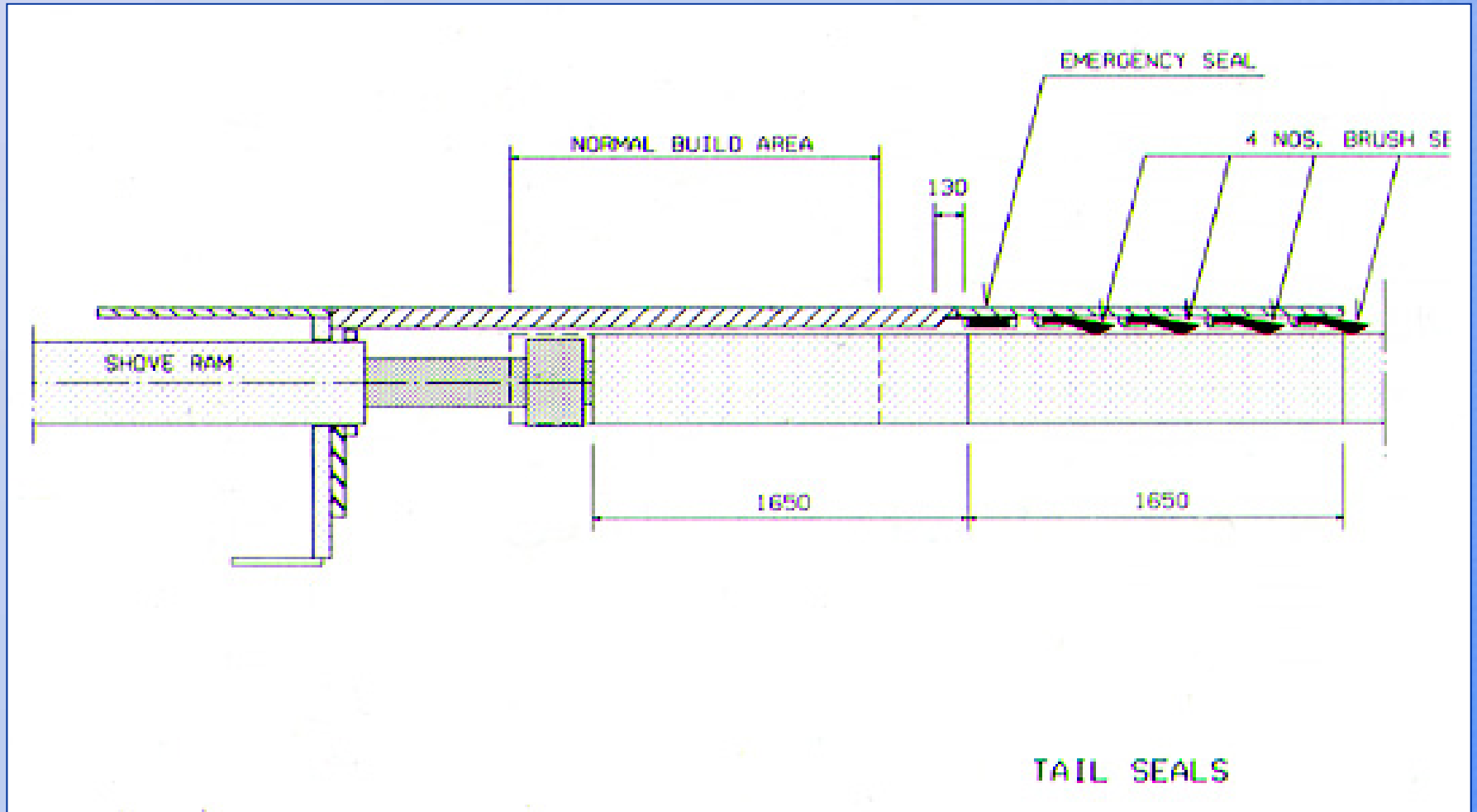
Hatch Mott  
MacDonald



# Vacuum Segment Erector

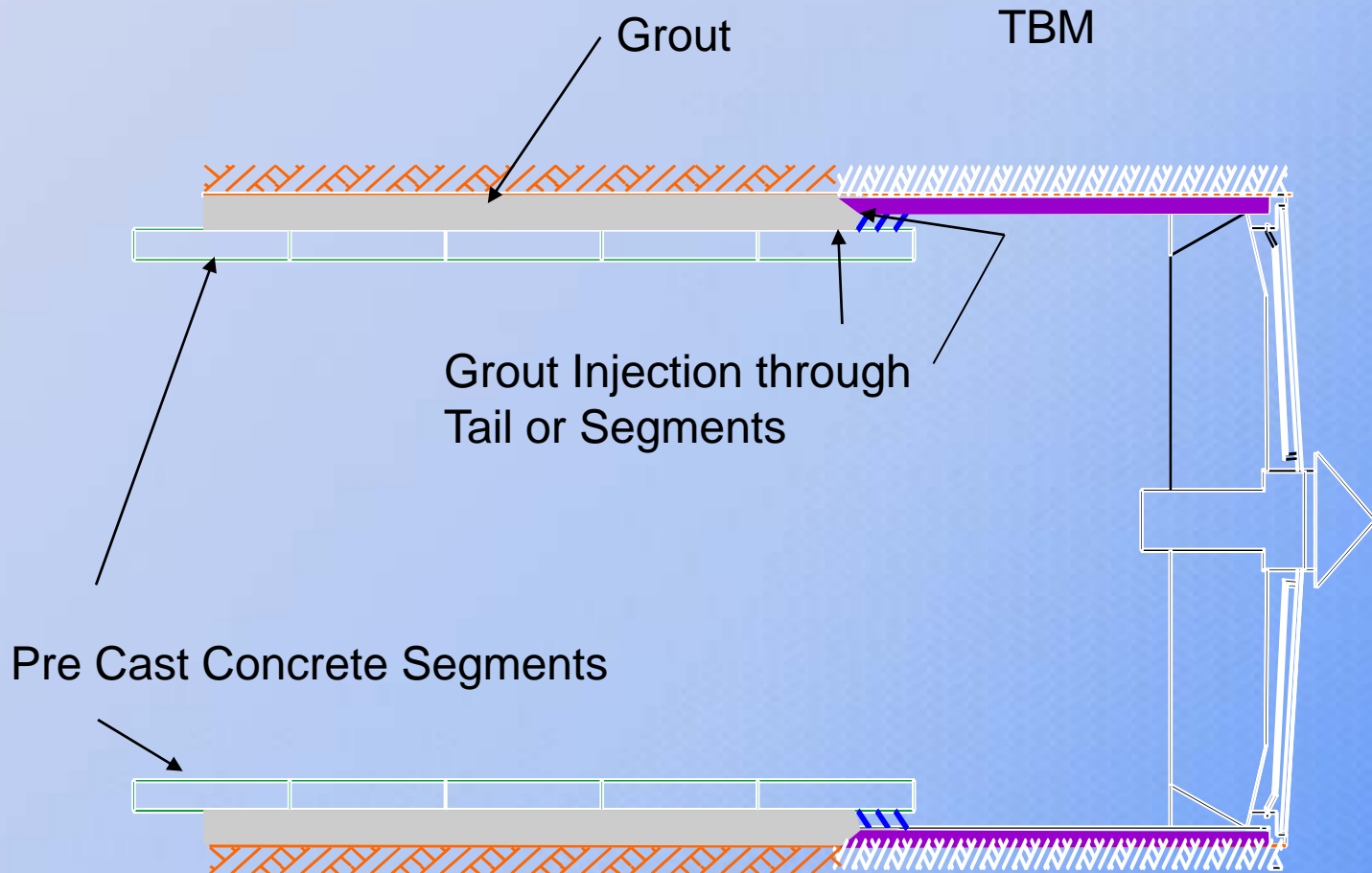


# EPBM Tail Seal

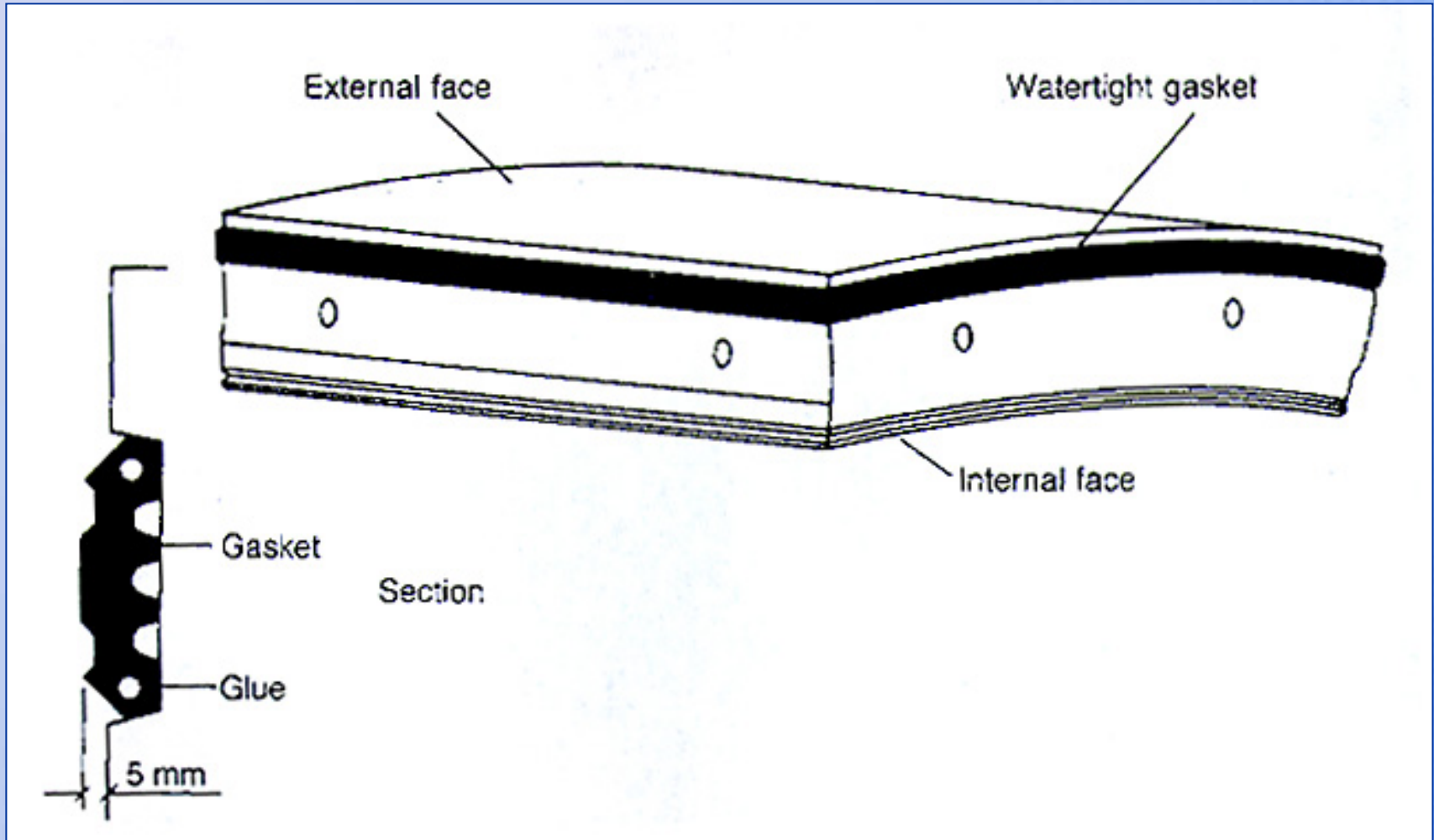




# Tail Grouting




# Precast Concrete Segment



# Volume Loss Magnitudes

➤ Historical Standards	Volume Loss, $V_L$
➤ Good practice in firm ground - better soils and excellent ground control	0.5%
➤ Good practice in slow raveling ground - considered good ground	1.5%
➤ Fair practice - More face and tail loss	2.5%
➤ Poor practice - Yet more face loss - Tail void mostly unfilled	4.0%

# Slurry Machines

- ❑ Slurry Machines were initiated by John Bartlett's patent of 1964
  - ❑ Developed for use in soft ground
  - ❑ Mainly used in granular materials below the water table
  - ❑ Face supported by a mixture of excavated material and bentonite slurry
  - ❑ Excavated material transported in a slurry pipeline
  - ❑ Separation plant required
- 

- Cutter Head
  - Main Bearing
  - Head Access
- Muck Removal System
  - Screw conveyor to trains or conveyor
  - slurry line
- Push Rams
  - Sufficient to overcome:
    - Face pressure
    - Friction
- Tail Seals
  - Tail Grouting
- Tunnel lining
  - Erector system
  - Pre-cast concrete segments
  - Watertight Gaskets





# Engineering Analyses

- Ground Characterization
- Volume Loss,  $V_L$  at tunnel depth
- Settlement Trough at surface
- Condition Assessments
- Effects on Structures



# Alaskan Way Viaduct & Seawall Replacement Program



## Urban Design Guidelines and Tunnel Operations Buildings Briefing March 16, 2010

## Design Team Members and Process

WSDOT and SDOT have brought on world-class architecture and urban design firms to aid in design aspects of the proposed bored tunnel. The team includes:

- NBBJ
- PB Architects
- ROMA Design Group

The design team is developing urban design guidelines that encompass the tunnel operations buildings, portals and north and south access areas.

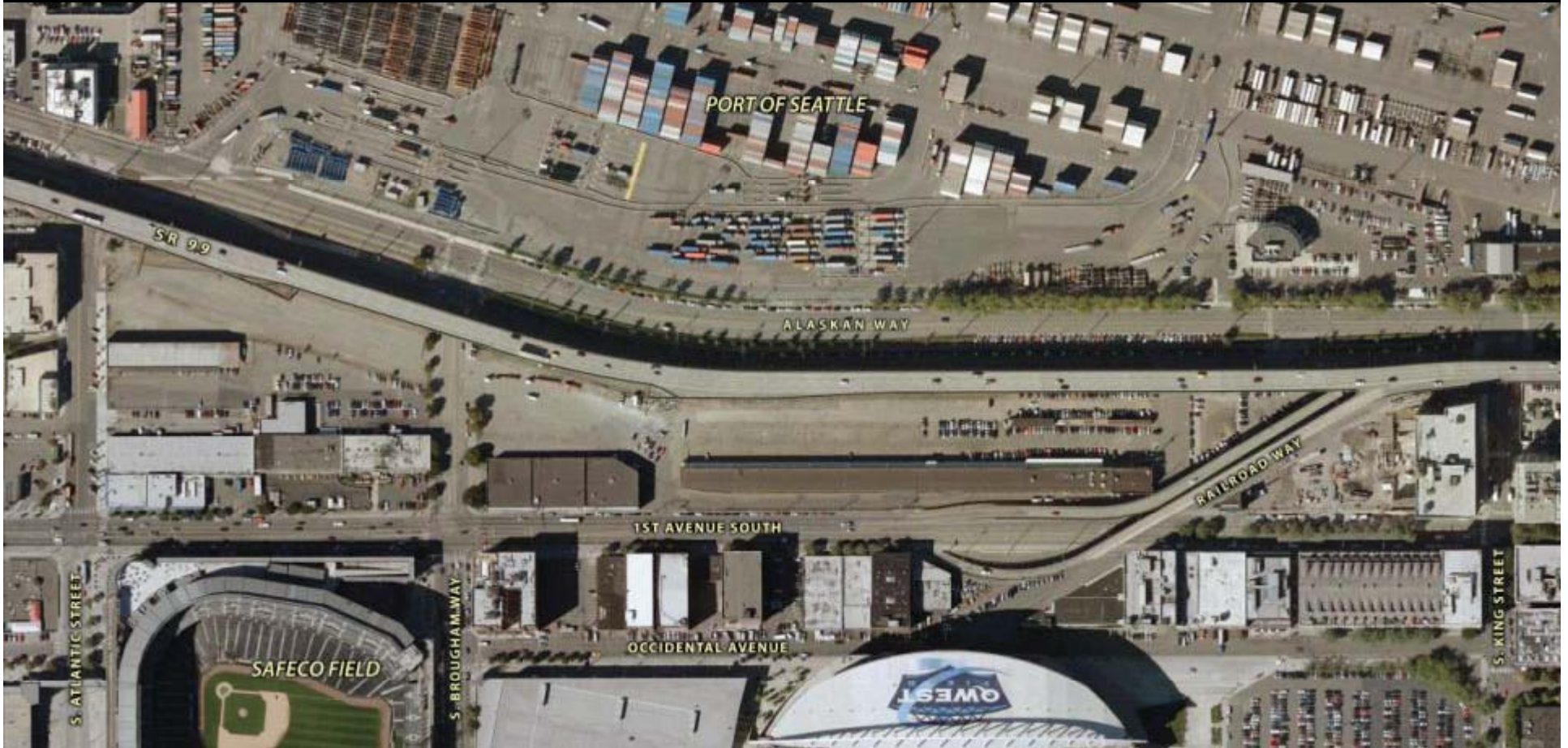
- WSDOT and SDOT are meeting regularly with the Seattle Design Commission.
- Recommendations will be included in the final RFP to be released to pre-qualified design-build teams in May 2010.

## Urban Design Guidelines Goals

- Provide for the safety and comfort of pedestrians, bicyclists, transit, freight and other vehicles.
- Reinforce the sense of place and give structure and orientation to the urban experience.
- Contribute positively to the fabric of the city and the unique qualities of adjacent neighborhoods.
- Contribute to the sustainability of the urban environment.



# Existing South Portal Area



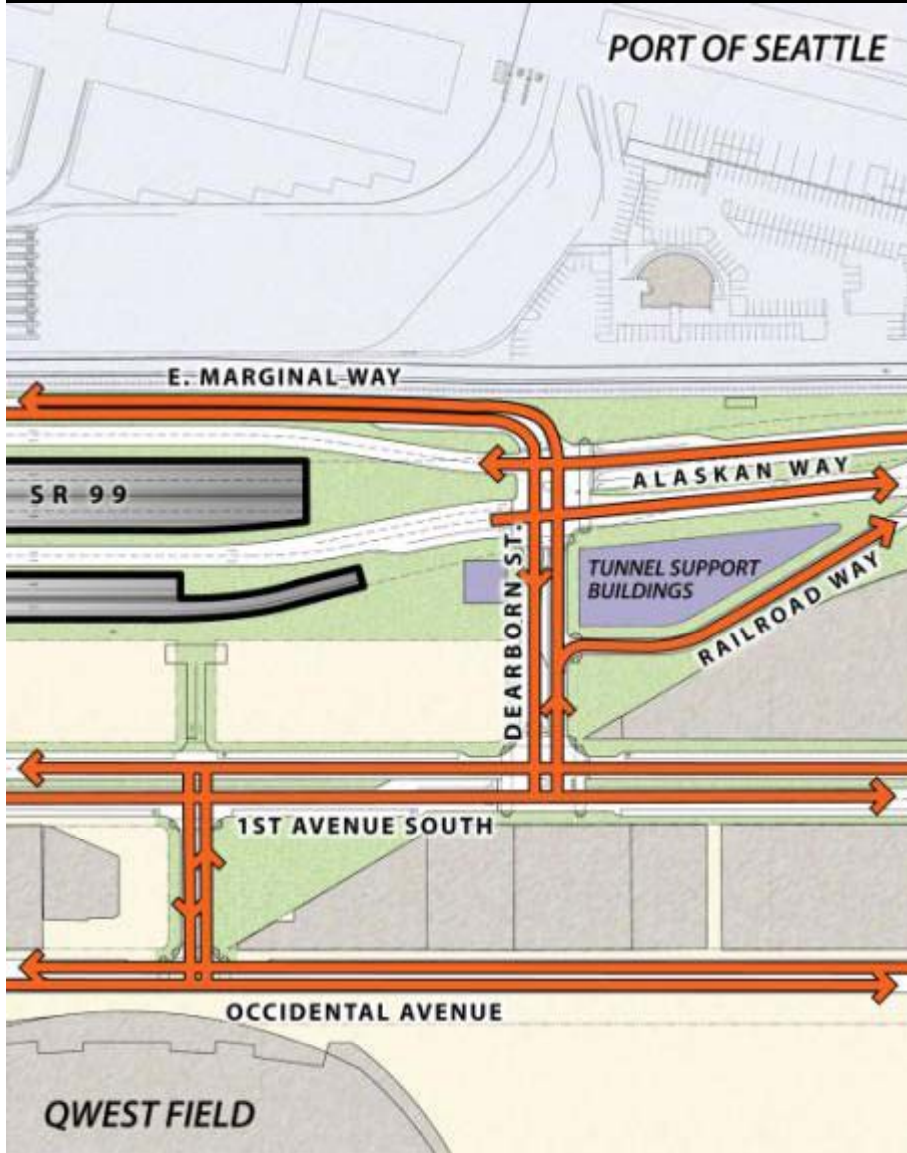
**SOUTH PORTAL**

BORED TUNNEL ALTERNATIVE

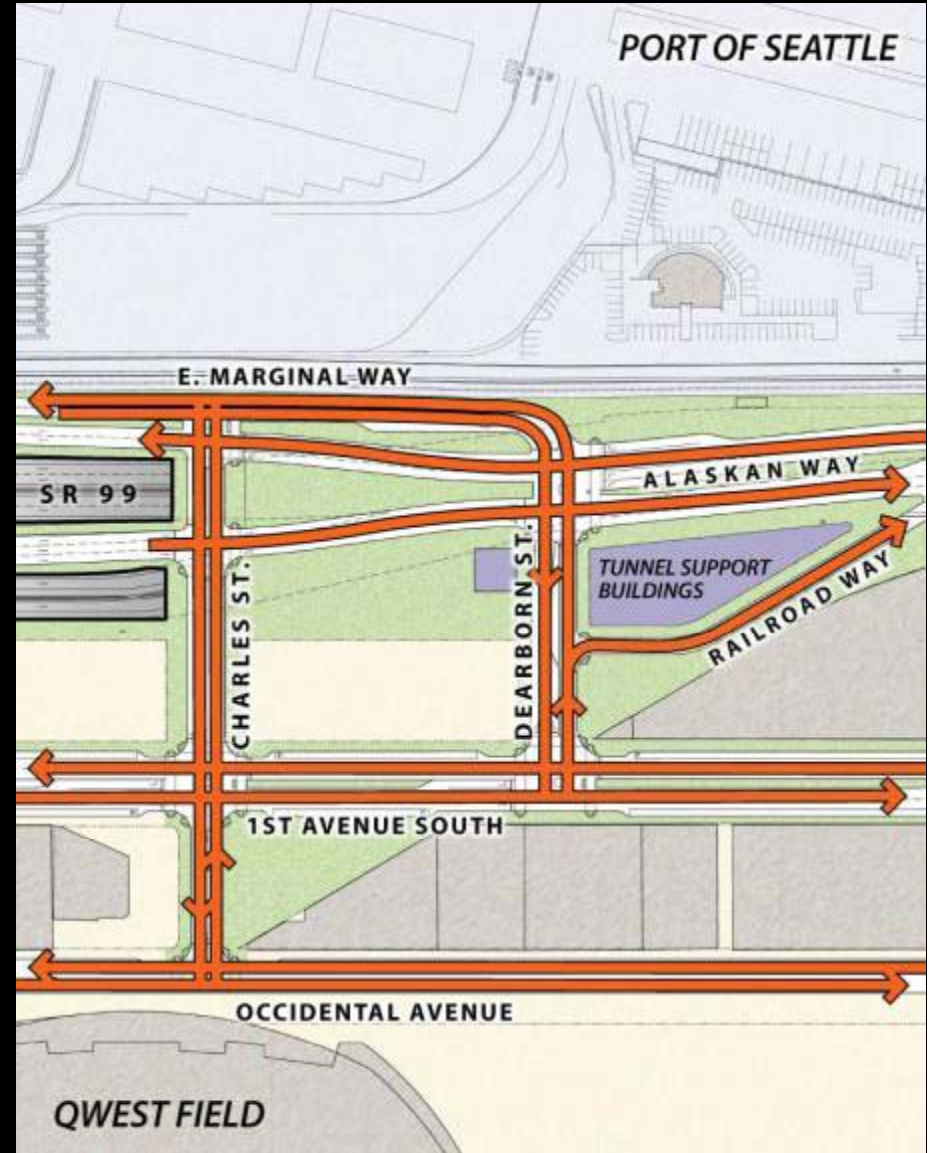


# City Streets Comparison

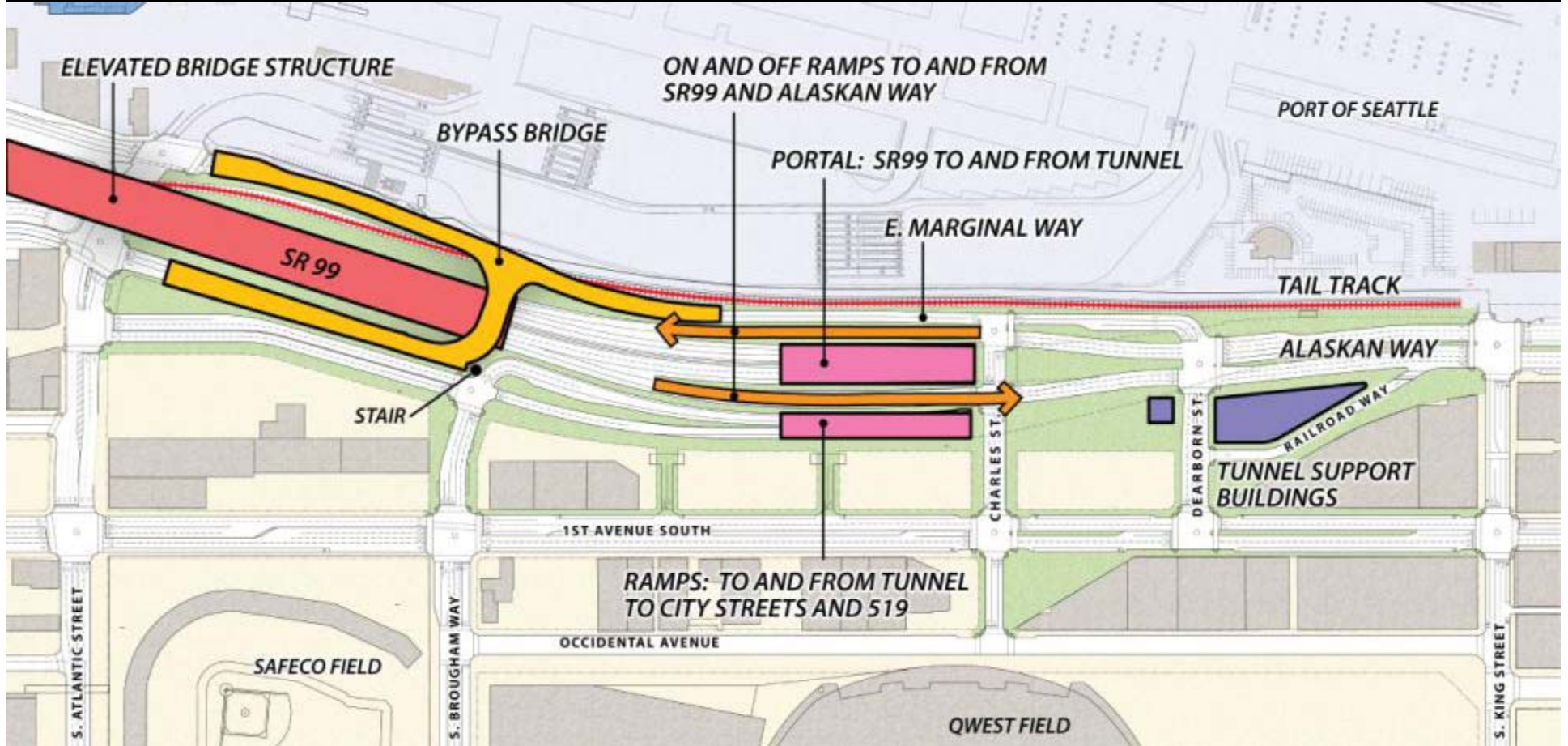
## OPTION 1



## OPTION 2



# Elements

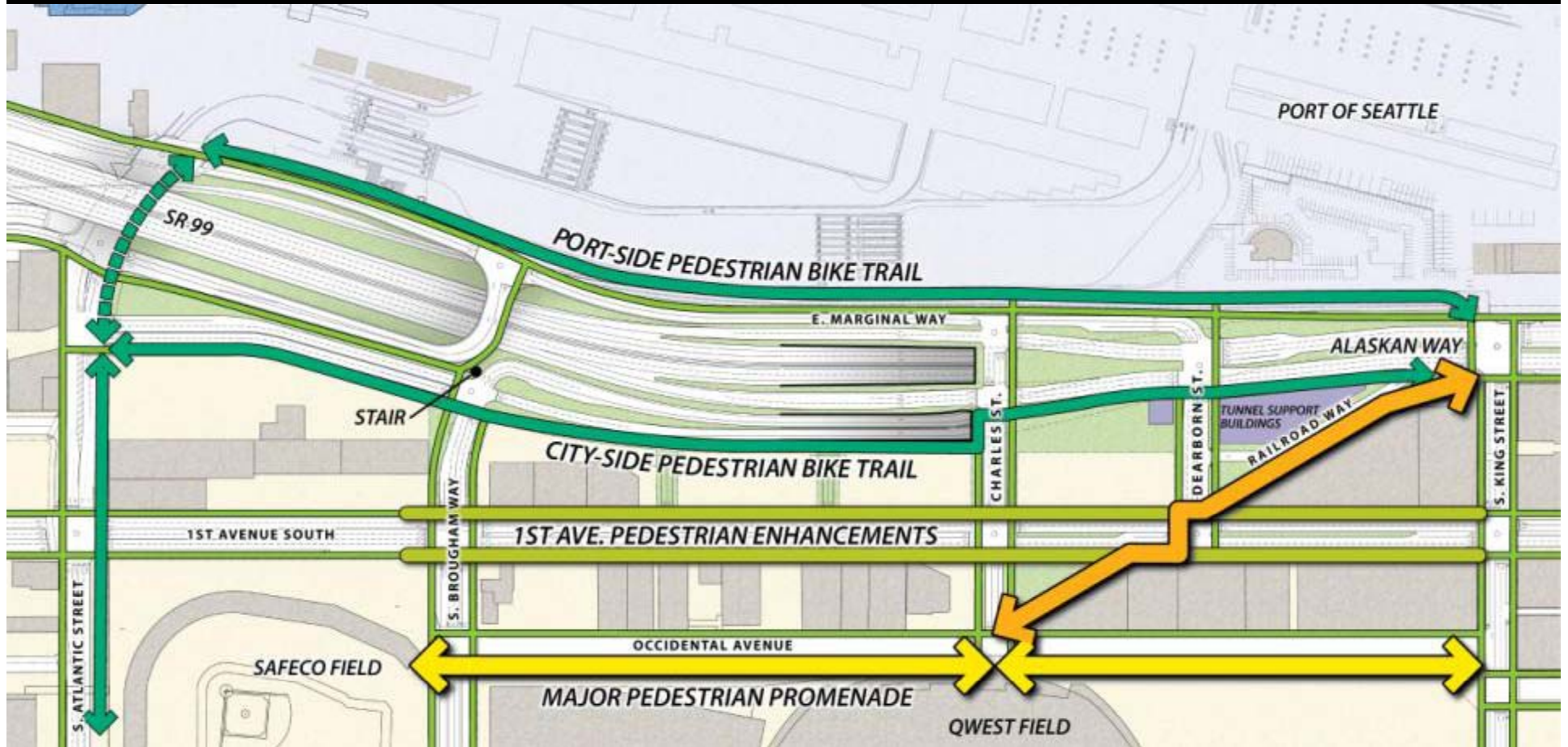


## SOUTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE



# Pedestrian and Bicycle Access



## SOUTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE

# Circulation: SR 99 Tunnel



## SOUTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE



# Tunnel to City Streets and 519

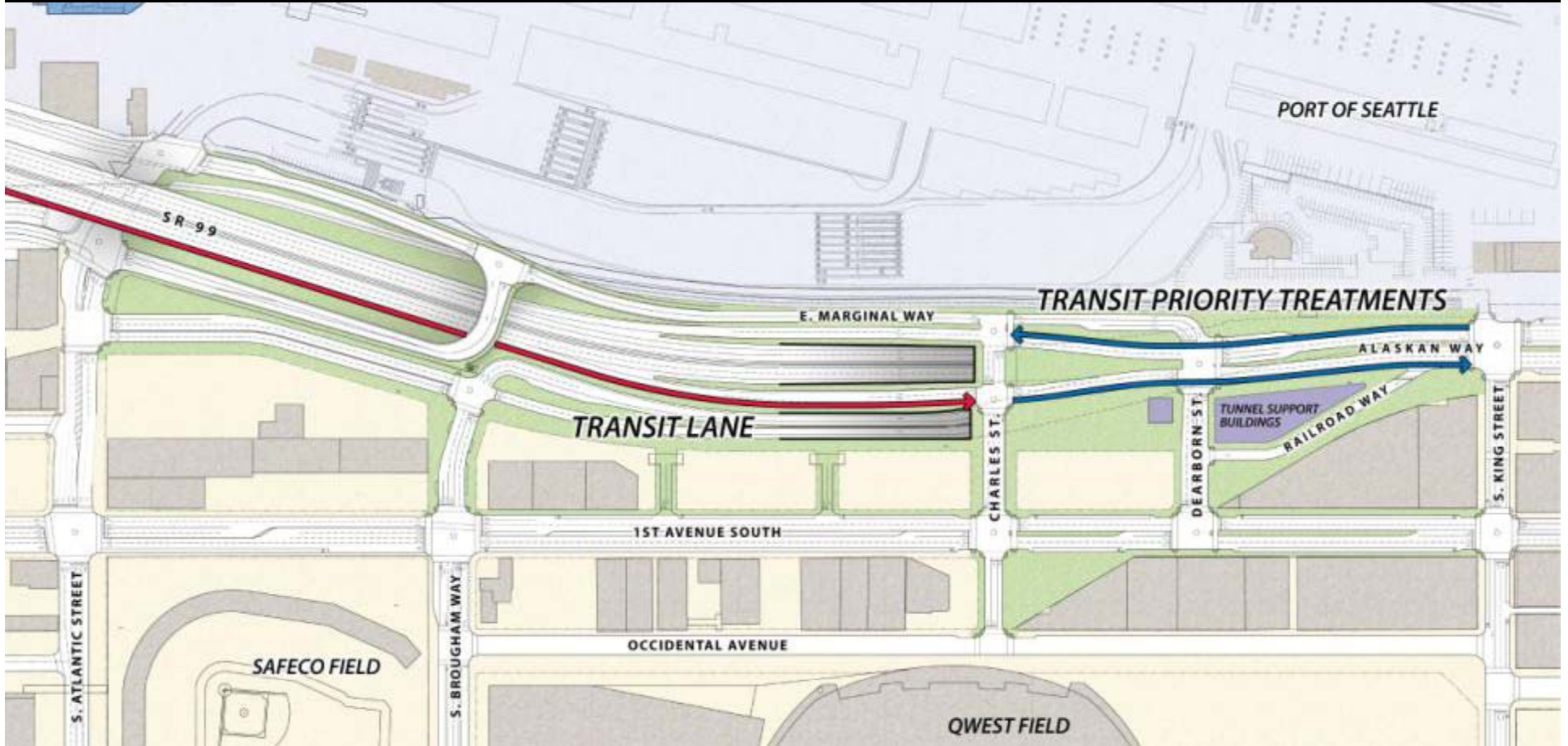


## SOUTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE



# Transit Access



**SOUTH PORTAL: OPTION 2**

BORED TUNNEL ALTERNATIVE

# Opportunity Areas



## SOUTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE

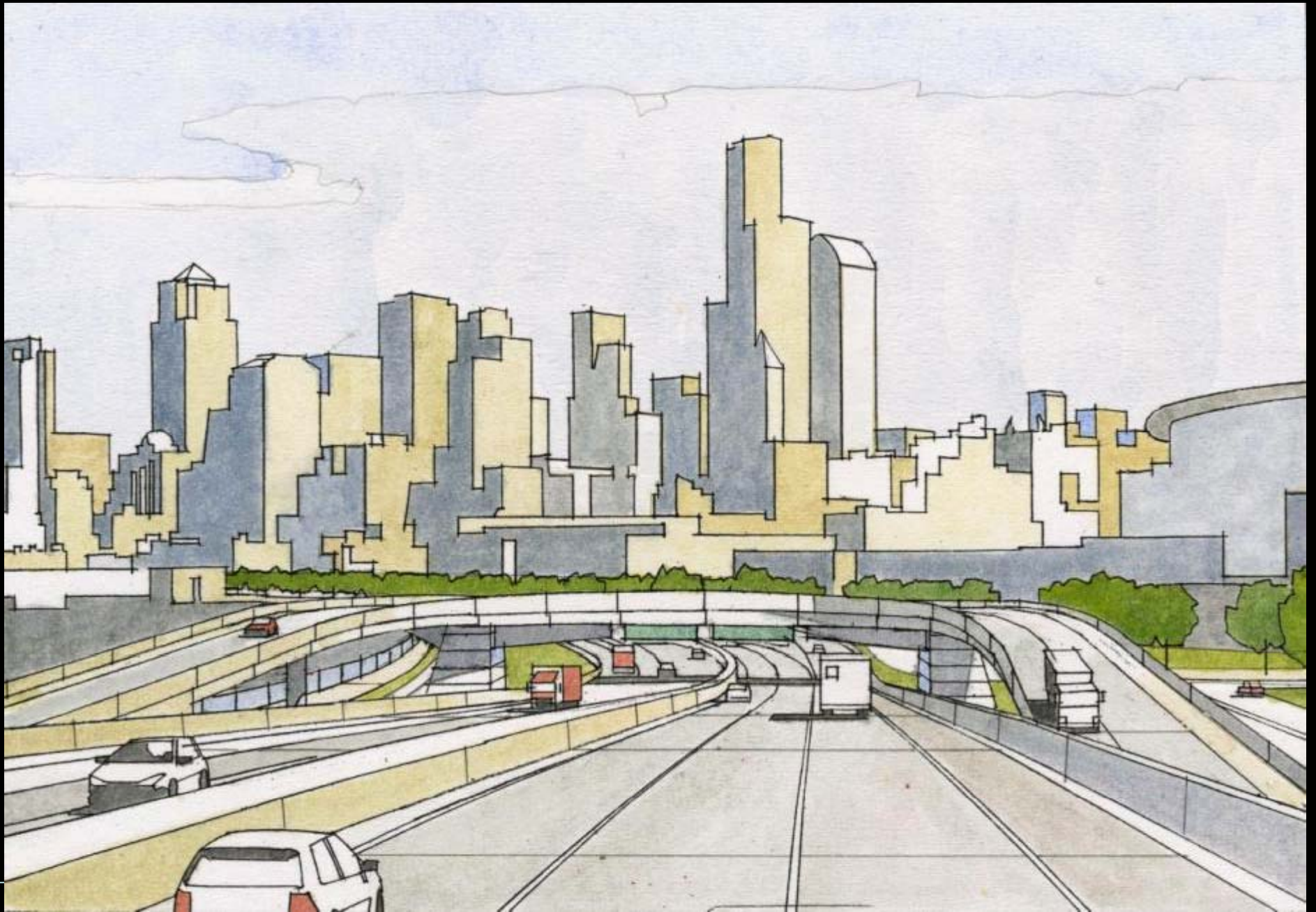


# Overview of South Portal Area





# Gateway to Downtown





# Portal Entrance to Tunnel and Ramps to City

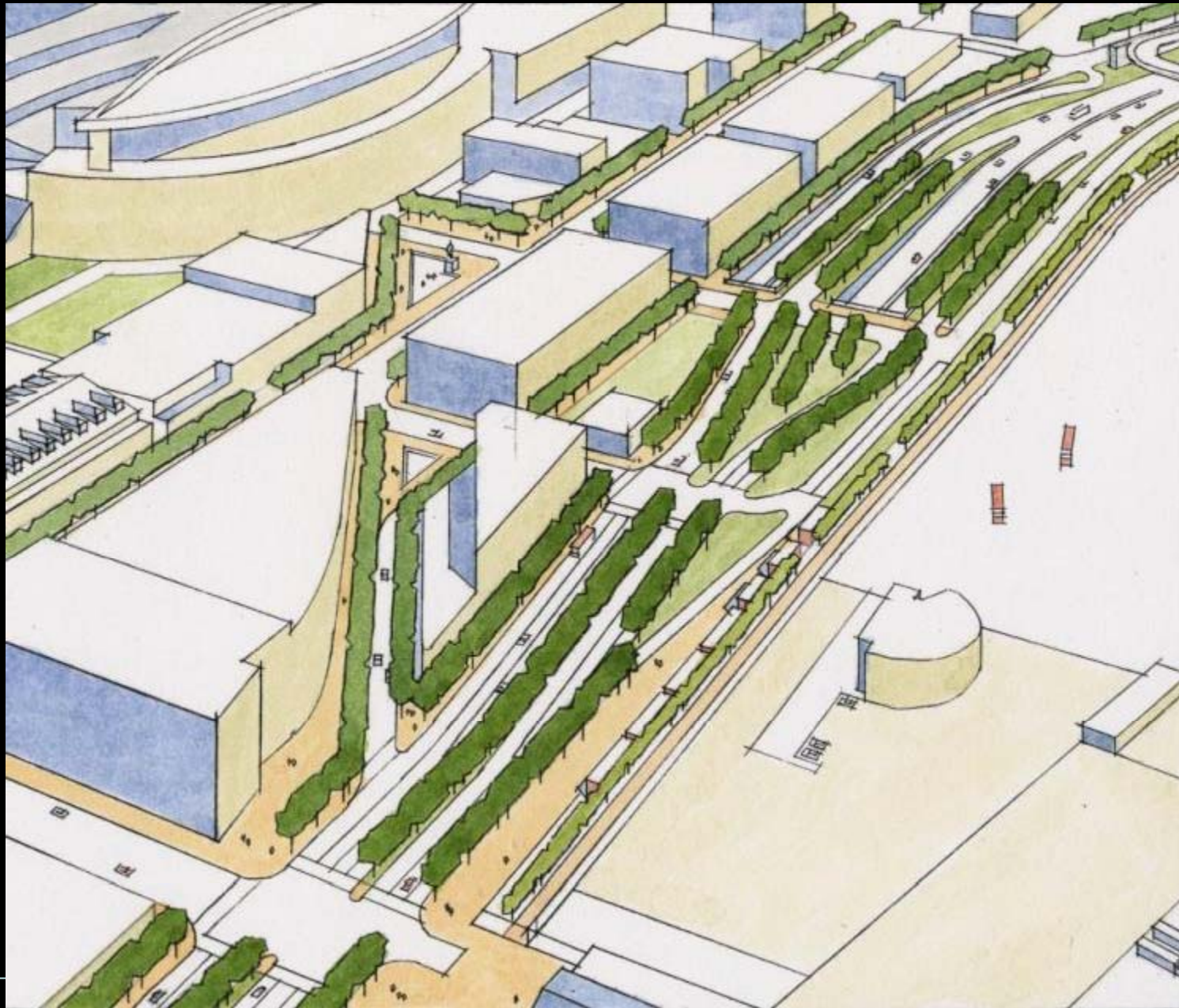




# Alaskan Way – Entering the Downtown Waterfront

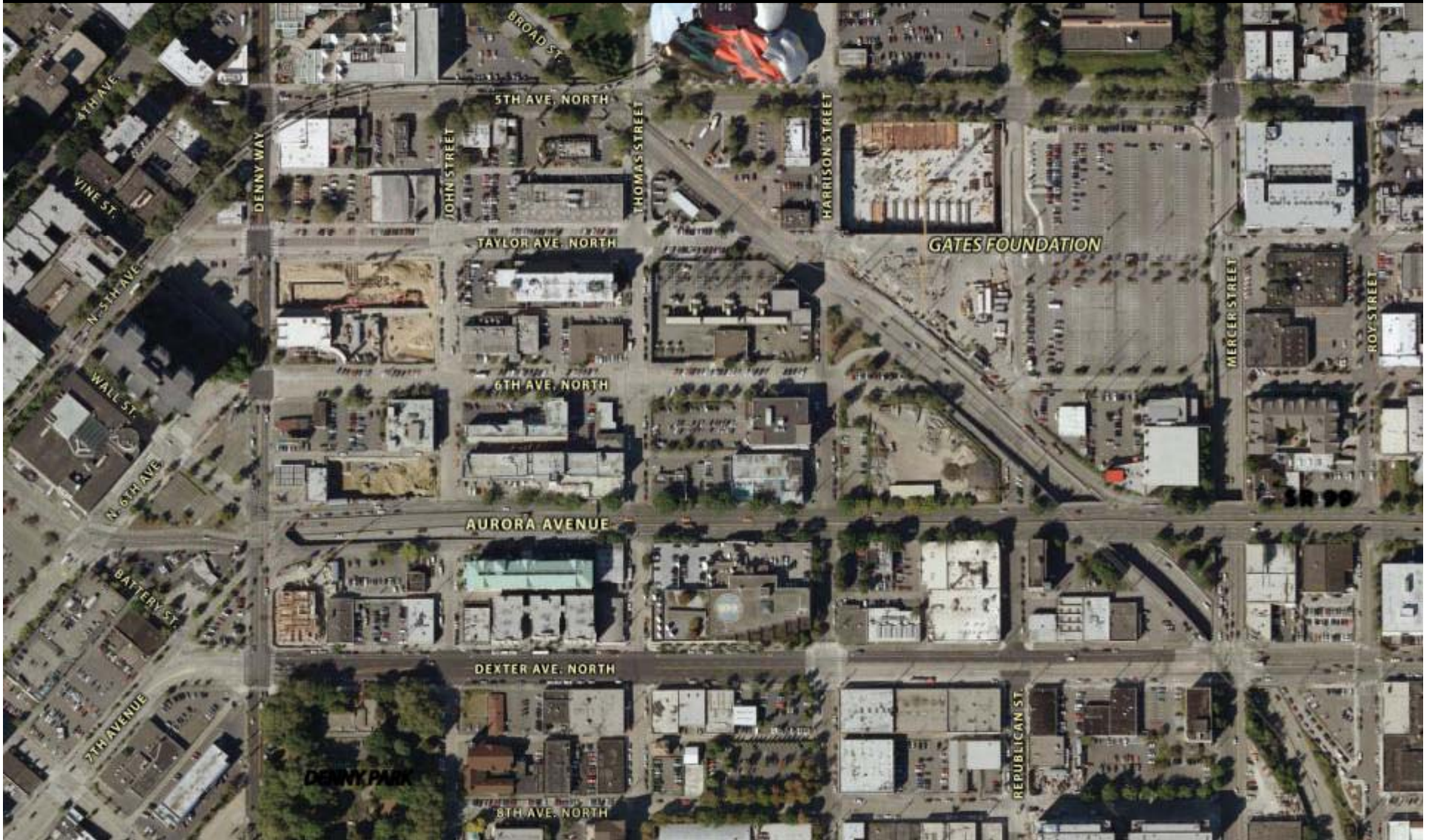


# Pedestrian, Bicycle Linkages





# Existing North Portal Area

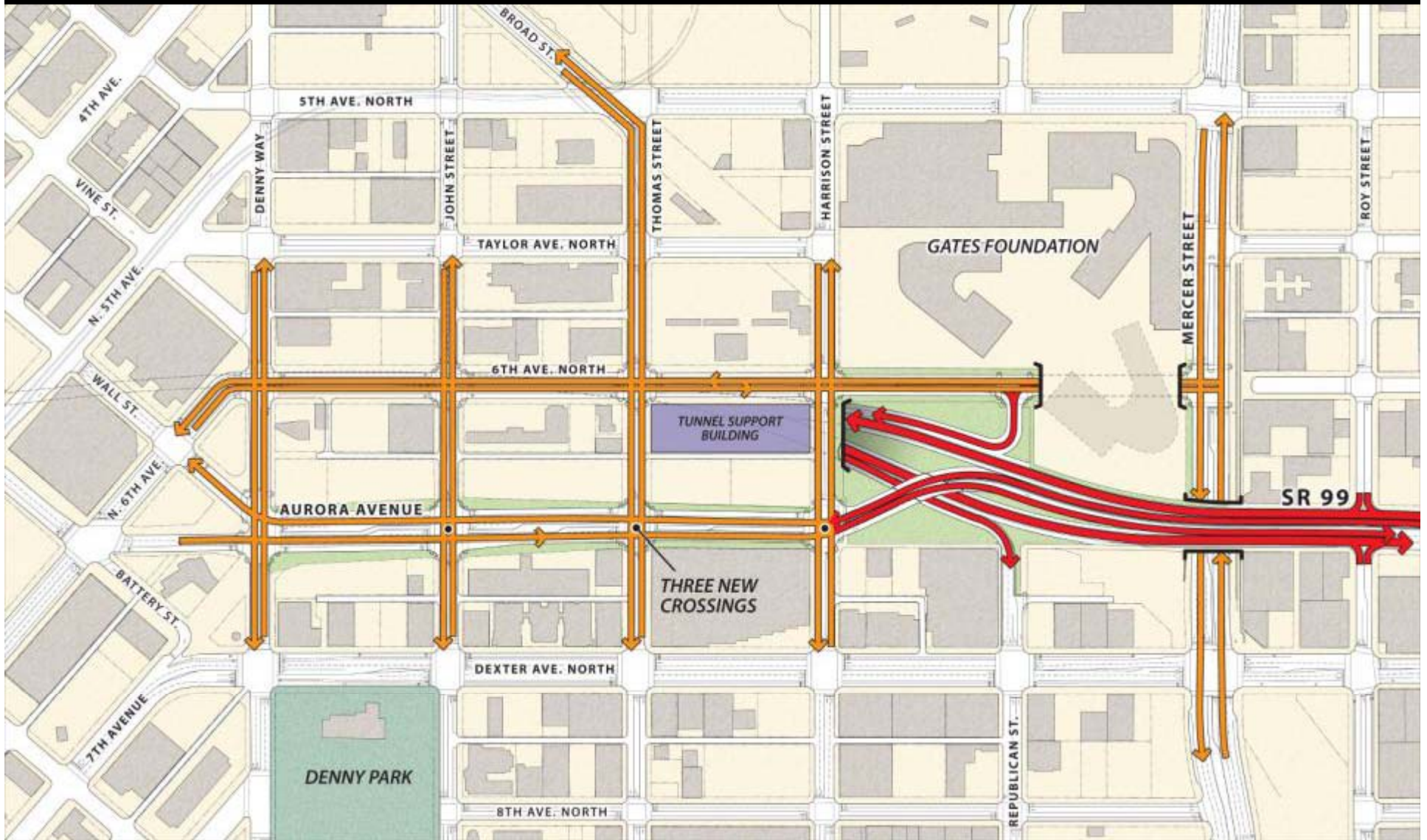


**NORTH PORTAL**

BORED TUNNEL ALTERNATIVE



# Elements

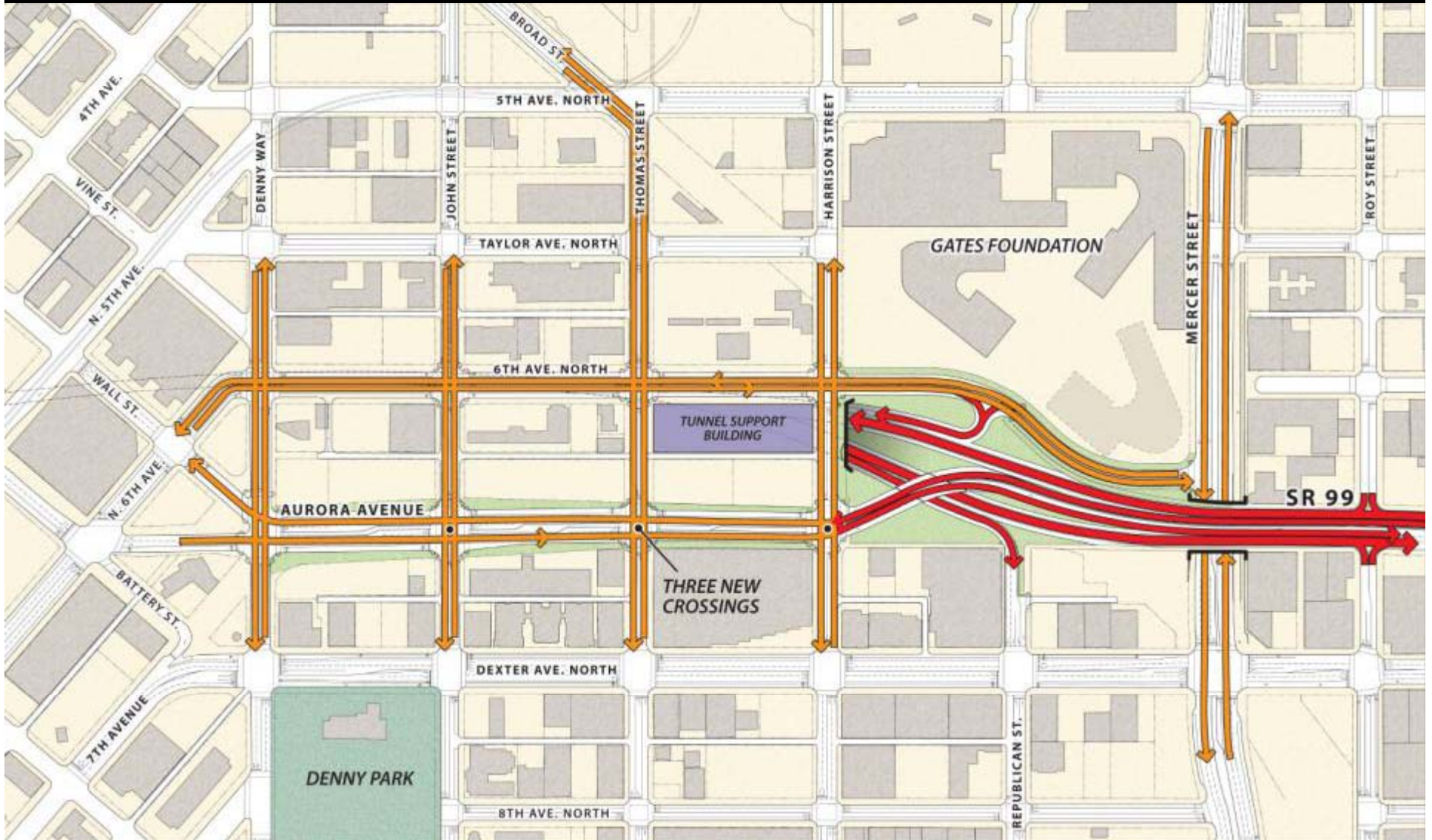


## NORTH PORTAL: OPTION 1

BORED TUNNEL ALTERNATIVE



# Elements

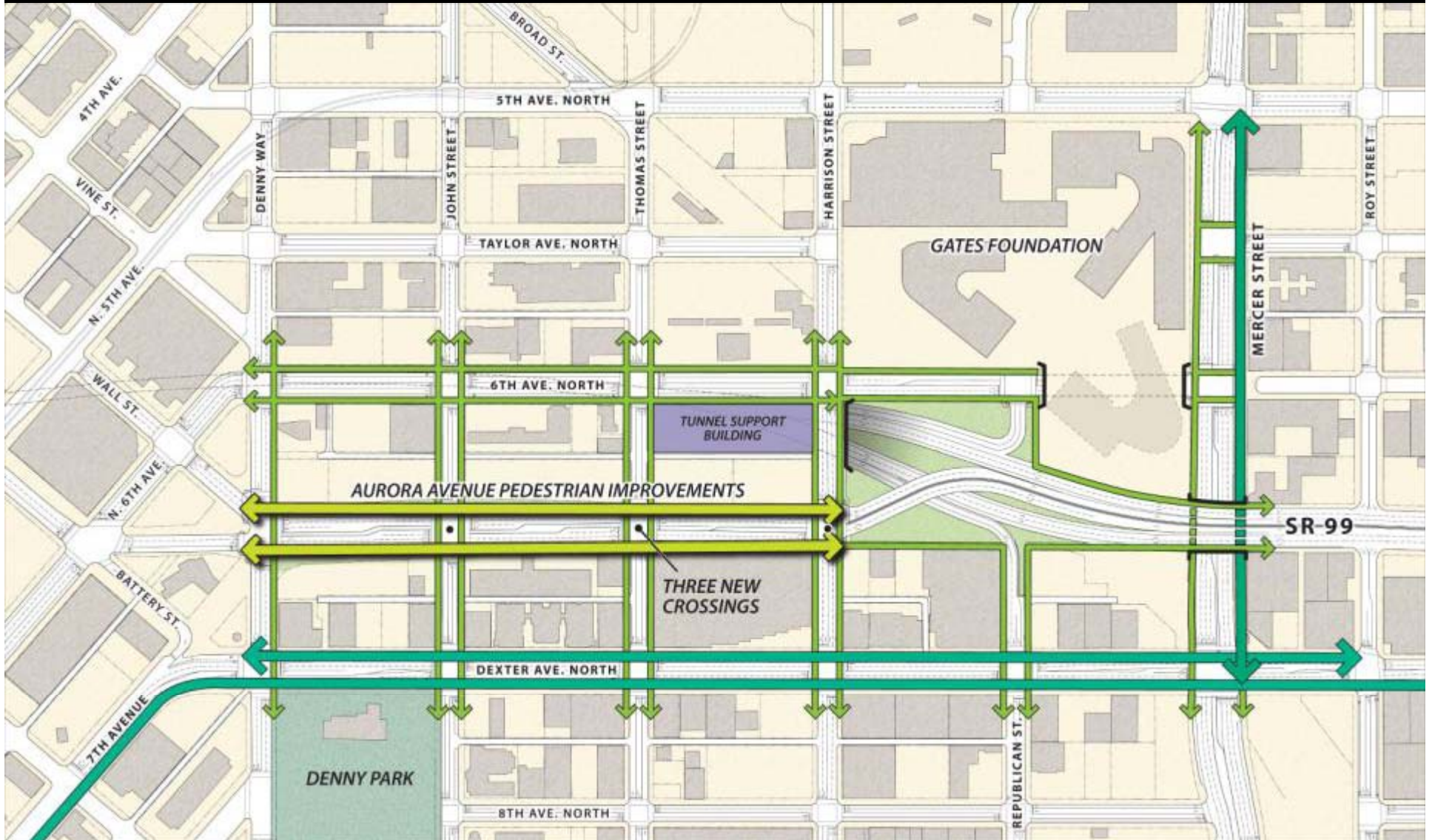


## NORTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE



# Pedestrian and Bicycle Access

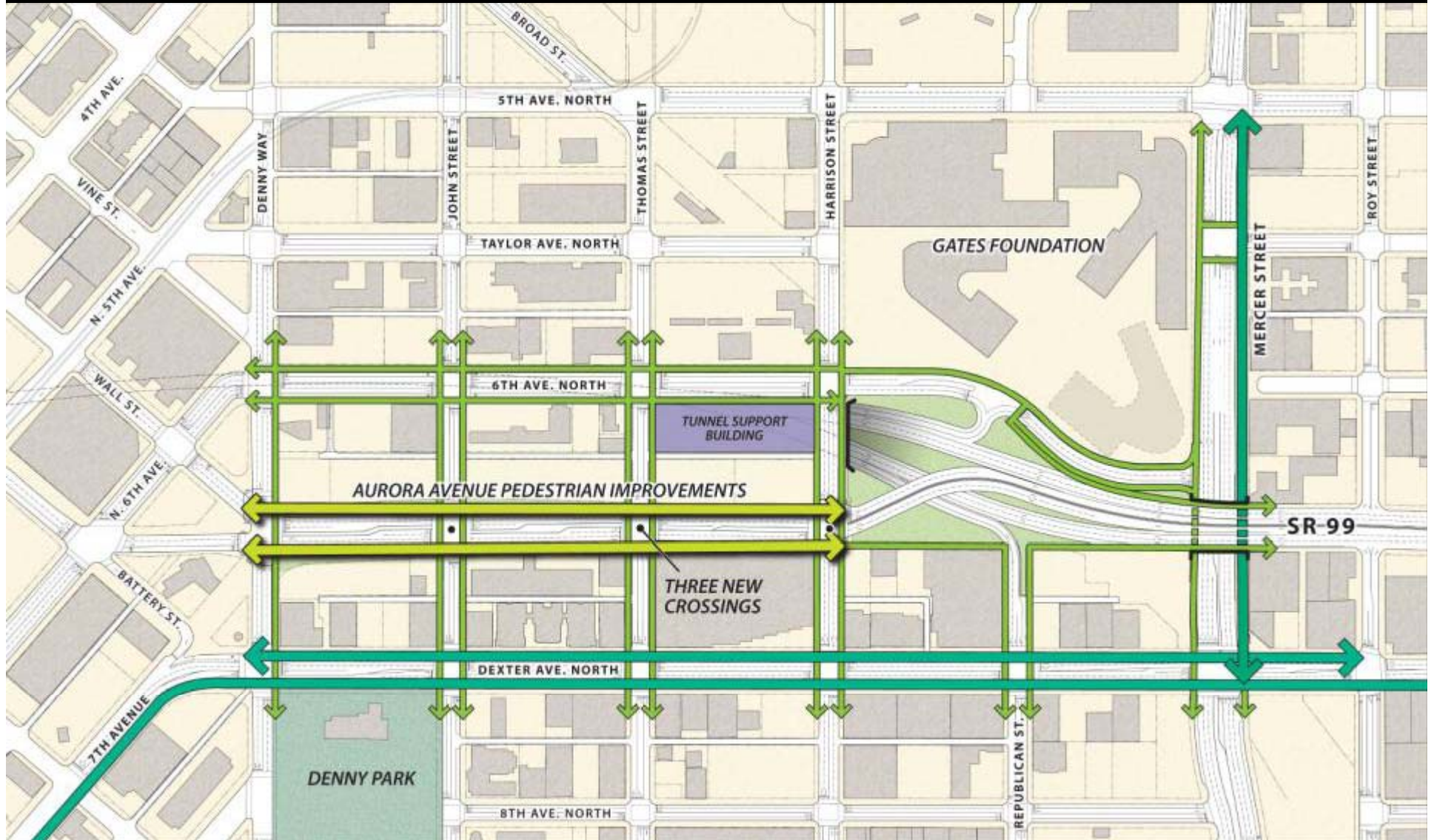


## NORTH PORTAL: OPTION 1

BORED TUNNEL ALTERNATIVE



# Pedestrian and Bicycle Access

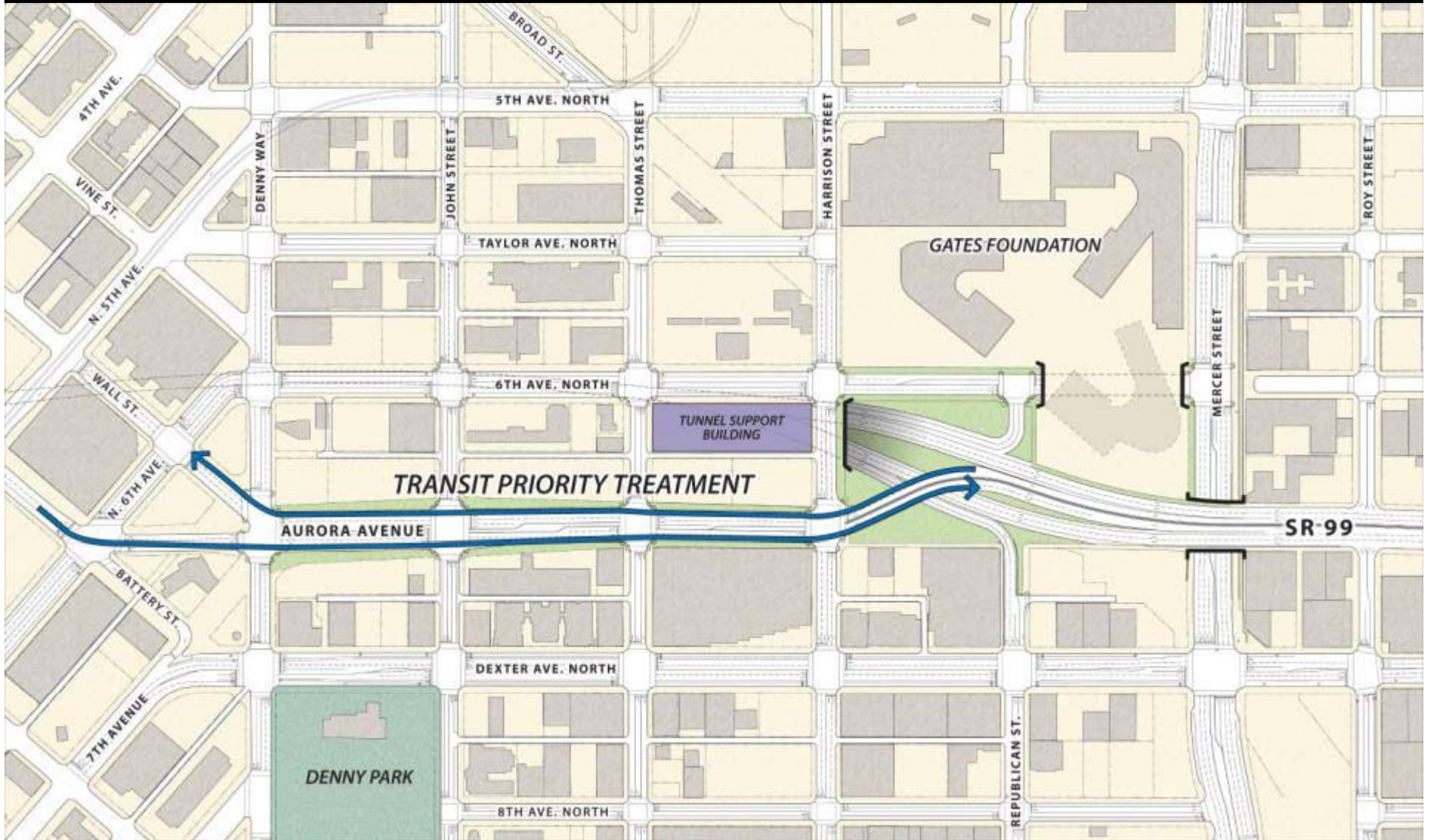


## NORTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE



# Transit Access



## NORTH PORTAL: OPTION 1

BORED TUNNEL ALTERNATIVE



# Transit Access

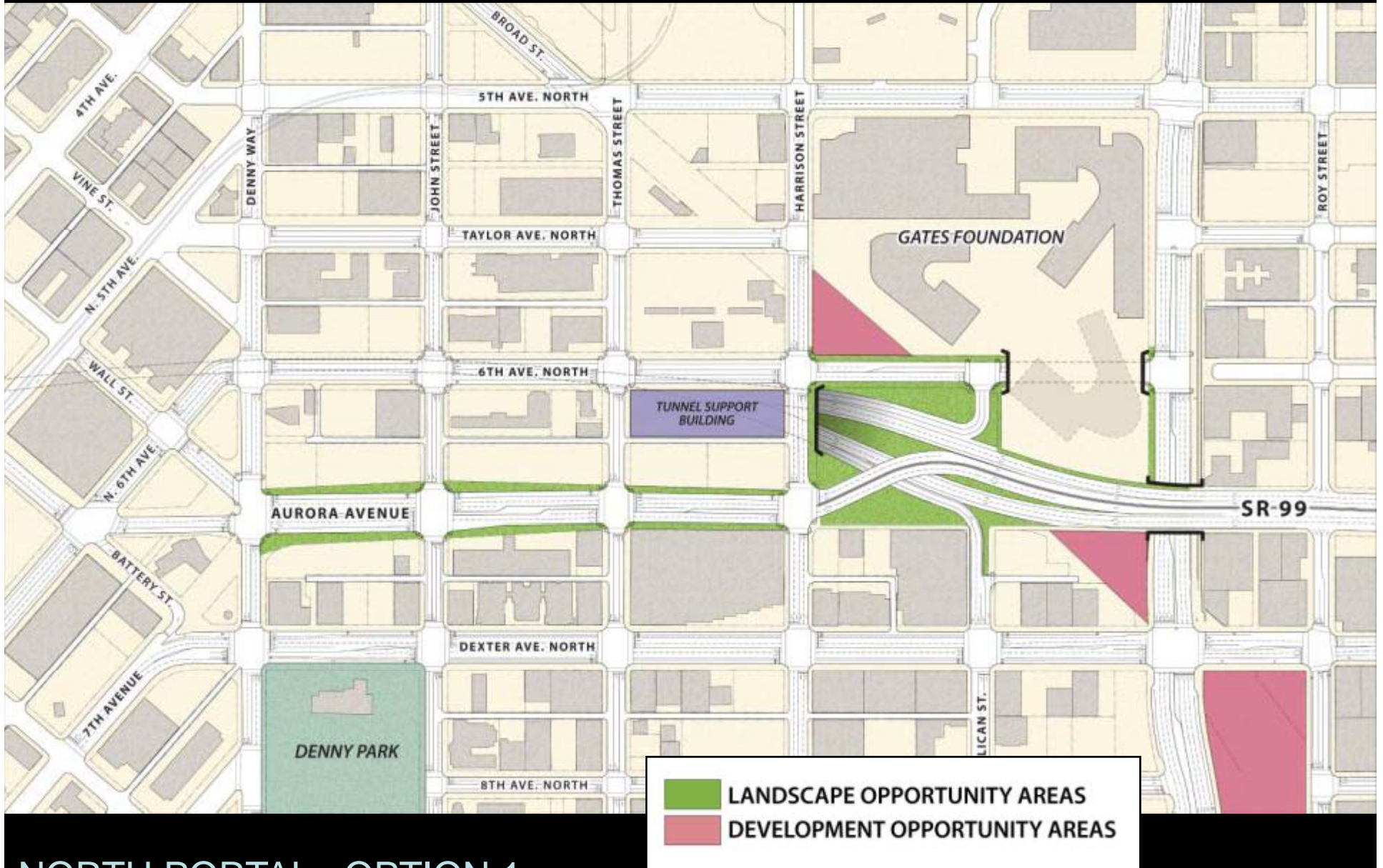


## NORTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE



# Opportunity Areas



## NORTH PORTAL: OPTION 1

BORED TUNNEL ALTERNATIVE



# Opportunity Areas



## NORTH PORTAL: OPTION 2

BORED TUNNEL ALTERNATIVE



# North Portal – Aurora Avenue





# North Portal

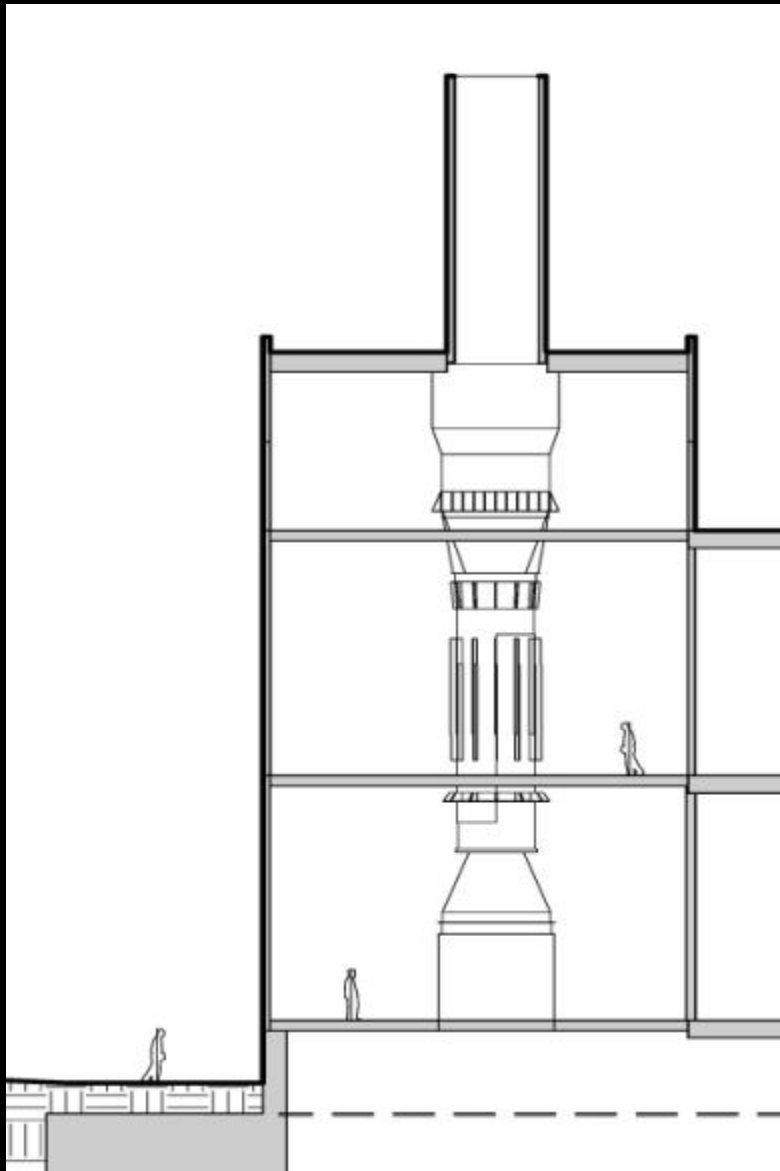


# Tunnel Operations Buildings

## ***PROGRAM FUNCTIONS :***

- ***EMERGENCY VENTILATION; 4-5 FANS***
- ***ELECTRICAL SYSTEMS AND EQUIPMENT***
- ***MAINTENANCE FACILITIES WITH PARKING***
- ***OPERATIONAL BACKUP AND SYSTEMS MONITORING***





Building Functions  
Systems- Ventilation Fans



Building Functions  
Systems- Electrical Power

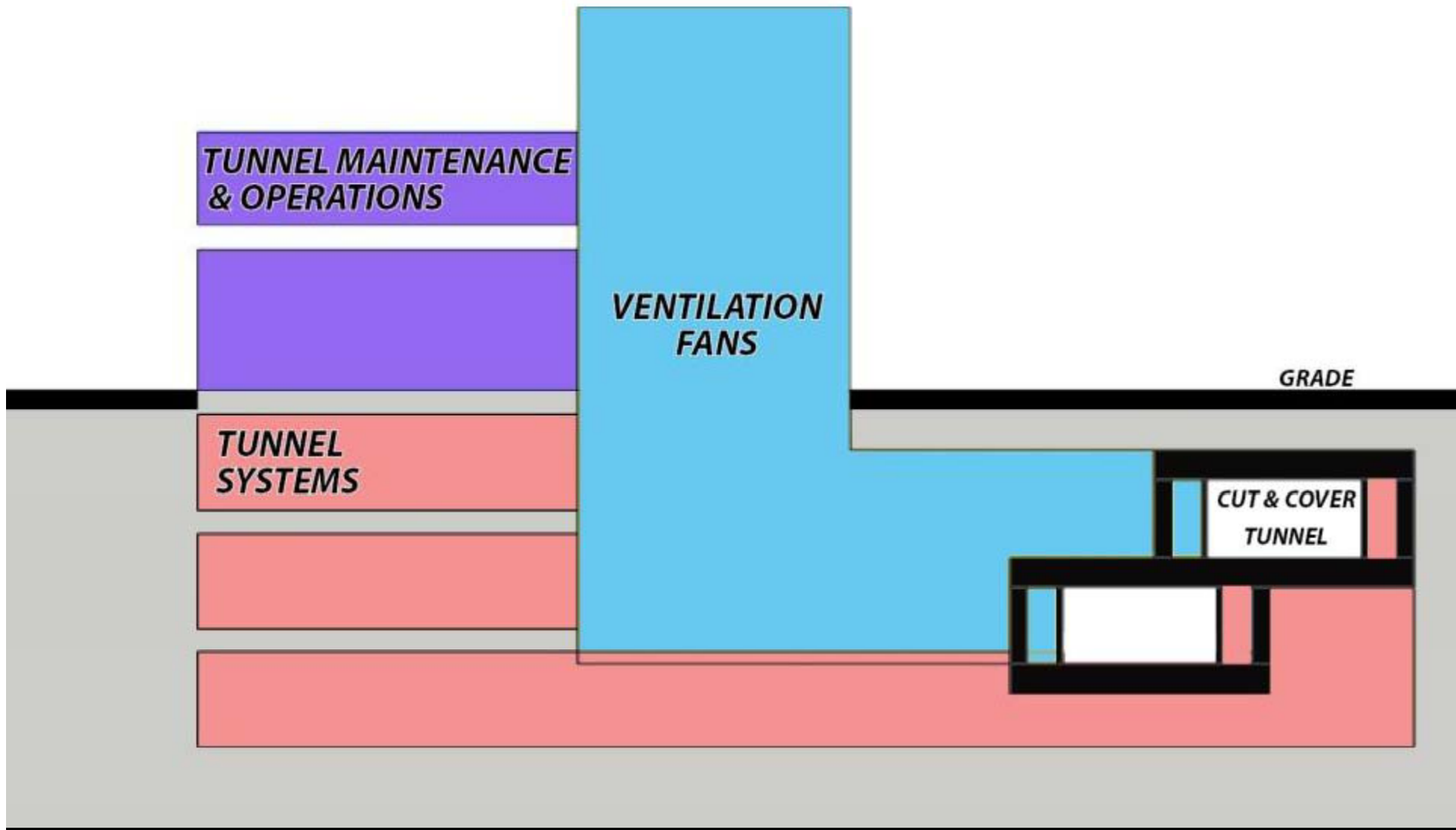
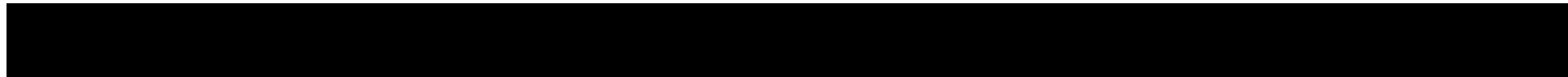




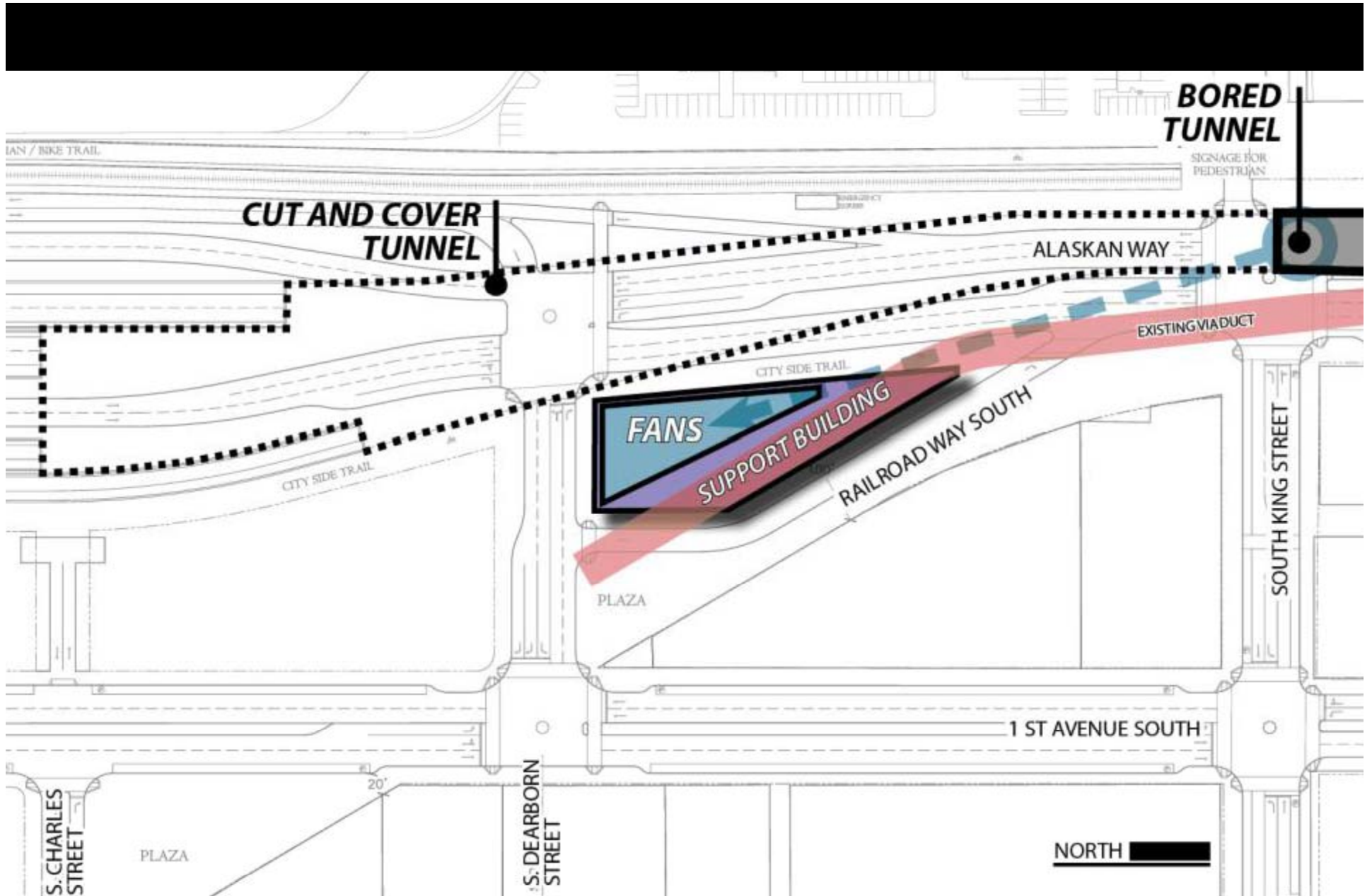
Building Functions  
Operations- Systems Monitoring



Building Functions  
Operations- Maintenance

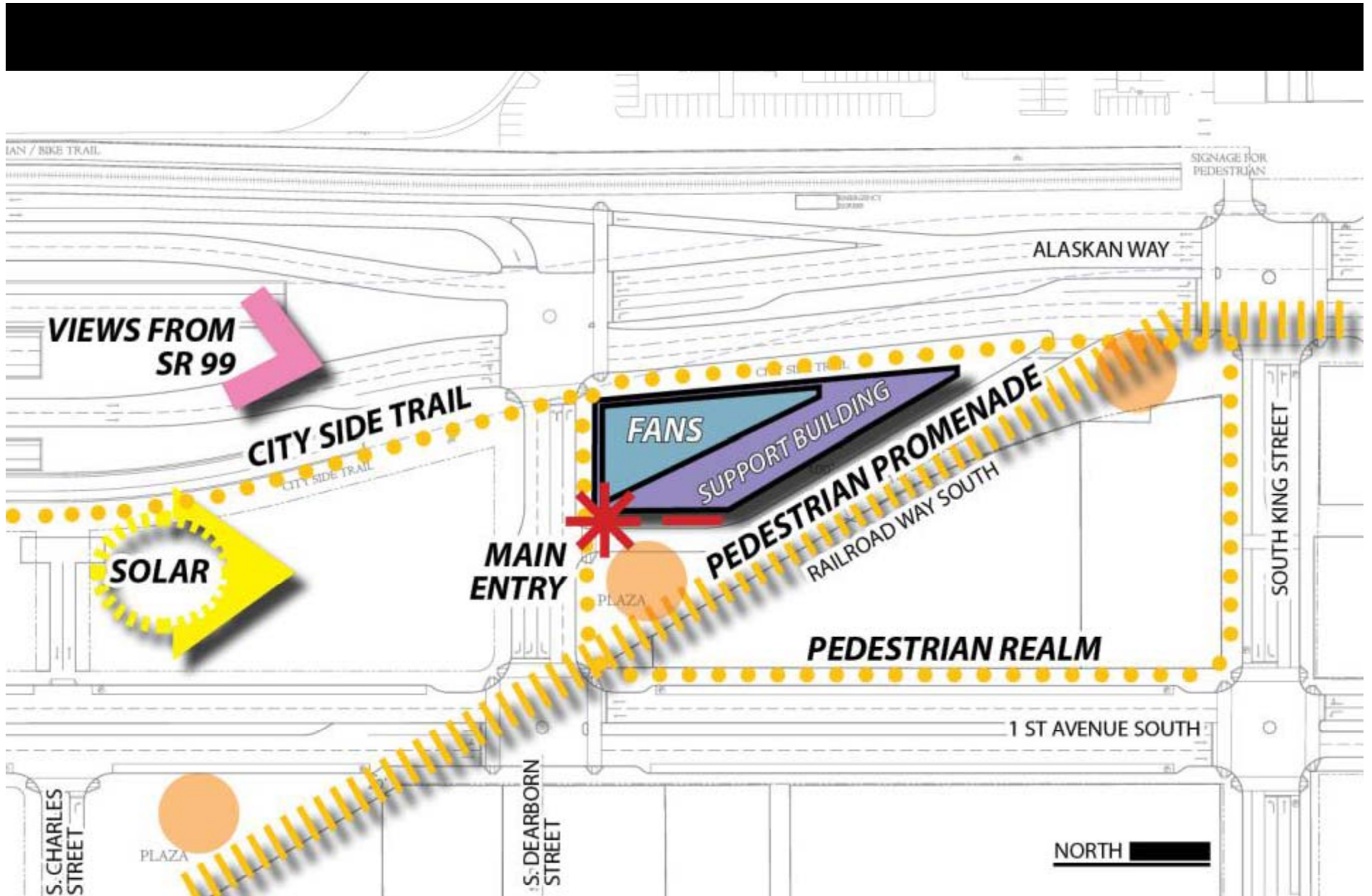






South Site Location





## South Site Design Influences



South Immediate Context








South Context  
pioneer square



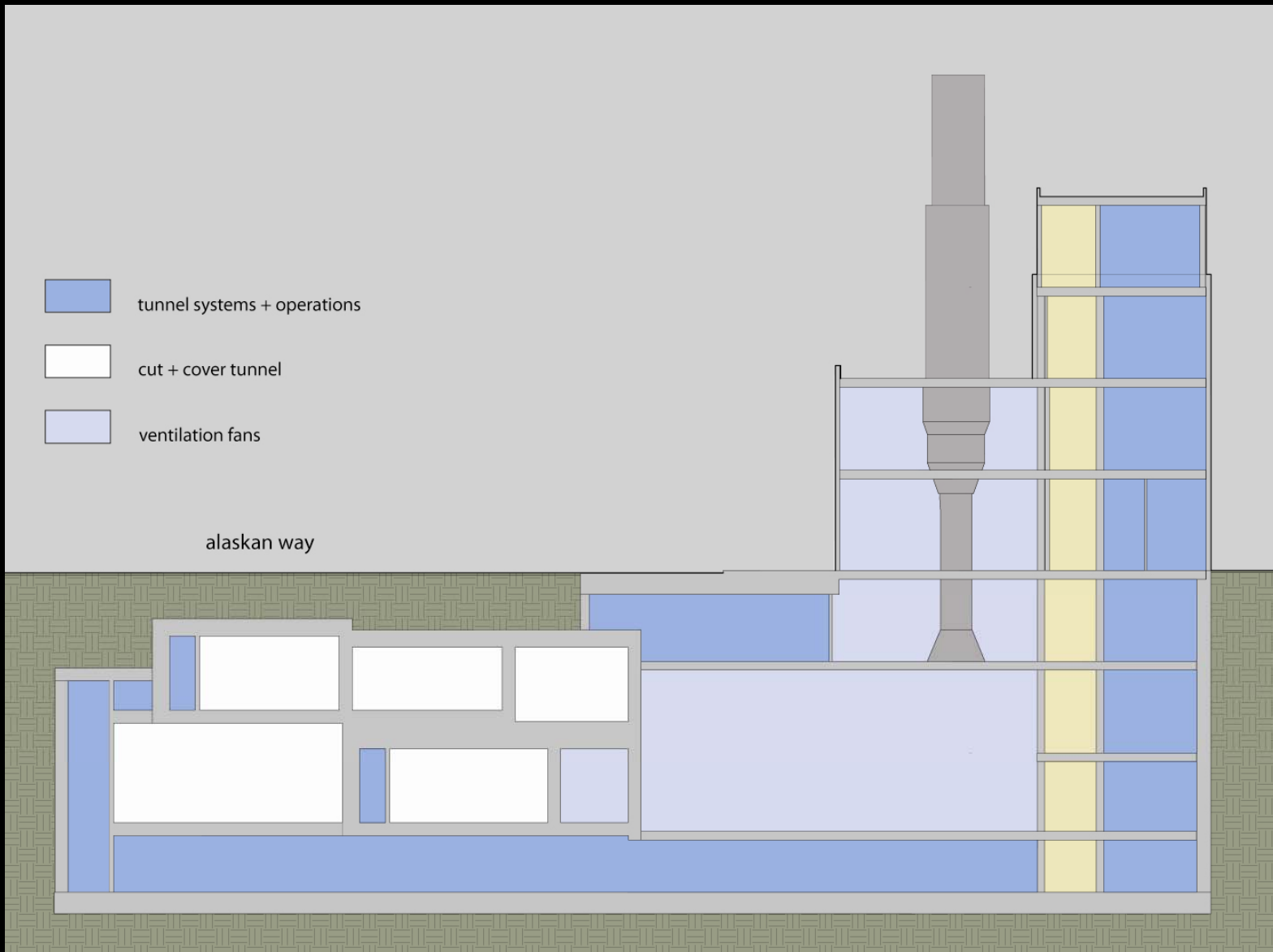


South Context  
pier structures and stadiums



-  tunnel systems + operations
-  cut + cover tunnel
-  ventilation fans

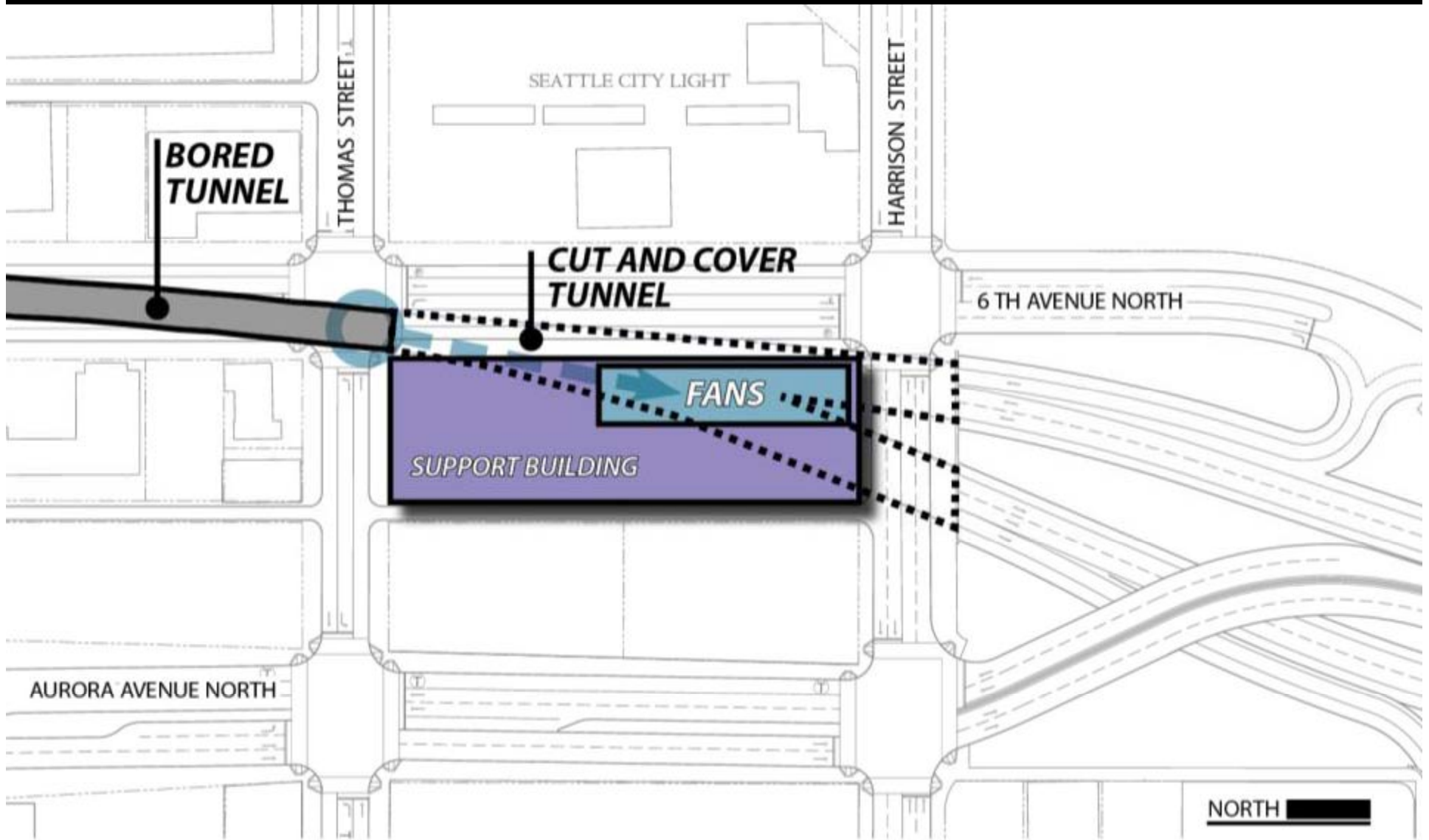
alaskan way



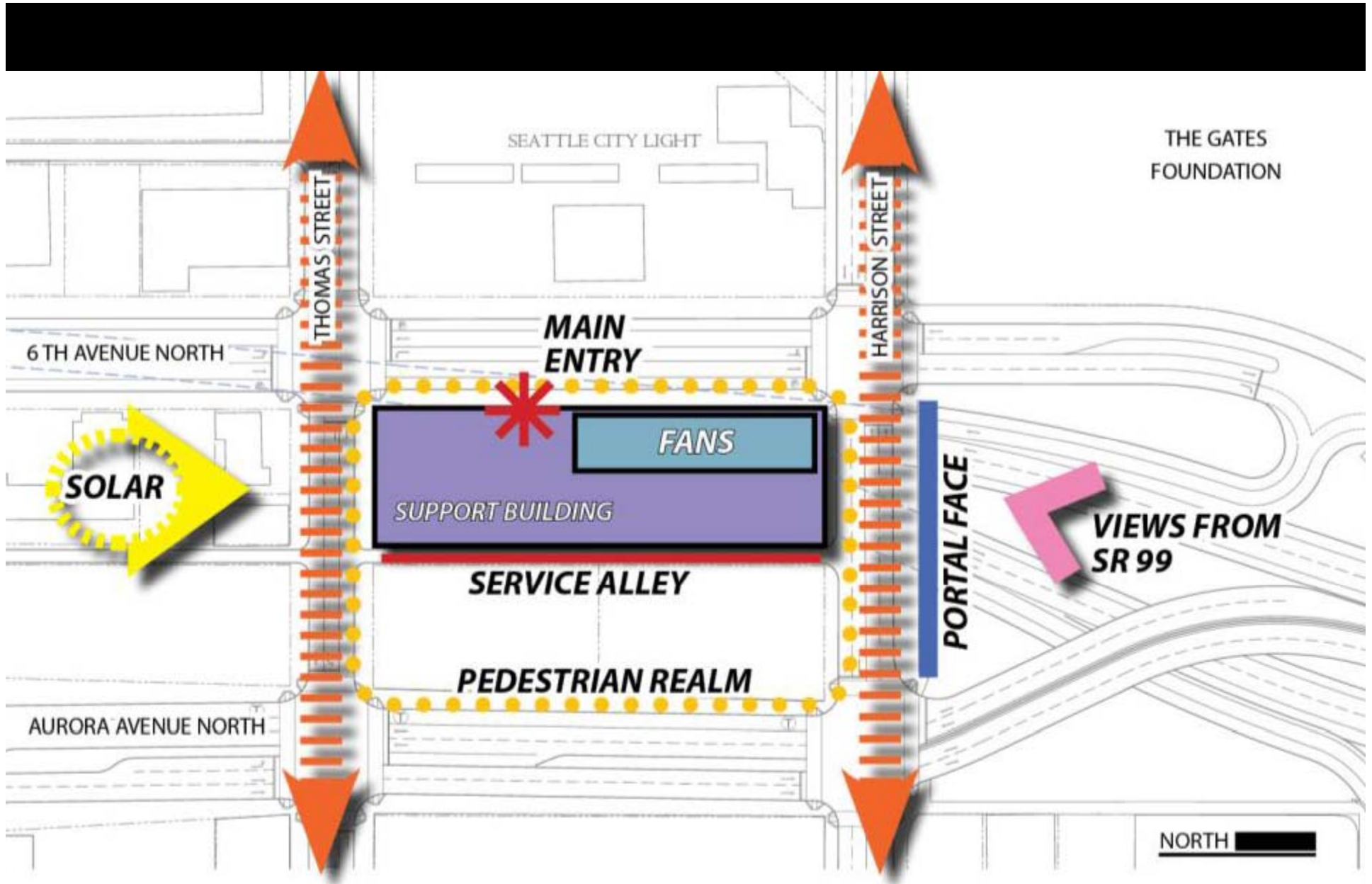
# South Building Concepts

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## section



North Site Location



## North Site Design Influences

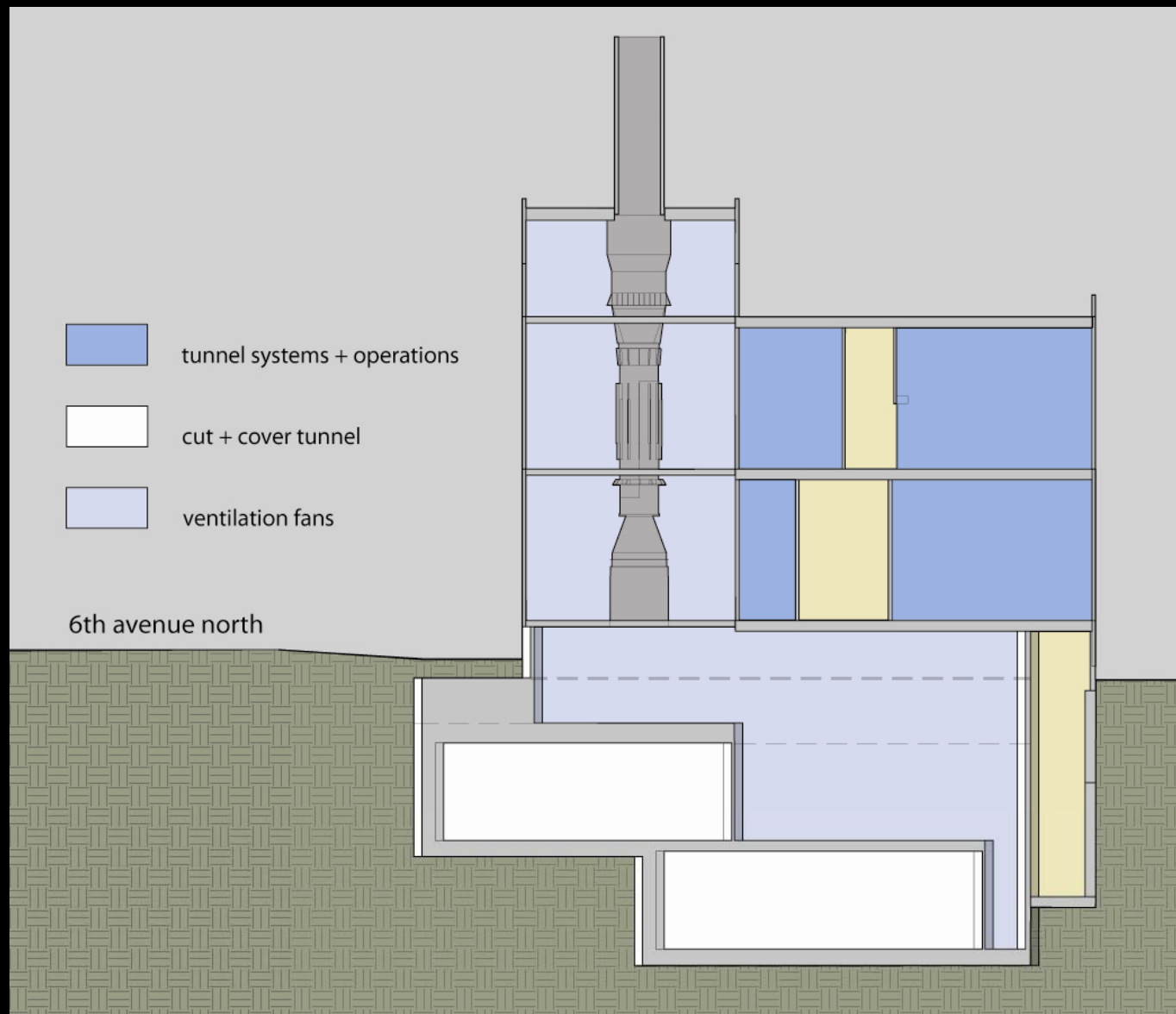


North Immediate Context





North Context  
mixed use



# North Building Concepts

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## section

# A Different Scale and Design Direction



Boston



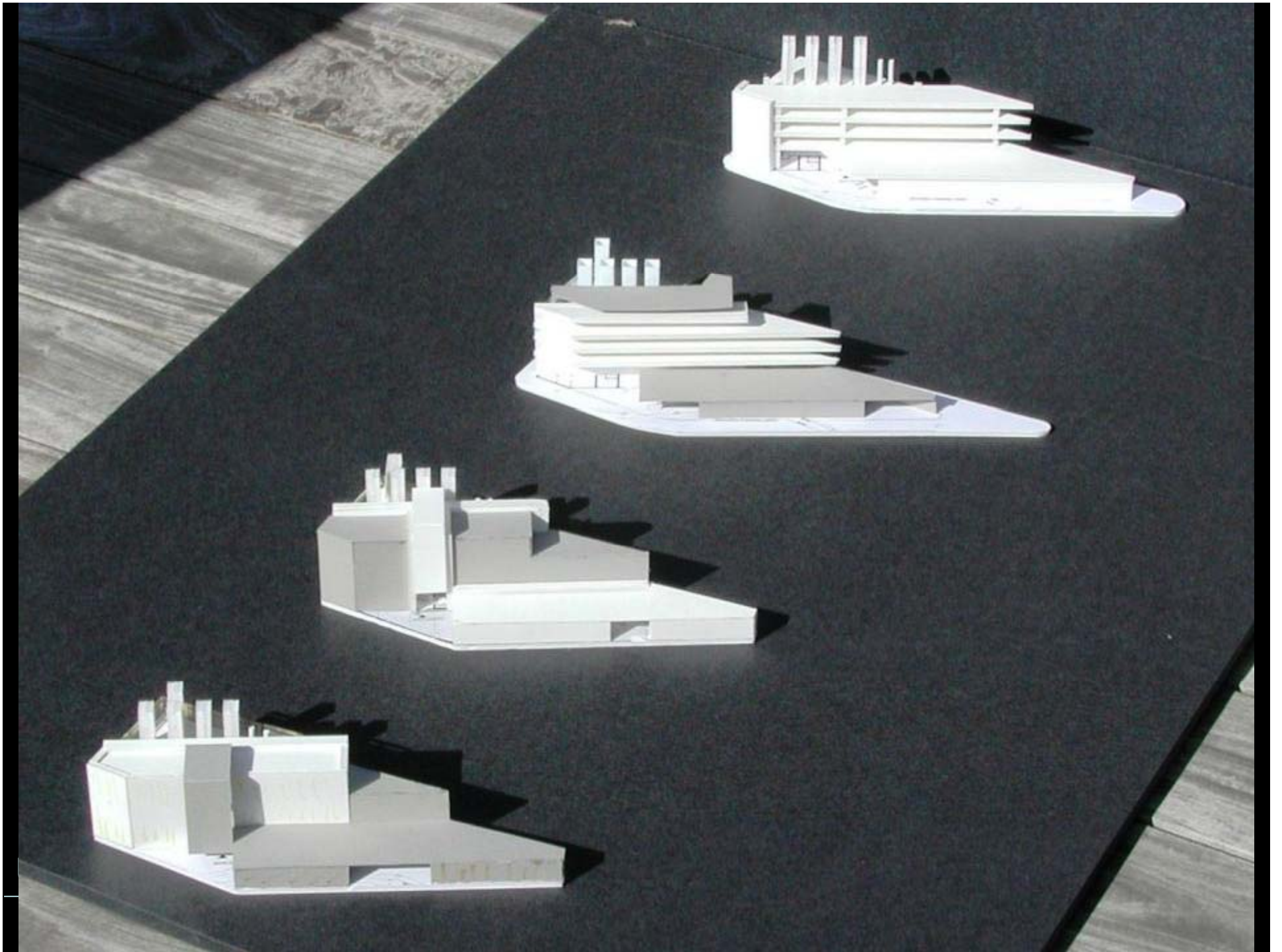


Urban Infrastructure Buildings

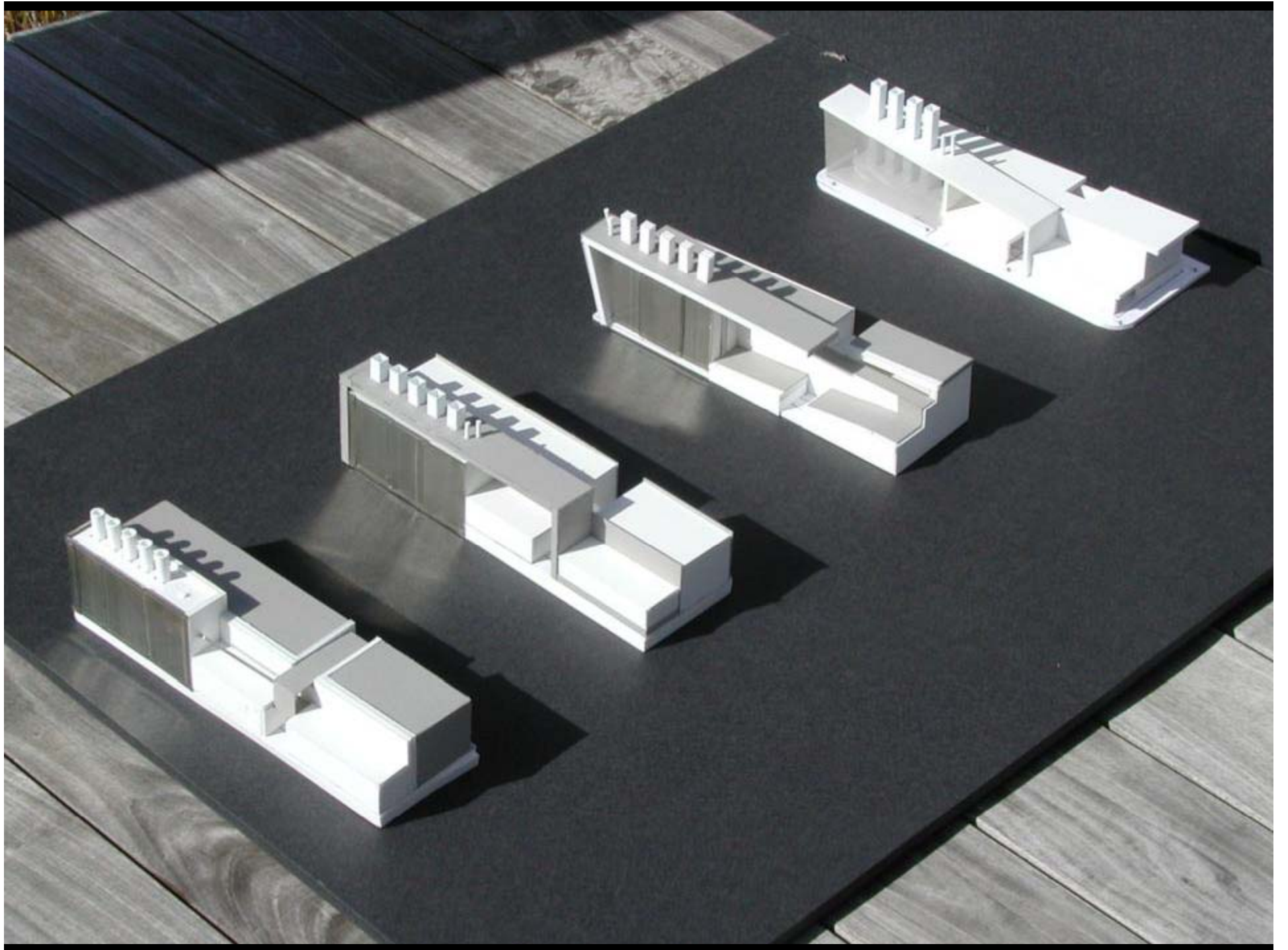




Urban Infrastructure Buildings







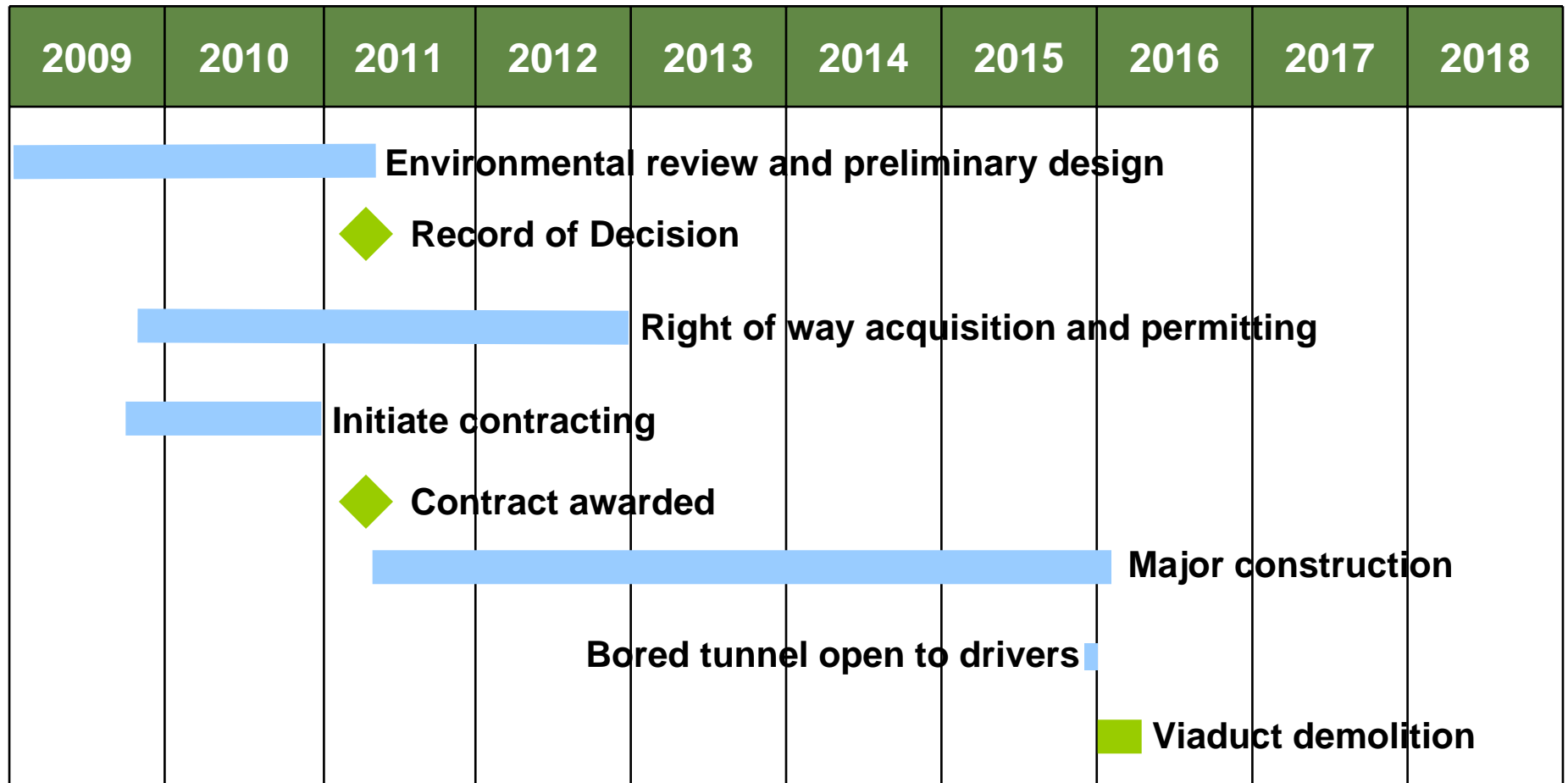
# Alaskan Way Viaduct & Seawall Replacement Program



## South Portal Working Group December 17, 2009



## Proposed Bored Tunnel Timeline\*



\*Assumes Record of Decision (ROD) for the bored tunnel alternative is issued in 2011.

## Design Build Qualifying Teams

Four design-build teams have submitted Statements of Qualifications for the SR 99 Bored Tunnel Design-Build Project. They include:

- **Seattle Tunneling Group** is made up of S.A. Healy Co., of Lombard, Ill.; FCC Construcción, S.A. of Spain; Parsons Transportation Group, which has a Seattle office; and London-based Halcrow Inc., which has an office in Vancouver, B.C.
- **VTS Joint Venture** is composed of Vinci Construction Grand Projects, a French company; Traylor Bros. Inc., of Evansville, Ind.; and Skanska USA and Arup, both of which have Seattle offices.
- **AWV Joint Venture** is composed of Omaha, Neb.-based Kiewit Pacific, which has a Seattle office; German-based Bilfinger Berger Ingenieurbau, which has offices in Vancouver and Vancouver, B.C.; and AECOM, which is based in Los Angeles and has Seattle offices.
- **Seattle Tunnel Partners** includes New York-based Dragados USA, whose parent company is ACS of Spain; and HNTB Corp., which is headquartered in Kansas City and has a Bellevue office.

# SR 99 Central Waterfront Bored Tunnel Alternative Update

The new proposed bored tunnel alignment:

- Begins on Alaskan Way south of S. King Street, then moves toward First Avenue near Yesler Way, turns north near Stewart Street and ends at Sixth Avenue N. and Thomas Street.
- Reduces impacts to Pioneer Square, including:
  - Construction impacts.
  - Risk and cost.
  - Building settlement.
- Reduces right of way acquisitions.
- Maintains functionality of previous proposal.
- Allows for simplified coordination among contractors.
- Maintains transit movements within the corridor.

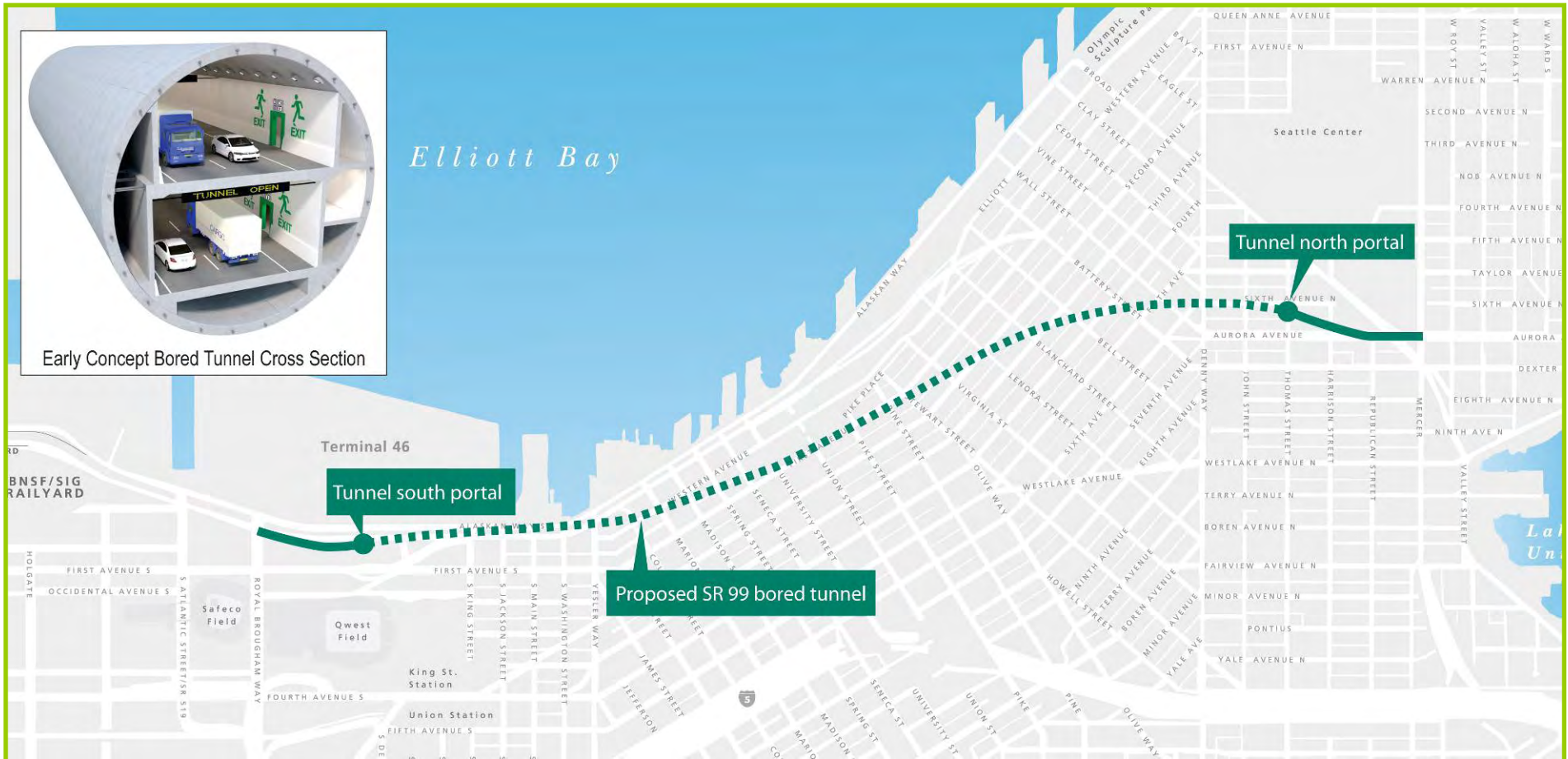
## Construction Impacts

Regardless of tunnel alignment there will be construction activities and impacts:

- Temporary and partial closures.
- Detour routes.
- Noise
- Dust.
- Increased construction-related truck traffic.
- Night work.
- Parking changes.

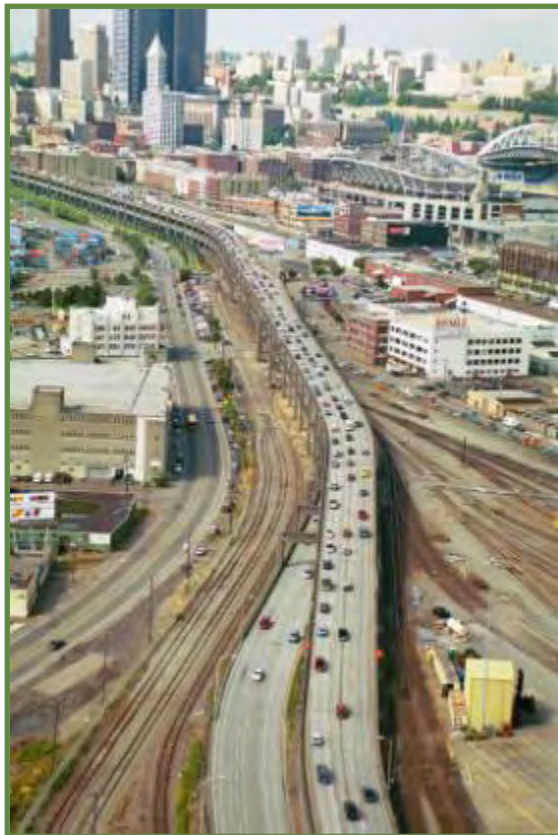


# New Proposed SR 99 Bored Tunnel Alignment



## S. Holgate to S. King Viaduct Replacement

### Construction timeline



2009	2010	2011	2012	2013
Preliminary construction				
	Road and bridge construction			

- Replaces nearly half of the existing viaduct.
- Keeps SR 99 traffic moving during replacement of the waterfront section of the viaduct.
- Improves access to Terminal 46 and provides a grade-separated crossing at S. Atlantic Street.
- Maintains safe pedestrian and bicycle access.
- Provides new access in stadium area.



# S. Holgate to S. King Viaduct Replacement Existing





## Previous Undercrossing Design





## Previous Alaskan Way/East Marginal Way Connection



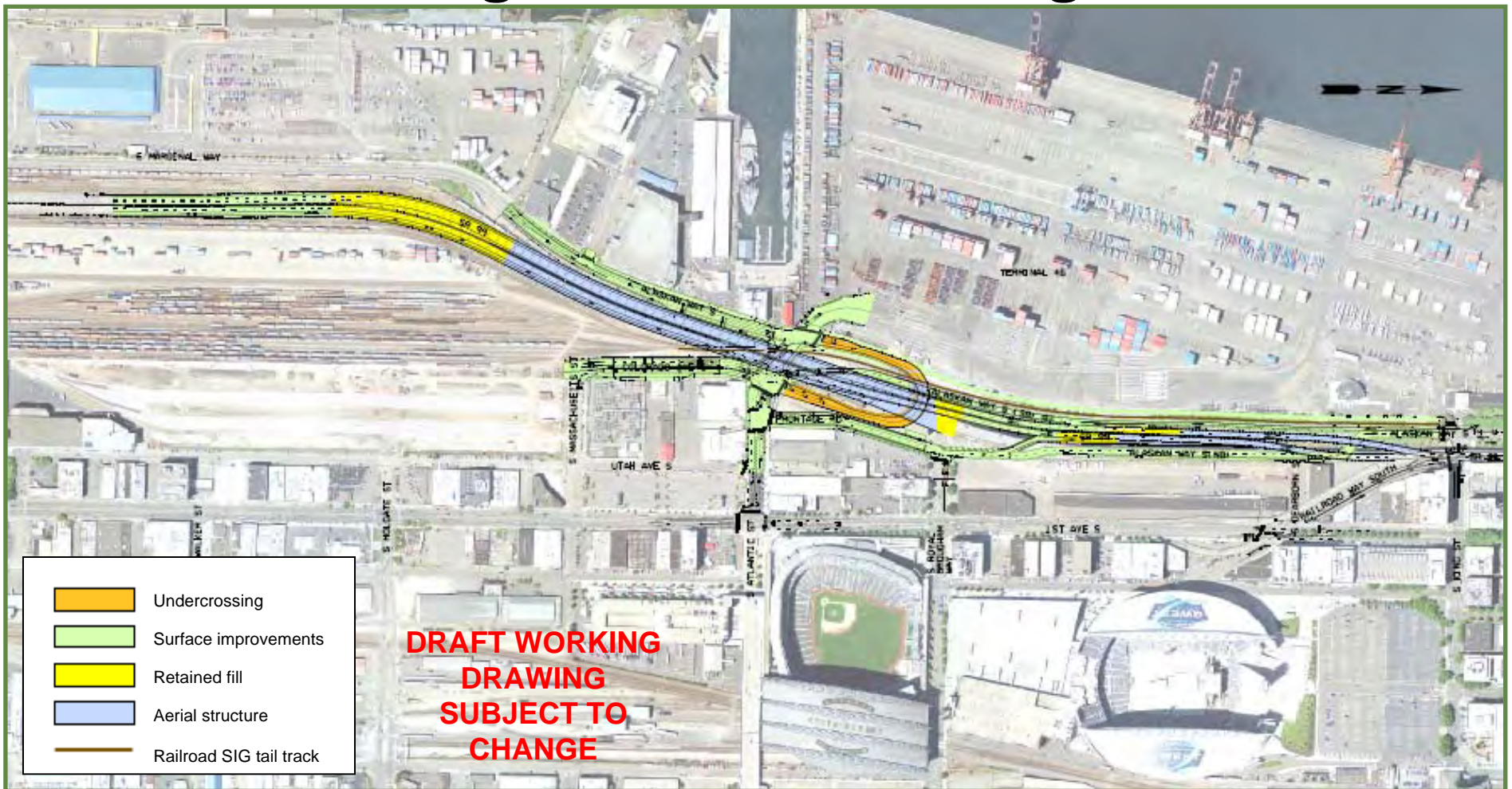


# S. Holgate to S. King Viaduct Replacement Current Proposal



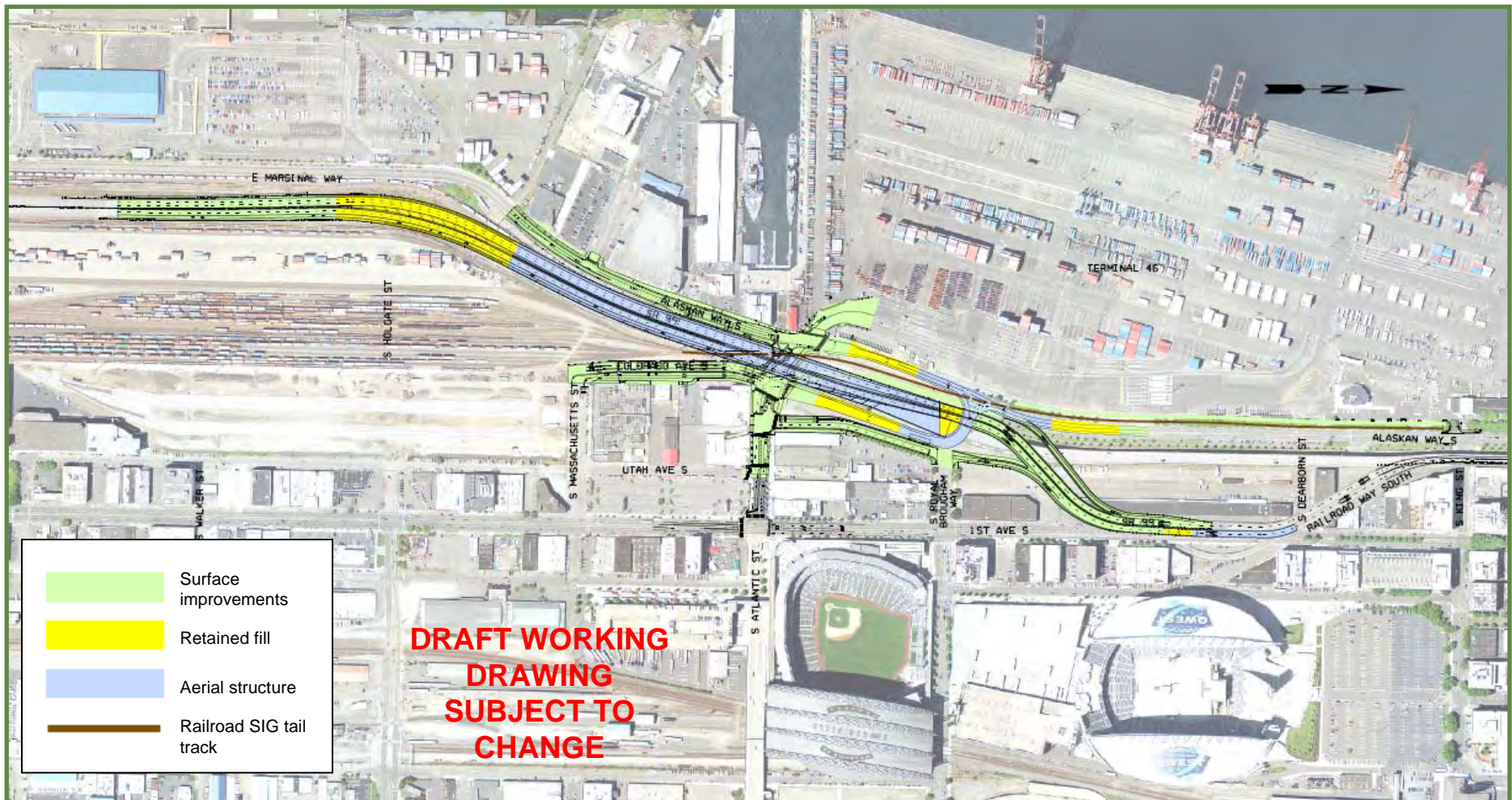


# S. Holgate to S. King Viaduct Replacement Stage 2 Previous Design





# S. Holgate to S. King Viaduct Replacement Stage 2 Current Design





## South Portal Goals

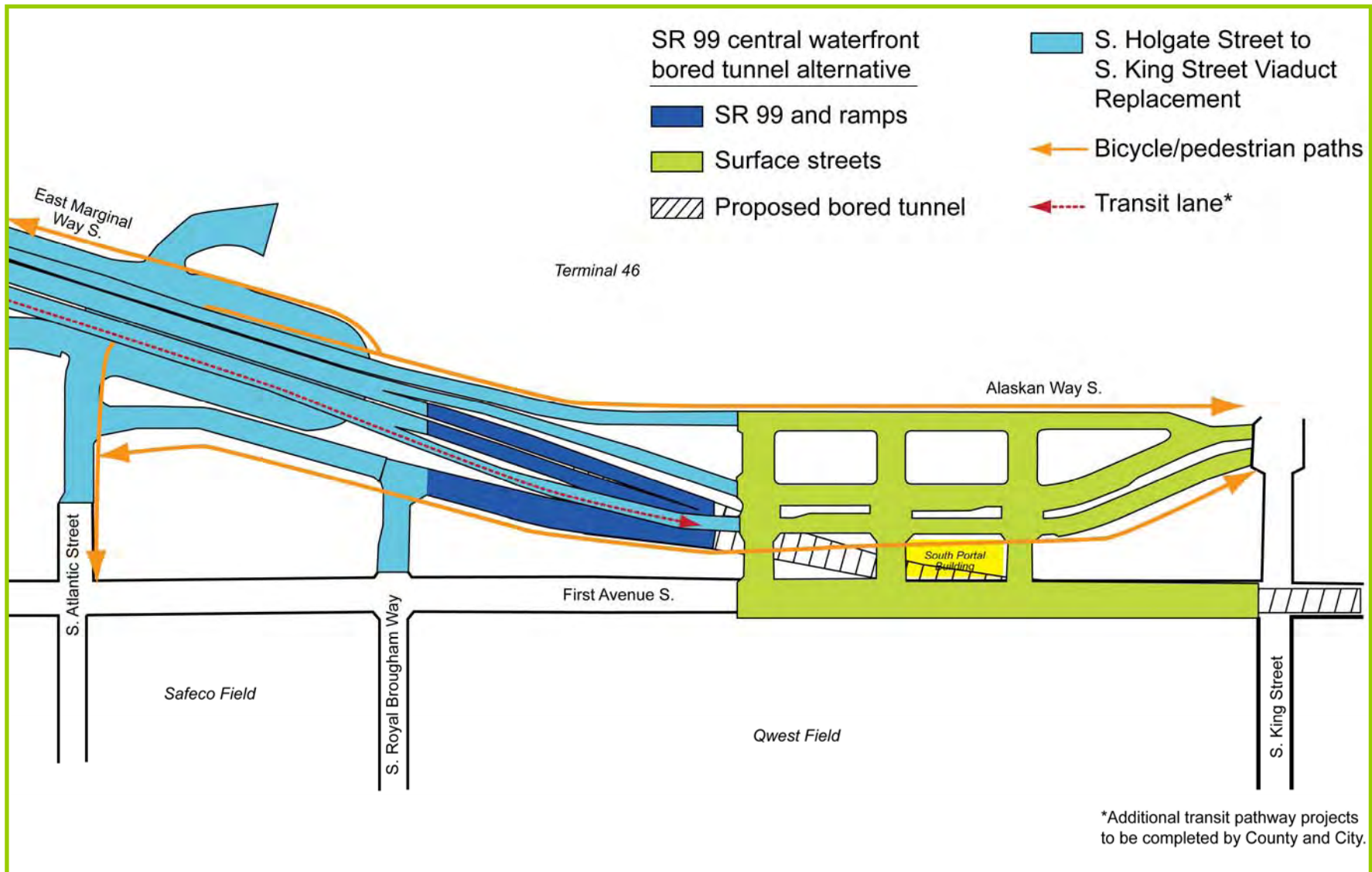
- Keep people and goods moving safely on SR 99 and on surface streets.
- Maintain freight access to and from the port and the manufacturing industrial center.
- Provide access to/from SR 99.
- Maintain efficient operations on the arterial street network.
- Enhance and/or maintain transit service in and through the SR 99 corridor.
- Improve bike and pedestrian connections to and through the area.
- Improve the urban character of the portal area.
- Maintain access to the ferry terminal.
- Open bored tunnel to traffic by the end of 2015.
- Complete improvements within the established budget.
- Minimize construction impacts.

## **New Proposed South Portal**

The new proposed south portal option on Alaskan Way:

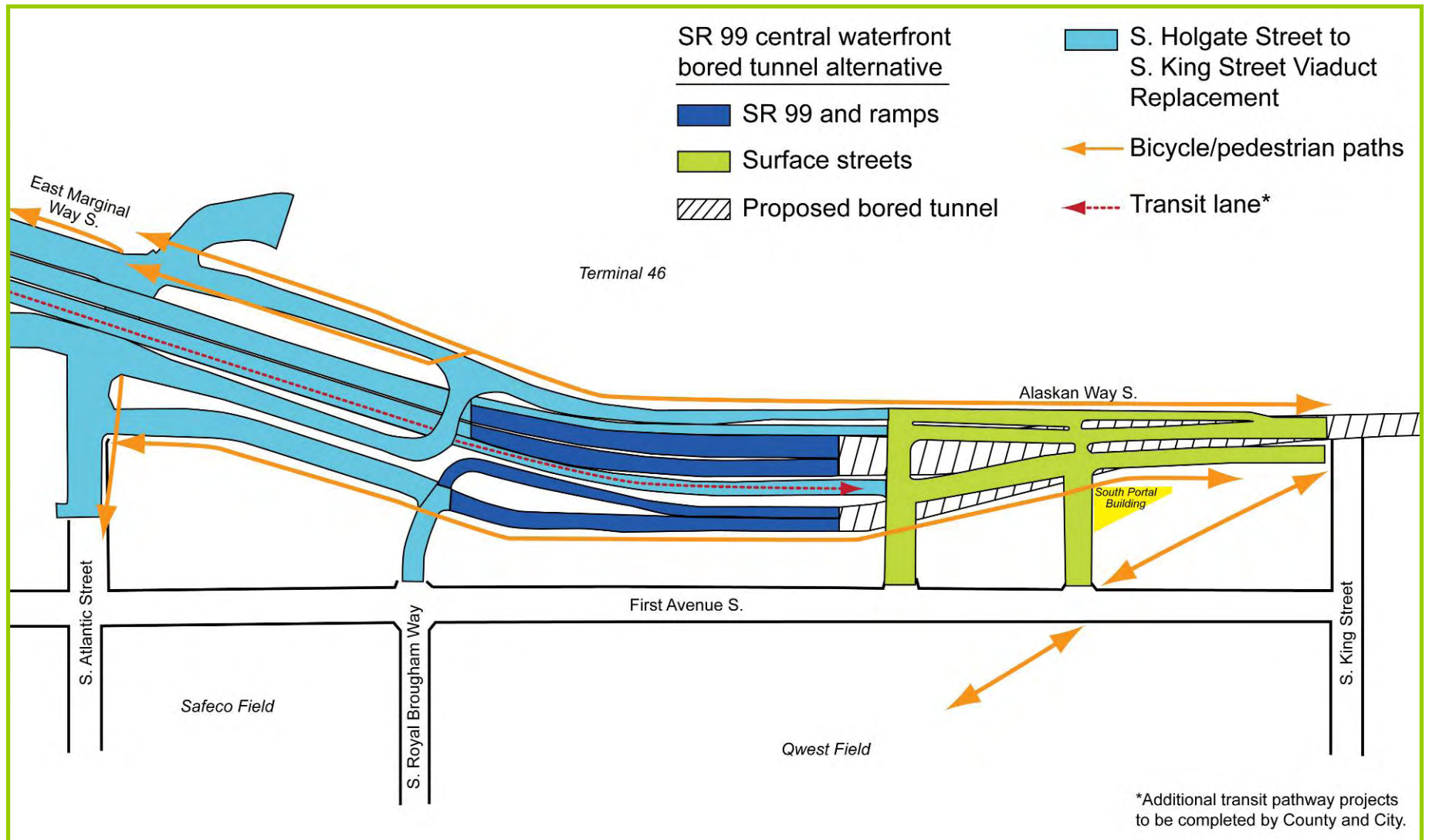
- Reduces risk and associated costs.
- Avoids impacts on First Avenue through Pioneer Square.
- Reduces the potential need to reinforce older historic structures during construction.
- Provides similar access and mobility as the previous design.

# Previously Proposed South Portal





# New Proposed South Portal



## **New Proposed South Portal**

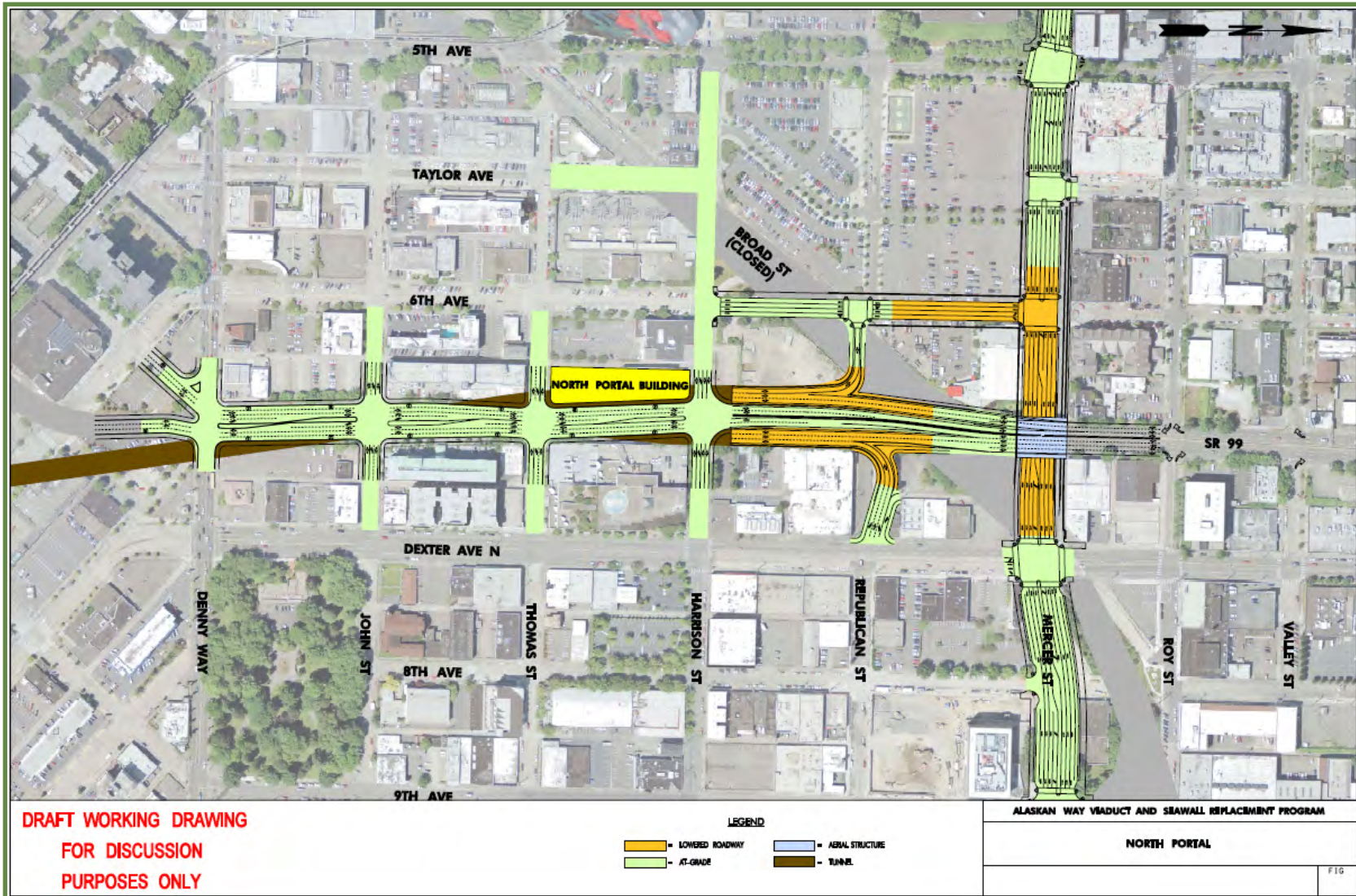
The new south portal design provides similar access and mobility as the previous design, including:

- New street connections, northbound and southbound, from SR 99 to Alaskan Way and First Avenue.
- Improved SR 99 access to downtown sports stadiums, port terminals and the ferry terminal.
- New east-west connections between S. Royal Brougham Way and S. King Street.
- Improved system connectivity between SR 99 and I-90/I-5.
- Improves bike and pedestrian movements.
- Maintains transit movements within the corridor.
- Future development potential along First Avenue is improved.

# **Feedback From Working Group Members**

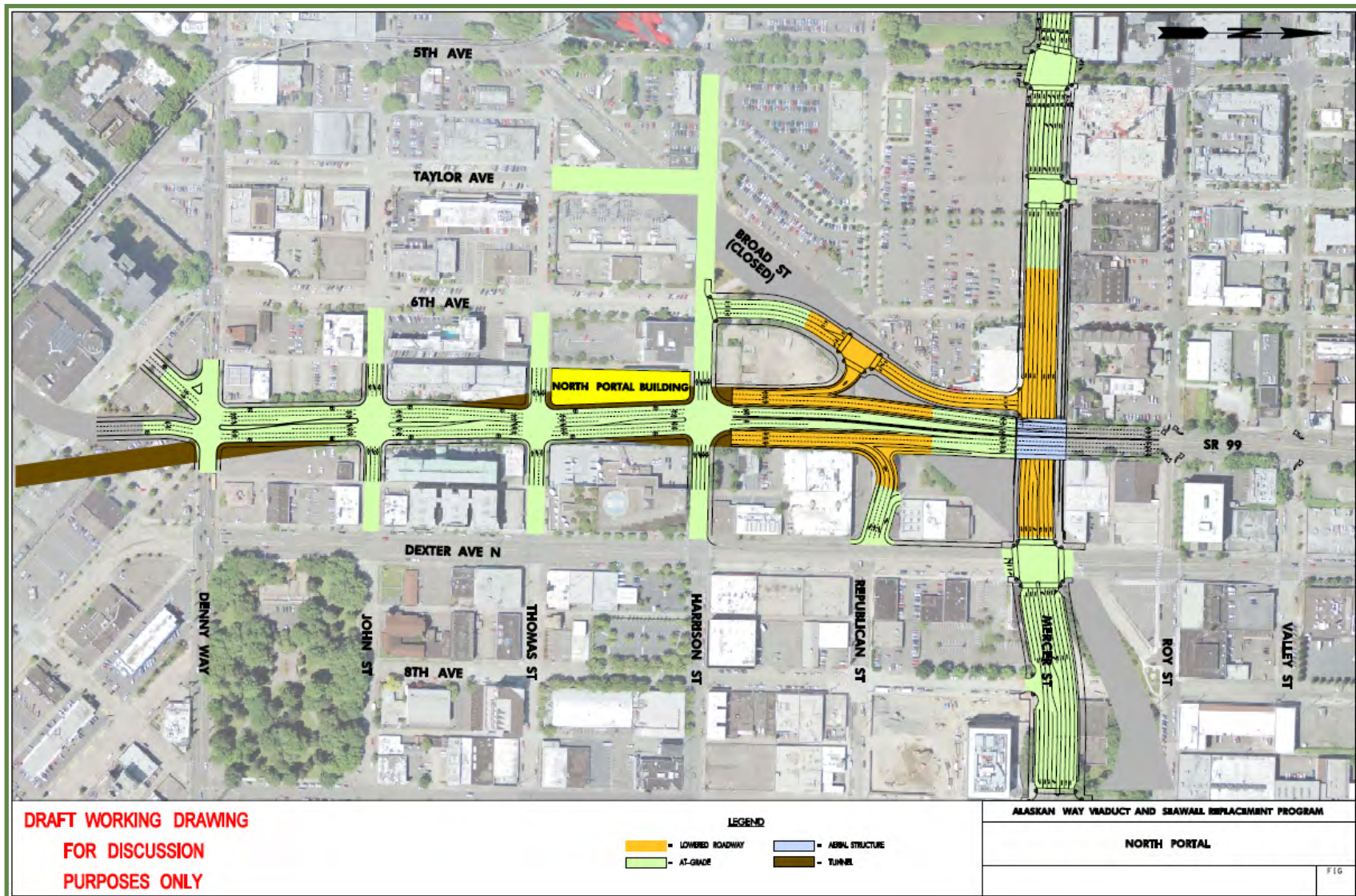


# Previous Proposed North Portal – Option 1





# Previous Proposed North Portal – Option 2



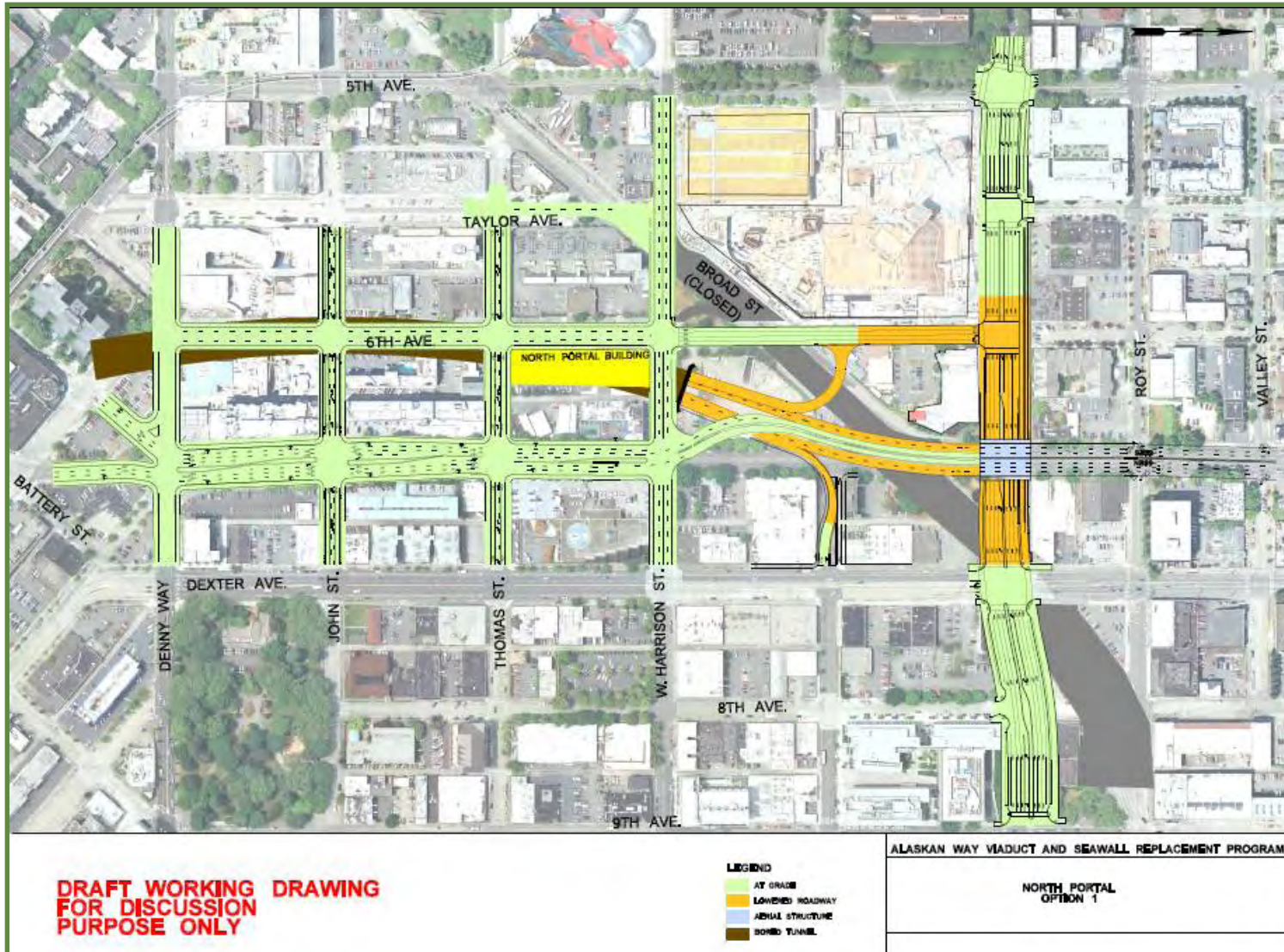
## **New Proposed North Portal**

The new proposed north portal option:

- Limits disruptions due to construction.
- Reduces right of way acquisitions.
- Avoids contractor conflicts within the construction zone by allowing greater construction space.
- Reduces the impacts on SR 99 and maintains transit movements within the corridor.

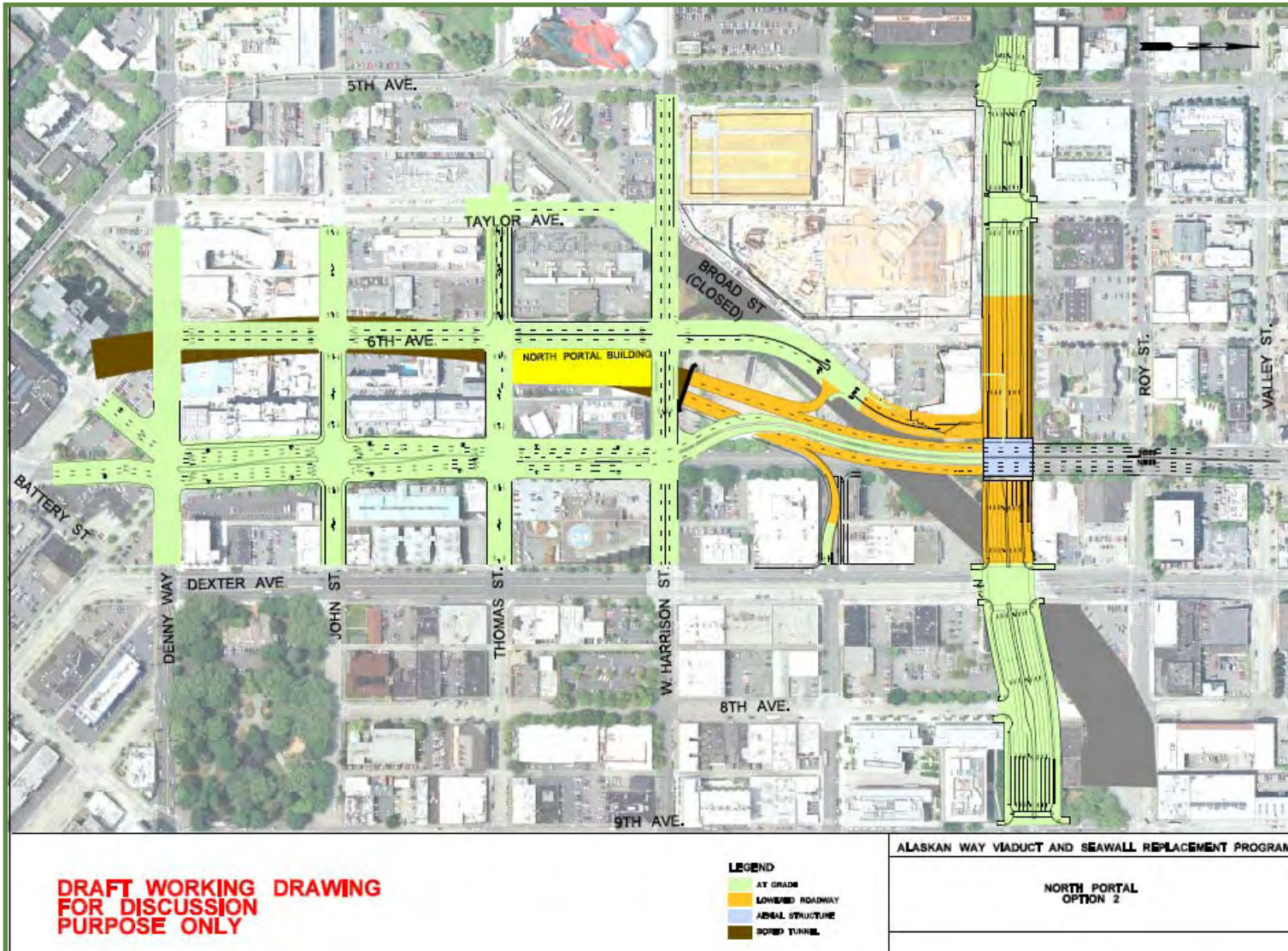


# New Proposed North Portal – Option 1





# New Proposed North Portal – Option 2



## **Alaskan Way Viaduct and Seawall Replacement Program**

### **Holgate to King Stage 2 and Bored Tunnel Interface Options and Decisions Workshops 1 & 2**

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#### **MEETING MINUTES**

##### **ATTENDEES:**

2-17-09	2-20-09	ATTENDEE	2-17-09	2-20-09	ATTENDEE
✓	✓	Ali Amiri, WSDOT	✓	✓	Vic Oblas, VOSK
✓		Bob Chandler, SDOT	✓	✓	Bill Ott, OTT
		Wally Chen, PB	✓	✓	Don Phelps, PB
✓	✓	Gordon Clark, PB	✓	✓	Mike Rigsby, PB
✓	✓	Mike Colyn, PB	✓	✓	Jim Robison, HMM/PMAC
✓	✓	Rick Conte, PB	✓		Kevin Sakai, OTT
✓	✓	Ken Fiorentino, Jacobs	✓		Jim Struthers, WSDOT
✓	✓	Theresa Greco, WSDOT		✓	Bob Valenti, PB
✓	✓	Mike Johnson, SDOT	✓	✓	Alec Williamson, WSDOT
✓		Einer Handeland, PB	✓		Laura Wojcicki, PB
✓	✓	Asvin Mandadi, PB			

**SUBJECT:** Holgate to King (H2K) Stage 2 and Tunnel Interface Options and Decisions Workshop

**DATE/TIME:** Workshop 1 - February 17, 2009 / 1:00 p.m. – 4:00 p.m.  
Workshop 2 - February 20, 2009 / 1:00 p.m. – 3:00 p.m.

**LOCATION:** AWVSRP Office, 23<sup>rd</sup> Floor Training Room South

**DISTRIBUTION:** Attendees, plus:  
Matt Preedy, WSDOT; John White, WSDOT; Chris Wellander, PB; AWVSRP DCC; GEC Document Control

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#### **2-17-09 WORKSHOP 1**

##### **MEETING AGENDA**

1. Goals
2. Workshop Objective
3. Presentation of H2K Stage 2 Transition Area Staging Alternatives
  - Assumptions
  - Walk Thru Alternatives and Construction schedules
  - Present Pros and Cons independent of the Bored TunnelBaseline Alternative 1 – 60% PS&E Design – WOSCA Detour  
Alternative 2 – Inline Transition Structures with SR99 Closure  
Alternative 3 – Side Connection Transition Structures with SB SR 99 Closure  
Alternative 4 – Inline Transition Structures with Modified WOSCA Detour  
Alternative 5 – Side Connection Transition Structures with Modified WOSCA Detour
4. Interface with the Bored Tunnel and South Portal Construction
  - Bored Tunnel team responses to the Transition Area Alternatives for H2K
  - Pros and Cons for each for Bored Tunnel Construction
5. Discussions, Pros & Cons Evaluation, and Conclusion
  - Choose preferred alternative or develop Hybrid alternative



## **Alaskan Way Viaduct and Seawall Replacement Program**

### Holgate to King Stage 2 and Bored Tunnel Interface Options and Decisions Workshops 1 & 2

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#### **MEETING MINUTES**

#### **DISCUSSION:**

##### **1. Goals**

- The stated goals for this workshop:
  - Proceed with H2K design to meet September, 2009 Ad Date
  - Minimize traffic disruptions on SR 99 as well as on City streets
  - Address constructability issues during contract overlaps between H2K and Bored Tunnel
  - Discuss transition area north of Royal Brougham and reconnection to the Existing Viaduct

##### **2. Workshop Objectives**

- Objectives stated as follows:
  - Begin construction of H2K as soon as possible; complete as much work as possible before heavy construction for the Bored Tunnel begins.
  - Address Bored Tunnel impacts
  - Discuss the H2K Transition Area Alternatives, and develop pros and cons for each alternative relative to each contract.
  - Collective decision on recommendations on detour strategy for H2K
  - Select transition structure connection; strategy must meet ad date, minimize delays to construction of the Bored Tunnel

##### **3. Presentation of H2K Stage 2 Transition Area Staging Alternatives**

- Assumptions
  - Vacating the Whatcom Lead could save 8 months in the H2K schedule
  - SR99 Traffic would be detoured to 1<sup>st</sup> Avenue during closures. The minimum closure would be 1 month. A different profile would tie in to transition structures.
  - Alaskan Way South would be closed between S. King Street and Atlantic Street for the first 8 months of the project. It could then re-open, with 2-lanes/2 way traffic. This would provide a 3 month gain in schedule to build the U-Tube,
  - The WOSCA staging area would be shared between the Bored Tunnel and H2K contractors.
  - The south end portal construction begins April 2011.
  - The assumption that the Tunnel Boring Machine (TBM) will be set up starting Nov 2011 was revised to June 2012.
- Asvin Mandadi walked through Alternatives and Construction schedules
  - Alternative 1 was presented as the baseline scenario (WOSCA detour with Inline Transition Structures) that was progressed beyond the 60% PS&E design and work was stopped on the WOSCA detours in January 2009 pursuant to the Bored Tunnel announcement.
  - Alternative 2 presented the most advantage for the Bored Tunnel contractor in terms of use of WOSCA staging area, and the schedule for completing the Transition Structures by August 2011. This alternative does not meet the objective of minimizing traffic disruptions on SR 99 and City streets.
  - Alternative 3 has the same staging area and schedule advantages as Alternative 2 for the Bored Tunnel contractor. This alternative on one hand does not meet the

## **Alaskan Way Viaduct and Seawall Replacement Program**

### **Holgate to King Stage 2 and Bored Tunnel Interface Options and Decisions Workshops 1 & 2**

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#### **MEETING MINUTES**

objective of minimizing traffic disruptions on SR 99 and City Streets, and on the other hand requires several spans of the mainline Viaduct be retrofitted.

- Alternatives 4 and 5 were removed from consideration. WOSCA detour via 1<sup>st</sup> Ave and Railroad Way Ramps in both alternatives presents a challenge to access the Staging area constrained by the detour on one side, and by the Railroad Ramps on the other.
- Alternative 6 was introduced for further study. This alternative would re-align WOSCA detour in two stages from its connection to the RR Ramps in Alternative 1 to a direct connection to the newly built SB mainline with the Viaduct removed. This would become the long-term detour for H2K until the Bored Tunnel construction is complete. The Transition Structures would not be built.
- Ken Fiorentino presented the following as considerations for the Bored Tunnel work:
  - The assumption for Tunnel Boring Machine setup in Nov 2011 was removed
  - Between WOSCA and S King St. the method of construction chosen was to build secant walls on either sides of the excavation pit, support the utilities, deck the surface at about 8 feet below ground, relocate the utilities and back fill. Excavation then takes place between the shafts before the TBM is launched in June of 2012.
  - Construction for the South Portal in all cases would begin on 1<sup>st</sup> Ave from S King St. to the South and proceed south into the WOSCA property. Contractor would need Railroad Way ramps removed to proceed into WOSCA.
  - Once the South Portal work is complete within WOSCA, the entire WOSCA site is needed for the Tunnel contractor to stage for the TBM.
  - The length required to assemble the TBM is 250 feet. Fabrication takes 16 months. The actual time to bore the tunnel is 11 months. It will take 5 months to set up machines, construction office, cages, slurry plant etc., requiring an approximate area with dimensions 120' X 1,300'.

The comparison matrix for each alternative was updated to develop Pros and Cons for the Bored Tunnel. The matrix updated during 2-20-09 Workshop 2 is attached.

#### **DECISIONS 2-17-09:**

- Alternatives 1, 4 and 5 were removed from further consideration, leaving 2-3 and the 6 for further consideration.

#### **ACTIONS for 2-10-09:**

- The H2K Team will develop Alternative 6.
- The Bored Tunnel team will assess WOSCA staging for Alternative 6.
- A follow-up workshop will be held February 20, 2009, from 1:00 P.M. to 3:00 P.M. in the 23<sup>rd</sup> Floor Training Rooms.

**Alaskan Way Viaduct and Seawall Replacement Program**  
Holgate to King Stage 2 and Bored Tunnel Interface Options and Decisions  
Workshops 1 & 2

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**MEETING MINUTES**

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**2-20-09 WORKSHOP 2**

**MEETING AGENDA**

1. Present Alternative 6
2. Present Alternative 3A – Developed new by Project Team
3. Discuss Pros and Cons of remaining Alternatives
4. Select remaining alternatives for Sr. Management Decision making

**DISCUSSION:**

**Goals and Objectives are the same as set on 2-17-09**

**Presentation:**

- Alternative 6 and 3A were presented with Pros and Cons.
- Alternative 6 was presented and the staged construction of WOSCA detour from its alignment in Alternative 1 to the final location was discussed.
- RR Ramps can be removed in Nov 2011 as soon as NB WOSCA detour is tied-in.
- Construction of a the relocated WOSCA detour is very constrained in Stages 3 & 4
- Approximately 1.25 Ac of WOSCA in the NW corner is not available to the Bored Tunnel contractor. The final alignment of WOSCA detour occupies this space.
- The initial reaction to Alternative 6 was that the Tunnel Team would need all of WOSCA
- Closing RR Ramps to all traffic to facilitate accelerated WOSCA detour construction to its final location was considered. Project team responded as follows:
  - SB SR99 must be detoured first on to WOSCA as soon as the SB mainline bridge and west 1/3<sup>rd</sup> of the south approach fill are complete
  - The central 1/3<sup>rd</sup> of the south approach fill is completed with SB SR99 on WOSCA detour
  - The Viaduct has to be demolished to build NB WOSCA detour
  - NB WOSCA detour must then be completed and detoured on to the SB mainline bridge
  - This sequence must be followed for any alignment of WOSCA. With the Viaduct in place, SB WOSCA detour to be closer to its final location would require several geometric deviations rendering the movement very constrained and unsafe.
- Alternative 3A was developed by the Project Team as a variation to Alternative 3 with a 25 MPH design speed for the Transition Structure tie-in to the Ex Viaduct
  - The SB transition structure tie-in connects north of the NB transition structure tie-in
  - The mainline traffic is always maintained on SR 99 before it is diverted on to the Transition Structures
  - The number of frames that need to be retrofitted drops from 6 to 4.



## ***Alaskan Way Viaduct and Seawall Replacement Program***

### **Holgate to King Stage 2 and Bored Tunnel Interface Options and Decisions Workshops 1 & 2**

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#### **MEETING MINUTES**

- The SB SR 99 traffic in 2 x 11' lanes has to snake through the existing columns at a lowered design speed.
- Barriers would be placed on both sides of the traffic lanes to protect columns
- The entire WOSCA site is available to the Bored Tunnel contractor as early as Jan 2011
- RR ramps can be removed by Oct 2011 as soon as the replacement ramps are built
- This alternative was favored by all due to the fact that it meets the objective of not disrupting SR99 and City street traffic, maintains traffic on SR 99 at all times, maintains the Bored Tunnel construction schedule, and the entire WOSCA site is available to the Bored Tunnel contractor in Jan 2011.

The comparison matrix was updated for alternatives 3A and 6. For all alternatives to the team developed considerations in lieu of pros and cons for the Bored Tunnel. The matrix is attached (updated to 2-20-09 discussions).

#### **DECISIONS:**

- Alternative 3 was eliminated and replaced with Alternative 3A which would be considered in the decision making
- Baseline Alternative 1 will be shown for comparison purposes

#### **ACTIONS:**

- Alternatives 2, 3A and 6 will be presented to Ali Amiri for furthering to Sr. Management for Decision making week of 2/23/09

Alaskan Way Viaduct Replacement S – Holgate St to S. King St.- **H2K and Bored Tunnel Interface Workshop**

**Goal:**

Decision on Transition Area Alternative for Holgate to King Project (H2K)

**Objective:**

Minimize Traffic and Business disruptions on SR 99 and Surface Streets; Maintain Holgate to King September Ad Date.

**Assumptions:**

1. Whatcom Lead Vacated during Construction;
2. SR 99 traffic detoured on to 1<sup>st</sup> Ave during closures;
3. Alaskan Way S closed between S King St. and Atlantic St.;
4. WOSCA Staging Area is shared between Holgate to King (H2K) Contractor and Bored Tunnel (BT) Contractor;
5. South End Portal Construction begins April 2011

Alternative	Description	Traffic Operations	Cost	H2K Pros & Cons	Bored Tunnel Considerations
<b>Baseline – Alternative 1 Inline Connection with WOSCA –(Not being considered further 2/20/09)</b>	<p><b>Design Speed:</b> <b>WOSCA Detour</b></p> <ul style="list-style-type: none"> <li>• 25 MPH – Superelevation deviated</li> </ul> <p><b>Transition Structures</b></p> <ul style="list-style-type: none"> <li>• 45-50 MPH with approved deviations</li> </ul> <p><b>Channelization:</b> <b>WOSCA Detour</b></p> <ul style="list-style-type: none"> <li>• 2 x 2 lanes with temporary NB on and SB off ramps</li> </ul> <p><b>Transition Structures</b></p> <ul style="list-style-type: none"> <li>• 2 x 2 lanes with temporary NB on and SB off ramps</li> </ul>	<p><b>SR99 mainline:</b></p> <ul style="list-style-type: none"> <li>• Weekend and nightly closures for Viaduct demolition and tie-in of WOSCA detour to RR Way Ramps</li> </ul> <p><b>1<sup>st</sup> Ave</b></p> <ul style="list-style-type: none"> <li>• No impacts</li> </ul> <p><b>Alaskan Way S</b></p> <ul style="list-style-type: none"> <li>• Detoured to 1<sup>st</sup> Ave S. via the RR Way S (Feb 2010–Feb 2011)</li> <li>• 2 Way connection between S King St and Atlantic St starting March 2011</li> </ul>	<p>60% CEVP estimate - \$55M</p> <ul style="list-style-type: none"> <li>• Transition Structures (Inline) plus WOSCA detour</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>• H2K EA not impacted</li> <li>• Night and Weekend closures of SR 99 for WOSCA Detour tie-ins</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>• High cost of constructing two sets of temporary structures</li> <li>• Lower Speed and deviated geometrics for WOSCA Detour</li> </ul>	<p><b>Considerations:</b></p> <ul style="list-style-type: none"> <li>• Railroad Ramps removed – March 2011</li> <li>• WOSCA Detour removed and entire site available – July 2012</li> <li>• No impact to work north or RR on 1<sup>st</sup> Ave – Jan 2011 to Nov 2011</li> <li>• Some work can be completed on WOSCA – 110' width available starting – Nov 2011</li> <li>• Increased cost of Bored Tunnel – Production slowed due to working inside shafts</li> <li>• Excavation of Tunnel and U-tube operations are concurrent</li> <li>• WOSCA Detour work is concurrent with the south portal excavation operations</li> <li>• Excavation activities along 1<sup>st</sup> Ave use 1<sup>st</sup> Ave for hauling</li> </ul>

Page 1 – Baseline Alternative shown for comparison with other alternatives – Not being considered further

Page 2 – Alternative 2, 3A, and 6 are being presented for Sr. Management Decision making

Page 3 – Alternatives eliminated and not being considered further are highlighted in yellow

**Alaskan Way Viaduct Replacement S – Holgate St to S. King St.- H2K and Bored Tunnel Interface Workshop**

<b>Alternative</b>	<b>Description</b>	<b>Traffic Operations</b>	<b>Cost</b>	<b>H2K Pros &amp; Cons</b>	<b>Bored Tunnel Considerations</b>
<b>Alternative 2 Inline Connection</b>	<p>Design Speed:</p> <ul style="list-style-type: none"> <li>50mph – Super, SSD, Deviated to 40 MPH</li> </ul> <p>Channelization:</p> <ul style="list-style-type: none"> <li>2 x 3 lane stacked transition structures</li> <li>Temporary NB on and SB off constructed by Tunnel Contractor prior to removing RR Ramps</li> </ul>	<p>SR99 mainline</p> <ul style="list-style-type: none"> <li>Closed – 6 Months (Feb-Aug 2011)</li> </ul> <p>1<sup>st</sup> Ave S</p> <ul style="list-style-type: none"> <li>Expected level of service - LOS E or F</li> </ul> <p>Alaskan Way South</p> <ul style="list-style-type: none"> <li>Detoured to 1<sup>st</sup> Ave S. via the RR Way S (Feb 2010–Feb 2011)</li> <li>2 Way Connection between Atlantic St and King St (Feb-Aug 2011)</li> <li>SB movement provided after Transition Structures completed (Oct 2011)</li> </ul>	<p>30% CEVP estimate - \$35M</p> <ul style="list-style-type: none"> <li>60,000SF of structure (\$34M)</li> <li>Additional MOT Costs (\$1M) for 1<sup>st</sup> Ave improvements</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>Existing Viaduct structural integrity maintained</li> <li>Potential re-use of existing Viaduct foundations for the NB transition structure</li> <li>BT Construction Schedule maintained</li> <li>WOSCA Staging area utilized efficiently</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>H2K EA re-eval required for SR 99 closure</li> <li>1<sup>st</sup> Ave traffic and businesses impacted for 6 months</li> </ul>	<p><b>Considerations:</b></p> <ul style="list-style-type: none"> <li>Railroad Ramps removed – Oct 2011</li> <li>Entire WOSCA site available – Jan 2011</li> <li>No WOSCA Detour</li> <li>Costs are lowered compared to other alternatives</li> <li>Major Excavation activities along 1<sup>st</sup> Ave uses WOSCA</li> <li>Excavation of Tunnel and U-tube operations are concurrent</li> <li>Excavation activities along 1<sup>st</sup> Ave use 1<sup>st</sup> Ave for hauling</li> </ul>
<b>Alternative 3A 25 MPH - Side Connection</b>	<p>Design Speed:</p> <ul style="list-style-type: none"> <li>25mph – Super, SSD, Deviated</li> </ul> <p>Channelization:</p> <ul style="list-style-type: none"> <li>2 lanes on SB and 3 lanes on NB structure connecting with existing SR 99 just south of RR Way ramps</li> <li>Temporary NB on and SB off constructed by Tunnel Contractor prior to removing RR Ramps</li> </ul>	<p>SR99 mainline</p> <ul style="list-style-type: none"> <li>Open at all time</li> </ul> <p>1<sup>st</sup> Ave S</p> <ul style="list-style-type: none"> <li>Not impacted</li> </ul> <p>Alaskan Way South</p> <ul style="list-style-type: none"> <li>Detoured to 1<sup>st</sup> Ave S. via the RR Way S (Feb 2010–Jan 2012)</li> <li>1 lane SB can be provided after Transition Structures completed (Oct 2011)</li> </ul>	<p>Order of Magnitude Estimate - \$35M</p> <ul style="list-style-type: none"> <li>40,000SF of structure (\$27M)</li> </ul> <p>Additional SR 99 retrofitting costs (\$9M)</p>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>SR 99 traffic maintained at all times</li> <li>H2K EA re-evaluation not required</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>Existing Viaduct needs shoring and retrofitting over 4 frames, skewed tie-in, monitoring for settlement of fills.</li> <li>Lower design speed (25MPH) for 4+ years</li> <li>Vertical Clearance 14' – 5"</li> </ul>	<p><b>Considerations:</b></p> <ul style="list-style-type: none"> <li>Railroad Ramps removed – Oct 2011</li> <li>Entire WOSCA site available – Jan 2011</li> <li>No WOSCA detour</li> <li>Costs are lowered compared to other alternatives</li> <li>Major Excavation activities along 1<sup>st</sup> Ave uses WOSCA</li> <li>Excavation of Tunnel and U-tube operations are concurrent</li> <li>Excavation activities along 1<sup>st</sup> Ave use 1<sup>st</sup> Ave for hauling</li> </ul>
<b>Alternative 6 WOSCA Detour optimized – No Transition Structures</b>	<p>WOSCA detour alignment shifted west to maximize WOSCA staging area for Bored Tunnel Contractor.</p> <p><u>Transition Structures</u></p> <ul style="list-style-type: none"> <li>Not built</li> </ul> <p><u>WOSCA Detour</u></p> <p>Design Speed:</p> <ul style="list-style-type: none"> <li>25mph</li> </ul> <p>Channelization:</p> <ul style="list-style-type: none"> <li>2 x 2 lanes with temporary NB on and SB off ramps</li> </ul>	<p>SR99 mainline:</p> <ul style="list-style-type: none"> <li>Weekend and nightly closures for Viaduct demolition</li> </ul> <p>1<sup>st</sup> Ave:</p> <ul style="list-style-type: none"> <li>Not impacted</li> </ul> <p>Alaskan Way S</p> <ul style="list-style-type: none"> <li>2 Way connection between S King St and Atlantic St</li> </ul>	<p>Order of magnitude - \$25M – \$30M</p> <ul style="list-style-type: none"> <li>Two construction stages for WOSCA detour</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>No Transition structures – Cost Savings</li> <li>SR 99 traffic maintained majority of the time</li> <li>H2K EA re-evaluation not required</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>Lower design speed (25MPH) for 4+ years</li> <li>Short duration SR 99 Closures</li> <li>Multiple stages of WOSCA detour construction</li> <li>Constrained construction of NB WOSCA alignment final location</li> </ul>	<p><b>Considerations:</b></p> <ul style="list-style-type: none"> <li>Railroad Ramps removed – Nov 2011</li> <li>75% WOSCA site available – March 2012</li> </ul>

Page 1 – Baseline Alternative shown for comparison with other alternatives – Not being considered further

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Page 3 – Alternatives eliminated and not being considered further are highlighted in yellow



Alaskan Way Viaduct Replacement S – Holgate St to S. King St.- H2K and Bored Tunnel Interface Workshop

Alternative	Description	Traffic Operations	Cost	H2K Pros & Cons	Bored Tunnel Considerations
Alternative 3 Side Connection (Alternate 3A is an improvement – Alternative not being considered further 2/20/09)	<p><b>Design Speed:</b></p> <ul style="list-style-type: none"> <li>50mph – Super, SSD, Deviated to 40 MPH</li> </ul> <p><b>Channelization:</b></p> <ul style="list-style-type: none"> <li>2 x 2 lane NB and SB structures connecting with existing SR 99; NB between S. King St and S. Jackson St.; SB just south of RR Way ramps</li> <li>Temporary NB on and SB off constructed by Tunnel Contractor prior to removing RR Ramps</li> </ul>	<p>SR99 mainline</p> <ul style="list-style-type: none"> <li>SB SR 99 Closed - 5 months (Aug 2011-Jan 2012)</li> <li>NB SR 99 on existing Viaduct at all times</li> </ul> <p>1<sup>st</sup> Ave S</p> <ul style="list-style-type: none"> <li>LOS on SB 1<sup>st</sup> Ave S. degraded</li> </ul> <p>Alaskan Way South</p> <ul style="list-style-type: none"> <li>Detoured to 1<sup>st</sup> Ave S. via the RR Way S (Feb 2010–Feb 2011)</li> <li>2 Way connection between Atlantic St and King St (Feb-Oct 2011)</li> <li>SB movement provided after Transition Structures completed (Oct 2012)</li> </ul>	<p>Order of Magnitude Estimate - \$50M</p> <ul style="list-style-type: none"> <li>80,000SF of structure (\$41M)</li> <li>Additional SR 99 retrofitting costs plus MOT costs for 1<sup>st</sup> Ave detour (\$9M)</li> </ul>	<p>Pros:</p> <ul style="list-style-type: none"> <li>None</li> </ul> <p>Cons:</p> <ul style="list-style-type: none"> <li>Existing Viaduct needs shoring and retrofitting over 6 frames, skewed tie-in</li> <li>H2K EA re-evaluation required for SR 99 closure</li> <li>SB 1<sup>st</sup> Ave. traffic and businesses impacted for 5 months</li> </ul>	<p><b>Considerations:</b></p> <ul style="list-style-type: none"> <li>RR Ramps removed January 2012</li> <li>Entire WOSCA Site available – Jan 2011</li> <li>All of WOSCA available starting August 2011</li> <li>Other pros same as Inline Connection above</li> <li>5 month wait for South Portal construction completion</li> <li>Excavation activities along 1<sup>st</sup> Ave use 1<sup>st</sup> Ave for hauling</li> </ul>
Alternative 4 Inline Connection with Modified WOSCA Detour (Alternative not being considered further 2/17/09)	<p><b>Transition Structures</b></p> <ul style="list-style-type: none"> <li>Design Speed and Channelization same as Alternative 2</li> </ul> <p><b>WOSCA Detour</b></p> <p><b>Design Speed</b></p> <ul style="list-style-type: none"> <li>25mph</li> </ul> <p><b>Channelization:</b></p> <ul style="list-style-type: none"> <li>2 x 2 lanes with temporary NB on and SB off ramps</li> </ul>	<p>SR99 mainline:</p> <ul style="list-style-type: none"> <li>Weekend and nightly closure for Viaduct Demolition</li> <li>Closed – 1 Month (May 2012) for tie-in to Transition Structures</li> </ul> <p>1<sup>st</sup> Ave S</p> <ul style="list-style-type: none"> <li>Maintain 1 Lane 2 Way between RR Ave and Royal Brougham Way</li> <li>Alaskan Way South similar to Alternative 2</li> </ul>	<p>Order of Magnitude Estimate - \$45M</p> <ul style="list-style-type: none"> <li>Added cost of modified WOSCA Detour (\$10M)</li> </ul>	<p>Same as inline connection except noted below</p> <p>Pros:</p> <ul style="list-style-type: none"> <li>EA re-evaluation not required</li> </ul> <p>Cons:</p> <ul style="list-style-type: none"> <li>1<sup>st</sup> Ave traffic and businesses impacted for 1 month</li> <li>11 month wait for TBM Machine setup</li> </ul>	<p><b>Considerations:</b></p> <ul style="list-style-type: none"> <li>RR Ramps removed July 2012</li> <li>WOSCA Site available July 2012</li> <li>Access to WOSCA restricted at either ends by Detour and RR Ramps until July 2012</li> </ul>
Alternative 5 Side Connection with Modified WOSCA Detour (Alternative not being considered further 2/17/09)	<p><b>Transition Structures</b></p> <ul style="list-style-type: none"> <li>Design Speed and Channelization same as Alternative 3</li> </ul> <p><b>WOSCA Detour</b></p> <p><b>Design Speed:</b></p> <ul style="list-style-type: none"> <li>25mph</li> </ul> <p><b>Channelization:</b></p> <ul style="list-style-type: none"> <li>2 x 2 lanes with temporary NB on and SB off ramps</li> </ul>	<p>SR99 mainline:</p> <ul style="list-style-type: none"> <li>Weekend and nightly closure for Viaduct Demolition</li> <li>Closed – 1 Month (Feb 2012) for tie-in to Transition Structures</li> </ul> <p>1<sup>st</sup> Ave S</p> <ul style="list-style-type: none"> <li>Maintain 1 Lane 2 Way between RR Way Ave and Royal Brougham Way</li> <li>Alaskan Way South similar to Alternative 3</li> </ul>	<p>Order of Magnitude Estimate - \$60M</p> <ul style="list-style-type: none"> <li>Added cost of modified WOSCA Detour (\$10M)</li> </ul>	<p>Same as side connection except as noted below</p> <p>Pros:</p> <ul style="list-style-type: none"> <li>H2K EA re-eval not required</li> </ul> <p>Cons:</p> <ul style="list-style-type: none"> <li>1<sup>st</sup> Ave traffic and businesses impacted for 1 month</li> <li>BT construction within WOSCA constrained for a 7 months</li> </ul>	<p><b>Considerations:</b></p> <ul style="list-style-type: none"> <li>RR Ramps removed May 2012</li> <li>WOSCA Site available May 2012</li> <li>Access to WOSCA restricted at either ends by Detour and RR Ramps until May 2012</li> </ul>

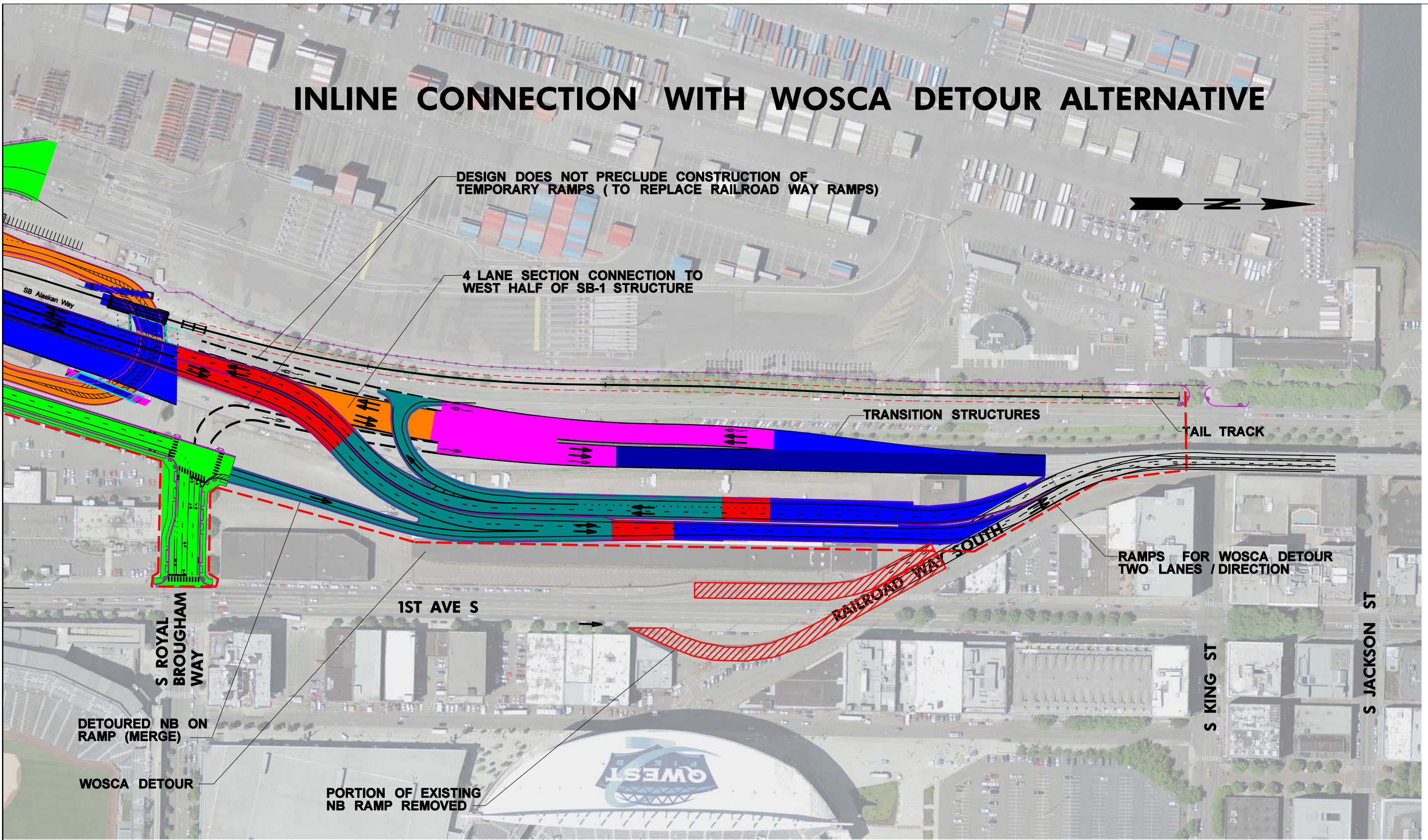
Page 1 – Baseline Alternative shown for comparison with other alternatives – Not being considered further

Page 2 – Alternative 2, 3A, and 6 are being presented for Sr. Management Decision making

Page 3 – Alternatives eliminated and not being considered further are highlighted in yellow



# INLINE CONNECTION WITH WOSCA DETOUR ALTERNATIVE



DESIGN DOES NOT PRECLUDE CONSTRUCTION OF TEMPORARY RAMPS (TO REPLACE RAILROAD WAY RAMPS)

4 LANE SECTION CONNECTION TO WEST HALF OF SB-1 STRUCTURE

TRANSITION STRUCTURES

TAIL TRACK

RAMPS FOR WOSCA DETOUR TWO LANES / DIRECTION

S ROYAL BROUGHAM WAY

1ST AVE S

RAILROAD WAY SOUTH

S KING ST

S JACKSON ST

DETOURED NB ON RAMP (MERGE)

WOSCA DETOUR

PORTION OF EXISTING NB RAMP REMOVED

**DRAFT WORKING DRAWING  
FOR DISCUSSION  
PURPOSES ONLY**

**LEGEND**

- = RETAINED CUT
- = SURFACE IMPROVEMENTS
- = RETAINED FILL
- = AERIAL
- = SR99 DETOUR AT GRADE
- = SR99 DETOUR ON FILL
- = STAGING & CONSTRUCTION FOOTPRINT LIMITS

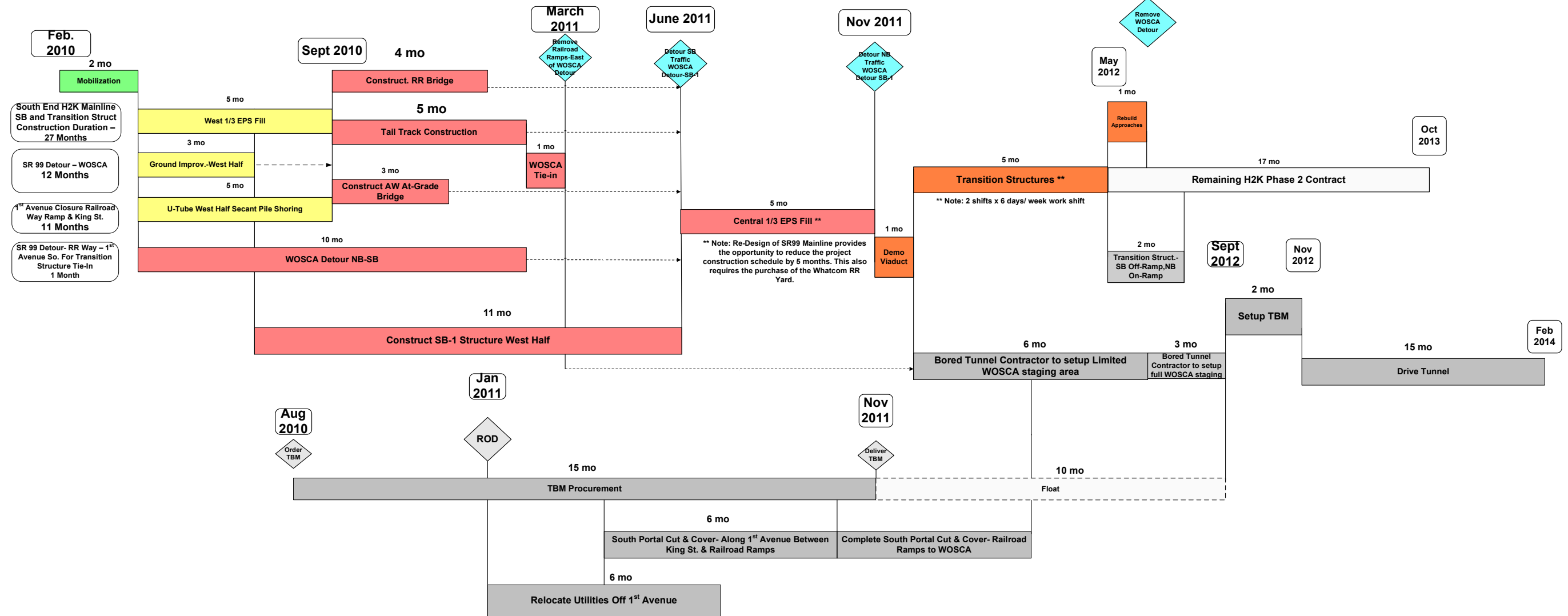
ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROGRAM	
S HOLGATE ST TO S KING ST VIADUCT REPLACEMENT PROJECT	
FEBRUARY 2009	FIG



Durations Assume NO RISK

PRE-DECISIONAL DRAFT For Internal Use Only

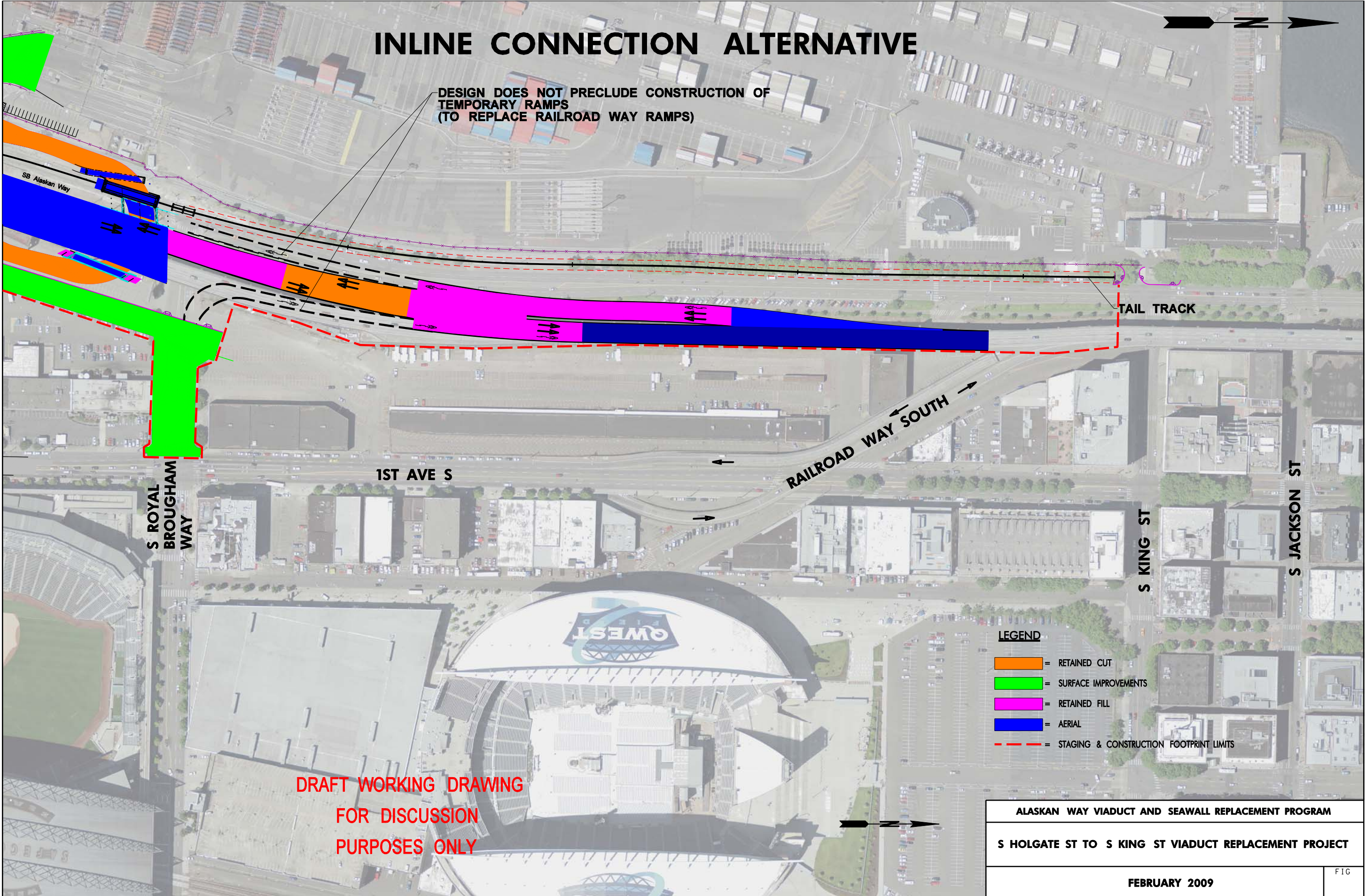
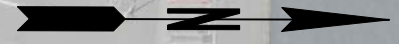
# InLine Connection with 60% WOSCA Detour





# INLINE CONNECTION ALTERNATIVE

DESIGN DOES NOT PRECLUDE CONSTRUCTION OF  
TEMPORARY RAMPS  
(TO REPLACE RAILROAD WAY RAMPS)



- LEGEND**
- = RETAINED CUT
  - = SURFACE IMPROVEMENTS
  - = RETAINED FILL
  - = AERIAL
  - = STAGING & CONSTRUCTION FOOTPRINT LIMITS

DRAFT WORKING DRAWING  
FOR DISCUSSION  
PURPOSES ONLY

ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROGRAM	
S HOLGATE ST TO S KING ST VIADUCT REPLACEMENT PROJECT	
FEBRUARY 2009	FIG

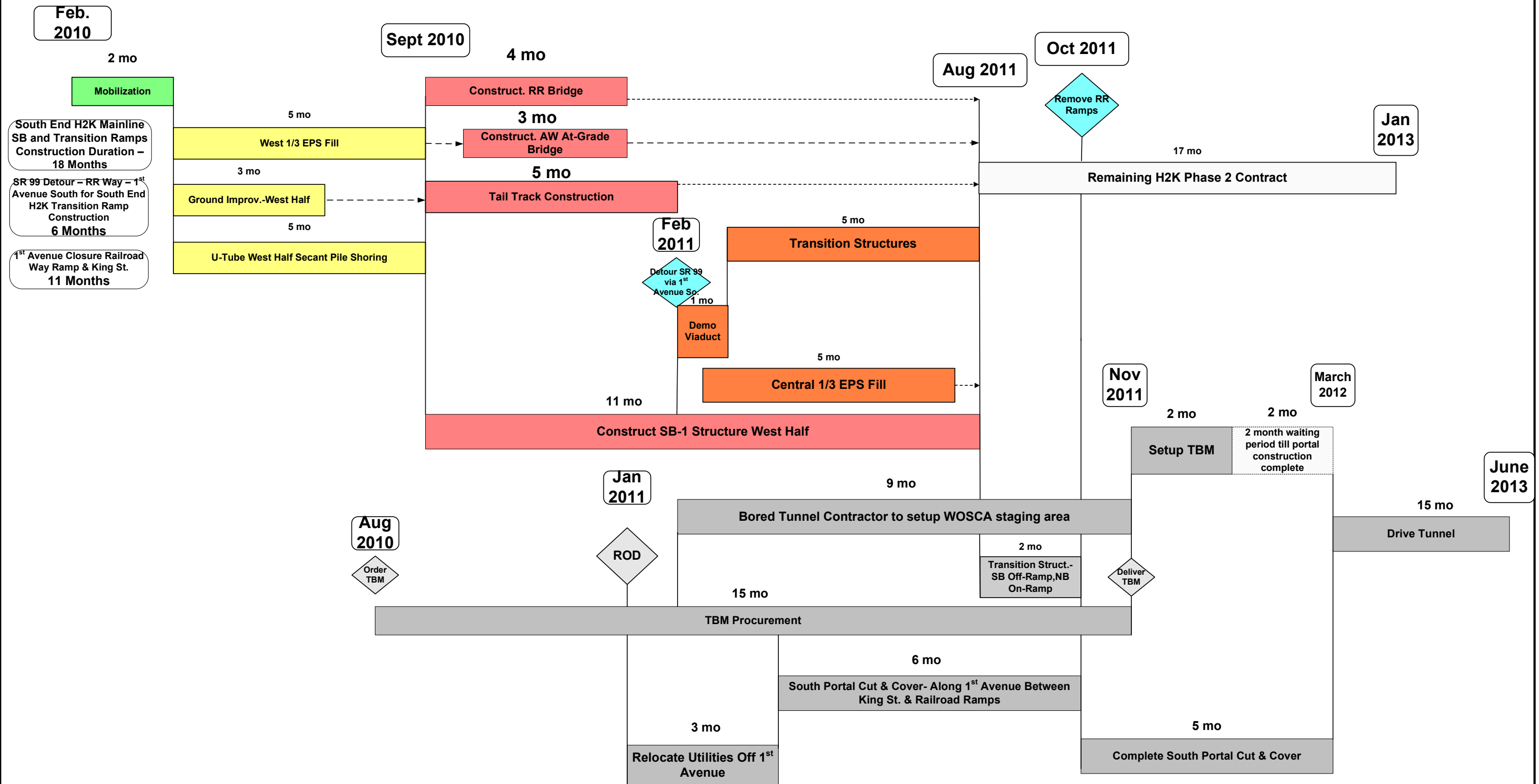


# In-Line Connection

PRE-DECISIONAL DRAFT For Internal Use Only

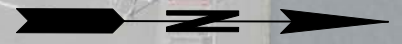
Durations Assume NO RISK

February 11, 2009





# SIDE CONNECTION ALTERNATIVE



DESIGN DOES NOT PRECLUDE CONSTRUCTION OF  
TEMPORARY RAMPS  
(TO REPLACE RAILROAD WAY RAMPS)

SB STRUCTURE OVER  
NB ROADWAY

TAIL TRACK

3 FRAMES

3 FRAMES

RAILROAD WAY SOUTH

1ST AVE S

S ROYAL  
BROUGHAM  
WAY

S KING ST

S JACKSON ST

### LEGEND

- = RETAINED CUT
- = SURFACE IMPROVEMENTS
- = RETAINED FILL
- = AERIAL
- = STRUCTURAL SHORING /RETROFIT
- = STRUCTURAL SHORING /RETROFIT + REMOVAL OF UPPER DECK
- = STAGING & CONSTRUCTION FOOTPRINT LIMIT

DRAFT WORKING DRAWING  
FOR DISCUSSION  
PURPOSES ONLY

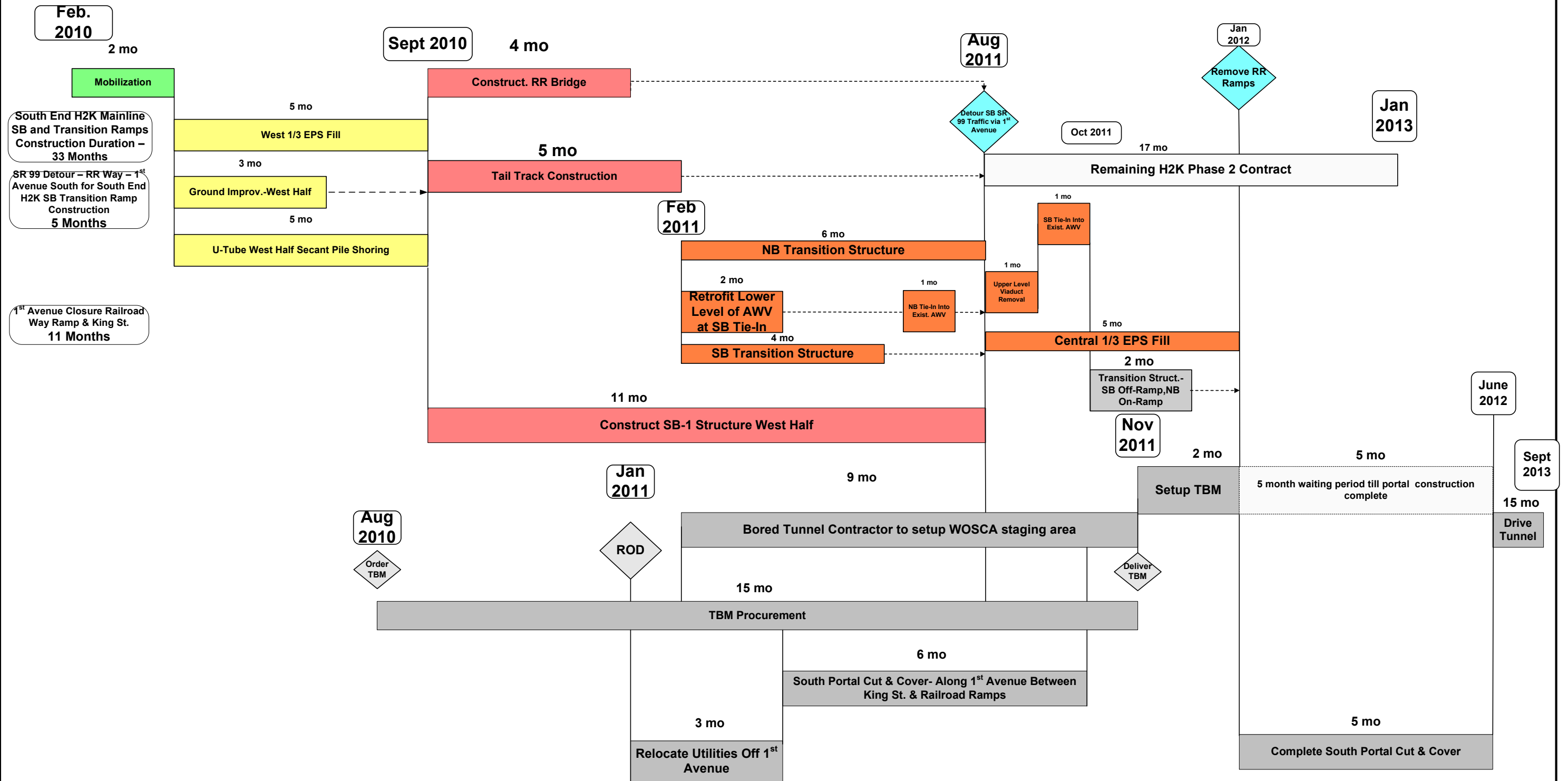
ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROGRAM  
S HOLGATE ST TO S KING ST VIADUCT REPLACEMENT PROJECT

FEBRUARY 2009

FIG

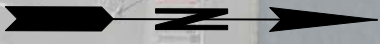


# Side Connection Alternative





# SIDE CONNECTION ALTERNATIVE



DESIGN DOES NOT PRECLUDE CONSTRUCTION OF  
TEMPORARY RAMPS  
(TO REPLACE RAILROAD WAY RAMPS)

2 LANES THROUGH  
BENTS 123 & 124  
(25 MPH)

TAIL TRACK

RAILROAD WAY SOUTH

1ST AVE S

S ROYAL  
BROUGHAM  
WAY

S KING ST

S JACKSON ST

**LEGEND**

- = RETAINED CUT
- = SURFACE IMPROVEMENTS
- = RETAINED FILL
- = AERIAL / BRIDGE
- = BRIDGE OR FILL (Further Study Needed)
- = STRUCTURAL SHORING / RETROFIT
- = STAGING & CONSTRUCTION FOOTPRINT LIMITS

DRAFT WORKING DRAWING  
FOR DISCUSSION  
PURPOSES ONLY

ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROGRAM	
S HOLGATE ST TO S KING ST VIADUCT REPLACEMENT PROJECT	
FEBRUARY 2009	FIG

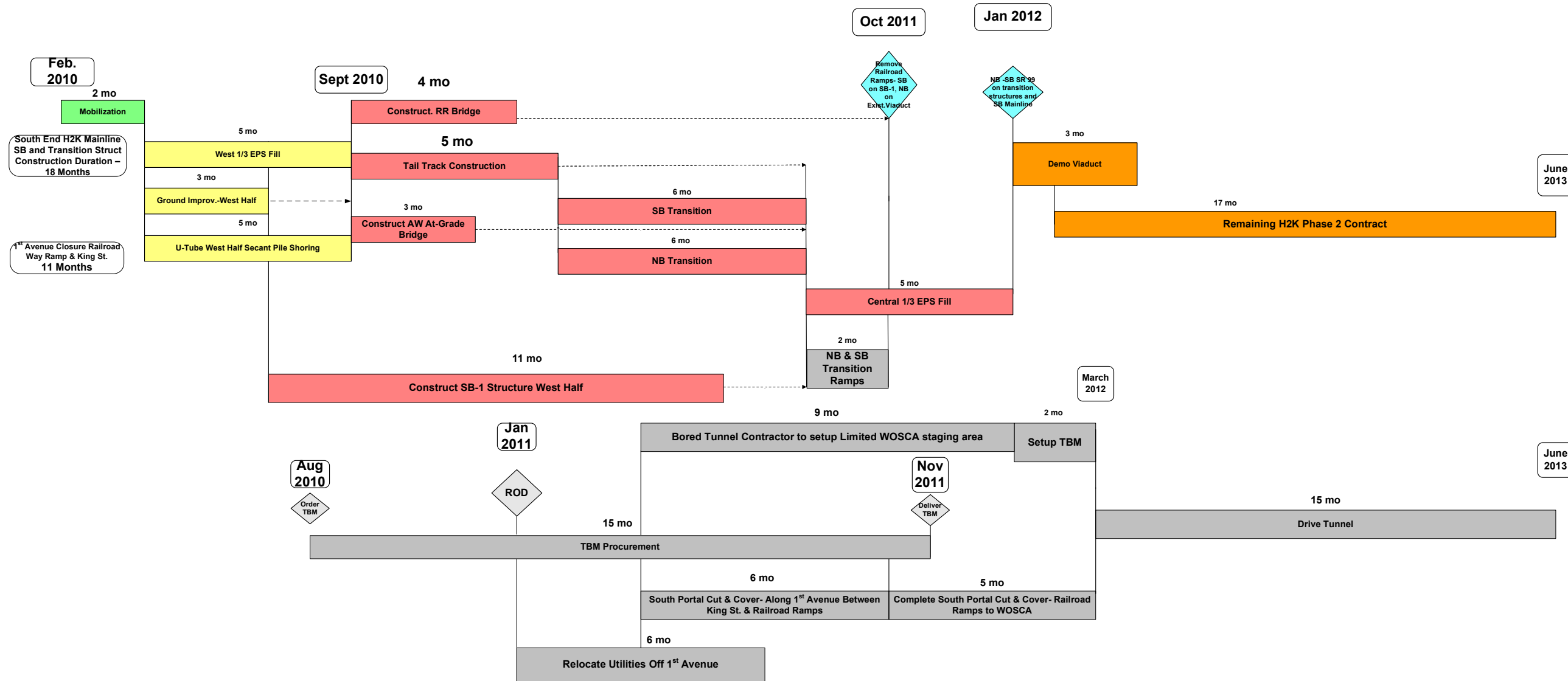


# 25 MPH Side Connection – Option 3A

February 19, 2009

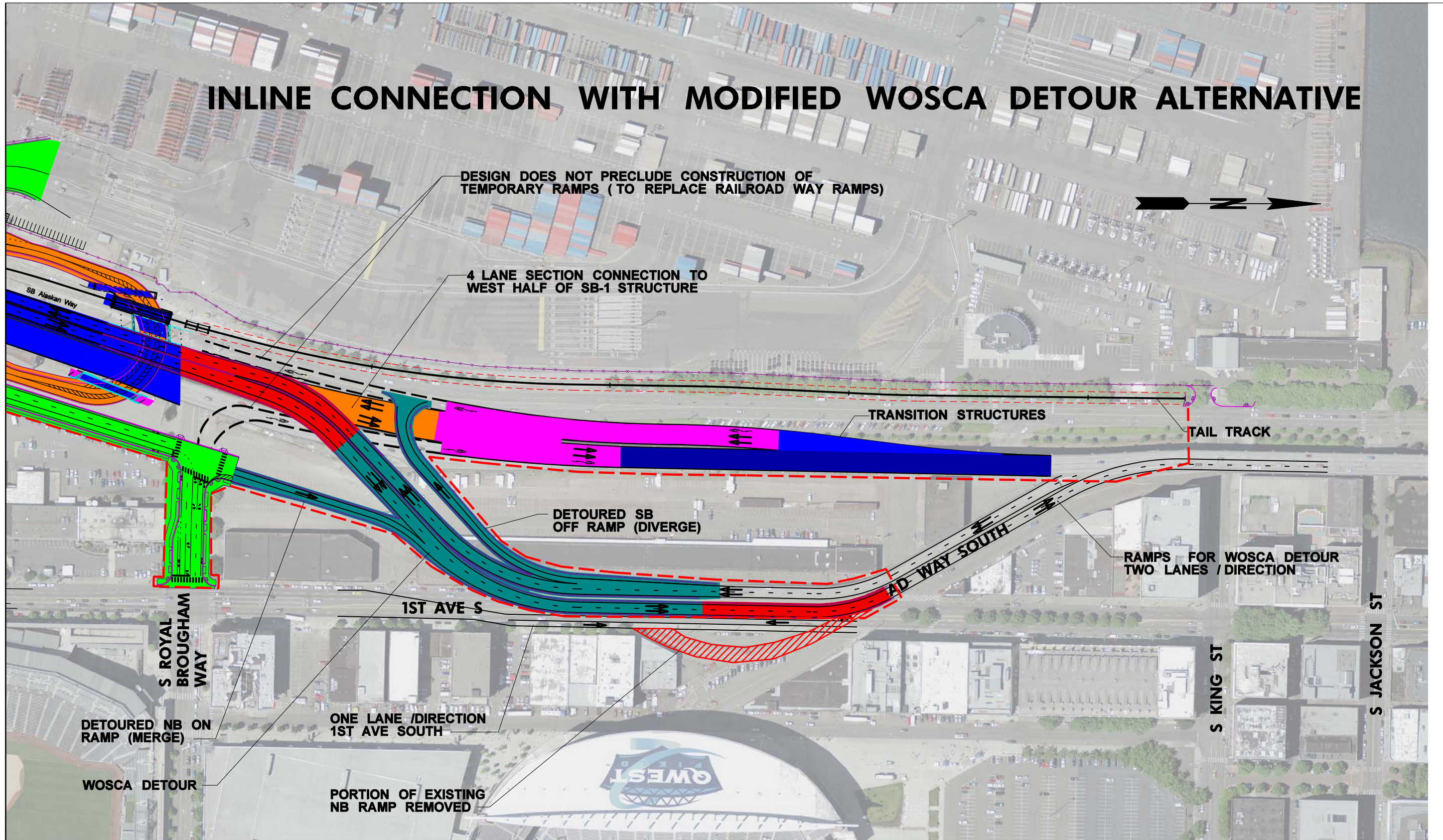
Durations Assume NO RISK

PRE-DECISIONAL DRAFT For Internal Use Only





# INLINE CONNECTION WITH MODIFIED WOSCA DETOUR ALTERNATIVE



**DRAFT WORKING DRAWING  
FOR DISCUSSION  
PURPOSES ONLY**

**LEGEND**

- = RETAINED CUT
- = SURFACE IMPROVEMENTS
- = RETAINED FILL
- = AERIAL
- = SR99 DETOUR AT GRADE
- = SR99 DETOUR ON FILL
- = STAGING & CONSTRUCTION FOOTPRINT LIMITS

ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROGRAM  
S HOLGATE ST TO S KING ST VIADUCT REPLACEMENT PROJECT

FEBRUARY 2009

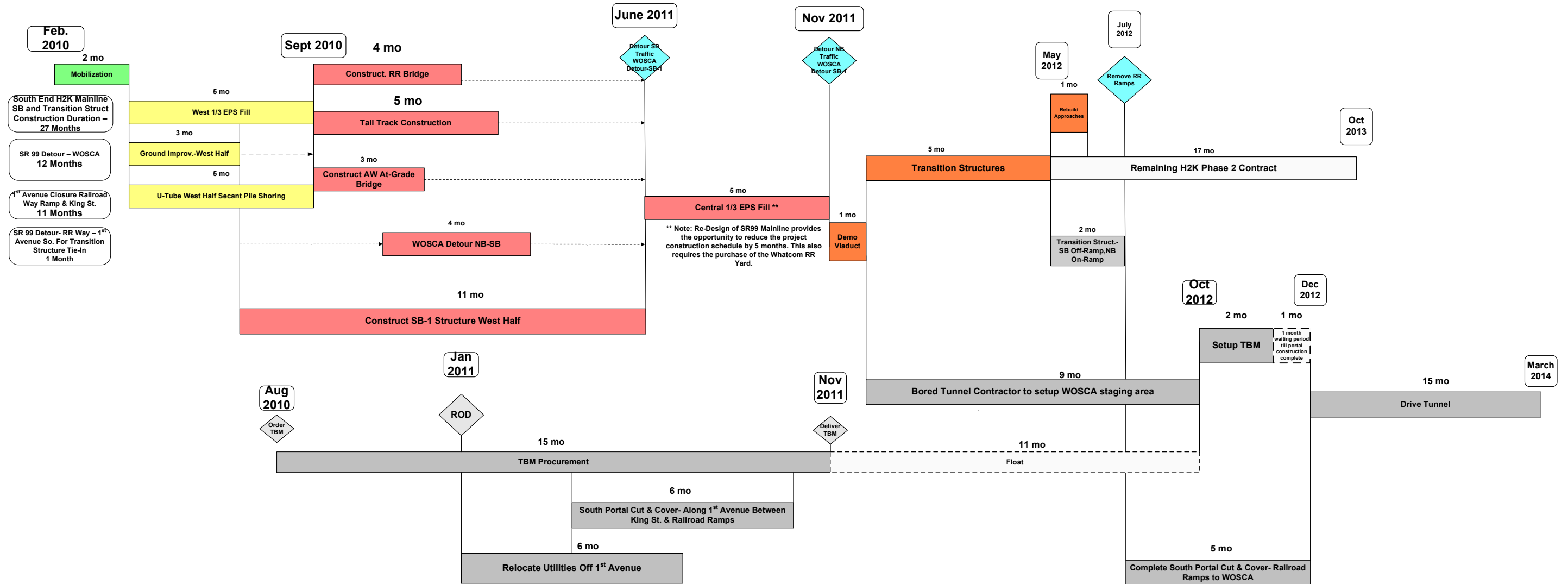
FIG



# InLine Connection with Modified WOSCA Detour

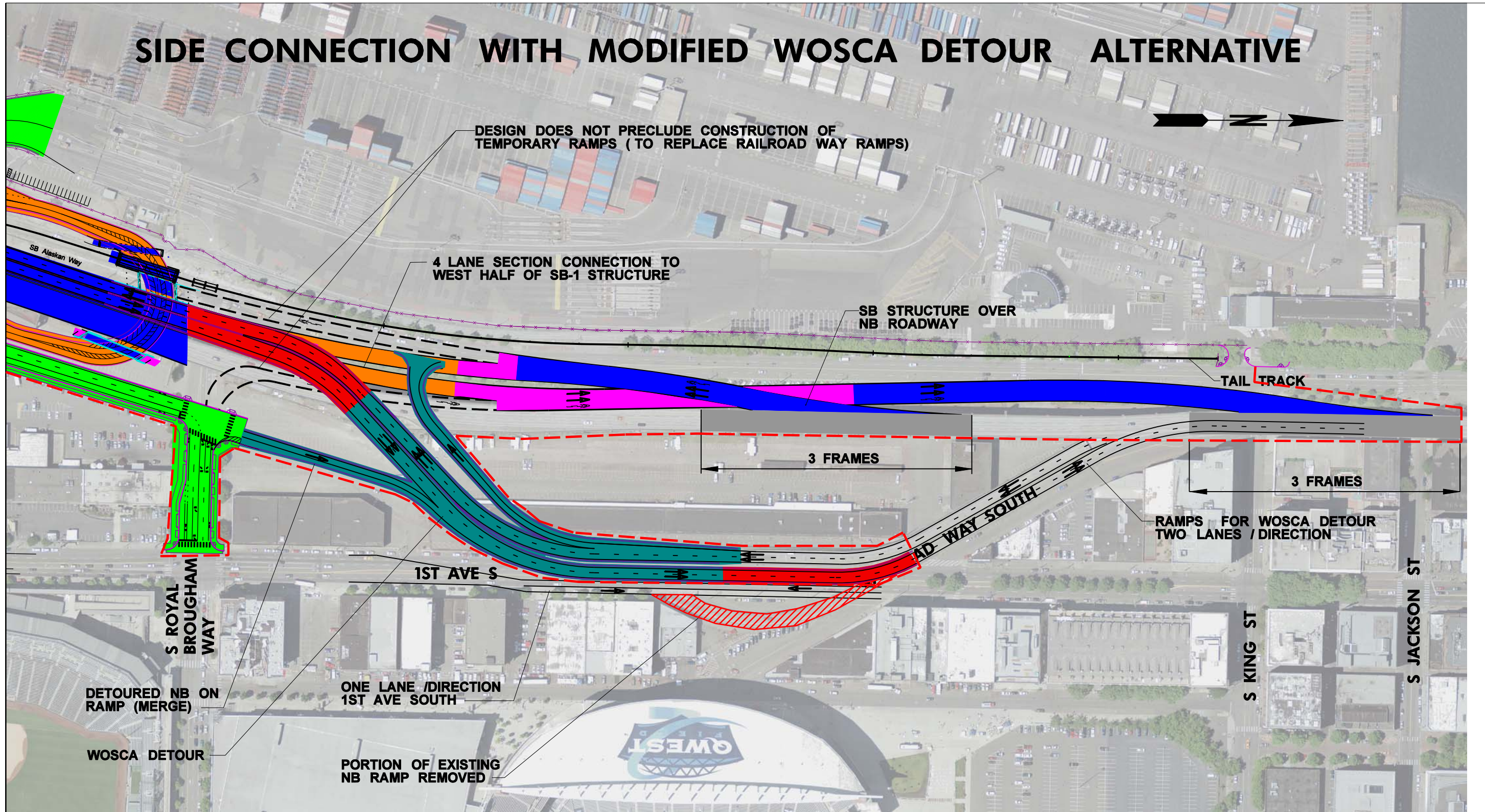
Durations Assume NO RISK

PRE-DECISIONAL DRAFT For Internal Use Only





# SIDE CONNECTION WITH MODIFIED WOSCA DETOUR ALTERNATIVE



**DRAFT WORKING DRAWING  
FOR DISCUSSION  
PURPOSES ONLY**

**LEGEND**

- = RETAINED CUT
- = SURFACE IMPROVEMENTS
- = RETAINED FILL
- = AERIAL
- = SR99 DETOUR AT GRADE
- = SR99 DETOUR ON FILL
- = STRUCTURAL SHORING /RETROFIT
- = STAGING & CONSTRUCTION FOOTPRINT LIMITS

<b>ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROGRAM</b>
<b>S HOLGATE ST TO S KING ST VIADUCT REPLACEMENT PROJECT</b>

FEBRUARY 2009

FIG

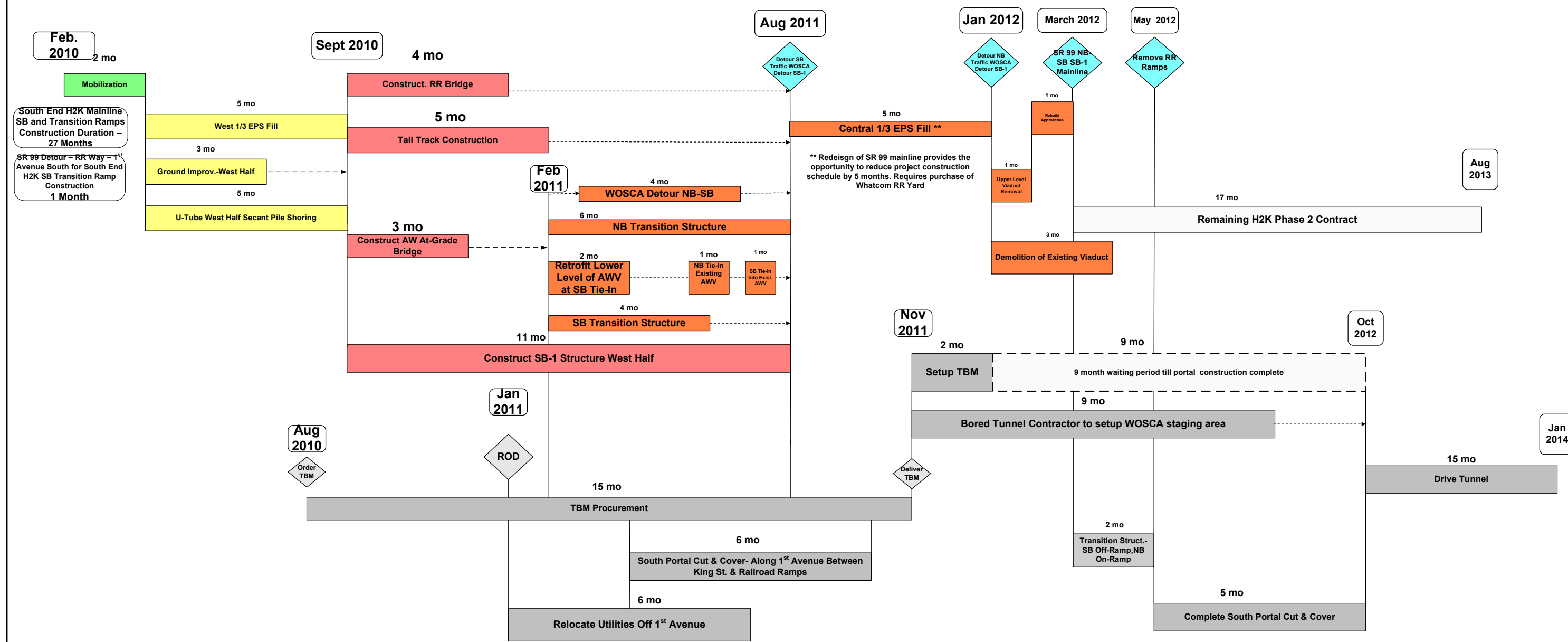


February 11, 2009

PRE-DECISIONAL DRAFT  
For Internal Use Only

Durations Assume NO RISK

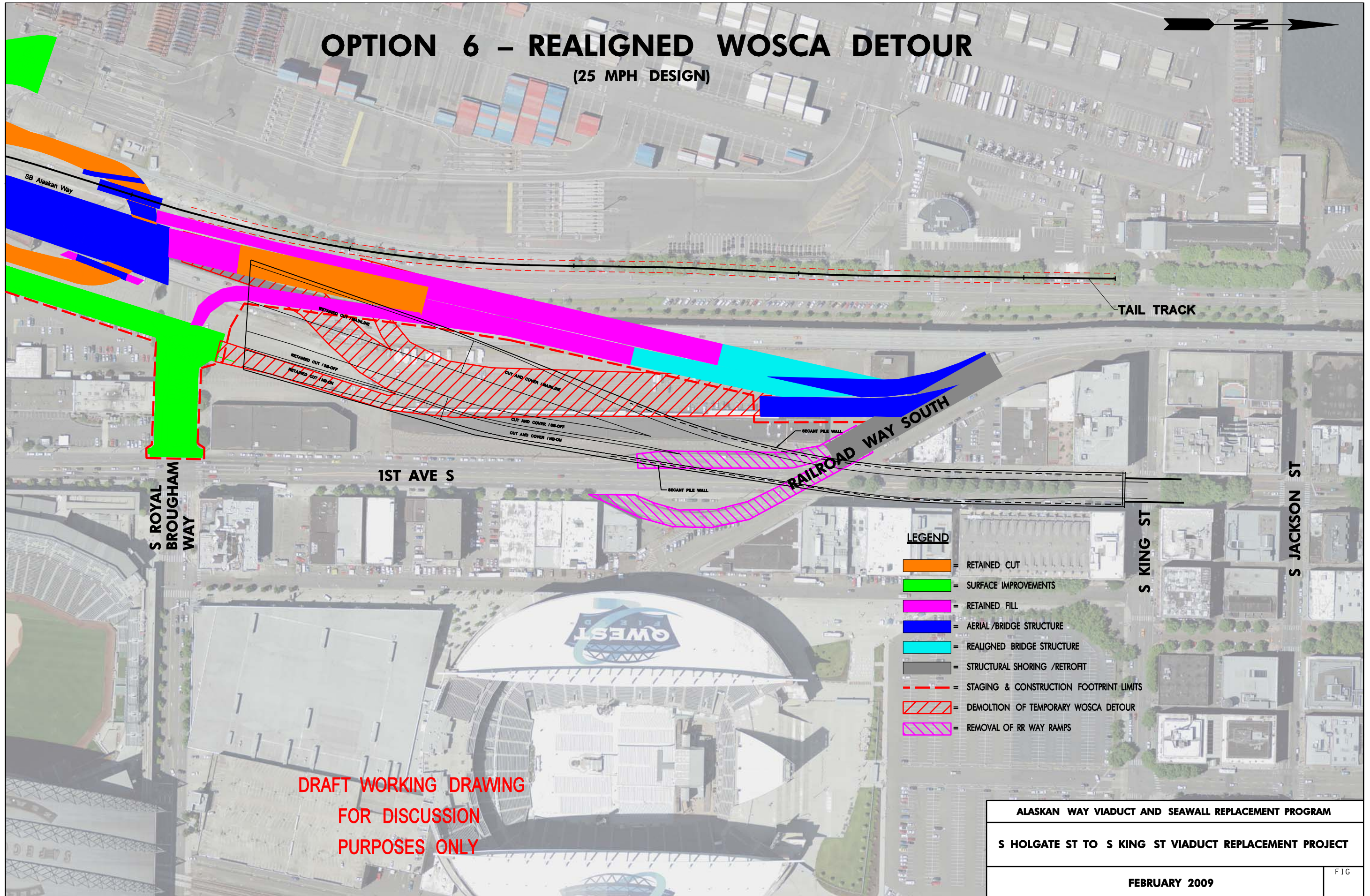
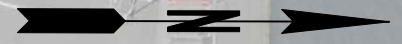
# Side Connection with Modified WOSCA Detour





# OPTION 6 - REALIGNED WOSCA DETOUR

(25 MPH DESIGN)



### LEGEND

- = RETAINED CUT
- = SURFACE IMPROVEMENTS
- = RETAINED FILL
- = AERIAL /BRIDGE STRUCTURE
- = REALIGNED BRIDGE STRUCTURE
- = STRUCTURAL SHORING /RETROFIT
- = STAGING & CONSTRUCTION FOOTPRINT LIMITS
- = DEMOLITION OF TEMPORARY WOSCA DETOUR
- = REMOVAL OF RR WAY RAMPS

DRAFT WORKING DRAWING  
FOR DISCUSSION  
PURPOSES ONLY

**ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROGRAM**  
**S HOLGATE ST TO S KING ST VIADUCT REPLACEMENT PROJECT**

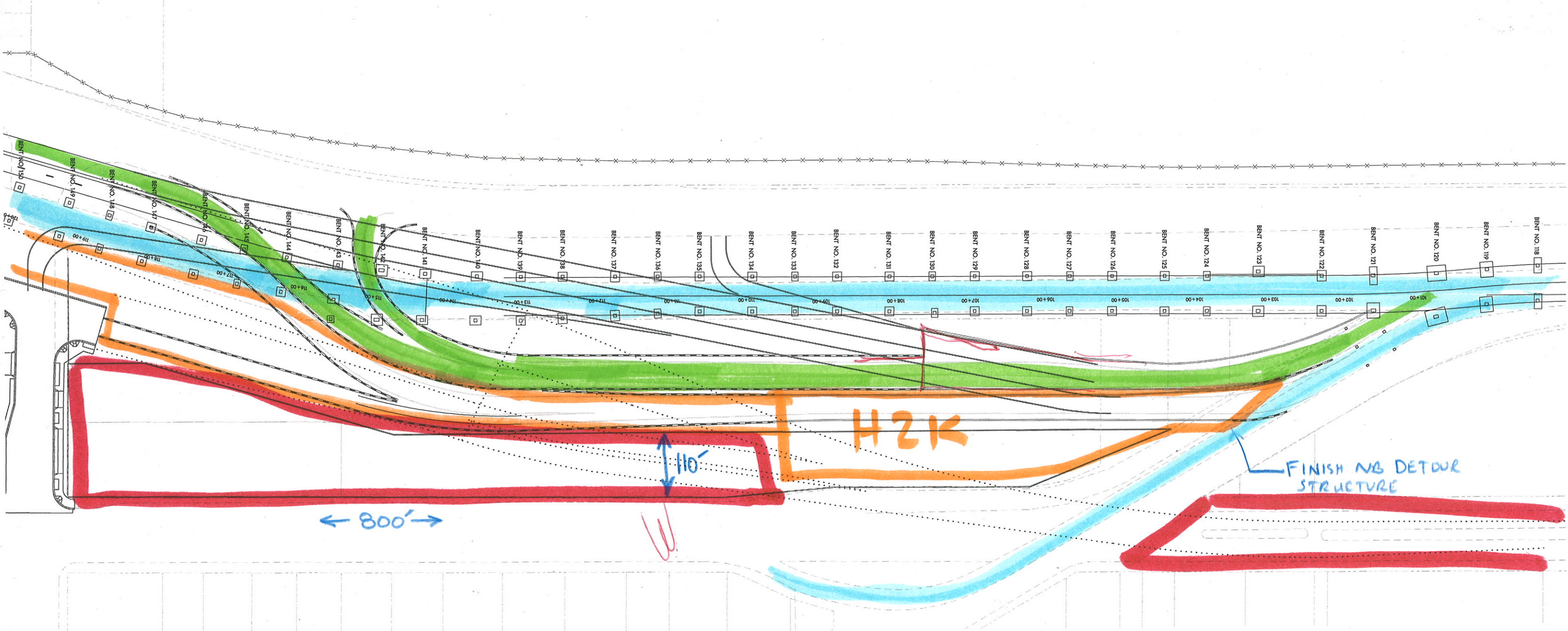
FEBRUARY 2009

FIG



OPTION 6A  
STAGE 2  
JUNE 2011 TO NOV 2011

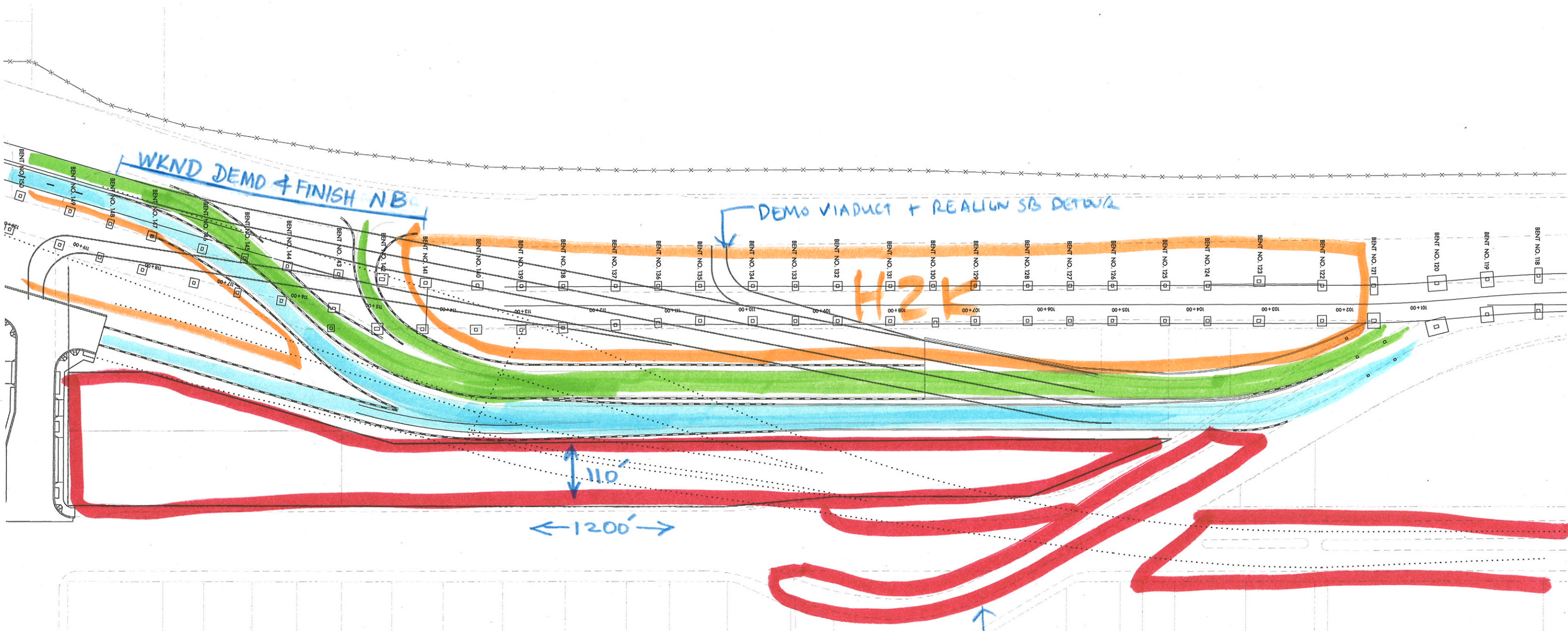
← COMPLETE S. APPROACH  
FOR SB ROADWAY





OPTION 6A  
STAGE 3

NOV 2011 TO JAN 2012

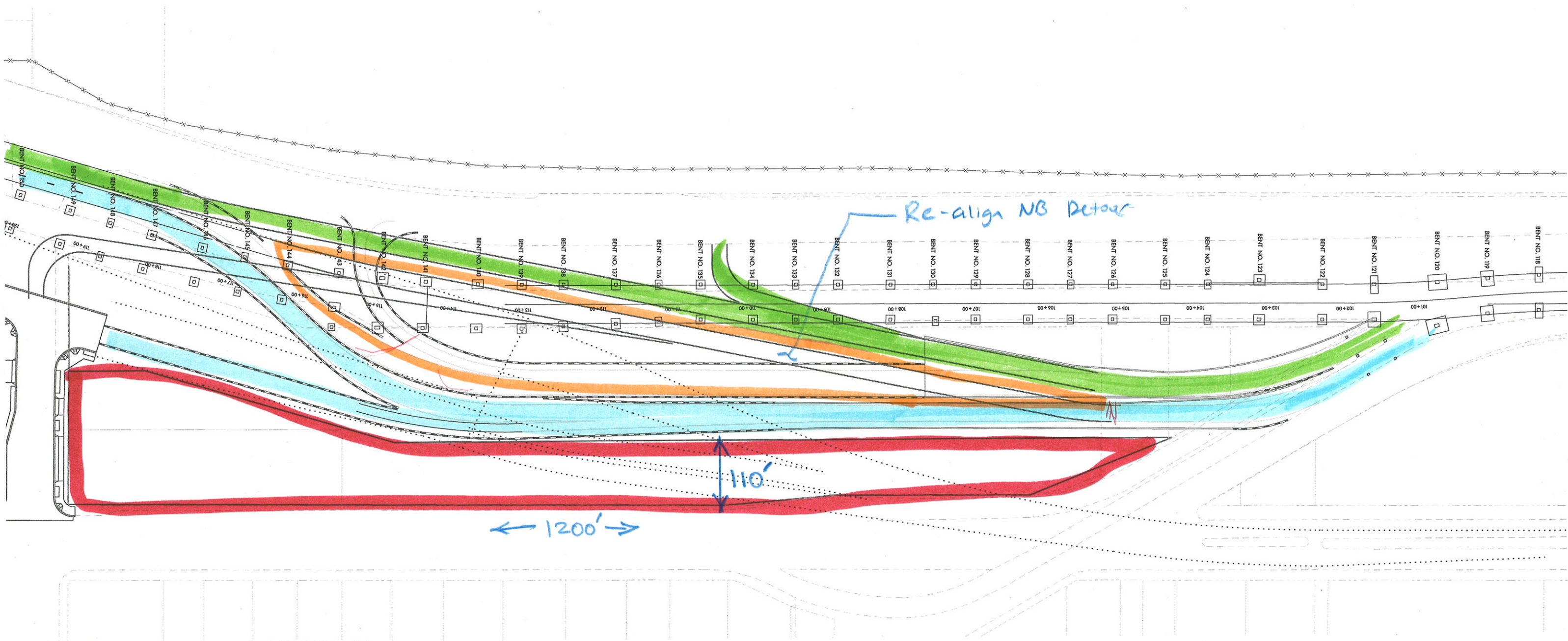


RAMPS REMOVED  
BY TUNNEL CONTRACT  
NOV 2011



OPTION 6A  
STAGE 4

JAN 2012 TO MARCH 2012

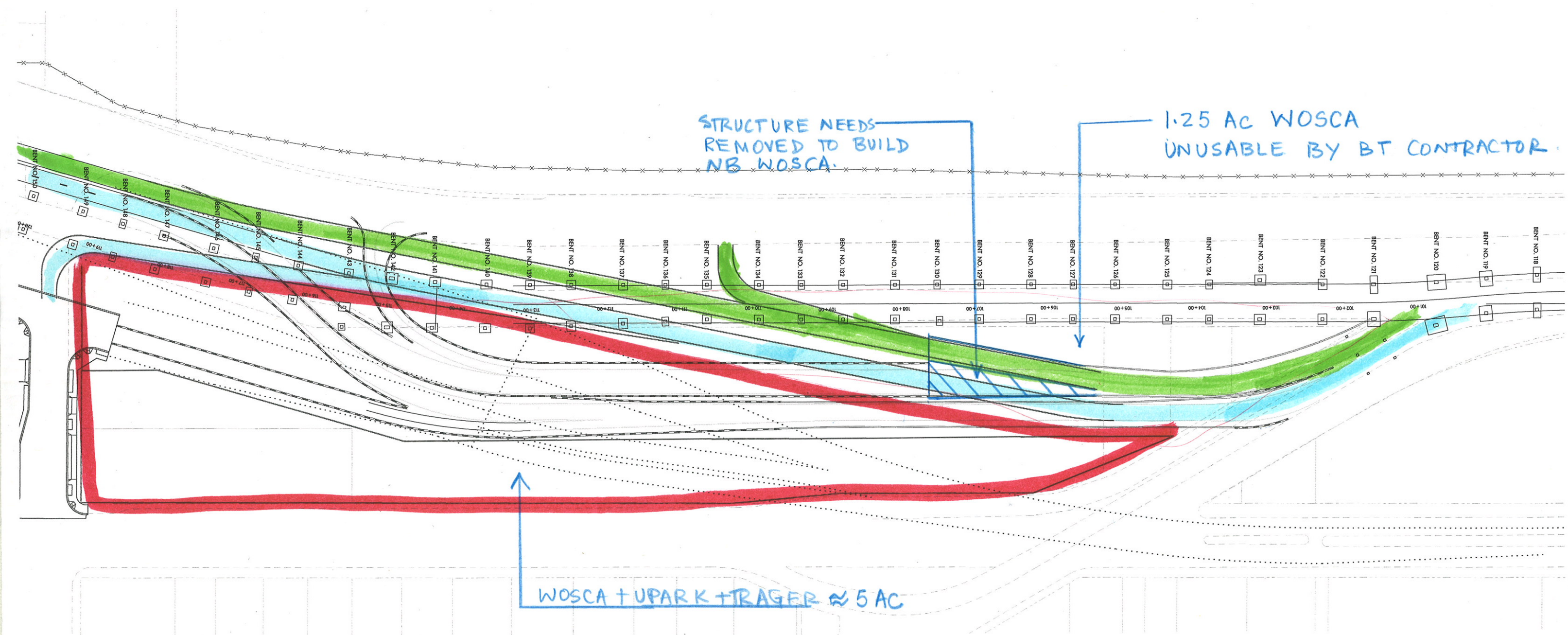




OPTION 6A

STAGE 5

~~APRIL~~ 2012 →  
MARCH



STRUCTURE NEEDS  
REMOVED TO BUILD  
NB WOSCA.

1.25 AC WOSCA  
UNUSABLE BY BT CONTRACTOR.

WOSCA + UPARK + TRAGER ≈ 5 AC



Durations Assume NO RISK

PRE-DECISIONAL DRAFT For Internal Use Only

# WOSCA Transition – Option 6A

