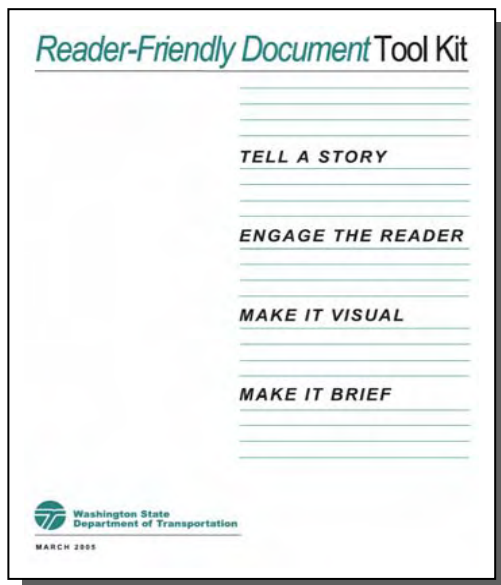


# Reader-Friendly Writing Tips



*Presented by*

**Kimberly Farley, Program Manager  
WSDOT**

Spokane, Washington

November 14, 2007

# The Story

Our story begins in the heart of downtown Seattle along a 4-mile stretch of SR 99.



# Why worry about how we write?

***“ NEPA documents today are largely written (in unreadable language) for two constituencies: federal district court judges and federal agency permit-writers.”***

— Doug MacDonald, WSDOT Secretary of Transportation, 9/23/02

***Many of the documents agencies write “are much too cumbersome for either the public or decision-makers to identify relevant issues.”***

— AASHTO/ACEC 2004 Joint Survey

# Guiding Lights

- **Clear Writing**

- *Style: Ten Lessons in Clarity and Grace*, by Joseph M. Williams
- *Planning in Plain English*, by Natalie Macris

- **Robust Graphic Design**

- *Show Me the Numbers: Designing Tables and Graphs to Enlighten*, by Stephen Few
- *Visual Explanations*, by Edward R. Tufte

# How do you develop reader-friendly documents?

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- Tell a story
- Engage the reader
- Make it visual
- Make it brief

# Tell a Story:

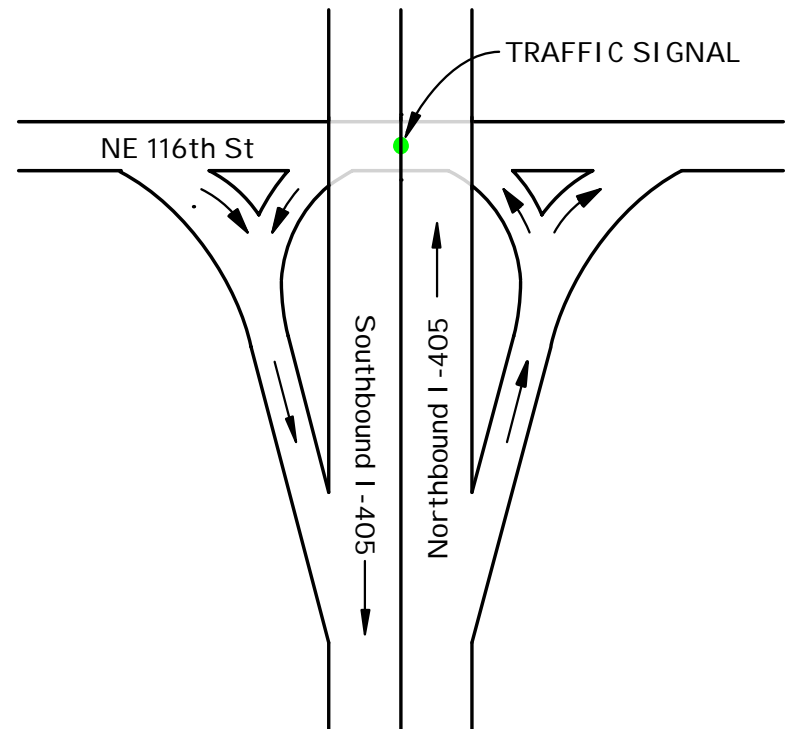
## How do you tell a story?

- Write clearly, use simple language
- Create an outline
- Organize the document to tell a story
- Explain the problem and why people should care—make the reader a character in the story

# Tell a Story: Create an outline

- Annotate your outline for text AND graphics
- Be flexible—your outline will change
- Writing is a process, not a one-time event.

*Exhibit 4-3  
Half Single Point Urban Interchange*



# Tell a Story: Organization

## Typical Organization

1. Alternative Description
  - Structures
  - Design Standards
  - Illumination
  - Pedestrian and Bicycle Facilities
  - Construction
2. Impacts and Mitigation
  - Noise
  - Visual Quality
  - Land Use
  - Transportation

## Reader-Focused Organization

1. What is the alternative?
2. How would it be built?
3. How would it change access?
4. How would it affect travel times and traffic flow?
5. How would pedestrian and bicycles be affected?
6. What would it look like?
7. How would noise levels change?
8. How would it change the character and land use in the project area?

Tell a Story:

# Make the reader a character in the story

## Typical Writing

Intersections that are projected to operate with especially long delays or overcapacity during the PM peak hour are identified as “congested intersections”. These intersections are those that operate under LOS F conditions (average vehicle delay of greater than 80 seconds) or ICU greater than 100 percent. Congested intersections are further identified as “highly congested” if they exceed 110 seconds of average vehicle delay and have an ICU of great than 110 percent.

This paragraph talks about **LOS**, **PM Peak**, and **ICU**—meaningless terms to most readers.

## Reader-Focused Writing

**What are congested and highly congested intersections?**

Congested intersections are intersections that cause drivers considerable delay. A driver might wait between one and two minutes to get through a traffic signal at a congested intersection. At a highly congested intersection, a driver might wait two minutes or more to get through the traffic signal.

This paragraph explains how congested intersections affect drivers.

Engage the Reader:

# How do you engage readers?

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- Use question and answer headings.
- Define terms and spell out acronyms.
- Use easy to read layouts to keep the reader from being overwhelmed.

Engage the Reader:

# Use Question and Answer Headings

## Typical Organization

- Purpose and Need
- Project Termini and why they are logical
- Social and Community Impacts

## Reader-Focused Organization

- Why do we need the Project?
- Where is the project located?
- How would the alternative affect neighborhoods and the people who live there?

# Engage the Reader: Define terms often

## 9. Where are the people using the AWW Corridor coming from and going to?

The corridor primarily serves short regional trips and trips within the city of Seattle. Examples of regional trips served by SR 99 include trips from northwest Seattle neighborhoods to the Sea-Tac International Airport or trips from downtown to the cities of Shoreline or Burien. It provides access to West Seattle, South Park, downtown, Belltown, South Lake Union, Queen Anne, Magnolia, Ballard, and Fremont.

SR 99 parallels I-5, the most heavily used highway in the Pacific Northwest. I-5 is congested for many hours a day through downtown Seattle, and SR 99 is an important alternative route to, from, and through downtown. It is a major freight corridor providing access for businesses in the SODO and Duwamish industrial areas to northwest Seattle neighborhoods. The corridor is an important route for freight in the Ballard/Interbay manufacturing and industrial area. WSDOT classifies this section of SR 99 as a freight corridor carrying more than 10 million tons per year—the highest classification made. Also, SR 99 is an important link to Safeco Field, Seahawks Stadium, and Seattle Center.

### Where are access points provided to and from SR 99?

Between S. Spokane Street and the Battery Street Tunnel, all access to SR 99 is provided via ramps. North of the Battery Street Tunnel, access is mostly provided by surface street connections. Exhibit 3-10 shows SR 99 access and ramp locations and the number of vehicles using these connections daily. The table below describes the connections.

## 10. What are typical travel times and traffic flow?

### What are typical travel times and flows on SR 99?

For many trips, the afternoon commute is the busiest, so it is used to evaluate travel conditions. In most cases, conditions are better at other times of day. The Final EIS will also describe conditions during the morning commute. Typical travel times for key trips using the viaduct during the peak afternoon travel hour (4:00 to 5:00 p.m.) are shown below in Exhibit 3-12.

In general, traffic flows well during the typical afternoon commute, with less than an hour of congestion. Average speeds during the PM Peak are typically within 10 miles per hour of the posted speed limit, as shown in Exhibit 3-13. At times, northbound SR 99 traffic is slowed by traffic that backs up near the off-ramps to Seneca Street and Western Avenue.

### What is the AWW Corridor?

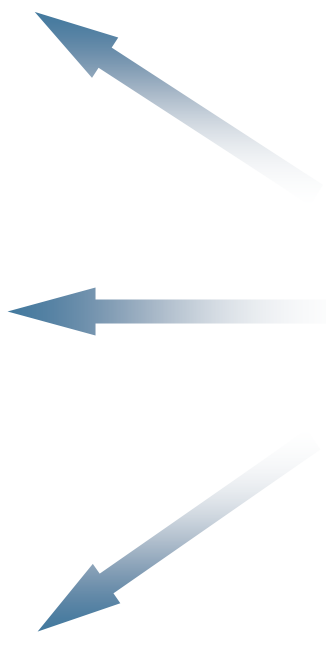
The AWW Corridor includes SR 99, E. Marginal Way, and Alaskan Way from S. Spokane Street up to Ward Street, north of the Battery Street Tunnel.

### What is the PM Peak hour and why is traffic data analyzed for the PM Peak?

The PM Peak hour is the time period when traffic is heaviest during the late afternoon commute. For SR 99, the PM Peak hour occurs from 4:00 to 5:00 p.m. For this project, PM Peak data was evaluated because overall traffic conditions in and around the project area are the most congested during that time of day.

### What are congested and highly congested intersections?

Congested intersections are busy intersections that cause drivers delay. At a congested intersection, a driver might wait 80 seconds or more to get through a traffic signal. At a highly congested intersection, a driver might wait 110 seconds (nearly 2 minutes) or more to get through a traffic signal.



Sidebars can be used to explain technical terms and concepts

# Engage the Reader: Develop a consistent layout

62 Rebuild Alternative

## How would it change vehicle access for ferries?

People driving to the ferry get there via the Alaskan Way surface street, often by taking a left at Yesler Way. When Colman Dock is full, drivers wait for the ferry under the viaduct south of Railroad Way S. Drivers leaving Colman Dock use Marion Street or Alaskan Way.

The Rebuild Alternative would change where drivers would wait for the ferry when Colman Dock is full. It would also change the way drivers get to Colman Dock, and it would add a new way for drivers to exit Colman Dock.

With this alternative, the viaduct would be removed and replaced with an at-grade roadway south of Yesler Way. Therefore, the existing ferry holding area under the viaduct would need to be relocated. Ferry holding could be provided east of SR 99 near S. Royal Brougham Way or west of SR 99 on part of Terminal 46, just south of S. King Street. With either of these ferry holding locations, traffic flow would be improved for both Alaskan Way surface street traffic and ferry traffic by building a separate roadway connecting the holding area to Colman Dock. Improved traffic flow at Colman Dock could also make ferry loading and unloading operations more efficient.

The separate ferry access roadway would be built on a new over-water pier between S. Washington Street and Yesler Way. Drivers would get to Colman Dock using S. King Street and the new ferry access roadway. Drivers leaving Colman Dock would be able to exit where they do now at Marion Street or Alaskan Way, or they could exit using the roadway to S. King Street.

The new ferry access roadway and over-water pier is needed for some additional reasons. The new pier would provide space to relocate the historic Washington Street Boat Landing, and it could provide new shoreline access to pedestrians and bicyclists. During construction, the roadway and pier are needed to maintain ferry access and egress. They could also accommodate construction staging activities.

## How would it change how drivers get into and out of downtown?

With the Rebuild Alternative, there would be some minor changes for drivers traveling into and out of downtown. On the south end, a new interchange at S. Atlantic Street and S. Royal Brougham Way and a new northbound off-ramp at S. King Street would offer drivers a new way into or out of the Pioneer Square area. The ramps at Columbia, Seneca, Elliott, and Western would remain in their current locations, so drivers would not notice much of a change compared with what is there today. The Battery Street ramps would be closed to general traffic, but they would remain open for emergency vehicles.

## How would it change the Alaskan Way surface street for vehicles?

The Alaskan Way surface street would be rebuilt in the same location with the same number of lanes. In most areas, a four-lane roadway would be built with two lanes in each direction as shown in Exhibit 5-2. In some locations, left-hand turn pockets could be provided. Parking both on Alaskan Way and under the viaduct would continue to be provided in the central waterfront area.

## How would the Battery Street Tunnel change?

The Rebuild Alternative does not propose to make any changes to the Battery Street Tunnel.

## How would it change vehicle access in the north?

No changes are proposed north of the Battery Street Tunnel, so access in this area would not change.

## How would it change bicycle access?

The Rebuild Alternative would change bicycle access by modifying the location of the Waterfront Trail. The existing Waterfront Trail begins at S. Royal Brougham Way and runs along the east side of E. Marginal Way/Alaskan Way to Bell Street. It is separated from the Alaskan Way surface street, and shared by bicyclists and pedestrians. The separated, shared path would be extended south from S. Royal

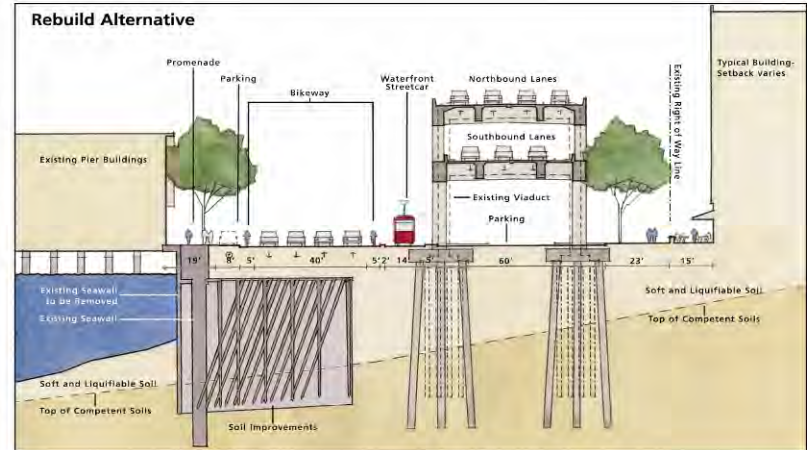


Exhibit 5-2

Brougham Way to just south of S. Atlantic Street. From S. Atlantic Street to Yesler Way, the Waterfront Trail would be moved from the east side of E. Marginal Way/Alaskan Way to the west side. Between Yesler Way and Pine Street, the Waterfront Trail would be replaced with striped bicycle lanes along each side of the Alaskan Way surface street. North of Pine Street, cyclists would be routed to the Waterfront Trail, which would be located in its present location on the east side of Alaskan Way.

## How would it change pedestrian access?

As with bicycle access, the Rebuild Alternative would change pedestrian access by modifying the location of the Waterfront Trail in a few places. The separated, shared path would be extended south from S. Royal Brougham Way to just south of S. Atlantic Street. From S. Atlantic Street to Yesler Way, the Waterfront Trail would be moved from the east side of E.

## What is the tail track?

The tail track is a single railroad track that connects the Burlington Northern Santa Fe (BNSF) Seattle International Gateway (SIG) Rail Yard on the east side of SR 99 to the Whatcom Rail Yard located west of SR 99.

The tail track is used to assemble and sort railcars for both the Whatcom and BNSF SIG Rail Yards.

# Engage the Reader: Design for your reader

14 Summary and Comparison

structures would seem a little more open if these alternatives were constructed. In the Aerial Alternative, the Alaskan Way surface street corridor would be reconfigured, with northbound surface lanes running near the east side of the corridor (beneath the new aerial structure) in the part of the corridor where parking spaces and the street that accesses them are currently located. The corridor

would also include a landscaped median, a landscaped trolley corridor (beneath the aerial structure), bike lanes, a broadened sidewalk on the east side of the Alaskan Way surface street, and a broader waterfront promenade. Together, Aerial Alternative amenities could make the surface street corridor appear to be more visually integrated than it currently does.

Motorists traveling on the aerial structure would continue to experience scenic waterfront and city views.

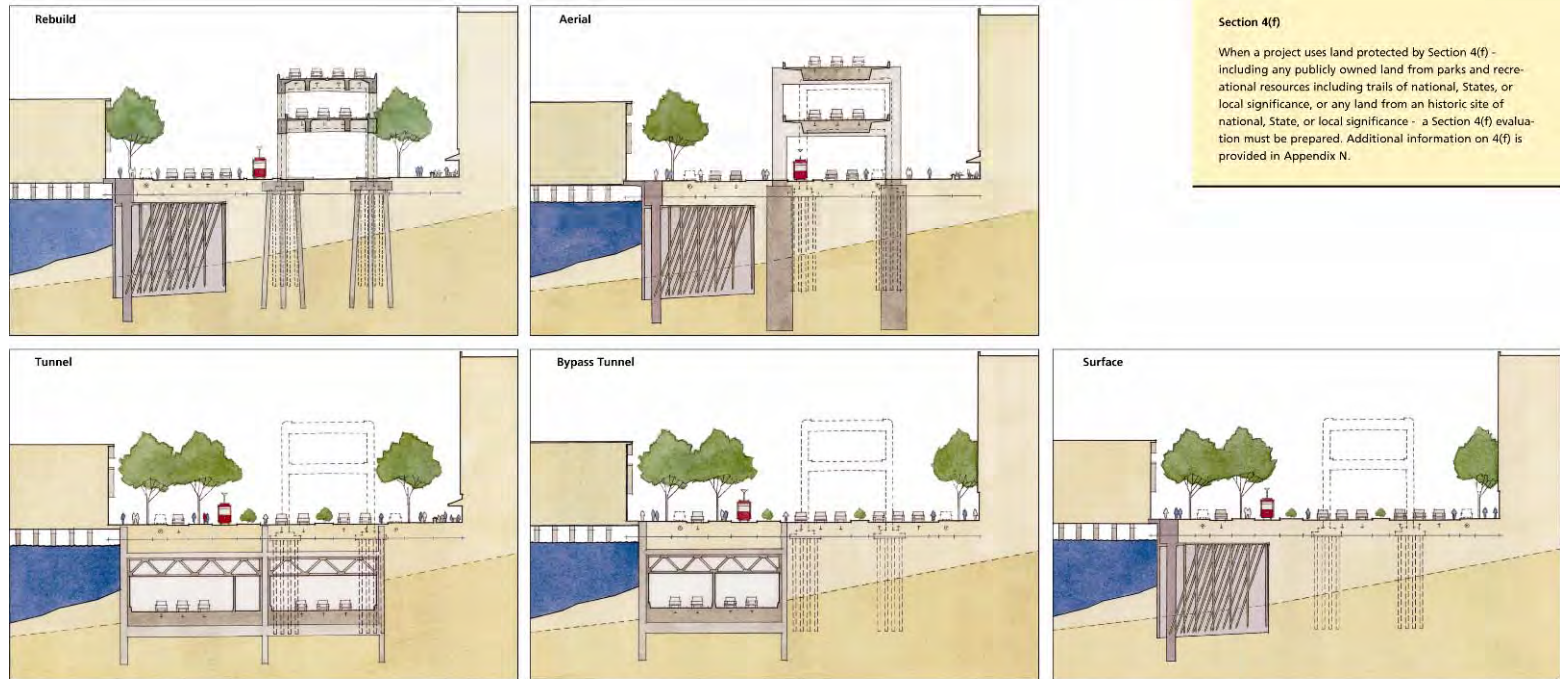
Between S. King Street and Pike Street, the Tunnel and Bypass Tunnel Alternatives would replace the existing viaduct with tunnels, opening up scenic views of piers, Elliott Bay, Puget Sound, and the Olympic Mountains to the west, and views of the Seattle skyline

#### How would adjacent properties benefit from removing the viaduct?

Existing properties adjacent to the viaduct would likely benefit from the Tunnel, Bypass Tunnel, and Surface Alternatives because views would improve, which may encourage redevelopment of these buildings. Conditions for businesses would not change much from the existing conditions with the Rebuild and Aerial Alternatives.

### Conceptual Illustrations of the Alternatives

Cross-sections in the central waterfront



#### Section 4(f)

When a project uses land protected by Section 4(f) - including any publicly owned land from parks and recreational resources including trails of national, State, or local significance, or any land from an historic site of national, State, or local significance - a Section 4(f) evaluation must be prepared. Additional information on 4(f) is provided in Appendix N.

Exhibit 2-14

Make It Visual:

# How do you make it visual?

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- Include graphs, charts, and illustrations rich with information.
- Exclude tables unless they are truly helpful.
- Good graphics take time, planning, and thought.

# Make It Visual: How do you make it visual?

**Exhibit 5-15. 2030 Corridor Travel Times**

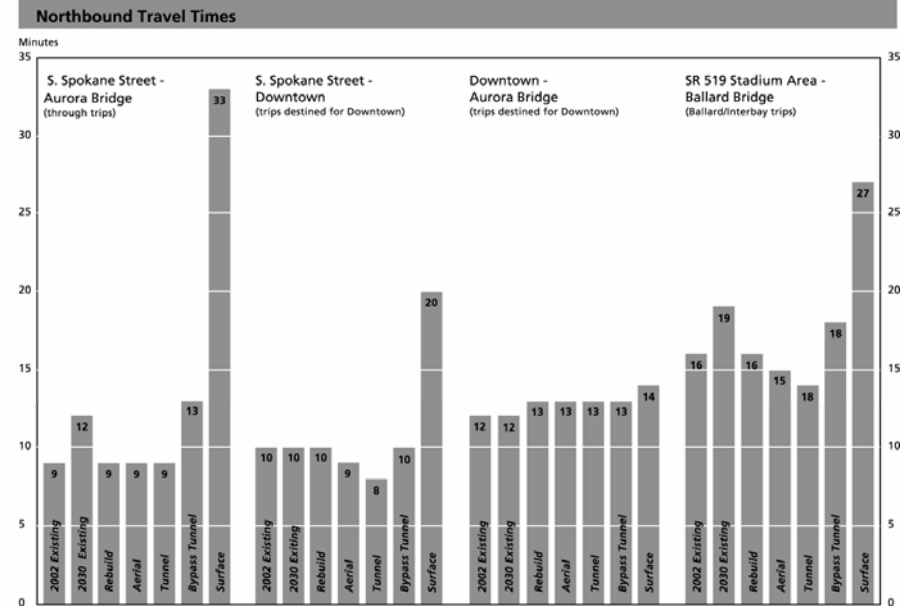
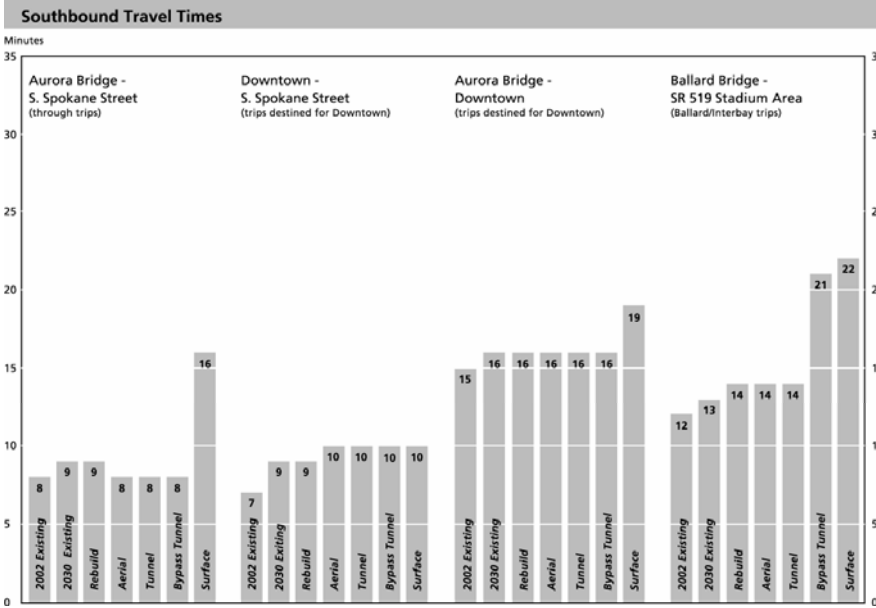
Southbound	2002 Existing	2030 Existing Facility	2030 Rebuild	2030 Aerial	2030 Tunnel	2030 Bypass Tunnel	2030 Surface
A urora Bridge - Spokane Street	8	9	9	8	8	8	16
Ballard Bridge - SR 519 (Stadium Area)	12	13	14	14	14	21	22
A urora Bridge - Seattle Downtown	15	16	16	16	16	16	19
Seattle Downtown - Spokane Street	8	9	9	9	10	10	10

Northbound	2002 Existing	2030 Existing Facility	2030 Rebuild	2030 Aerial	2030 Tunnel	2030 Bypass Tunnel	2030 Surface
Spokane Street - A urora Bridge	9	12	9	9	9	13	33
SR 519 (Stadium Area) - Ballard Bridge	16	19	16	15	18	18	27
Seattle Downtown - A urora Bridge	12	12	13	13	13	13	14
Spokane Street - Seattle Downtown	10	10	10	9	8	10	20

\* Estimate d trav el times show n in minutes.

Typical table often used in reports

# Make It Visual: Bar Charts

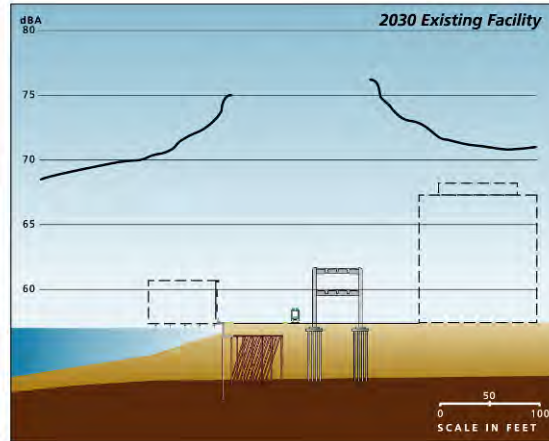
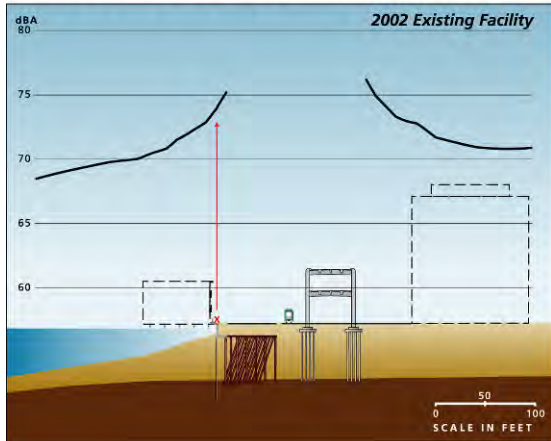


These bar charts show the same information as the tables, but it is easier to show differences and similarities between alternatives.

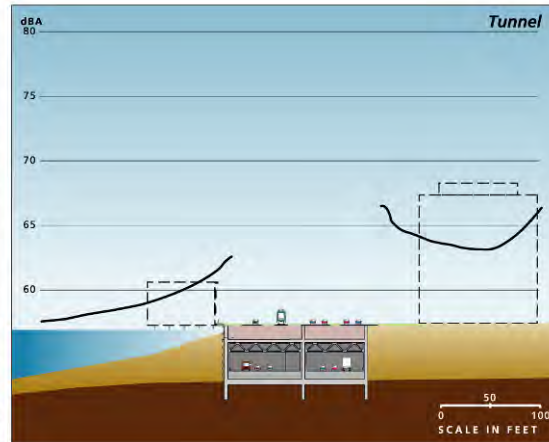
Readers can draw their own conclusions.

# Make It Visual: Illustrated Graphs

## Noise Levels for Each Alternative



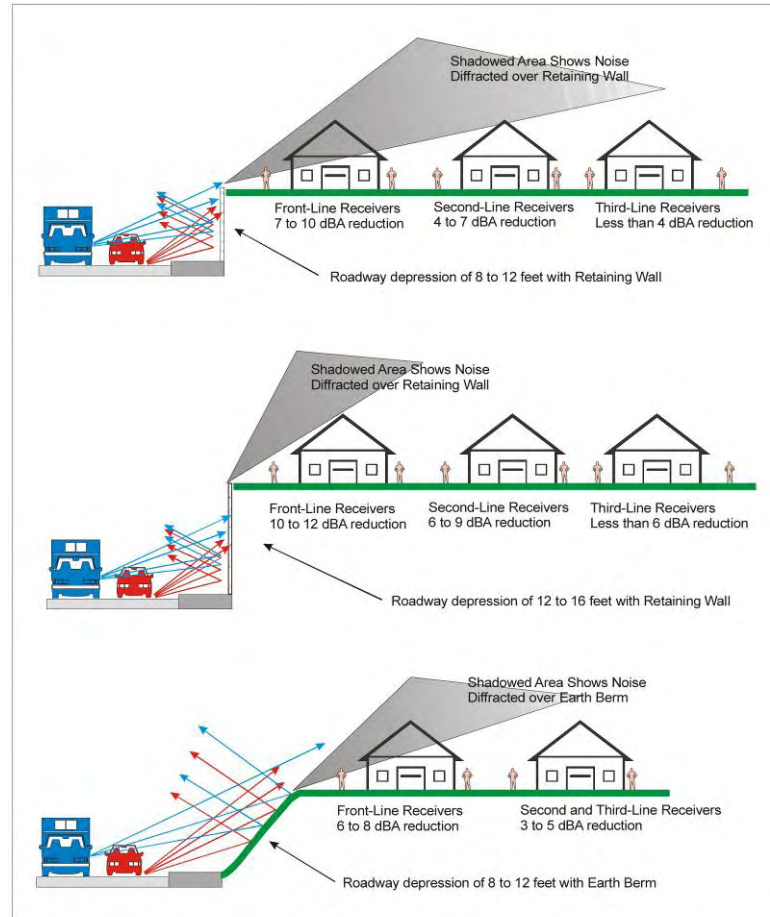
These graphs are showing how loud traffic would be at various distances from Alaskan Way. If you were standing where the X is, the noise level would be about 72 dBA. This is similar to the noise you would hear standing 3 feet from a blender.



## Tunnel Noise Calculations at Spring Street

Location	distance	tunnel
10 feet East of AWW	340	66.5
20' East of AWW	350	65.4
30' East of AWW	360	64.7
40' East of AWW	370	64.4
50' East of AWW	380	64.1
60' East of AWW	390	63.8
70' East of AWW	400	63.6
80' East of AWW	410	63.5
90' East of AWW	420	63.3
100' East of AWW	430	63.2
125' East of AWW	455	63.3
150' East of AWW	480	64.6
175' East of AWW	505	66.7
10' West of AWW	190	62.6
20' West of AWW	180	61.9
30' West of AWW	170	61.3
40' West of AWW	160	60.7
50' West of AWW	150	60.3
60' West of AWW	140	60.0
70' West of AWW	130	59.7
80' West of AWW	120	59.4
90' West of AWW	110	59.1
100' West of AWW	100	58.9
125' West of AWW	75	58.5
150' West of AWW	50	58.2
175' West of AWW	25	57.8
200' West of AWW	0	57.6

# Make It Visual: Illustrations



Examples of Depressed Roadways and Typical Noise Reduction Characteristics

Make It Brief:

## How do you make it brief?

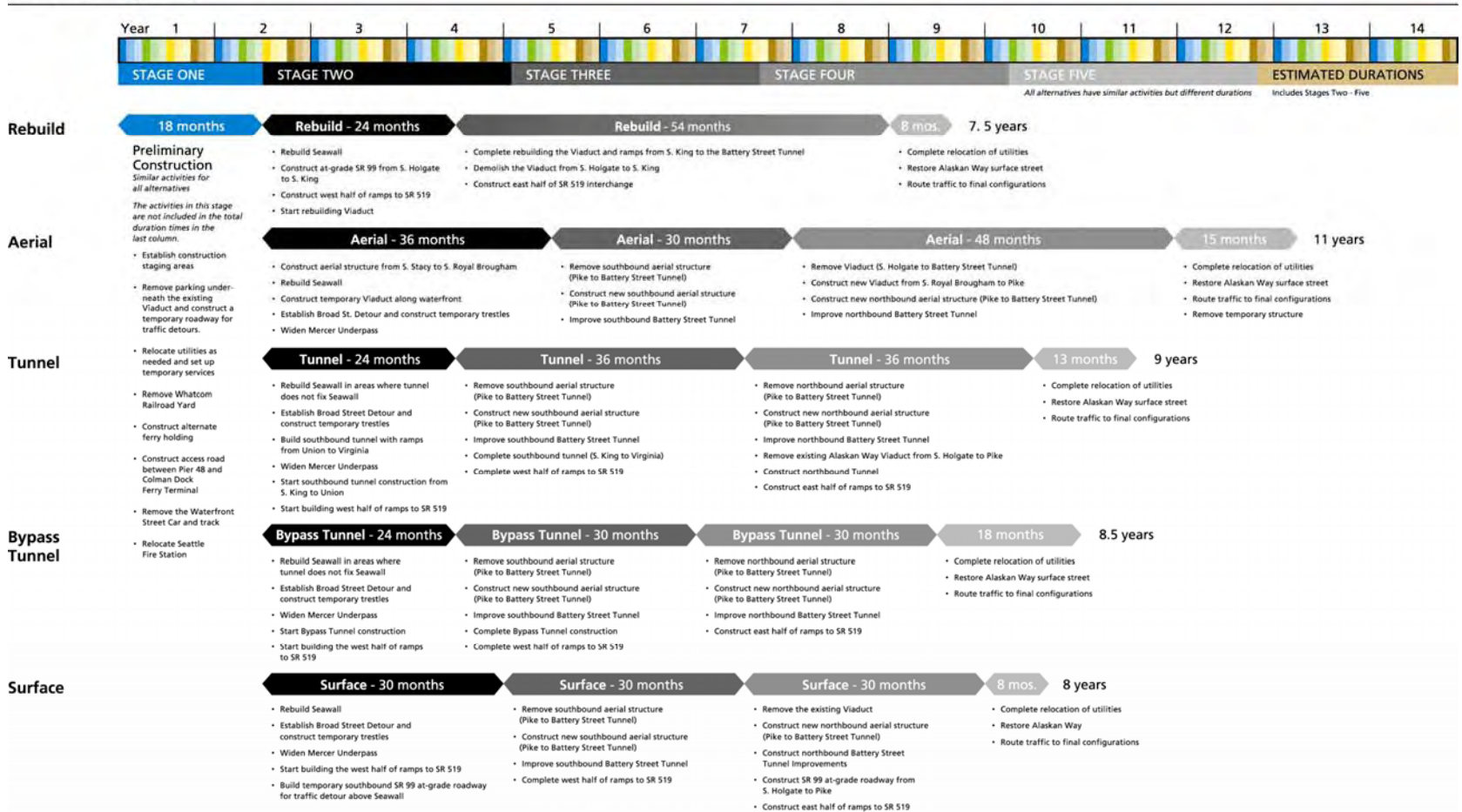
- “Impacts should be discussed in proportion to their significance.”
  - CFR 1502.2 (b)
- Be thoughtful where information shows up
- Summarize information



# Make It Brief: Construction text summarized in a chart

## Alternatives Construction Chart

Timeline Assumes Full Project Funding



# Contact Information

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# Writing Exercise

# Using Subjects and Actions

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- *It has been determined* that 15 businesses must be relocated.
- The project team *determined*...

# Using Subjects and Actions

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- Early *engineering studies determined* that a tunnel could not be built because soils in the project area are poor.
- *Engineers determined...*

# Using Subjects and Actions

---

- The *biological assessment must be submitted* before the Final EIS is approved.
- *You must submit* a biological assessment before *FHWA will approve...*

# Nominalizations

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- This alternative *will result* in a 35 percent *reduction* in available parking.
- This alternative *reduces*...

# Nominalizations

---

- This alternative will benefit neighborhoods by *improving connectivity* with adjacent neighborhoods.
- This alternative *improves access* between neighborhoods A, B, and C.

# Noun Strings

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- The Build Alternatives will have an effect on *project study area neighborhoods*.
- The Build Alternatives will affect *neighborhoods in the project study area*.

# Noun Strings

- The County does not have a *current travel forecast model* that is calibrated to the *a.m. peak hour existing conditions*.
- The County does not *currently have a travel forecasting model* calibrated to *existing conditions during the a.m. peak hour*.

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# Today's Exercises

# Today's Exercises

## Exercise 1

- Evaluation of the alternatives will be completed using a screenline level of evaluation.
- The project team will evaluate the alternatives using information obtained from traffic screenlines.

# Today's Exercises

## Exercise 2

- The development of alternatives was implemented to be more compatible with envisioned local connections.
- The agency developed alternatives that are more compatible with local connections.

# Today's Exercises

## Exercise 3

- The year of expenditure capital costs for the project is estimated to be approximately \$5 million, including risk and contingencies.
- The engineers estimate that the project will cost approximately \$5 million. Their estimate includes an amount that would cover events that cannot be anticipated.

# Today's Exercises

## Exercise 4

- Effective with the August Monthly Progress Report, the schedule exhibit in this report will revert to a modified version of the summary program schedule that relates directly to the CPMS milestones.
- We will modify the schedule associated with the August Monthly Progress Report to reflect the current program schedule. This schedule relates directly to the milestones found in CPMS.

# Today's Exercises

## Exercise 5

- The Predefined Control Center Operator Response Plan Generation function presents to the operator a recommended incident response plan based on the type and geographic location of the incident.
- The Operator Response Plan for the control center provides operators with predefined incident response plans based on the type and geographic location of the incident.

# Today's Exercises

## Exercise 6

- Early in 2003, traffic operations analyses were conducted for the Main Street Corridor Study to determine traffic conditions in the years 2003 and 2030 under “Build” and “No Build” conditions and to identify locations operating at overcapacity conditions.
- In early 2003, the project team analyzed traffic operations for the Main Street Corridor Study to (1) determine existing (2003) and future (2030) traffic conditions for the Build and No Build Alternatives, and (2) identify locations where traffic conditions exceed available roadway capacity.