

**Channelization Plan Documentation**  
**Northwest Region**

**September 3, 2002**

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Dear Transportation Professional:

Washington State Department of Transportation's (WSDOT's) stewardship role includes responsibility for ensuring that changes within the traveled way of state highways are consistent with accepted design guidance. Within the Northwest Region, a Channelization Plan is used to document these changes. In 1997, District 1 (now Northwest Region) put together a small team of WSDOT and local agency representatives to develop consistent guidelines for production of these plans.

We have heard from many of you representing local agencies, developers and WSDOT that it would be beneficial to reassess our Channelization Plan approval process, with a focus on streamlining the process. Local agency and developer representatives have expressed dissatisfaction with the length of time it takes to get approval and inconsistent guidance from WSDOT, among other issues. WSDOT staff has expressed concern with receiving poor quality submittals and the length of time needed to perform multiple reviews. We recently received similar input from participants in the Community Partnership Forum; a group that was convened to develop recommendations on how local agencies and WSDOT can effectively deliver projects that balance community and regional needs. The collective feedback demonstrates that there is room for improvement.

The attached document provides guidelines on what is required on a Channelization Plan. It also outlines our goals for expeditiously reviewing and approving these plans. We have initiated a number of internal process changes including clarifying points of contact, ensuring that Region review comments that are sent out do not conflict with one another, enhancing project tracking, and improving communication both within and outside of WSDOT. We have also increased our emphasis on quickly resolving unclear design guidance. On point will be a core team of regional staff meeting regularly to evaluate the Channelization Plan process and ensure region-wide consistency.

So what is your role in improving this process? Most important, we are very interested in working with you during the early planning stage to cooperatively develop an achievable project. We welcome your continuous input on what is working and what is not. We want to take advantage of any new ideas you may have that will simplify the process for all involved. And finally, we ask that you follow these guidelines to ensure a quality product.

I am pleased to provide you with this Channelization Plan Guidance document to facilitate approval of channelization changes within the Northwest Region. My staff is committed to ensuring that this process is a success. I encourage you to equally do your part to achieve this success.

Sincerely,

Lorena Eng, P.E.  
Regional Administrator

## Essential Steps in the Channelization Plan Process

### WSDOT's Commitment and Expectation

The following page lists elements that are key to successful completion of a Channelization Plan. Both the project proponent and WSDOT have responsibility for this product. Northwest Region staff is committed to achieving these goals.

### Project Initiation

It is essential that the project proponent and WSDOT work cooperatively in scoping of projects on state highways. This is a stage where all involved can assess the project vision and agree upon a set of principles that will facilitate implementation of the project. The effort made at this early stage can clear many of the issues that have typically slowed down plan approval in the past. This early discussion can take place in a number of forms. One size does not fit all and we encourage flexibility in dealing with each project. Some projects are very complex and require a formal scoping meeting(s) to ensure agreement on design guidelines to be followed. Many others are less complex and can be initiated with a phone call or brief conversation between the project manager and WSDOT review lead.

It is critical that decisions regarding project scope and guidance are documented, so that they can be referred to during the project development stage. A tool to accomplish this is the *Project Design Guidelines* worksheet. The intent of this document is to identify key design features, proposed design guidance, and anticipated design deviations. *It is essential that this completed document be forwarded to WSDOT prior to initial submittal of the Channelization Plan.*

To initiate coordination with WSDOT on a project that will require Channelization Plan approval, contact the Area representative. The appendix attached to this document provides a list of Area contacts within the Northwest Region.

### Initial Submittal

- ✓ Ensure that the plans are consistent with guidance contained in the Channelization Plan Checklist and documented project agreements, including the Design Parameters Worksheet.

### WSDOT Review Comments

- ✓ WSDOT staff will use a consistent approach to review plan submittals. A flow diagram of this process, *Review Process Flow Chart*, is included in this guidance document.
- ✓ We will take every opportunity to expedite review of a Channelization Plan submittal.

### Subsequent Submittal

- ✓ Ensure that the plans are consistent with guidance contained in the Channelization Plan Checklist and documented project agreements, including the Design Parameters Worksheet.
- ✓ Ensure that all review comments are clearly addressed with an itemized list of revisions.
- ✓ Ensure that any new design elements or revisions not included in the previous submittal are clearly identified

## The Path to Success

### Northwest Region's Commitment:

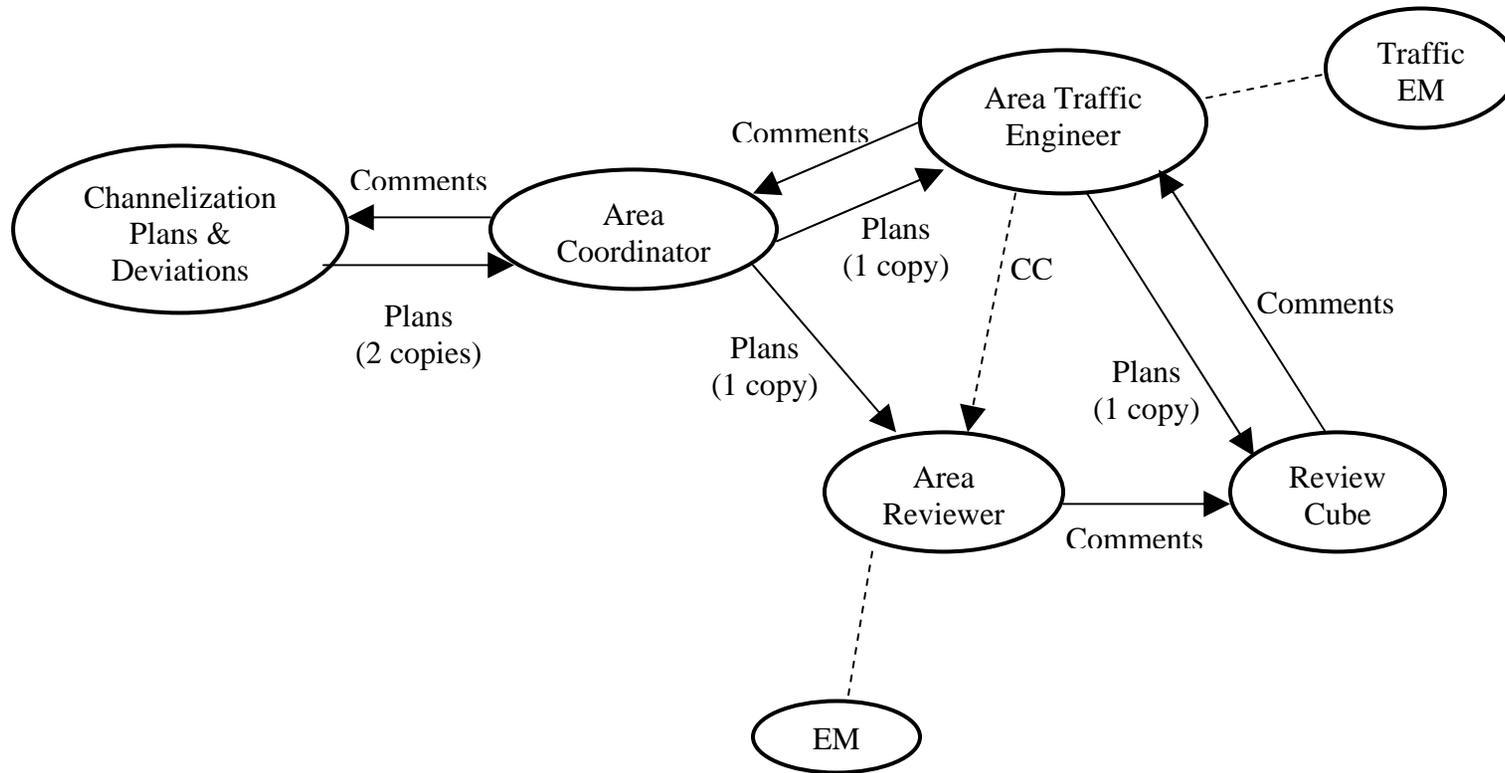
- We will provide a single point of contact to work with you through this process
- We will provide clear, consistent and accurate review comments
- We will provide prompt review and response
  - Typically we will perform an initial review within 4 weeks, depending on the complexity of the project and the quality of the submittal
  - Our goal is that subsequent reviews will be accomplished in less time
- We will maintain documentation of all decisions and agreements made during the project duration
- We will ensure that documents that we produce have been checked for quality
- We will ensure that our comments do not conflict with one another
  - Comments pertaining to requirements will be clearly noted and separate from those that are suggestions
- We will make every effort to sign the Channelization Plan on either the first or second submittal. At a minimum we will strive for providing interim approval of critical “footprint” channelization no later than following a 2<sup>nd</sup> submittal.
- We will strive to resolve and clarify inconsistent design guidance

### Our Expectation (i.e. Your Commitment):

- The project proponent will keep WSDOT's Area Coordinator informed of project schedule and include WSDOT's input on schedule commitments that involve WSDOT review
- The project proponent will submit a completed Project Design Guidelines worksheet prior to the first Channelization Plan submittal
- The plans will adhere to guidance contained in the Channelization Plan Checklist and will be checked for quality prior to submittal
- All review comments will be clearly addressed, with an itemized list of changes
- Each subsequent submittal will identify new revisions/modifications that were not included in the previous submittal
- For local agency projects, the agency staff will be actively involved in discussions between their consultant and WSDOT

# Channelization Plan & Design Deviation Review Process

Local Agency and Developer Projects



# Project Design Guidelines

\* Provide this information in advance of a Channelization Plan or Design Deviation submittal.

**Project Route / Title** \_\_\_\_\_

**Project Description** \_\_\_\_\_

<b>Basic Information?</b> Various factors determine the appropriate design of a transportation facility. The following are the basics to perform a quality review of your project.	<b>Project Specific</b> In the section marked <b>Required vs. Proposed</b> any discrepancies may require that an Evaluate Upgrade or Deviation be provided. Other elements not meeting standards may also require additional documentation.	<b>Information Resource</b> Your information resource may vary. Those noted below are generally the most accepted source of information by WSDOT. If a specific page, table or figure is used, please note the exact source.	<b>Resource Date</b> You should use the most current edition of WSDOT resources available.
Project Limits		Project Sponsor	
Project Description/Type		Project Sponsor	
Design Matrix: Interstate, NHS or Non NHS		Design Manual fig.325-2a & b	
Functional Class - R1 thru R5 or U1 thru U5		WSDOT Highway Route Log	
Number of Lanes Proposed		Project Sponsor	
Design Class		Design Manual fig 440-4 thru 440-7b	
Access Management Class		WAC 468-52; Contact Area Coordinator	
Terrain		WSDOT Highway Route Log	
Posted Speed		WSDOT Highway Route Log	
Operating Speed if higher than the posted speed		Traffic Analysis	
ADT		Traffic Analysis or Traffic Data Office Report	
Truck Percentage		Traffic Analysis or Traffic Data Office Report	
Applicable Matrix		Design Manual fig. 325-4 thru 8	
Lane width		Design Manual Chapter 430 or 440 depending on Matrix guidance	
Shoulder width		Design Manual Chapter 430 or 440 depending on Matrix guidance	
Clearzone		Design Manual Chapter 700	
Design Vehicle		Design Manual Chapter 430 or 910 depending on Matrix guidance	

# WSDOT NORTHWEST REGION CHECKLIST FOR CHANNELIZATION PLANS

## GENERAL REQUIREMENTS:

- Use the latest updates of the WSDOT Design Manual and the Manual of Uniform Traffic Control Devices (MUTCD). Use terminology specified in the WSDOT Standard Specifications for Road, Bridge, and Municipal Construction and the WSDOT Design Manual. Use plan scale of 1" = 50'
- Show entire roadway width with all elements listed below. On State highways, where new channelization matches with existing highway sections, show no less than 300 feet of the existing highway section beyond the match line(s) with all elements listed below. On intersecting roads and commercial and multi-residential driveways, show no less than 100' of the existing section beyond the match line(s) with all elements listed below.
- Show only the final channelization where widening/improvement proposed. Include stations and dimensions of all channelization features where proposed improvement ties in with existing roadway.
- Provide one full size (22"x 34") and two half size (11"x 17") white paper copies of the channelization plan(s). Full size mylar is required for final approval.
- Submit Channelization-related Design Deviation(s) and/or Evaluate Upgrades requests for review and approval. Channelization Plan cannot be approved until these deviations and/or EU's are approved.

## REQUIRED ELEMENTS TO BE INCLUDED ON A CHANNELIZATION PLAN:

- Project Title w/ State Route Number, Begin / End Mileposts, County, Date and Page Number in Title block
- North arrow, section, township, and range
- Street and Highway names
- Right of way lines (WSDOT, County, and/or City)
- Construction centerline bearing and 100 ft stations
- Posted Speed, Design Speed, and Design Vehicle
- Highway Classification and Design Matrix used.
- Channelization-related Design Deviations, Evaluate Upgrades and Design Exceptions callouts/notes
- Curve data for each curve (curve radius, superelevation, curve and tangent lengths, delta angle, PC, PI, & PT)
- Edge of traveled way and edge of pavement lines
- Intersecting roadways and driveways - at least 100' and identify business name and description.
- Angles between intersections and or bearings of all centerlines at intersections.
- Widths of through lanes, turn lanes, and shoulders
- Begin and end stations of right and left turn storage lanes. (Indicate recommended storage lengths in Traffic Analysis)
- Begin and end stations with offsets for all channelization tapers and stripes
- Left and right turn radii for intersections, and commercial and multi-residential driveways
- Typical roadway sections showing all channelization features with dimensions (i.e. travel lanes, turn lanes, medians, shoulders, curb and gutter, bike lane, sidewalk etc.).
- Existing and proposed raised curbing.
- Raised & painted islands. Separate sketch showing detail of islands including offsets of key locations from reference lines. Also indicate square footage of islands.
- Signature block for WSDOT approval.
- PE stamp / seal signed and dated

# CHANNELIZATION ELEMENTS

## Design Data

Local Jurisdiction ↓

**DESIGN DATA BOX**

	SR 000	AL 3 RAMP	CROSS STREET RD.
Functional Class:	(Urban/Rural - Principal Arterial, Minor Arterial, etc.)		County or City Designation
Highway Design Class:	(Modified: MDL14, Full: Collector, etc.)		
NHS Status:	(Interstate, NHS or Non NHS)		
Design Matrix:	Matrix: (X) Line: (Y)		
Access Control:	(Full, Partial, Managed - Class 1-5)		
Design Vehicles:	(SU, WB-67, etc.)	(SU, WB-67, etc.)	(SU, WB-67, etc.)
Posted/Design Speed:	(25 / 25, 55 / 65, etc.)	60 AT CONNECTION, etc.	
Terrains:	(LEVEL, ROLLING, or MOUNTAINOUS)		
Truck Percentage:	(3%, 11%, etc.)		

**For State Highways and Ramps:**

- State Highway Log →
- DM 430 / DM 440 / Design Reviewer →
- Design Manual 325 →
- Design Manual 325 →
- Design Reviewer / NWR Traffic / WSDOT Access web site http://www.wsdot.wa.gov/EESC/Design/Access/default.htm →
- Traffic Analysis / DM 430.09 / DM 910.05 / DM 1055.05 / Design Reviewer →
- State Highway Log / DM 430.02 / DM 440.07 / DM 940.05 / DM 1055.05 →
- State Highway Log →
- NWR Safety Management or NWR Traffic →

**Comments in the Design Data Box**

- Only one design data box is required, preferably on the first sheet.
- If a route changes characteristics within the project limits, each segment should have its own column and each columns should clearly identify the limits of segment it covers

## Title Block

**WSDOT Project**

Mile post limits of channelization from current State Highway Log. Use "MP xx.xx" if back equation.

State Route(s) → I-5 SR-516

City (if portion within) / County → KENT/KING COUNTY

MP 148.81 TO MP 149.93  
MP 1.80 TO MP 2.05

PLOT 01

**I-5 SR-516 INTERCHANGE CHANNELIZATION**

MARCH, 2007

plan reference number → C1

Sheet number → SHEET 1 OF 3 SHEETS

Total number of channelization sheets → 3

Month and year of submittal → MARCH, 2007

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**Non-WSDOT Project**

Mile post limits of channelization from current State Highway Log. Use "MP xx.xx" if back equation.

State Route(s) → I-5 SR 516

Title or sheet type must include "CHANNELIZATION"

KENT/KING COUNTY

MP 200.75 TO MP 200.85  
MP 1.80 TO MP 2.05

project title line # 1

project title line # 2 (optional)

project title line # 3 (optional)

APRIL, 2007

Channelization sheet number → SHEET 1 OF 3 SHEETS

Total number of channelization sheets → 3

Month and year of submittal → APRIL, 2007

City (if portion within) / County → KENT/KING COUNTY

## Land Survey

**T.22N.R.4E.W.M.**

**Comments on Land Survey**

- Townships, Ranges, and Sections shall be drawn and noted per Division 3 of the Plans Preparation Manual.
- Sections shall be noted adjacent to the section line unless the plan is contained in one section. If the plan is completely contained in one section it may be noted under the Township and Range at the top of the plan sheet.

## Centerline Curve Data Block

CURVE DATA					
P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	S

No spiral curves

TOTAL CURVE DATA			CURVE DATA			SPIRAL DATA			
P.I. STATION	DELTA	TANGENT	DELTA	RADIUS	LENGTH	S	o	DE	Ls

Spiral curves

## Signature Block

**WSDOT NORTHWEST REGION**

**APPROVED CHANNELIZATION PLAN**

TRAFFIC ENGINEER - AREA OPERATIONS

3.25"± Signed \_\_\_\_\_ Date \_\_\_\_\_

Print \_\_\_\_\_

ENGINEERING MANAGER

Signed \_\_\_\_\_ Date \_\_\_\_\_

Print \_\_\_\_\_

5.25"±

This signature block should be approximately 3.25" high by 5.25" wide on a full size plot.

## Design Variances

**DESIGN VARIANCES**

- ⚠ Deviation: Right Turn Corner. DM 910.06, May 2006.
- ⚠ Deviation: Turning Roadway Width. DM 641.04(1), November 2006.
- ⚠ Deviation: Access Spacing. DM 1435.02(3), December 2003. Approved by the City Of Kent
- ⚠ Evaluate Upgrade: Shoulder Cross Slope. DM 640.04(3), May 2006.
- ⚠ Design Exception: Lane Width. DM 430.04(1), May 2006.

Type of variance: variance, design standard, date of standard

**Comments on Design Variances**

- The design variances for each sheet shall be listed on that sheet.
- Design variances include deviations, evaluate upgrades, design exceptions, project analyses, and corridor analyses.
- Design variance numbers shall correspond to the number on the design variance document.
- Design and number shall be placed on the plan sheet(s) showing the location of each variance.

## WSDOT Contacts

### **SnoKing Area**

Area Coordinator: Ramin Pazooki  
(206) 440-4710  
[PazookR@wsdot.wa.gov](mailto:PazookR@wsdot.wa.gov)

### **Mount Baker Area**

Area Coordinator: Marv Pulst  
(360) 757-5960  
[PulstML@wsdot.wa.gov](mailto:PulstML@wsdot.wa.gov)