



## Noll Road Corridor Plan

---

City of Poulsbo



December 2008  
Parametrix

# Noll Road Corridor Plan

*Prepared for*

**City of Poulsbo**  
19050 Jensen Way NE  
Poulsbo, Washington 98370

*Prepared by*

**Parametrix**  
4660 Kitsap Way, Suite A  
Bremerton, WA 98312-2357  
T. 360.377.0014 F. 360.479.5961  
[www.parametrix.com](http://www.parametrix.com)

## CITATION

Parametrix. 2008. Noll Road Corridor Plan.  
Prepared by Parametrix, Bremerton, Washington.  
December 2008.

## ACKNOWLEDGEMENTS

The Noll Road Corridor Plan is a community plan. The plan was developed over a period of one year by a Stakeholder Committee that consisted of community leaders and elected officials that volunteered their time to review and discuss technical information and data, engineering alternatives and recommendations. The Committee's recommendations are reflected in this Plan document. The following people participated in the Stakeholders Committee planning process:

### Noll Road Corridor Plan Stakeholders Committee

Name	Representing
Tom Anderson	County resident
Linda Berry-Maraist	City Council
Ray Burkhard	Noll Road resident
David Carpenter	Languanet/Maranatha/Ridgewood community
Tony DeCarlo	Languanet/Maranatha/Ridgewood community
Becky Erickson	City Council
Byron Harris	Developer/owner
Andrzej Kasiniak	City of Poulsbo, City Engineer
Mark Kuhlman	Development community
Barry Loveless	City of Poulsbo, Public Works Director
Nancy Moffat	North Kitsap School District
Steve Sheridan	Deer Run HOA, President
Robin Shoemaker	North Kitsap School District
Stephanie Wells	Noll Road resident

# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>ES-1</b>
STAKEHOLDER COORDINATION AND INVOLVEMENT .....	ES-1
EXISTING AND PLANNED DEVELOPMENT .....	ES-1
TRAFFIC ASSESSMENT .....	ES-1
Traffic Volume Forecasting .....	ES-5
Noll Road Lane Requirements .....	ES-6
Intersection Traffic Operations .....	ES-6
Signal Warrant Analysis.....	ES-7
INTERSECTION CONTROLS.....	ES-7
Noll Road – Hostmark Street Intersection.....	ES-7
Noll Road - Lincoln Road Intersection .....	ES-11
Noll Road – SR 305 Intersection.....	ES-11
NOLL ROAD IMPROVEMENTS .....	ES-11
POULSBO ELEMENTARY SCHOOL VICINITY IMPROVEMENTS .....	ES-15
STORMWATER MANAGEMENT.....	ES-15
LANGUANET LANE – MARANATHA LANE.....	ES-16
JOHNSON WAY EXTENSION .....	ES-19
Johnson Way – SR 305 Intersection.....	ES-19
IMPLEMENTATION AND FUNDING .....	ES-19
PHASING PLAN.....	ES-23
SHORT TERM IMPLEMENTATION ACTIONS .....	ES-27
PRELIMINARY FUNDING PLAN.....	ES-27
PRELIMINARY FUNDING STRATEGY .....	ES-27
<b>1. INTRODUCTION.....</b>	<b>1-1</b>
1.1 PURPOSE AND SCOPE .....	1-1
1.1.1 Project Organization and Approach .....	1-1
1.1.2 Stakeholder Coordination.....	1-7
1.2 EXISTING AND PLANNED DEVELOPMENT .....	1-7
1.3 CRITICAL AREAS .....	1-8
1.3.1 Streams .....	1-8
1.3.2 Other Critical Areas.....	1-8
1.3.3 Summary of Critical Area Regulatory Requirements.....	1-11
<b>2. ROADWAY INVENTORY AND TRAFFIC ASSESSMENT.....</b>	<b>2-1</b>
2.1 ROADWAY INVENTORY .....	2-1
2.1.1 Noll Road .....	2-1
2.1.2 Washington State Route (SR) 305.....	2-1
2.1.3 Lincoln Road .....	2-1
2.1.4 Local Roadways .....	2-2

## TABLE OF CONTENTS (CONTINUED)

2.2	TRAFFIC DATA COLLECTION .....	2-2
2.3	TRAFFIC VOLUME FORECASTING .....	2-5
2.3.1	Planning Model Growth Rates .....	2-5
2.3.2	Pipeline Development Projects.....	2-6
2.3.3	Opening (2010) and Design Year (2030) Volumes.....	2-6
2.4	OPERATIONS .....	2-17
2.4.1	Noll Road Lane Requirements .....	2-17
2.4.2	Intersection Traffic Operations - Noll Road.....	2-18
2.4.3	Traffic Operations - Johnson Way Extension.....	2-22
2.4.4	Traffic Operations at Secondary Intersections .....	2-26
2.5	ACCIDENT DATA.....	2-27
2.5.1	SR 305 Accident Data .....	2-27
2.6	SPEED LIMIT CONSIDERATIONS .....	2-28
<b>3.</b>	<b>INTERSECTION CONTROL ALTERNATIVES .....</b>	<b>3-1</b>
3.1	NOLL ROAD - HOSTMARK STREET INTERSECTION .....	3-1
3.1.1	Recommended Intersection Option .....	3-7
3.1.2	Noll – Hostmark Intersection Lane Requirements .....	3-9
3.2	NOLL ROAD - LINCOLN ROAD INTERSECTION .....	3-13
3.3	NOLL ROAD – SR 305 INTERSECTION.....	3-14
3.4	SR 305 – JOHNSON WAY INTERSECTION.....	3-14
3.5	SECONDARY INTERSECTIONS.....	3-19
3.5.1	Other Intersections.....	3-19
3.6	SUMMARY OF PRELIMINARY INTERSECTION COSTS FOR RECOMMENDED IMPROVEMENTS .....	3-19
<b>4.</b>	<b>ROADWAY IMPROVEMENTS .....</b>	<b>4-1</b>
4.1	ROAD CLASSIFICATION AND DESIGN STANDARDS .....	4-1
4.2	EXISTING RIGHT-OF-WAY AND ROADWAY FEATURES.....	4-1
4.3	NOLL ROAD CROSS SECTION ALTERNATIVES.....	4-5
4.3.1	Cross Section Alternatives Evaluation .....	4-9
4.4	PROPOSED NOLL ROAD PLAN .....	4-10
4.5	POULSBO ELEMENTARY SCHOOL VICINITY IMPROVEMENTS.....	4-17
4.6	PRELIMINARY STORMWATER ANALYSIS .....	4-18
4.6.1	Stormwater Management Options .....	4-25
4.7	LANGUANET LANE – MARANATHA LANE PLAN.....	4-30
4.7.1	Proposed Roadway Design.....	4-31
4.7.2	Proposed Intersection Improvements .....	4-37
4.7.3	Preliminary Cost Estimate – Languanet Lane Improvements .....	4-37
4.8	ALTERNATE ALIGNMENT – JOHNSON WAY EXTENSION.....	4-37

## TABLE OF CONTENTS (CONTINUED)

4.8.1	Noll Road – Johnson Way Intersection .....	4-39
4.9	CONNECTIVITY .....	4-39
<b>5.</b>	<b>IMPLEMENTATION AND FUNDING .....</b>	<b>5-1</b>
5.1	PROJECT PHASING .....	5-1
5.1.1	Short Term Implementation Actions .....	5-2
5.2	PRELIMINARY FUNDING PLAN .....	5-5
5.2.1	Grants .....	5-5
5.2.2	Low-Cost Loans .....	5-11
5.3	CITY FINANCING OPTIONS .....	5-11
5.4	PRELIMINARY FUNDING STRATEGY .....	5-12
<b>6.</b>	<b>REFERENCES .....</b>	<b>6-1</b>

### LIST OF FIGURES

ES-1	Noll Road Study Area .....	ES-3
ES-2	Proposed Intersection Improvements at Noll Road – Hostmark Intersection .....	ES-9
ES-3	Proposed Noll Road Improvements .....	ES-13
ES-4	Proposed Languanet Lane Improvements .....	ES-17
ES-5	Proposed Johnson Way Extension .....	ES-21
1-1	Vicinity Map .....	1-3
1-2	Study Area .....	1-5
1-3	Critical Areas .....	1-9
2-1	Existing Traffic Volumes .....	2-3
2-2	2010 Volumes without Johnson Way Extension .....	2-9
2-3	2010 Volumes with Johnson Way Extension .....	2-11
2-4	2030 Volumes without Johnson Way Extension .....	2-13
2-5	2030 Volumes with Johnson Way Extension .....	2-15
2-6	Johnson Way Extension Alignment .....	2-23
3-1	Noll – Hostmark Intersection, All-Way Stop Control, Preferred Plan .....	3-3
3-2	Noll – Hostmark Intersection, Roundabout Option .....	3-5
3-3	Noll and Lincoln Roundabout .....	3-15
3-4	Johnson Way and SR 305 Proposed Intersection .....	3-17
4-1	Existing Right-of-Way and Cross Section Locations .....	4-3
4-2	Alternative Cross Sections .....	4-7
4-3	Proposed Noll Road Improvements .....	4-11

## TABLE OF CONTENTS (CONTINUED)

4-4	Proposed Noll Road Improvements, Cross Sections .....	4-13
4-5	Proposed Improvements within the Right-of-Way Adjacent to Poulsbo Elementary School .....	4-19
4-6	Existing and Proposed Stormwater Facilities, North Segment.....	4-21
4-7	Existing and Proposed Stormwater Facilities, South Segment.....	4-23
4-8	Typical LID Rain Garden Plan and Profile .....	4-27
4-9	Typical Rain Garden Installed Next to Residential Collector, City of Tacoma ...	4-29
4-10	Proposed L-M Plan and Section .....	4-33
4-11	Proposed Languanet Lane Traffic Calming Details .....	4-35

### LIST OF TABLES

ES-1	Summary of Residential Development Applications Since 2005.....	ES-5
ES-2	Intersection Level of Service Summary .....	ES-6
ES-3	Signal Warrant Summary .....	ES-7
ES-4	Summary of Preliminary Project Costs (2008 Dollars).....	ES-23
ES-5	Preliminary Implementation Plan (All Costs in 2008 Dollars).....	ES-25
ES-6	Preliminary Funding Plan (All Costs in 2008 Dollars) .....	ES-29
1-1	Summary of Residential Development Applications Since 2005.....	1-7
1-2	Summary of Stream Characteristics In Study Area.....	1-8
2-1	Turning Movement Count Collection .....	2-2
2-2	Mid-Block Data Collection .....	2-5
2-3	Pipeline Development Previously Unaccounted for in City of Poulsbo Transportation Planning Model.....	2-6
2-4	Comparison of Average Daily Traffic Calculations to Transportation Plan Update (2006).....	2-17
2-5	Noll Road Peak Directional Volumes and LOS by Segment .....	2-18
2-6	Level of Service Criteria for Unsignalized Intersections .....	2-19
2-7	Intersection Level of Service Summary .....	2-20
2-8	Signal Warrant Summary .....	2-21
2-9	Level of Service (LOS) Summary – Johnson Way/SR-305 (Without Connection) .....	2-22
2-10	Level of Service (LOS) Summary, Unsignalized Intersections - AM Peak Hour with New Johnson Way Connection .....	2-25
2-11	Level of Service (LOS) Summary, Unsignalized Intersections - PM Peak Hour with New Johnson Way Connection .....	2-25
2-12	Signal Warrant Summary .....	2-26



## TABLE OF CONTENTS (CONTINUED)

3-1	Level of Service (LOS) Summary – Noll Road / Hostmark Street .....	3-1
3-2	Summary of Noll-Hostmark Intersection Control Costs .....	3-7
3-3	Intersection Improvement Alternatives, Noll & Hostmark .....	3-8
3-4	Alternative 1 - Single-Lane Approaches - 2030 AM and PM Peak Hour Summary .....	3-9
3-5	Alternative 2 – Add EBRT Lane - 2030 AM and PM Peak Hour Summary .....	3-10
3-6	Alternative 3 – Add Only NBLT Lane - 2030 AM and PM Peak Hour Summary .....	3-10
3-7	Alternative 4 – Add Both EBRT & NBLT Lanes - 2030 AM and PM Peak Hour Summary .....	3-11
3-8	Alternative 2 and 4 Sensitivity Analysis Summary – 2030 AM Peak Hour .....	3-11
3-9	Comparison of Intersection Improvement Alternatives, Noll & Lincoln.....	3-13
3-10	Summary of Preliminary Intersection Improvement Costs (2008 Dollars).....	3-19
4-1	Summary of Noll Road Cross Section Alternatives .....	4-5
4-2	Summary of Cross Section Alternatives.....	4-9
4-3	Noll Road Preliminary Cost Estimates for Roadway Cross Sections.....	4-15
4-4	Summary of Noll Road Preliminary Road Improvement Costs (2008 Dollars)...	4-17
4-5	Summary of Preliminary Stormwater Volumes, Treatment, and Detention Requirements.....	4-25
4-6	Languanet Lane Extension, Preliminary Base Cost Estimate for Cross Section..	4-37
4-7	Johnson Way Extension, Preliminary Cost Estimate for Roadway Cross Section.....	4-38
5-1	Summary of Preliminary Project Costs (2008 Dollars).....	5-1
5-2	Preliminary Implementation Plan (All Costs in 2008 Dollars) .....	5-3
5-3	Preliminary Funding Plan (All Costs in 2008 Dollars) .....	5-7
5-4	Noll Road Capital Improvements Preliminary Funding Summary, City Portion Only (2008 Dollars).....	5-13

## **ACRONYMS**

AWST	All-Way Stop Control
City	City of Poulsbo
EBRT	Eastbound Right Turn
HSP	Highway System Plan
LID	Low Impact Development
LOS	Level of Service
MUTCD	Manual of Uniform Traffic Control Devices
NBLT	Northbound Left Turn
RBT	Roundabout
SR 305	State Route 305
TIP	Transportation Improvement Plan
UGA	Urban Growth Area
VPH	Vehicles Per Hour