EXECUTIVE SUMMARY

The Noll Road corridor travels north-south through the eastern portion of the City of Poulsbo (City) and its Urban Growth Area (UGA) and provides connectivity between residential neighborhoods and public school sites. Since 2005, over 800 new residential lots have been proposed within the Noll Road corridor. This growth, combined with growing traffic volumes on State Route 305 (SR 305) to the south and Lincoln Road to the north, have led to concerns regarding the capacity and safety of Noll Road, and potential improvements that may be needed to accommodate growth and address traffic generated by drivers that increasingly decide to utilize Noll Road as a cut-through between the two roadways.

The purpose of the Noll Road Improvements project is to develop a plan to implement both traffic and non-motorized features within the corridor, with a goal of maintaining or improving its current neighborhood character and ability to provide safe access to area homes and schools. The Noll Road corridor study examines the entire length of the Noll Road corridor between Lincoln Road and SR 305. Figure ES-1 shows the project study area.

Elements discussed in the corridor plan include traffic routes and neighborhood connectivity, non-motorized facilities, intersection controls, environmental considerations, stormwater management, estimated costs and funding, and a proposed plan for implementation of preferred alternatives.

STAKEHOLDER COORDINATION AND INVOLVEMENT

Stakeholder coordination and involvement was a primary component of the planning process and was designed to ensure that key stakeholders and local citizens' concerns and comments were solicited and reflected in the final plan. Stakeholder review was done through a series of four workshops.

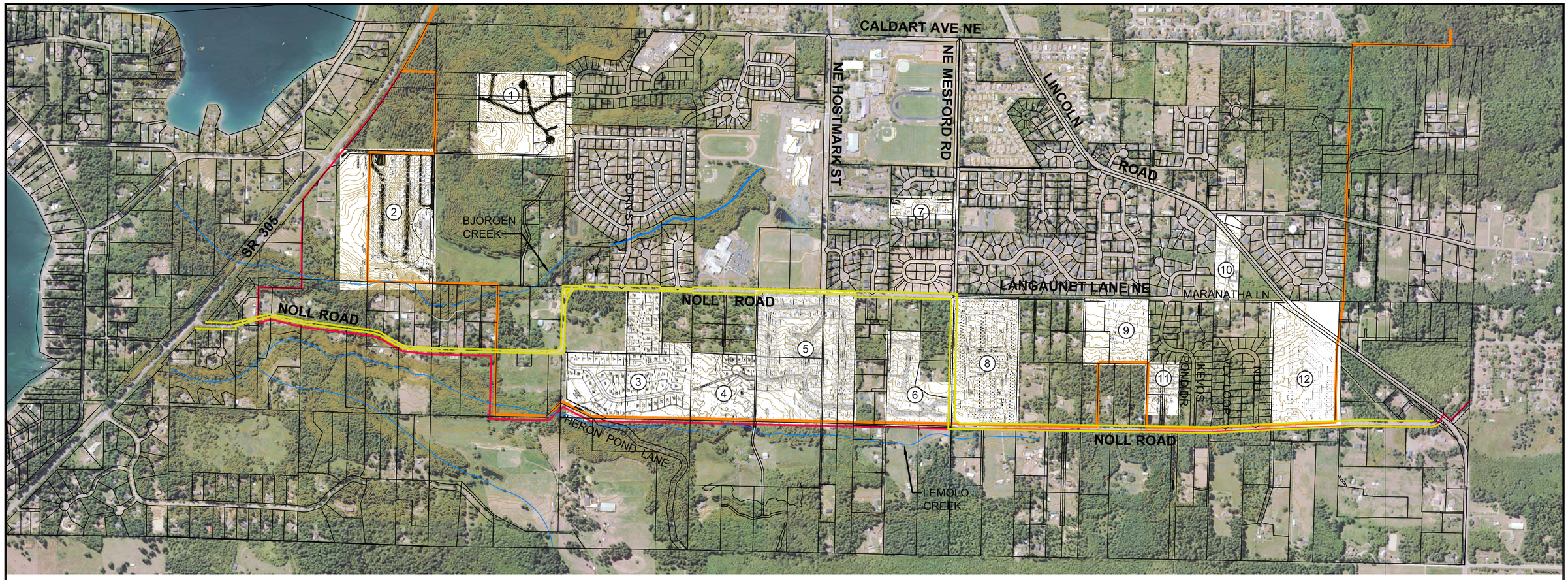
EXISTING AND PLANNED DEVELOPMENT

Future planned land use in the project vicinity includes several new residential developments, as well as a recreational facility adjacent to the Poulsbo Elementary School site. A total of 815 lots have been proposed since 2005. Table ES-1 presents data regarding planned residential development in the project vicinity. These proposed developments, along with existing land uses, are illustrated on Figure ES-1.

TRAFFIC ASSESSMENT

The Noll Road corridor extends from Lincoln Road to the north, to SR 305 to the south. The majority of the Noll Road corridor is within the Poulsbo city limits (see Figure ES-1) and is classified by the City as a Neighborhood Collector. Neighborhood Collectors are defined as intra-community streets which connect residential neighborhoods with centers and facilities. According to the City of Poulsbo Street Standards, a neighborhood collector shall have a 50-foot right-of-way, 12-foot lane width, 3-foot shoulders and 5-foot sidewalks on both sides.

Both the northern and southern segments of Noll Road are outside the city limits, and as a result, these segments are under Kitsap County's jurisdiction. The County portion of Noll Road has a federal functional classification as a Minor Arterial, which provides primary access to a principal arterial and to or through communities of high-density residential areas.



MAP KEY	DEVELOPMENT	NO. OF LOTS	STATUS
1	CRYSTAL GLEN	39	PRE-APP
2	JOHNSON RIDGE PUD	80	SUBMITTED
3	BLUE HERON	84	SUBMITTED
4	CEDAR POINT PLAT	18	PRE-APP
5	MOUNTAIN AIRE	144	SUBMITTED
6	POULSBO MEADOWS	46	SUBMITTED
7	BOARDWALK PLACE	10	APPROVED
8	MESFORD STREET PUD	101	PRE-APP
9	SPRING VALLEY	26	SUBMITTED
10	LONE PINE	15	APPROVED
11	LAURA LEE MEADOWS	10	PRE-APP
12	LINCOLN PUD	80	PRE-APP

LEGEND

- PARCEL
- STREAMS
- 300 — 25-FT CONTOUR
- RIGHT OF WAY
- URBAN GROWTH AREA
- CITY LIMITS

DATE: Dec 29, 2008 FILE: BR2237829P01T01F-10

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Figure ES-1
Noll Road Improvements
Study Area

Table ES-1. Summary of Residential Development Applications Since 2005

Development Name	Map Code	No. Lots	Status		
			Pre-App	Submitted	Approved
Crystal Glen	1	39	2006		
Johnson Ridge PUD	2	80	2005	Dec 2007	
Blue Heron	3	119		Dec 2007	
Cedar Point Plat	4	18	2006		
Mountain Aire	5	100		July 2007	
Poulsbo Meadows	6	86		Oct 2008	
Boardwalk Place	7	10			Aug 2007
Mesford Street PUD	8	101	2006		
Spring Valley Plat	9	28		June 2007	
Lone Pine Plat	10	15			July 2007
Laura Lee Meadows	11	10	2007		
Lincoln PUD	12	80	2006		
Noll Valley Meadows	NA	49			2005
Total Pre-Application Lots			328		
Total Lots Preliminary Plats Submitted				413	
Total Lots Approved Since 2005					74
Total Planned Development				**815 Lots**	

Primary roadways within the study area are Lincoln Road, Hostmark Street, Bjorn Street, Mesford Road, Kevos Pond Drive, Languanet Lane and Maranatha Lane.

Traffic Volume Forecasting

The City of Poulsbo's VISUM planning model (David Evans and Associates, Inc. 2006) was used as the foundation for future traffic volume forecasts. Traffic data collection was performed in December 2007 and March 2008 and included turning movement counts at eight intersections during the AM (7 AM to 9 AM) and PM (4 PM to 6 PM) peak hours. In addition, daily traffic volume data was collected at eight mid-block locations. Opening year (2010) and design year (2030) volume projections were calculated using the 2006 volumes as the base, and adding the model growth rates and pipeline (near term new development) traffic.

In order to evaluate the ultimate capacity of the existing roadway, and estimate the roadway geometry required to maintain an acceptable Level of Service (LOS) within the study area transportation network, the projected volumes are analyzed to first determine how many through lanes are required along the corridor, and second, where turn lanes or intersection control devices may be required. LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from "A" (very little delay) to "F" (long delays and congestion). The City of Poulsbo uses Level of Service "D" as its design standard, and LOS "E" as its concurrency standard for the study area.

Noll Road Lane Requirements

Traffic volume forecasts for the 2030 horizon year indicate maximum peak volumes occur between Mesford Street and Bjorn Street, and range from 315 to 400 vehicles per hour (vph) during the PM peak, and 420 and 600 vph during the AM peak. Other sections of Noll Road experience 255 vph or less in the peak direction during the PM peak, and 350 vph or less in the peak direction of the AM peak hour. The LOS C threshold for the corridor is 296 vph, the LOS D threshold is 576 vph, and LOS E threshold occurs with volumes between 576 and 616 vph. Thus, one lane in each direction meets the City's LOS E standard, but the roadway will be nearing capacity during the AM peak. This means that any perturbation to traffic flow, such as could be caused by excessive driveways, poor geometry, or overly narrow lanes, may cause delays along the corridor.

Intersection Traffic Operations

Level of service calculations for intersections determines the amount of "control delay" (in seconds) that drivers will experience while proceeding through an intersection. For intersections under minor street stop sign-control, the LOS of the most difficult movement (typically the minor street left-turn) represents the intersection level of service. Operational forecasts for the primary intersections of Noll-Lincoln, Noll-Mesford, Noll-Hostmark and Noll-SR 305 intersections are summarized in Table ES-2.

Table ES-2. Intersection Level of Service Summary

Intersection		Existing 2007		Projected 2010		Projected 2030	
N/S	E/W	LOS (Delay)		LOS (Delay)		LOS (Delay)	
Corridor	Intersection	Worst Movement	Intersection Average	Worst Movement	Intersection Average	Worst Movement	Intersection Average
Noll Rd	Lincoln Rd	C (18.1)	A (3.4)	C (18.6)	A (3.8)	F (71.5)	B (12.2)
Noll Rd	Mesford St	A (8.3)	A (7.9)	A (8.9)	A (8.4)	C (17.8)	C (16.4)
Noll Rd	Hostmark St	B (11.3)	A (5.0)	C (17.2)	A (7.8)	F (>300)	F (>100)
Noll Rd	Bjorn St	A (9.4)	A (1.9)	A (9.6)	A (1.8)	B (13.4)	A (2.6)
Noll Rd	SR-305	F (99.4)	A (4.4)	F (193.3)	B (11.0)	F (>300)	F (>100)

Red = Does not meet City LOS standard.

The worst movement at the intersection of Noll and Lincoln is projected to operate at LOS F during the AM peak hour by 2030. This intersection is projected to meet traffic signal warrants by 2010. The worst movement at the intersection of Noll and Hostmark is projected to operate at LOS C in 2010 and LOS F during peak hours in 2030 under its current configuration. Because stop-controlled intersections are evaluated based on delay to each individual movement, this intersection is expected to fail without improvements. The intersection of Noll and Mesford is projected to operate well in 2030 as it is currently configured. The southbound Noll Road approach at SR-305 currently operates at LOS F during both peak hours.

Operation analysis for the secondary intersections of Noll-Bjorn, Noll-Kevos Pond Drive, Noll – Johnson Way (alternative alignment), and Noll – developments shows no capacity or delay deficiencies in the design year 2030. The worst movement is expected to operate at LOS C, with a projected average delay of 16.3 seconds per vehicle. No left turn lanes at secondary intersections therefore appear required. However, as infill development occurs, or

if background growth is significantly faster than expected, conditions may warrant use of turn lanes at selected locations in the future.

Signal Warrant Analysis

Table ES-3 summarizes the results of the 4-hour and 8-hour volume signal warrant analysis found in the latest version of the Manual of Uniform Traffic Control Devices (MUTCD).

Table ES-3. Signal Warrant Summary

Intersection	Projected 2010	Projected 2030
Noll Road NE / Lincoln Road / Gala Way	Yes	Yes
Noll Road NE / NE Hostmark Street	No	Yes
Noll Road NE / SR-305	No	Yes
Noll Road NE / Mesford Street	No	No
Noll Road NE / Bjorn Street	No	No

Meeting signal warrants does not necessarily require installation of a traffic signal. Rather, it means that the combination of conditions at the intersection (speed, queuing, LOS, etc.) are such that a signal may be considered at the location. For the intersections with SR-305, a traffic signal is the most likely form of intersection control, as it is in character with the rest of this state route. At other intersections, other traffic control strategies may prove equal to or better than a signal.

In summary, it is anticipated that intersection improvements will be required at the intersections of Noll Road with Lincoln Road, Hostmark Street, and SR 305. Lincoln Road and SR 305 have improvement concepts proposed by the County and the State, respectively.

INTERSECTION CONTROLS

To alleviate the level of service deficiencies, improvement options were considered at each of the primary intersections.

Noll Road – Hostmark Street Intersection

Based on stakeholder evaluation and feedback, an interim AWSC and eventual signalization provides the best combination of pedestrian safety, LOS, right-of-way and cost at the intersection of Noll Road and Hostmark Street (Figure ES-2). The primary benefits of the AWSC alternative are pedestrian safety (particularly small children), lower cost – about 50 percent of the cost for a RBT or signal – and ability to add a signal at a later date when traffic volumes warrant signalization.

Intersection improvements would include an eastbound right turn (EBRT) and a northbound left turn (NBLT). Until about 2020, all-way stop control (AWST) provides adequate intersection control. After approximately 2020, signalization is needed. The estimated cost for the Noll-Hostmark intersection is $187,500 for interim AWSC, and $187,500 for final signalization for total of $375,000.

MOUNTAIN AIRE DEVELOPMENT

TAX ACCT No. 242601-1-016-2007

TAX ACCT No. 242601-1-043-2004

10 FT SHARED USE PATH

PROPOSED ROW

LANDSCAPE AREA

5 FT SIDEWALK

5 FT BIKE LANE

PROPOSED ROW

60'

Noll Rd NE

60'

EXISTING ROW

PROPOSED ROW

EXISTING ROW

12 FT RAINGARDEN

10 FT SHARED USE PATH

NE Hostmark St

REFER TO NORTH KITSAP REGIONAL EVENTS CENTER MASTER PLAN FOR ROADWAY DESIGN ALONG HOSTMARK

TAX ACCT No. 242601-2-009-2004

Parametrix DATE: Dec 29, 2008 FILE: BR2237829P01T01F-XX_Intersections

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Figure ES-2
Noll Road Improvements
Noll Road NE and NE Hostmark Street Intersection
All-way Stop Control or Signal - Preferred Plan

Noll Road - Lincoln Road Intersection

The worst movement at the intersection of Noll and Lincoln is projected to operate at LOS F during the AM peak hour by 2030 and the intersection is projected to meet traffic signal warrants by 2010. When an intersection meets traffic signal warrants, a roundabout is usually considered warranted as well as a signal. Installation of a signal at the existing intersection would operate at LOS A or B for all approaches during peak hours, but would require widening Lincoln Road to 3 or 4 lanes as well as widening the Lincoln Road approaches.

Kitsap County has identified, as a joint effort with the City of Poulsbo, a roundabout (RBT) intersection improvement project at this location. The roundabout would improve safety, reduce pedestrian crossing distances, and provide opportunities for central island landscaping or gateway features. The estimated cost for either a signal or a RBT at this location is approximately $375,000. Based on stakeholder evaluation and feedback, it was determined that the RBT option provides the best combination of pedestrian safety, LOS, right-of-way need, and cost at the Noll Road – Lincoln Road intersection.

Noll Road – SR 305 Intersection

The southbound Noll Road approach at SR-305 currently operates at LOS F during both peak hours. The WSDOT 2007-2026 Highway System Plan (HSP) identifies a project to add a center left turn and acceleration lane on SR-305 at Noll Road. This project is identified as a Tier 1 Capacity project with a construction date between 2 and 20 years from 2007 – a specific data has not been identified. This project is currently unfunded.

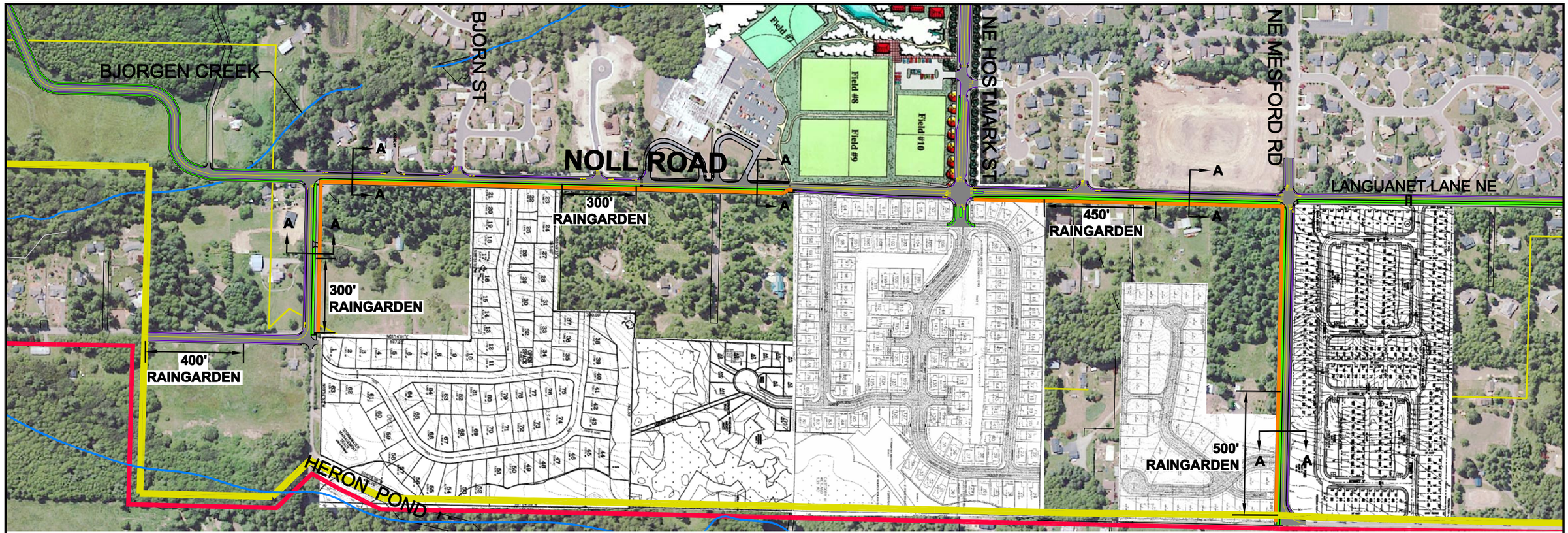
NOLL ROAD IMPROVEMENTS

Existing right-of-way varies from 30 feet to 60 feet, and the existing lane widths typically vary from 10 feet to 15 feet. There are existing sidewalks adjacent to areas where new developments have been constructed, and there is an existing gravel pedestrian trail extending the length of the soccer field along Noll Road.

Traffic analysis has shown that Noll Road requires one lane in each direction to meet capacity requirements. Several lane width, sidewalk and bike lane alternatives were considered and evaluated relative to operation, safety, cost, design guidelines, right-of-way and goals for community aesthetics and character. Proposed roadway improvements reflect City standards, as well as stakeholder feedback with primary design objectives summarized as follows:

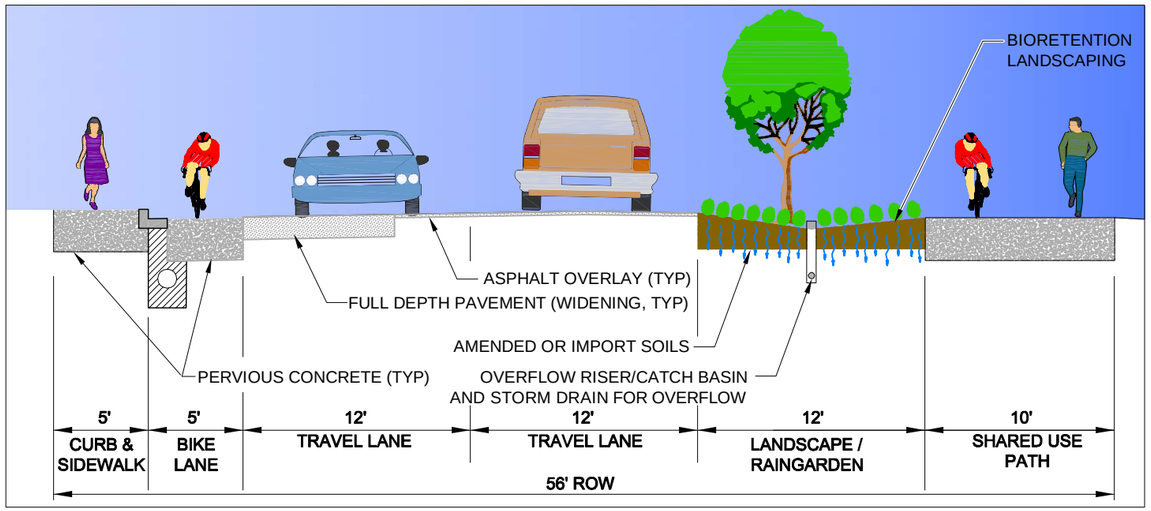
- Provide pedestrian safety, particularly for school children.
- Allow for efficient traffic movement, but discourage excessive speeds and “cut through” traffic.
- Provide a shared path for bicyclists and pedestrians, separate from the roadway.
- Provide a bike lane on one side of the street.
- Incorporate LID elements and treat stormwater within the right-of-way.
- Minimize right-of-way to 60 feet or less.

The proposed plan that reflects these criteria is shown in Figure ES-3.



LEGEND

- PARCEL
- STREAMS
- 300 — 25-FT CONTOUR
- CITY LIMITS
- URBAN GROWTH AREA
- LANDSCAPING STRIP
- SHARED USE PATH
- RAIN GARDEN
- A / A — PROPOSED CROSS SECTION LOCATION



SECTION A-A

NOTE: LOCATION OF RAINGARDENS ARE APPROXIMATE.

Parametrix DATE: Dec 31, 2008 FILE: BR2237829P01T01F-XX_Noll

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Figure ES-3
Noll Road Improvements
Proposed Plan and Cross Section Locations

Two 12-foot lanes and a 5-foot bike lane are proposed for all sections of Noll Road. A 10-foot wide shared path is proposed along all of Noll Road that is within the city limits, with the exception of a short segment between the south city limits and the future Johnson Way – Noll Road intersection where 5-foot sidewalks are proposed. A 12-foot rain garden is proposed between the roadway and the shared path to provide stormwater management. This plan meets design objectives, and provides necessary improvements within a 60-foot right-of-way. The preliminary cost estimate for Noll Road improvements, including intersections, is $3,643,400.

POULSBO ELEMENTARY SCHOOL VICINITY IMPROVEMENTS

Improvements at Poulsbo Elementary School were identified by stakeholders as a key project objective. Traffic counts show about 80 vehicles enter and exit the site during the PM peak hour. The majority of vehicles (75 percent) turn right from Noll Road into the school. A total of 42 vehicles (52 percent) had a NBLT movement when exiting the school site. Based on these traffic volumes, no significant traffic delay is expected and a left turn channel is not required to meet LOS standards.

The North Kitsap School District has determined that there is currently no plan for major circulation improvements on school property, and that transportation patterns may change significantly over time due to changes in school operations, as well as changes in driving and walking patterns. Given potential traffic and operation changes, a phased plan is proposed with Phase 1 consisting of the improvements within the right-of-way, with no changes in access points. Phase 2 may consist of Noll Road channelization and/or a signal at later date, with consideration of on school circulation improvements.

STORMWATER MANAGEMENT

Two options were considered for meeting stormwater management needs of the project; 1) a 12-foot wide linear rain garden/bioretention area adjacent to Noll Road designed using Low Impact Development (LID) techniques, and 2) a combination of a regional stormwater detention system and rain garden.

Both the rain garden only option and the combined rain garden-regional facility option appear technically and financially feasible. A regional facility only option is not considered feasible due to basin transfer regulatory prohibitions. The combined rain garden-regional facility option does provide potential cost savings; however, these savings are reduced by increased stormwater conveyance costs, and would be offset by costs for a landscaping strip to replace the rain garden.

The potential benefits of the rain garden option include more effective stormwater treatment and management, improved road aesthetics via an expanded planting and landscaping strip, and potential reduced cost due to lower requirements for “end of pipe” stormwater treatment. For these reasons, the proposed rain garden option is proposed as the preferred method for stormwater management for new impervious surfaces within the right-of-way. The rain garden option is not expected to be a feasible option however, for the Johnson Way extension area due to the poor (hydric) soils in this segment, and the larger impervious surface created by the new roadway.

Construction costs for rain garden are in the range of $400,000 for Noll Road and $270,000 for Languanet Lane. This compares to a regional facility cost estimate of $1.1 million developed for the City’s Stormwater Management Plan (2008).

LANGUANET LANE – MARANATHA LANE

The City's Transportation Plan and Comprehensive Plan Circulation Plan Map show a future Languanet Lane and Maranatha Lane connecting road between Noll Road and Lincoln Road. Neighborhood residents have expressed concern that this new road will become a preferred by-pass route for traffic traveling between Lincoln Road and SR 305, and that traffic volumes will therefore increase significantly and result in negative impacts to the neighborhood and pedestrians.

The stakeholder committee evaluated options for providing access, and how to mitigate and prevent cut-thorough traffic. These options included connecting Languanet Lane to Lincoln Road via the future Lone Pine development, reclassifying the future Languanet Lane to a Residential Collector, providing connection to existing cross roads, and implementing a variety of traffic calming measures to discourage cut-through traffic and excess speeds.

After evaluating options, the majority of stakeholders agreed that a Neighborhood or Residential Collector designation was appropriate, and that connection to existing cross roads was important to ensure consistency with City policy and standards for neighborhood connectivity. Furthermore, the option of Languanet Lane access to Lincoln Road via Lone Pine was determined not feasible due to the conflicts created by connecting a Neighborhood or Residential Collector (Languanet Lane) to a Residential Access (Lone Pine). These conflicts include different right-of-way standards, street design criteria, driveway access and parking use.

Design criteria for the Languanet Lane – Maranatha Lane connector are similar to the criteria developed for Noll Road; pedestrian safety (particularly for school children), discourage excessive speeds and "cut through" traffic by employing traffic calming measures, provide a shared path for bicyclists and pedestrians that is separate from the roadway, and use LID elements and treat stormwater within the right-of-way.

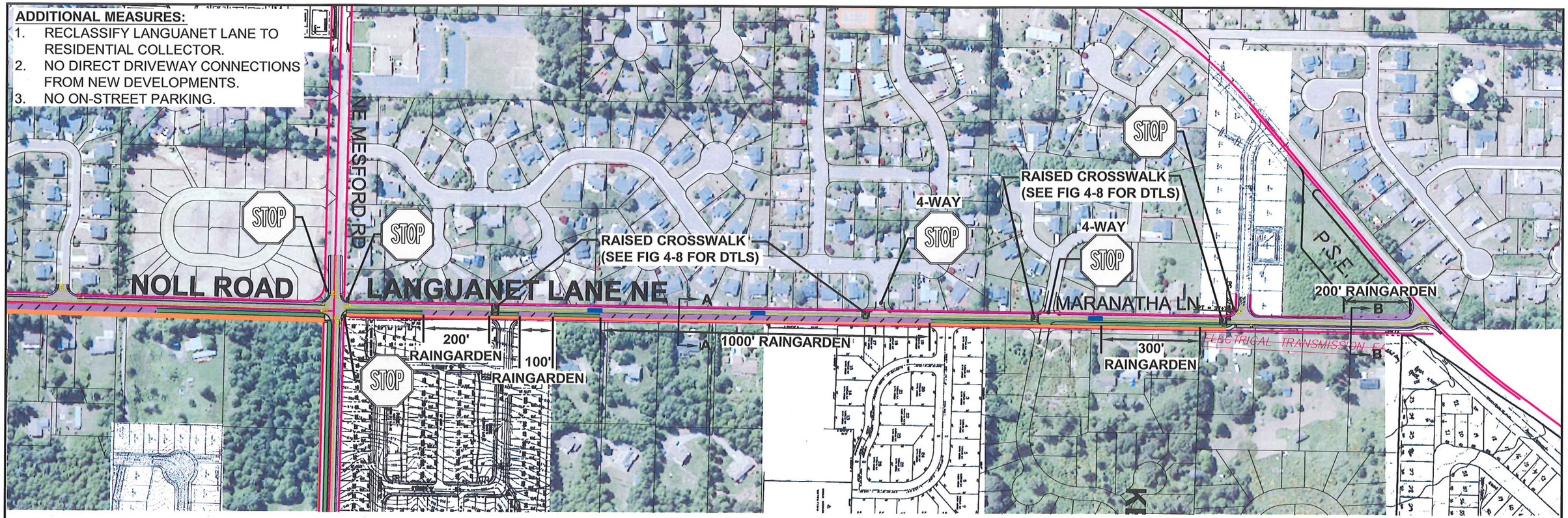
After reviewing the options, the stakeholder committee recommended that the road be reclassified as a Residential Collector, with the following enhancements to provide for additional traffic calming and safety:

- No driveway access to road from future developments and no parking on street
- 11-foot lanes and 10-foot shared path for pedestrians on east side of road, separated from street by 10-foot rain garden strip
- 3 to 5-foot landscaping strip on west side of roadway that alternates from behind sidewalk to center of street (landscape islands)
- 4-way stop at 23rd Street connection and at Kevos Pond Drive
- Raised sidewalks at four crossings

The proposed plan that reflects these criteria is shown in Figure ES-4. To further discourage through-traffic from using Languanet Lane, the entrance at Mesford Street would be restricted with bulb outs and the stop control on north bound Noll Road would be removed to encourage traffic to stay on Noll Road rather than divert to Languanet Lane. At the Maranatha Lane – Lincoln Road intersection, the approach at Maranatha Lane would discourage cut-through traffic by restricting the entrance with bulb outs and aligning only a short portion of Maranatha Lane perpendicular to Lincoln Road. The preliminary cost estimate for all Languanet Lane improvements, not including intersections, is $1,389,900.

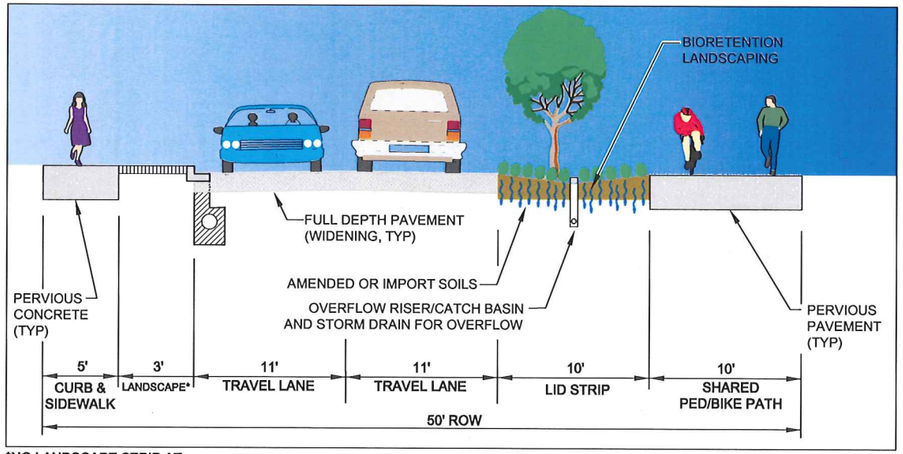
ADDITIONAL MEASURES:

1. RECLASSIFY LANGUANET LANE TO RESIDENTIAL COLLECTOR.
2. NO DIRECT DRIVEWAY CONNECTIONS FROM NEW DEVELOPMENTS.
3. NO ON-STREET PARKING.



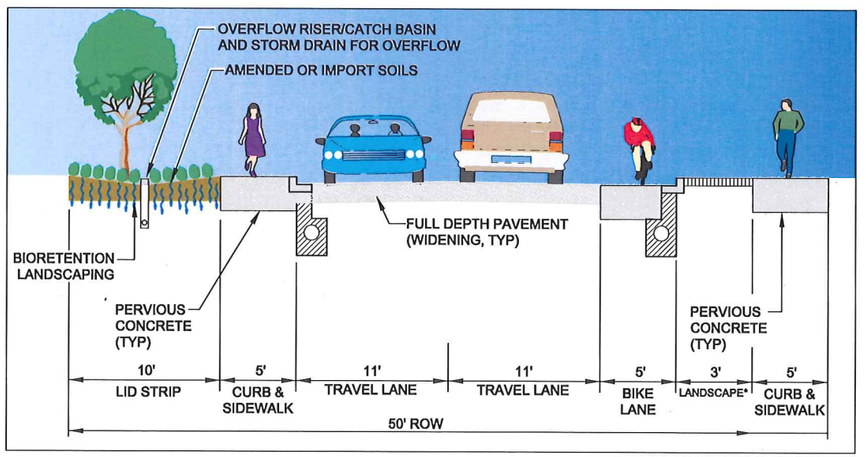
LEGEND

- PARCEL
- STREAMS
- 300 — 25-FT CONTOUR
- CITY LIMITS
- URBAN GROWTH AREA
- LANDSCAPING STRIP
- SHARED USE PATH
- RAINGARDEN
- TRAFFIC ISLAND (SEE FIGURE 4-8 FOR DETAILS)



*NO LANDSCAPE STRIP AT TRAFFIC ISLAND SECTIONS.

SECTION A-A



SECTION B-B

*NO LANDSCAPE STRIP AT TRAFFIC ISLAND SECTIONS.

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PLAN

Figure ES-4
Noll Road Improvements
Languanet Lane NE/Maranatha Lane
Proposed Right-of-Way Improvement

JOHNSON WAY EXTENSION

The Johnson Way extension consists of a potential new 3,500-foot road that connects Noll Road to SR 305 via Johnson Way (Figure ES-5). This new road alternative is being considered due to several factors. These factors include potential critical areas limitations in the existing south Noll Road segment, configuration of the City limits, and proposed development patterns in the southeast City area that suggest an alternate access to SR 305 may be a preferred alternative to the existing Noll Road – SR 305 connection. The Johnson Way extension is part of the City's circulation plan, and it is envisioned that the road would be implemented by developers that need the road to serve their development.

If Johnson Way is extended to intersect Noll Road, it is likely that a large portion of the traffic that uses the southern section of Noll Road will shift to the new connection because the new intersection with Noll Road will align the north-south approaches as through movements. The currently aligned Noll Road would become the east leg of the intersection and operate under stop control.

In order to identify a potential alternate alignment for Noll Road from SR 305, a preliminary plan and profile has been prepared that shows an alternate alignment beginning at the intersection at Johnson Way and connecting to Noll Road at the northern leg of the 90 degree corner. Total costs for the Johnson Way extension including allowances are approximately $1,999,000.

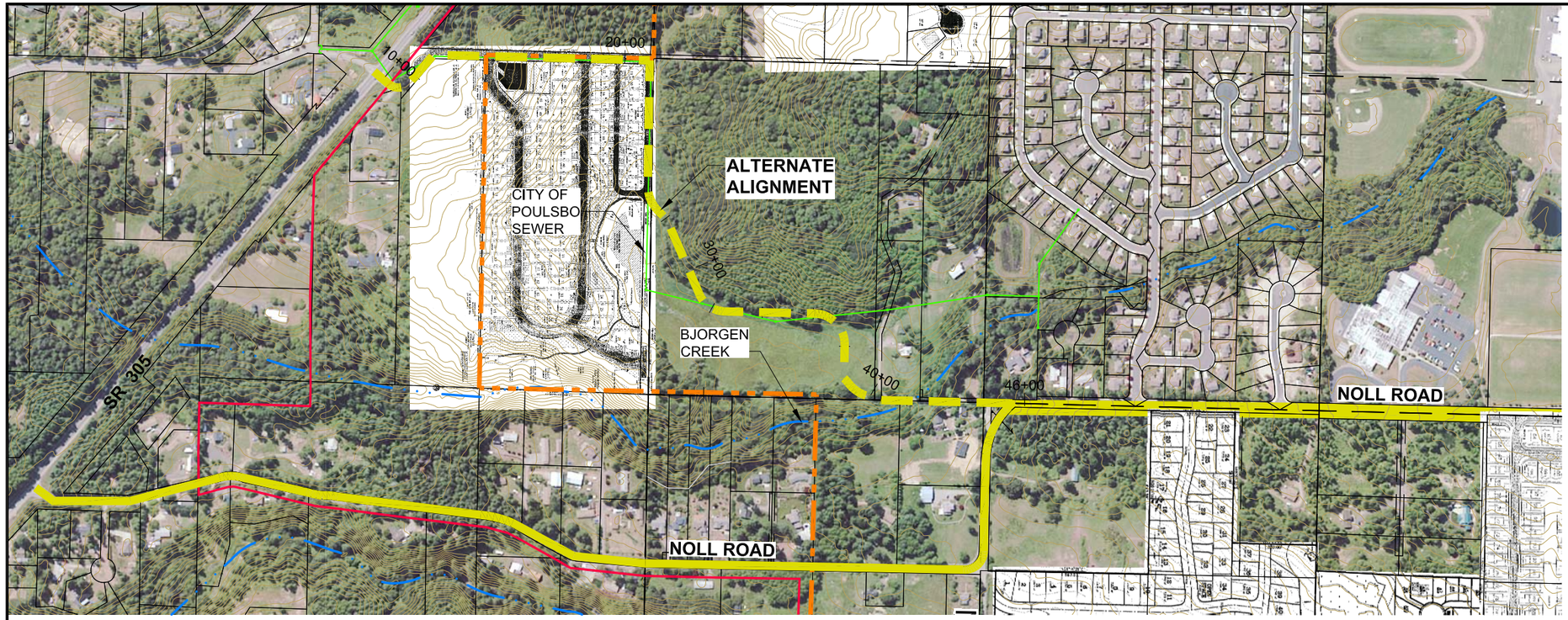
Johnson Way – SR 305 Intersection

A signal is warranted sometime between 2010 and 2030 at either Johnson Way and SR 305, or Noll Road and SR 305. Only one signal will ultimately be warranted. While signal spacing for either intersection option is relatively good, the two intersections are too close together for both to be signalized. The intersection of Johnson Way and SR-305 is considered a preferred location for a signal because this location would have one more approach leg than at Noll and SR-305, and this signal would serve more motorists. Funding for the new intersection would be provided by the developer of the property served by the new road.

The new Johnson Ridge residential development is proposed along Johnson Way north of SR-305. This development, coupled with a shift of north-south traffic away from Noll Road, will require intersection improvements at Johnson Way and SR-305. The resulting intersection improvements will reduce delay for southbound left turns from Johnson Way to SR 305. The combination of these factors is projected to attract approximately 90-percent of the southbound and 75-percent of the northbound through traffic from Noll Road to the new Johnson Way extension. With the new alignment, a signal is no longer warranted at the Noll Road-SR 305 intersection.

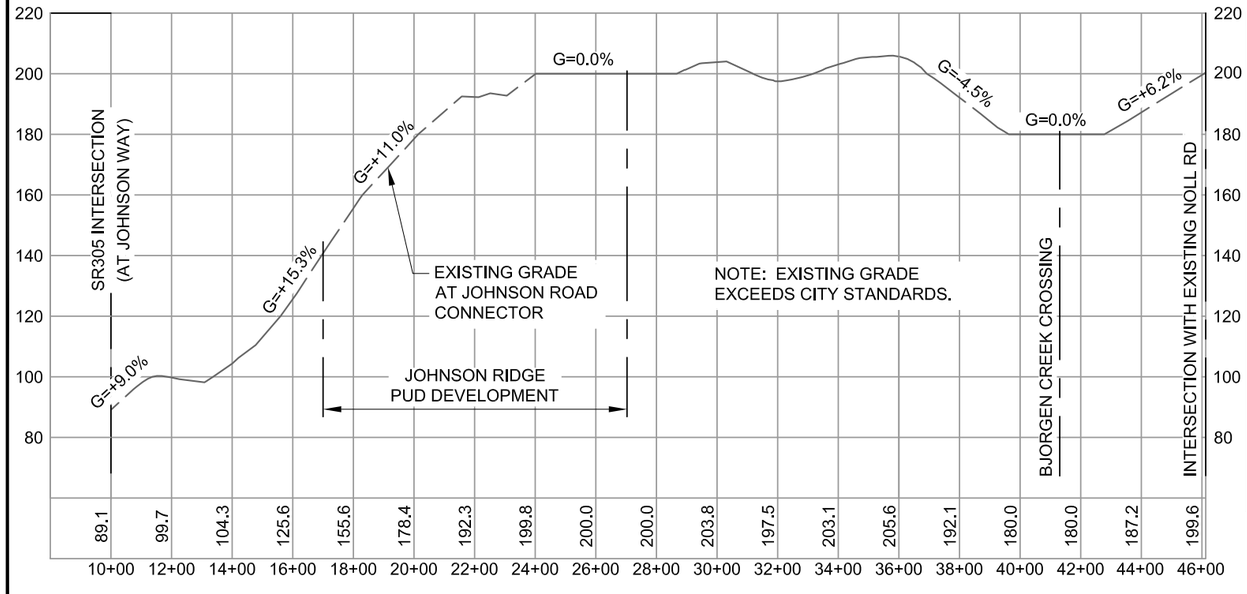
IMPLEMENTATION AND FUNDING

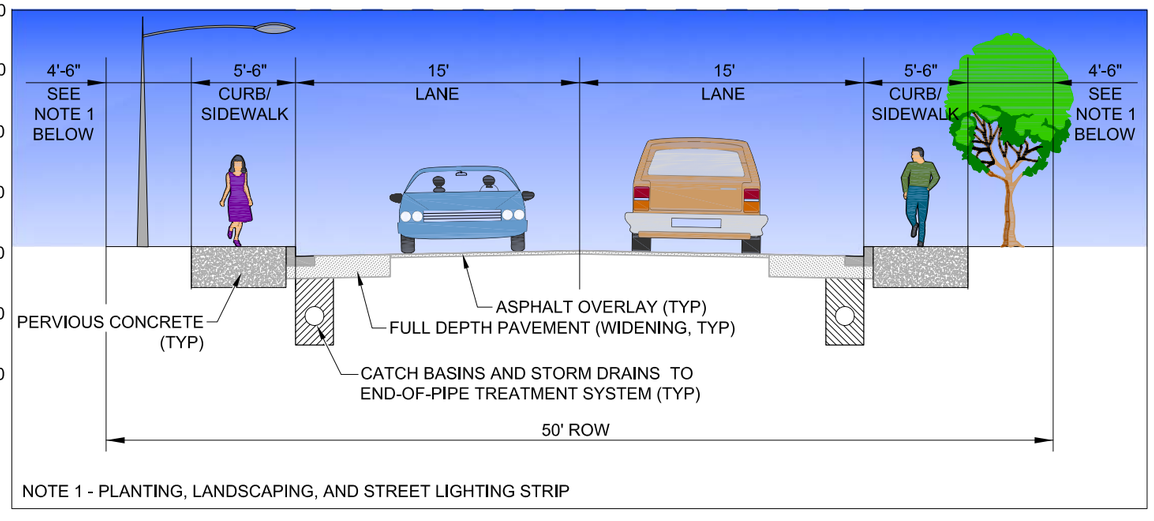
The total cost of future transportation improvements is estimated at $7.03 million in 2008 dollars as shown in Table ES-4.



LEGEND

- PARCEL
- STREAMS
- 300 — 25-FT CONTOUR
- URBAN GROWTH AREA
- NOLL ROAD
- POTENTIAL JOHNSON ROAD CONNECTOR
- CITY LIMITS
- EXISTING POULSBO SEWER





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PLAN SCALE: 1"=500'

PROFILE SCALE: HORIZ 1"=500'
VERT 1"=50'

CROSS SECTION SCALE: NO SCALE

Figure ES-5
Noll Road Improvements
Potential Johnson Road Connector
Plan, Profile, Proposed Cross Section

Table ES-4. Summary of Preliminary Project Costs (2008 Dollars)

Project Element	Total Cost
Noll Road	
Noll Road - Lincoln Road Roundabout	$375,000
Noll Road: Mesford Street to North City Limits	$545,400
Noll Road - Hostmark Street Intersection Phase[1]	$187,500
Noll Road - Hostmark Street Intersection Phase[2]	$187,500
Noll Road: Mesford Street to Poulsbo Elementary School	$1,028,700
Noll Road: Poulsbo Elementary to South City Limits	$1,319,300
Noll Road - SR 305 Intersection Channelization	$0[1]
Subtotal Noll Road	**$3,643,400**
Johnson Road Extension	
Preliminary Engineering	$75,000
Bjorgen Creek Fish Passage Improvements	$160,000 2
Johnson Road Extension	$1,764,300
Johnson Road - SR 305 Signalized Intersection	$0[3]
Subtotal Johnson Way Extension	**$1,999,300**
Languanet/Maranatha Extension	
Languanet/Maranatha Street Extension	$1,389,900
Subtotal Languanet-Maranatha	**$1,389,900**
TOTAL COSTS	**$7,032,600**

[1] Project costs to be borne by WSDOT.

[2] Cost from City of Poulsbo Stormwater Comprehensive Plan (2008).

[3] Project costs to be borne by developer.

PHASING PLAN

Due to funding constraints, the recommended plan will be implemented gradually, as growth occurs. Therefore, a phased plan is proposed that allocates funds to those projects that are expected to be needed first. Given that the need for specific improvements is generally linked to population and traffic growth, the phasing plan does not include specific target dates to reflect the uncertain rate of development. The plan therefore provides flexibility to accelerate or defer specific improvements to match the rate of development and the City's long-term Transportation Improvement Plan (TIP) management strategy.

The Johnson Way extension is critical to corridor success because it would reduce traffic on the southern unimproved segment of Noll Road, and would provide for a new signalized intersection at Johnson Way. The Johnson Way extension has therefore been identified as the top implementation priority. The proposed phasing plan is summarized in Table ES-5.

Table ES-5. Preliminary implementation plan (all costs in 2008 dollars).

Element	Total Cost	City Portion	City Cost	Developer Portion	Developer Cost
Phase 1 - Johnson Road Extension					
Preliminary Engineering	$75,000	All	$75,000	none	$0
Bjorgen Creek Fish Passage Improvements	$160,000	all improvements	$160,000	none	$0
Johnson Road Extension [1]	$1,764,300	none	$0	all improvements	$1,764,300
Johnson Way - SR 305 Signalized Intersection	$0	none	$0	all improvements	To Be Determined [3]
Subtotal Phase 1	$1,999,300		$235,000		$1,764,300
Phase 2 - Noll Road: Hostmark Street to Poulsbo Elementary School (incl corridor improvements adjacent to school)					
Noll Road - Hostmark Street Intersection, Phase 1	$187,500	west half of intersection	$93,750	east half of intersection	$93,750
Noll Road: Mesford Street to Poulsbo Elementary School	$645,000	west half of road	$322,500	east half of road	$322,500
Subtotal Phase 2	$832,500		$416,250		$416,250
Phase 3 - Lincoln - Noll Roundabout					
Noll Road - Lincoln Road Roundabout	$375,000	half of total cost	$187,500	County to fund 50%	$187,500
Subtotal Phase 3	$375,000		$187,500		$187,500
Phase 4 - Noll Road: Mesford Street to Hostmark Street					
Noll Road: Mesford Street to Hostmark Street	$639,600	west half of road	$319,800	east half of road	$319,800
Noll Road - Hostmark Street Intersection, Phase 2	$187,500	half of total cost	$93,750	half of total cost	$93,750
Subtotal Phase 4	$827,100		$413,550		$413,550
Phase 5 - Noll Road: Mesford Street to North City Limits					
Noll Road: Mesford Street to North City Limits	$545,400	north half of road	$272,700	south half of road	$272,700
Subtotal Phase 5	$545,400		$272,700		$272,700
Phase 6 - Noll Road: Poulsbo Elementary School to South UGA					
Noll Road: Poulsbo Elementary School to South City Limits	$1,063,400	none	$0	all improvements	$1,063,400
Noll Road - SR 305 Intersection	$0	none	$0	all improvements [2]	$0
Subtotal Phase 6	$1,063,400		$0		$1,063,400
Phase 7 - Languanet/Maranatha Extension					
Languanet/Maranatha Street Extension	$1,389,900	west half of road	$694,950	east half of road	$694,950
Subtotal Phase 7	$1,389,900		$694,950		$694,950
TOTAL COSTS	**$7,032,600**		**$2,219,950**		**$4,812,650**

[1] Segment between Noll Road and Johnson Ridge development. Johnson Ridge to SR305 segment costs borne by developer.

[2] Project costs to be borne by WSDOT.

[3] Project costs are dependant on development. Cots to be determined by developer at a later date in consultation with City and WSDOT.

SHORT TERM IMPLEMENTATION ACTIONS

Short term implementation actions are those actions that are critical to success of the corridor plan, and/or are likely to be necessary to accommodate development within the near term. Two short term implementation actions have been identified:

- Preliminary design of the Johnson Way extension. To ensure optimal alignment and adequate right-of-way for the future extension, it is recommended that the City proceed with preliminary engineering to establish alignment, right-of-way, Bjorgen Creek fish passage design, and estimated construction costs. Costs for this preliminary engineering work are estimated at between $50,000 and $75,000.
- Preliminary design of improvements to the Noll Road - Hostmark Street intersection. A preliminary engineering plan would help to ensure effective integration of the phased intersection plan, define city/private developer construction responsibilities, and coordinate with the Public Facilities District plan. Costs for this preliminary engineering work are estimated at $15,000.

PRELIMINARY FUNDING PLAN

The City has previously adopted and periodically updates a Comprehensive Street Program that includes a 6-Year TIP. The TIP identifies Noll Road as the third highest priority in the city after Viking Way and Finn Hill Road. The TIP identifies a total cost of $6,700,000 for the Noll Road project, with $3,250,000 identified as being paid for with local funds (City and developer). The Lincoln-Noll roundabout is identified separately in the TIP at a total cost of $450,000 with $200,000 in local funds.

The cost of improvements to existing roads and existing intersections would be born by a combination of public and private sources. Developers would provide 100 percent of the new road projects needed within new subdivisions and along frontage to Noll Road. Table ES-6 shows options the City could pursue to fund the transportation projects needed to implement the recommended plan. The total amount to be covered is about $2.2 million. This amount may vary in the future, as refinements are added to design and construction costs. Not all options apply to all projects and ongoing work will be needed to match specific projects and funding sources, and to be sure adequate funding is identified for all projects.

PRELIMINARY FUNDING STRATEGY

The City's portion of the project totals approximately $2.2 million in 2008 dollars. The funding options available to meet the City's needs fall into several general categories: grants, development contributions of direct road improvements, impact fees and general obligation bonds.

The funding strategy assumes that project implementation will be contingent upon receipt of sufficient grant funding and/or impact fees. Although it is an option, the City does not anticipate pursuing loans and general obligation debt to cover costs that exceed the other available funding sources.

Future impact fees of approximately $5,500 per single family residence would be expected to generate sufficient funds for implementation of the corridor plan if most of the proposed 815 new lots are developed. Management of impact fees and the phased implementation plan will be important since impact fees must be used within 5 years of collection.

Table ES-6. Preliminary funding plan, City portion only (all costs in 2008 dollars).

Phase and Description	Funding Element	Total City Cost	Potential Funding Sources
Phase 1 - Johnson Road Extension			
	Preliminary Engineering	$75,000	Impact fees
	Bjorgen Creek Fish Passage Improvements	$160,000	Grant or Stormwater fees
	Johnson Way Extension [1]	$0	Developer
	Johnson Way - SR 305 Signalized Intersection	$0	Developer
	Subtotal Phase 1	$235,000	
Phase 2 - Noll Road: Hostmark Street to Poulsbo Elementary School			
	Sidewalks and pedestrian improvements	$0	Developer
	Shared path	$207,900	Safe Routes to School Grant
	Bioretention	$112,500	WDOE Stormwater Grant
	Road Improvements	$0	Developer
	Noll Road - Hostmark Street Intersection, Phase 1	$95,850	Impact Fees, KRCC, TIB
	Subtotal Phase 2	$416,250	
Phase 3 - Lincoln Road - Noll Road Roundabout			
	Noll Road - Lincoln Road Roundabout	$187,500	Impact Fees, KRCC, TIB
	Subtotal Phase 3	$187,500	
Phase 4 - Noll Road: Mesford Street to Hostmark Street			
	Sidewalks and pedestrian improvements	$115,088	
	Shared path	$0	Developer
	Bioretention	$0	Developer
	Road Improvements	$204,713	
	Noll Road - Hostmark Street Intersection, Phase 2	$93,750	Impact Fees, KRCC, TIB
	Subtotal Phase 4	$413,550	
Phase 5 - Noll Road: Mesford Street to North City Limits			
	Sidewalks and pedestrian improvements	$0	Developer
	Shared path	$230,175	Safe Routes to School Grant
	Bioretention	$0	Developer
	Road Improvements	$42,525	Impact Fees, KRCC, TIB
	Subtotal Phase 5	$272,700	
Phase 6 - Noll Road: Poulsbo Elementary to South City Limits			
	Sidewalks and pedestrian improvements	$0	Developer
	Shared path	$0	Developer
	Rain garden	$0	Developer
	Road Improvements	$0	Developer
	Noll Road - SR 305 Intersection	$0	WSDOT
	Subtotal Phase 6	$0	
Phase 7 - Languanet/Maranatha Extension			
	Sidewalks and pedestrian improvements	$178,200	Safe Routes to School Grant
	Shared path	$0	Developer
	Rain garden	$0	Developer
	Road Improvements	$516,750	Impact Fees, KRCC, TIB
	Subtotal Phase 7	$694,950	
TOTAL COSTS		**$2,219,950**	

[1] Segment between Noll Road and Johnson Ridge development.

[2] Project costs to be borne by WSDOT.

[3] Project costs are dependant on development. Cots to be determined by developer at a later date in consultation with City and WSDOT.