Appendix A-I WSDOT Stormwater Design Documentation Spreadsheet Threshold Area Tabulation

Due is at Title	Dealer Wey Fritancies Dridge Deciset				
Project Litle: WSDOT Pagian	Poplar Way Extension Bridge Project				
WIN:	Nonwest				
PIN(s):					
Design Manual Used:	Highway Runoff Manual				
	0044				
Manual Publication Year:	2011				
Job Number:					
Is this project in western Washington?	YES]			
Existing Impervious Surface		_			
Total Project Area (ft ²)	225,878	J			
New Impervious Surface					
Total Project Area (ft ²)	56.987]			
Conversion of Native Vegetation to Lawn or L	andscaped	1			
Total Project Area (ft ²)	0	J			
Conversion of Native Vegetation to Pasture					
Total Project Area (ft ²)	0				
Deplesed Imperviews Surface					
Tetel Preiset Area (# ²)	0	1			
	0	1			
Land Disturbing Activity					
Total Project Area (ft ²)	334,042	J			
Is this project a "non-road-related"	' project? (See HRM Glossary for definition)	NO	1		
		No	4		
		Γ			
Description	Project Area	Threshold Area Triggers	HRM Figure 3.1 Step #	Decision Response	HRI
Description New and replace impervious surfaces added to	Project Area	Threshold Area Triggers ≥ 2.000 ft ²	HRM Figure 3.1 Step # 2	Decision Response YES	HRI Apply MR 1-4 to th
Description New and replace impervious surfaces added to Project	Project Area 56,987	Threshold Area Triggers ≥ 2,000 ft ²	HRM Figure 3.1 Step # 2	Decision Response YES	HRI Apply MR 1-4 to th and land disturbed
Description New and replace impervious surfaces added to Project	Project Area 56,987	Threshold Area Triggers $\ge 2,000 \text{ ft}^2$ $\ge 7,000 \text{ ft}^2$	HRM Figure 3.1 Step # 2	Decision Response YES	HRI Apply MR 1-4 to th and land disturbed Threshold does no
Description New and replace impervious surfaces added to Project Land disturbing activity for the Project	Project Area 56,987 334,042	Threshold Area Triggers $\ge 2,000 \text{ ft}^2$ $\ge 7,000 \text{ ft}^2$	HRM Figure 3.1 Step # 2 2	Decision Response YES YES	Apply MR 1-4 to th and land disturbed Threshold does no above new imperv
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Description New and replace impervious surfaces added to Project Land disturbing activity for the Project New impervious surface added to Project Conversion of native vegetation to lawn or landscaped area	Project Area 56,987 334,042 56,987 0	Threshold Area Triggers $\geq 2,000 \text{ ft}^2$ $\geq 7,000 \text{ ft}^2$ $\geq 5,000 \text{ ft}^2$ $\geq 32,670 \text{ ft}^2 (3/4 \text{ acres})$	HRM Figure 3.1 Step # 2 2 3 3 3	Decision Response YES YES YES NO	HRI Apply MR 1-4 to th and land disturbed Threshold does no above new imperv Apply MR 6-9 for r pervious surfaces Threshold does no new impervious su
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M Minimum Requirements

the new and replaced impervious surfaces ed on the Project

not apply since Project already exceeds the rvious and replaced surfaces threshold

new impervious surfaces and converted s on the Project

not apply since Project already exceeds surface threshold

not apply since Project already exceeds surface threshold

pply MR 6-9 to replaced impervious ect

ed project threshold above

Project Title WSDOT Region WIN PIN(s)	: Poplar Way Extension Bridge Projec : Northwest : :	t			
Design Manual Used Manual Publication Year Job Number	: Highway Runoff Manual : 2011 :				
Is this project in western Washington?	YES]			
Existing PGIS					
Total Project Area (ft ²)	183,389				
New PCIS					
Total Project Area (ft ²)	46,734	1			
· · · · · · · · · · · · · · · · · · ·	- , -	-			
Conversion of Native Vegetation to PGPS	0	1			
Total Project Area (ft ⁻)	0				
Replaced PGIS		_			
Total Project Area (ft ²)	0]			
Is this project a "non-road-relat	ed" project? (See HRM Glossary for d	efinition)	NO	1	
		,		1	
Description	Project Area (ft ²)	Threshold Area (ft ²)	HRM Figure 3.2 Step #	Decision Response	
New PGIS added to Project	46,734	≥ 5,000	5	YES	Apply l on the
Conversion of Native Vegetation to PGPS	0	≥ 32,670 (3/4 acres)	5	NO	Thresh
New PGIS add 50% or more to the existing PGIS within the Project limit	25%	New PGIS ≥ 5,000 AND (New PGIS) ≥ 1/2 (Exist PGIS)	6	NO	DO NO the Pro
For non-road-related Projects, proposed value of improvements greater than replacement value	See HRM Figure 3.1 for complete threshold. Non-road-related Project generally refers to rest area, ferry terminals, and maintenance facility projects.	(New PGIS + replaced PGIS) ≥ 5,000 AND (Proposed value of improvements) ≥ 1/2 (replacement value of existing site)	6	N/A	Check
		Apply MR 5 to New PGIS and o	converted PGPS the	on Project	
Summary of All Minimu	um Requirements:	Do not apply MR 5 to Replaced	d PGIS on Project		
		Go to Step 7 RT tab	-		
MR #	Minimum Requirements	MR #	Minimum Require	nents	
1		•	Flow Control (Quan	titv)	
1	Stormwater Planning	6	lion control (ddan		
2	Stormwater Planning Construction Stormwater Pollution	6 7	Wetland Protection		
2 3	Stormwater Planning Construction Stormwater Pollution Source Control of Pollutants	6 7 8	Wetland Protection Incorporating Water	shed-Based /Basin	
2 3 4	Stormwater Planning Construction Stormwater Pollution Source Control of Pollutants Maintaining the Natural Drainage	6 7 8 9	Wetland Protection Incorporating Water Operations and Mai	shed-Based /Basin ntenance	

HRM Minimum Requirements

MR 5 for new PGIS and converted PGPS Project

hold does not apply since Project already eds new PGIS threshold

OT apply MR 5 to the replaced PGIS on roject

k road-related project threshold above

Project Title: WSDOT Region: WIN: PIN(s): Design Manual Used: Manual Publication Year: Job Number: Refer	Poplar Way Extension Bridge Project Northwest Highway Runoff Manual 2011 to HRM Figure 3.3 Step 7 Is <u>replaced PGIS</u> applicable to the project per s	tep 6? NO	1				Is this project	in western Washington?	YES	1						
TDA Description	Description	New PGIS Area (ft ²)	Replaced PGIS Area (ft ²)	Non- Effective PGIS Area (ft ²)	Effective PGIS Area (ft ²)	Converted PGPS Area (ft ²)	RT needed for TDA based on Effective PGIS? Flow Chart Step 7 (Yes/No)	RT needed for TDA based on PGPS? <i>Flow Chart Step 7</i> (Yes/No)	RT needed for TDA? PGIS Area (ft ²)	RT needed for TDA? Converted PGPS Area (ft ²)	If RT needed, what is ADT of roadway in TDA? (ADT)	Is Roadway inside Urban Growth Area? (Yes/No)	Enhanced RT or Basic RT? (Enhanced/Basic)	Oil Control (Yes/No)	Phosphorus Control? (Yes/No)	Comments
TDA 1		38,150	0	0	38,150	0	YES	NO	38,150	0	30,000	YES	Enhanced RT	YES	NO	
TDA 2		3,682	0	0	3,682	0	NO	NO	0	0	30,000	YES	N/A	YES	NO	
TDA 3		4,761	0	0	4,761	0	NO	NO	0	0	30,000	YES	N/A	YES	NO	
TDA 4		141	0	0	141	0	NO	NO	0	0	30,000	YES	N/A	YES	NO	
	Area Totals for F	Project 46,734	0	0	46,734	0			38,150	0						

Project Title: Poplar Way Extension Bridge Project WSDOT Region: Northwest WIN:

PIN(s):

Design Manual Used: Highway Runoff Manual

Manual Publication Year: 2011

Job Number:															
Refer to HRM Figure 3.3 Step 8															
Is <u>replaced l</u>	mpervious surface applicable to the project per flow co	ontrol step 5?	? NO					Is this project in	western Washington?	YES					
TDA Description	Description	New Impervious Surface Area (ft ²)	Reverted Impervious Surface** Area (ft ²)	Net-New Impervious Surface Area (ft ²)	Replaced Impervious Surface Area (ft ²)	Non- Effective Impervious Surface Area (ft ²)	Effective Impervious Surface Area (ft ²)	Conversion of Native Vegetation to Lawn or Landscape per TDA Area (ft ²)	Increase of 0.1 cfs in 100-year Recurrence Interval Flow for TDA?*** (Yes/No)	FC Needed for TDA based on Effective Impervious surface threshold? (Yes/No)	FC needed for TDA based on Native Vegetation Conversion? (Yes/No)	FC needed for TDA based on 0.1 cfs increase in flow? (Yes/No)	FC needed for TDA? Effective Impervious Area (ft ²)	FC needed for TDA? Converted Pervious Surfaces Area (ft ²)	Comments
TDA 1		49,698	0	49,698	0	0	49,698	0	YES	YES	NO	YES	49,698	0	
TDA 2		3,246	0	3,246	0	0	3,246	0	NO	NO	NO	NO	0	0	
TDA 3		3,903	0	3,903	0	0	3,903	0	NO	NO	NO	NO	0	0	
TDA 4		141	0	141	0	0	141	0	NO	NO	NO	NO	0	0	
		-	-		-		-								
			+		-	-									
		-	-		-	-	-								
		-	-		-	-	-								
		-	-		-		-								
		-	-		-		-								
		-	-		-		-								
			+		-	-									
			+		-	-									
			+												
		_													
	Area Totals for Project	56,988	0	56,988	0	0	56,988	0					49,698	0	
** Input zero into this column if the re-	Input zero into this column if the reverted impervious surface does not meet the requirements per HRM 4-3.6.1 (Western WA) and 4-4.6.2 (Eastern WA).														

***See Highway Runoff Manual 3-3.6.3 for MGSFlood modeling guidance.

Threshold Area Tabulation

TDA	Impervious Area Category	New PGIS (SF)	Total New PGIS (SF)	New Imperv. (SF)	Total New Imperv. (SF)
	New PGIS (Road Pavement)	27,308		27,308	
	New PGIS (Road Pavement, Previously Sidewalk)	9,731		0	
1	New NPGIS	0		20,942	
	TDA 1 Totals	37,039	37,039	48,250	48,250
	TDA 1 Totals with 3% Contingency		38,150		49,698
	New PGIS (Road Pavement)	642		642	
2	New PGIS (Road Pavement, Previously Sidewalk)	2,933		0	
Z	New NPGIS	0		2,509	
	TDA 2 Totals	3,575	3,575	3,151	3,151
	TDA 2 Totals with 3% Contingency		3,682		3,246
	New PGIS (Road Pavement)	1,083		1,083	
2	New PGIS (Road Pavement, Previously Sidewalk)	3,539		0	
3	New NPGIS	0		2,706	
	TDA 3 Totals	4,622	4,622	3,789	3,789
	TDA 3 Totals with 3% Contingency		4,761		3,903
	New PGIS (Road Pavement)	137		137	
	New PGIS (Road Pavement, Previously Sidewalk)	0		0	
4	New NPGIS	0		0	
	TDA 4 Totals	137	137	137	137
	TDA 4 Totals with 3% Contingency		141		141
	Project Totals with 3% contingency		46,734		56,987

Numbers below obtained from Existing Impervious Area Maps in Appendix A

Project Existing Impervious

Total Existing NPGIS		Total Existing NPGIS
	Total Existing NPGIS	Total Exisitng Impervious area
		Total Existing PGIS

Total Project Area This area is the total project area within the project limits

ous Area	Totals (SF)
	183,389
	42,489
	225,878

334,042

Appendix A-2

Figures A-2.1 through A-2.7:	Existing Drainage Conditions
Figure A-2.8:	Upstream Map
Figures A-2.9 through A-2.14:	Downstream Maps (excluding Figure A-2.12)
Figure A-2.15:	Point of Compliance
Figures A-2.16 through A-2.22:	Existing Impervious Areas
Figures A-2.23 through A-2.29:	Proposed Impervious Areas











FIGURE A2.4



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THE DRAINAGE FEATURES SHOWN ON THIS MAP ARE A COMBINATION OF GIS RECORDS FROM THE CITY OF LYNNWOOD, LIMITED FIELD RECONNAISSANCE WITHIN THE RIGHT-OR-WAY, AND TOPOGRAPHIC SURVEY INFORMATION. AS SUCH, THE DRAINAGE INFORMATION SHOWN HERE ON IS APPROXIMATE AND BASED UPON BEST AVAILABLE INFORMATION.

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POPLAR WAY EXTENSION **EXISTING DRAINAGE CONDITIONS**







WETLANDS

CULVERT DITCH CREEK

TDA/DISTURBED AREA LIMITS UPSTREAM BASIN LIMITS STORM DRAIN PIPE



