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Engineers, Geologists and Surveyors

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Stormwater Management Report

Fairway Estates PUD Phases 2, 3 and 4

Map and Tax Lot 18-12-15-00-01500

Florence, Oregon

September 22, 2022

Owner/Applicant

Pacific Golf Communities, LLC Roberts Land Company, LLC 4000 Rhododendron Drive Florence, OR 97439

Engineer/Surveyor

EGR & Associates, Inc. 2535B Prairie Road Eugene, Oregon 97402 This page intentionally left blank.

Designer's Certification and Statement

I hereby certify that this Stormwater Management Report for Fairway Estates PUD Phases 2, 3 and 4 has been prepared by me or under my supervision and meets minimum standards of the City of Florence and normal standards of engineering practice. I hereby acknowledge and agree that the jurisdiction does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities designed by me.



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PROJECT OVERVIEW AND DESCRIPTION

The project site is approximately 10.33 acres in size and is identified as Tax Lot 1500 on Lane County Assessor Map 18-12-15-00. The site is located north of the Fairway Estates P.U.D. Phase 1 subdivision, east of the Mariners Village P.U.D. subdivision, west of Florence Golf Links, and south of public lands. Access is from the Fairway Estates P.U.D. Phase 1 subdivision private street system that connects to Rhododendron Drive. A vicinity map is included in Appendix A.

The property is inside the City of Florence and is currently zoned Single Family Residential. Proposed development consists of 42 single-family lots to be developed in three phases starting from the terminus of Fairway Estates P.U.D. Phase 1 and extending northward. Two existing private streets in Phase 1 will be extended into and looped through the proposed development. Underground utilities consisting of public wastewater and water lines, franchise utilities, and private stormwater facilities will be installed to serve the development. These utilities are currently stubbed to the south side of the site from the Phase 1 subdivision improvements.

Local groundwater and surface water generally flows from the northeast to southwest towards the Siuslaw River. The tributary watershed upgradient (north) from the site consists predominantly of undeveloped land situated on Lane County, City of Florence and BLM lands. These lands rely solely on groundwater infiltration for stormwater management. Soils within the watershed, including the project site, consists predominantly of Yaquina loamy fine sand.

The project site is currently vacant land overgrown with coastal brush and trees. Topography is generally flat with an approximate gradient of 1- to 2-percent from north to south. Proposed development will include clearing and grading of the site as needed. A preliminary site grading plan is included in Appendix A. The two private streets currently terminated at the south side of the site will be extended through the development and connected on the north side of the site to create a looped street system. The streets will slope at approximate one-half percent grades from a high point on the north side to the terminus of the current streets. Underground utilities will generally be located within the roadway or in an adjacent public utility easement.

METHODOLOGY

Existing Conditions

Groundwater and surface runoff upgradient (northerly) from the site generally flows to the southwest towards Florence Golf Links, the Mariners Village subdivision, and the project site. Stormwater flow typically concentrates at the northwest corner of Florence Golf Links and northeast corner of the Mariners Village subdivision.

At Florence Golf Links, stormwater is routed to the southwest corner of the golf course property where the stormwater is discharged into a stormwater pipe that terminates at the southeast corner of the Fairway Estates subdivision. This stormwater pipe is part of the Fairway Estates P.U.D. Phase 1 stormwater system.

Stormwater collected at the northeast corner of Mariners Village subdivision is piped underneath the development to a large infiltration basin on the south side of the subdivision. During wet years groundwater levels will come to the surface of the surrounding area. This excess surface water flows southerly between the Mariners Village subdivision and the project site and is discharged into the Phase 1 stormwater system.

The Phase 1 stormwater system includes large diameter stormwater pipes (ranging between 36inch and 60-inch diameter) that discharge to a public pipe through a flow control manhole located at the Tournament Drive intersection onto Rhododendron Drive. A public 15-inch diameter pipe installed in Rhododendron Drive from the flow control manhole to just north of 35th Street discharges into a ravine that outfalls into the Siuslaw River. The flow control manhole attenuates the rate of discharge from the Fairway Estates on-site system and helps to prevent flows in the ravine from exceeding capacity.

Stormwater management for Phase 1 development consists of stormwater runoff from the roadway being directed into street-side swales. The swales are sized to receive the road and sidewalk runoff only with the intent that the homes address stormwater on site at time of building construction per Florence standards.

No changes to the current stormwater system are proposed as part of this development.

Proposed Stormwater Management

The <u>Florence Stormwater Management Design Manual</u>, <u>Revised September 2011</u> (Florence Stormwater Manual) requires treatment and flow control using vegetated surface facilities to the maximum extent feasible with the standard requirement to maintain peak flow rates at their predevelopment levels for up to the 25-year runoff events. In high groundwater areas, such as sites with Yaquina soil type, groundwater is to be addressed per the Florence Stormwater Manual.

The Phase 1 stormwater management approach addresses groundwater by incorporating an under-drain beneath the infiltration facility that is connected into the on-site piped stormwater system. This is an approved method per the Florence Stormwater Manual.

Stormwater management for proposed new phases will continue the same management approach as in Phase 1. This includes vegetated swales installed along one side of on-site streets sized to receive the road and sidewalk runoff for purpose of water quality and infiltration for up to the 25-year runoff events. Homes will address stormwater on site per Florence standards at time of building construction. An under-drain will be installed beneath the vegetated swales. Overflow from street-side stormwater facilities and under-drains will be directed into the on-site piped system.

ANALYSIS

Presumptive Approach Analysis

The Florence Stormwater Manual requires that the Presumptive Approach be used for projects with new or redeveloped impervious area of 0.5 acre or greater, which applies to this project. Presumptive Approach calculations were performed utilizing the City of Eugene <u>Stormwater</u> <u>Surface Filtration/Infiltration Facility Sizing Spreadsheet</u>. This calculator is an Excel-based spreadsheet that is downloadable from the City of Eugene web page. Runoff calculations are based on unit hydrograph method for a 24-hour storm, NRCS Type 1A rainfall distribution.

Design storms for pollution reduction and flood control are based on a water quality rainfall depth of 0.8 inches and 25-year rainfall depth of 5.06 inches, respectively (from Table 4.1 of Florence Stormwater Manual).

The infiltration rate of dune sand is expected to be greater than 10 inches per hour, but the Florence Stormwater Manual limits the infiltration rate to the assumed long term infiltration rate for the growing medium, or 4 inches per hour.

A pre-development curve number (CN) of 73 is selected based on a Hydrologic Soil Group D and brush with greater than 75-pecent coverage. A post-development CN of 98 is selected for impervious surfaces.

For purposes of this preliminary design, each development phase is delineated into drainage catchments served by individual swales located adjacent to lots on one side of the roadway. Catchment areas are illustrated on the Drainage Basin Map included in Appendix A and consists of pavement and walkway surfaces of the private street adjacent to lots. Size of each vegetated swale is controlled by the required storage needed to fully infiltrate collected stormwater for the design storm, so if the facility size meets destination requirements, then it also meets pollution reduction requirements. Facility sizing spreadsheets for each catchment area are included in Appendix B and summarized on the Drainage Basin Map in Appendix A. These facilities manage runoff from the street surfaces only. Homes will address stormwater on site per Florence standards at time of building construction.

Conveyance Pipes

A stormwater conveyance pipe will be extended with street construction. The conveyance pipe will connect into an existing 36-inch diameter storm pipe that currently ends at the street terminus. The stormwater pipe will collect stormwater from street-side swale overflows and facility under-drains and convey the stormwater to the Phase 1 stormwater system. The conveyance pipes are sized to accommodate peak flow based on 25-year overflow from street-side stormwater facilities. Calculation worksheets for pipe sizes are included in Appendix B. Peak flows are based on peak runoff rate calculations given in the facility sizing spreadsheet for

a 25-year design storm, which results in a peak runoff rate of 0.0137 gpm per square foot impervious area. Peak flows and pipe sizes are summarized below.

Pipe I.D.	Basins Served	Impervious Area, s.f.	Peak Runoff, cfs	Pipe Size Required
Basin 1 Pipe	Basins 1 and 2	43,097	1.32	12"
Basin 2 Pipe	Basin 1	19,612	0.60	10"
Basin 3 Pipe	Basin 3	38,745	1.18	12"

Table 1	. Conveyance	e Pipe	Size	Summary
I dole l	Conveyanes	o i ipe	DILU	Summary

Escape Route

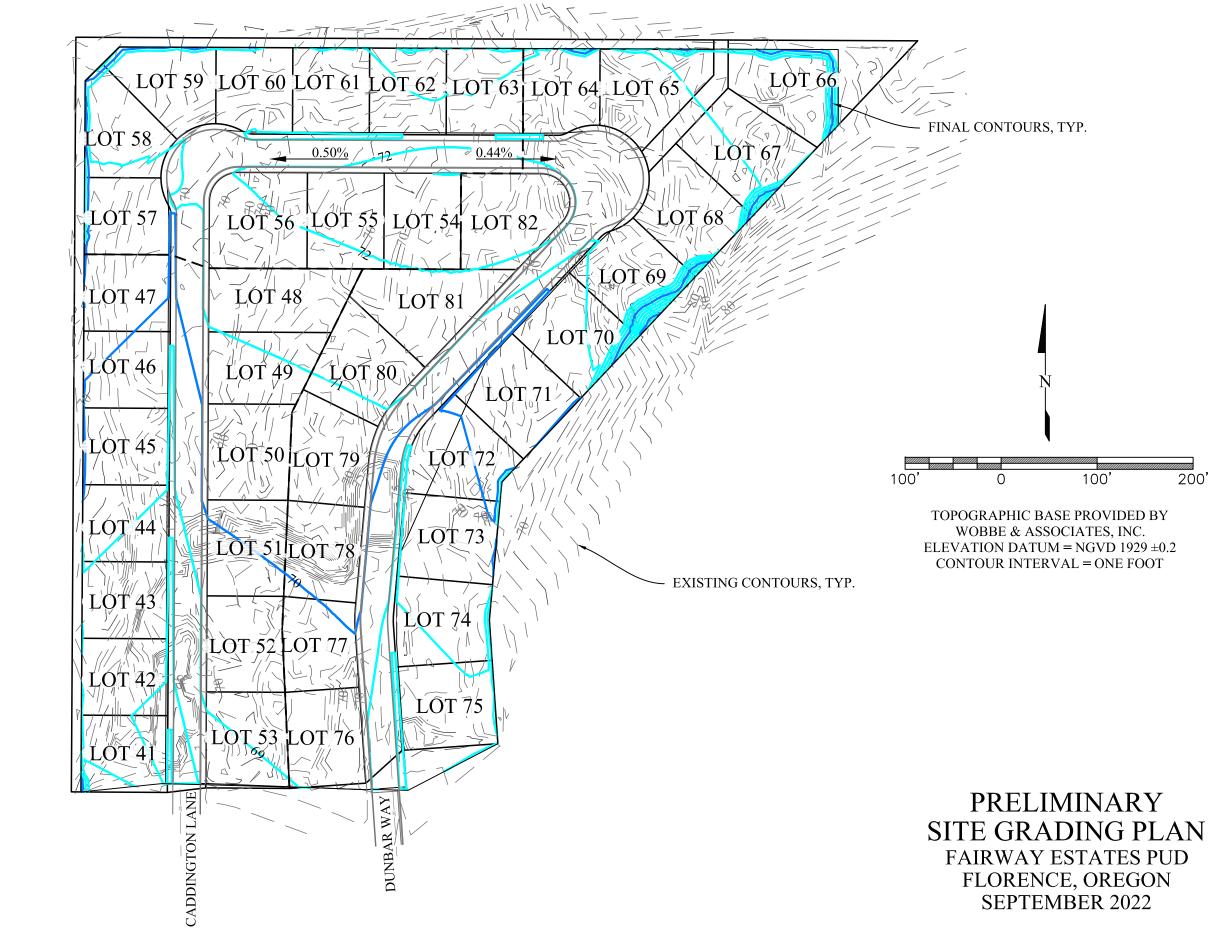
The on-site private stormwater system discharges into a public piped system located in Rhododendron Drive. If the capacity in the public system is exceeded, then stormwater from the subdivision will collect at a low point in the street network on Tournament Drive where a depressed path runs between Lots 28 and 29 to an open space to the south. Stormwater will either temporarily pond in the open space and infiltrate into the ground or at higher levels will discharge to a pre-existing catch basin and 12-inch diameter storm pipe that flows off-site to the south.

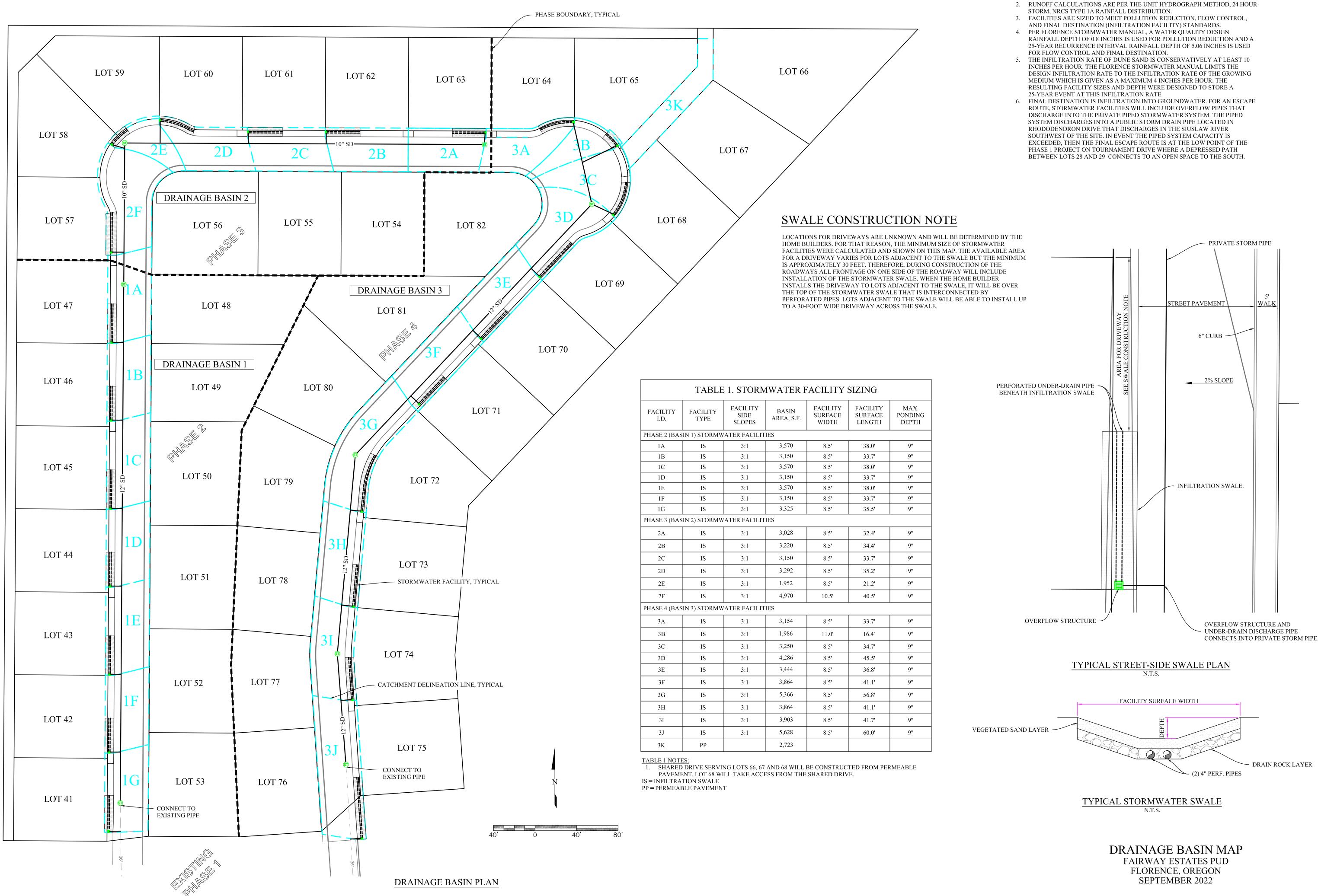
ENGINEERING CONCLUSIONS

- 1. Florence standards require treatment and flow control using vegetated surface facilities to the maximum extent feasible with the standard requirement to maintain peak flow rates at their pre-development levels for up to the 25-year runoff events.
- 2. Site soils are predominantly loamy fine sand that are well suited for infiltration systems. Thus, vegetated infiltration facilities will be used on this site for final destination of stormwater runoff from impervious surfaces.
- 3. Adequate detention storage capacity can be provided using low impact development techniques, such as swales installed adjacent to the street. Surface runoff from pavement and walks will be routed into the street-side facilities. Overflow from these facilities will be directed into the piped stormwater system installed in the street. These facilities will be privately maintained by a homeowner association.
- 4. It is the intent that runoff from roofs will be collected and directed into private individual onsite stormwater facilities sized in accordance with Florence standards when home construction occurs. Individual onsite stormwater facilities will be privately maintained by the homeowner.

APPENDIX A FIGURES







STORMWATER FACILITY DESIGN NOTES

- 1. FACILITIES ARE SIZED PER THE PRESUMPTIVE APPROACH.

APPENDIX B

SIZING SPREADSHEETS AND CALCULATIONS

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene						
	Version 2.1						
Project Information							
Project Name:	Fairway Esta	ates			Date: <u>5/19/20</u>	<u>22</u>	
Project Address:	<u>18-12-15-00-0</u>	<u>01500</u>			Permit Number: <u>NA</u>		
	Florence, OF	<u>र</u>			Catchment ID: 1A		
Designer:	Clint Beecro	ft					
Company:	EGR & Asso	<u>ciates</u>					
Instructions:							
1. Complete this form for	r each drainage	e catchm	ent in the project site t	that is to be siz	ed per the Presumptive App	proach.	
2. Provide a distinctive C	atchment ID fo	or each f	acility coordinated with	the site basin	map to correlate the approp	oriate	
calculations with the fa	acility.						
3. The maximum drainag							
4.For infiltration facilities	in Class A or E	B soils w	here no infiltration test	ing has been p	erfromed use an infiltration	rate of 0.5 in/hr.	
For all facilities use a	maximum soil i	infiltratio	n rate of 2.5 in/hr for to	opsoil/growing I	nedium.		
Design Requirements:							
Choose "Yes" from the d	lropdown boxes	s below i	next to the design stan	dards requirem	ents for this facility.		
Pollution Poducti		(00					
Pollution Reducti		(es					
Flow Cont		/es					
Destinati	on (DT) Y	<mark>(es</mark> */	An infiltration facility must be	chosen as the facil	ity type to meet destination require	nents	
Site Data Deat Develor							
Site Data-Post Develop	ment	_					
Total Square Footag	e Impervious	Area=	<mark>3570</mark> sqft	Total	Square Footage Pervious	Area= 0 sqft	
In	npervious Are	a CN=	98		Pervious Are	a CN= 85	
		_					
Total Square Footag	-		3570 sft	Time of Co	ncentration Post Develop	ment=5 min	
Wei	ghted Average	e CN=	98				
Site Data-Pre Developm	nent (Dat	ta in this	section is only used	l if Flow Contr	ol is required)		
Pro	e-Developmen	nt CN=	73	Time of C	oncentration Pre-Develop	ment= 10 min	
Soil Data			_			-	
	oil Infiltration	Rate=	10 in/hr (See No	nte 4)	Destination De	esign= 5 in/hr	
	oil Infiltration		4 in/hr		Soil Infiltratio	•	
_							
Design Storms Used Fo	or Calculation	IS					
Requirement	Rainfall De	epth D	esign Storm				
Pollution Reduction	0.8 inch	ies V	Vater Quality				
Flow Control	5.1 inch	ies F	lood Control				
Destination	5.1 inch	ies F	lood Control				
Facility Data							
-	Facility	Type=	nfiltration Stormwate	r Planter	Facility Surface	Area= 323 sqft	
	Surface W		8.5 ft		Facility Surface Perir		
	Surface Le		38 ft		Facility Bottom		
F	acility Side Sl		3 to 1		Facility Bottom Perir		
	Ponding Dept	-					
	mwater Facilit		9 in		Basin Vo	lume= 179.0 cf	
Depth of Grov		-	<mark>2</mark> in	Ratio of Fa	acility Area to Impervious	Area= 0.090	
1							

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.015 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater	
Facility = 186 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Stan	idards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.109 cfs	Peak Facility Overflow Rate= 0.038 cfs
Total Runoff Volume to Stormwater	
Facility = 1432 cf	Total Overflow Volume= 48 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data Peak Flow Rate = 0.043 cfs Total Runoff Volume = 692 cf	
Yes Facility Sizing Meets Flow Control Standards?	
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.109 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater Facility = 1432 cf	
Facility = 1432 cf Max. Depth of Stormwater in Facility= 8.9 in	Total Overflow Volume=0cf
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene						
	Version 2.1						
Project Information							
Project Name:	Fairway Est	<u>tates</u>			Date:	<u>5/19/2022</u>	
Project Address:	<u>18-12-15-00</u>	<u>)-01500</u>			Permit Number:	NA	
	Florence, O	<u>DR</u>			Catchment ID:	<u>1B</u>	
Designer:	Clint Beecre	<u>oft</u>					
Company:	EGR & Asso	<u>ociates</u>					
Instructions:							
1. Complete this form for	r each drainag	ge catchn	nent in the project site t	hat is to be siz	ed per the Presum	ptive Approach.	
2. Provide a distinctive C	atchment ID	for each	facility coordinated with	the site basin	map to correlate th	ne appropriate	
calculations with the fa	acility.						
3. The maximum drainag	ge catchment	to be mo	deled per the Presump	tive Approach	is 1 acre (43,560 S	F)	
4.For infiltration facilities	in Class A or	r B soils v	where no infiltration test	ing has been p	erfromed use an in	filtration rate of	0.5 in/hr.
For all facilities use a	maximum soi	il infiltratio	on rate of 2.5 in/hr for to	psoil/growing	medium.		
Design Requirements:	1						
Choose "Yes" from the d	lropdown box	es below	next to the design stan	dards requiren	nents for this facility	<i>ų</i> .	
Dellution Deducti		Vee					
Pollution Reducti		Yes					
Flow Cont	. /	Yes					
Destinati	on (DT)	Yes	An infiltration facility must be	chosen as the facil	ity type to meet destinat	ion requirements	
Site Data-Post Develop	oment						
Total Square Footag	e Impervious	s Area=	<mark>3150</mark> sqft	Total	Square Footage P	ervious Area=	0 sqft
	npervious Ar		98			ious Area CN=	85
	-					•	
Total Square Footag	e of Drainage	e Area=	3150 sft	Time of Co	ncentration Post	Development=	5 min
Wei	ighted Avera	ge CN=	98			-	
Site Data-Pre Developn	nent (Da	ata in thi	s section is only used	if Flow Contr	ol is required)		
	e-Developme		73		oncentration Pre-	Development	10 min
	e-Developine		13	Time of C	oncentration Pre-	Development-	
Soil Data							
Tested S	oil Infiltration	n Rate=	10 in/hr (See No	te 4)	Destin	nation Design=	5 in/hr
Design S	oil Infiltration	n Rate=	4 in/hr		Soil Ir	nfiltration Rate	
Design Storms Used Fo	or Calculatio	ons					
Requirement	Rainfall D	Denth	Design Storm				
Pollution Reduction	0.8 inc		Water Quality				
Flow Control	5.1 inc		Flood Control				
Destination	5.1 inc		Flood Control				
	0.11110						
Facility Data							
	-		Infiltration Stormwate	r Planter		Surface Area=	286.45 sqft
	Surface	Width=	<mark>8.5</mark> ft		-	ce Perimeter=	84.4 ft
	Surface L	_ength=	33.7 ft		Facility	Bottom Area=	117 sqft
	acility Side S	-	3 to 1		Facility Botto	om Perimeter=	66 ft
	Ponding Dep						
	mwater Facil	-	<mark>9</mark> in			Basin Volume=	158.8 cf
Depth of Grov	ving Medium	n (Soil)=	<mark>2</mark> in	Ratio of F	acility Area to Imp	ervious Area=	0.091

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.013 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 164 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Stan	idards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.096 cfs	Peak Facility Overflow Rate= 0.033 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf	Total Overflow Volume= 42 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data	
Peak Flow Rate = 0.038 cfs Total Runoff Volume = 611 cf	
Yes Facility Sizing Meets Flow Control Standards?	
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.096 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 1263 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 8.9 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene							
	Version	2.1						
Project Information								
Project Name:	Fairway	Estates			Date:	5/19/2022		
Project Address:		<u>5-00-01500</u>			Permit Number:	NA NA		
	Florence				Catchment ID:	<u>1C</u>		
Designer:	Clint Be							
Company:	EGR & A	<u>Associates</u>						
Instructions								
 Complete this form for Provide a distinctive C calculations with the fa The maximum drainag For infiltration facilities 	 Instructions: Complete this form for each drainage catchment in the project site that is to be sized per the Presumptive Approach. Provide a distinctive Catchment ID for each facility coordinated with the site basin map to correlate the appropriate calculations with the facility. The maximum drainage catchment to be modeled per the Presumptive Approach is 1 acre (43,560 SF) For infiltration facilities in Class A or B soils where no infiltration testing has been perfromed use an infiltration rate of 0.5 in/hr. For all facilities use a maximum soil infiltration rate of 2.5 in/hr for topsoil/growing medium. 							
Design Requirements:								
Choose "Yes" from the d	ropdown	boxes belov	v next to the design stan	dards requiren	nents for this facility	y.		
Flow Cont	Pollution Reduction (PR) Yes Flow Control (FC) Yes Destination (DT) Yes *An infiltration facility must be chosen as the facility type to meet destination requirements							
Site Data-Post Develop	ment							
Total Square Footag In	-	ious Area= s Area CN=	3570 sqft 98	Total	Square Footage P Pervi	ervious Area= ious Area CN=	0 sqft 85	
Total Square Footage Wei		nage Area= rerage CN=	3570 sft 98	Time of Co	ncentration Post	Development=	5 min	
Site Data-Pre Developn	nent	(Data in th	is section is only used	l if Flow Contr	ol is required)			
	e-Develop	oment CN=	73	Time of C	oncentration Pre-	Development=	10 min	
Soil Data								
		tion Rate=	10 in/hr (See No 4 in/hr	ote 4)		nation Design= nfiltration Rate	5 in/hr	
Design Storms Used Fo	or Calcula	ations						
Requirement	Rainf	all Depth	Design Storm					
Pollution Reduction	1	inches	Water Quality					
Flow Control		inches	Flood Control					
Destination		inches	Flood Control					
Facility Data	•	•						
			Infiltration Stormwate	r Planter	Facility	Surface Area=	323 sqft	
		ace Width=	<mark>8.5</mark> ft		-	ce Perimeter=	93 ft	
		ce Length=	38 ft		•	Bottom Area=	134 sqft	
	-	de Slopes=	3 to 1		Facility Botto	om Perimeter=	75 ft	
	Ponding		9 in		6	Basin Volume=	179.0 cf	
in Stormwater Facility= 9 in Basin Volume= 179.0 cf Depth of Growing Medium (Soil)= 2 in Ratio of Facility Area to Impervious Area= 0.090								

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.015 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater	
Facility = 186 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Stan	idards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.109 cfs	Peak Facility Overflow Rate= 0.038 cfs
Total Runoff Volume to Stormwater	
Facility = 1432 cf	Total Overflow Volume= 48 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data Peak Flow Rate = 0.043 cfs Total Runoff Volume = 692 cf	
Yes Facility Sizing Meets Flow Control Standards?	
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.109 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater Facility = 1432 cf	
Facility = 1432 cf Max. Depth of Stormwater in Facility= 8.9 in	Total Overflow Volume=0cf
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene						
	Version 2.1						
Project Information							
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>			
Project Address:	<u>18-12-15-00-0150</u>	<u>)</u>		Permit Number: <u>NA</u>			
	Florence, OR			Catchment ID: <u>1D</u>			
Designer:	Clint Beecroft						
Company:	EGR & Associate	<u>s</u>					
Instructions:							
1. Complete this form for	r each drainage cat	chment in the project site	that is to be size	ed per the Presumptive Approa	ach.		
2. Provide a distinctive C	atchment ID for ea	ch facility coordinated with	n the site basin	map to correlate the appropria	e		
calculations with the fa	acility.						
3. The maximum drainag	ge catchment to be	modeled per the Presump	otive Approach i	s 1 acre (43,560 SF)			
4.For infiltration facilities	in Class A or B soi	s where no infiltration tes	ting has been p	erfromed use an infiltration rate	ef 0.5 in/hr.		
For all facilities use a	maximum soil infiltr	ation rate of 2.5 in/hr for t	opsoil/growing r	nedium.			
Design Requirements:							
Choose "Yes" from the c	lropdown boxes bel	ow next to the design star	ndards requirem	ents for this facility.			
Dollution Doducti							
Pollution Reducti		_					
Flow Cont							
Destinati	on (DT) Yes	*An infiltration facility must be	chosen as the facili	ty type to meet destination requirement	S		
Site Data-Post Develop	ment						
Total Square Footag	e Impervious Area	= <u>3150</u> sqft	Total	Square Footage Pervious Are	ea= 0 sqft		
In	npervious Area CN	= 98		Pervious Area C	N= 85		
Total Square Footag	e of Drainage Area	= 3150 sft	Time of Co	ncentration Post Developme	nt= 5 min		
Wei	ghted Average CN	= 98					
Site Data-Pre Developm	nent (Data in	this section is only used	d if Flow Contr	ol is required)			
Pr	e-Development CN	= 73	Time of Co	oncentration Pre-Developme	nt=10 min		
Soil Data	•			•			
		······································					
	oil Infiltration Rate		ote 4)	Destination Desig			
Design S	oil Infiltration Rate	= 4 in/hr		Soil Infiltration R	ate		
Design Storms Used F	or Calculations						
Requirement	Rainfall Depth	Design Storm]				
Pollution Reduction	0.8 inches	Water Quality					
Flow Control	5.1 inches	Flood Control					
Destination	5.1 inches	Flood Control	1				
Facility Data	• • •	•	-				
	F 104 F	- Infiltration Of	n Diautan	EWeige (000.45		
		= Infiltration Stormwate	er Planter	Facility Surface Are			
	Surface Width			Facility Surface Perimet			
-	Surface Length			Facility Bottom Are			
	acility Side Slopes	= <u> </u>		Facility Bottom Perimet	er= 66 ft		
	Ponding Depth mwater Facility=	9 in		Basin Volun	ne= 158.8 cf		
	ving Medium (Soil		Ratio of F	acility Area to Impervious Are			
Depth of Glov	ing meanin (301			and Alea to impervious Ale	0.001		

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.013 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 164 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Stan	idards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.096 cfs	Peak Facility Overflow Rate= 0.033 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf	Total Overflow Volume= 42 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data	
Peak Flow Rate = 0.038 cfs Total Runoff Volume = 611 cf	
Yes Facility Sizing Meets Flow Control Standards?	
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.096 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 1263 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 8.9 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene					
	Version 2.1					
Project Information						
Project Name:	Fairway Estat	<u>es</u>		Date: <u>5/19/2022</u>		
Project Address:	<u>18-12-15-00-01</u>	<u>1500</u>		Permit Number: <u>NA</u>		
	Florence, OR			Catchment ID: <u>1E</u>		
Designer:	Clint Beecroft					
Company:	EGR & Assoc	iates				
Instructions:						
	a a a b draina da	actabment in the project sit	a that is to be siz	ad not the Dresumptive Approach		
	-			ed per the Presumptive Approach.		
calculations with the fa		each fachily coordinated w	ith the site basin	map to correlate the appropriate		
		be modeled per the Presum	antivo Annroach i	s 1 acro (13 560 SE)		
				erfromed use an infiltration rate of 0	5 in/br	
		filtration rate of 2.5 in/hr for			.5 m/m.	
			topson/growing i			
Design Requirements:						
Choose "Yes" from the d	lropdown boxes	below next to the design sta	andards requirem	ents for this facility.		
Pollution Reducti	on (PR) Ye	es				
Flow Cont						
Destinati			na ahaaan aa tha faail	ty time to most destinction requirements		
Destinati		An initiation facility must t	be chosen as the facil	ity type to meet destination requirements		
Site Data-Post Develop	ment					
		0570	Tetel		0 auft	
Total Square Footag	-		lotal	Square Footage Pervious Area=	0 sqft	
In	npervious Area	CN= 98		Pervious Area CN=	85	
Total Square Footag	o of Drainago A	rea= 3570 sft	Time of Co	ncentration Post Development=	5 min	
	ghted Average		Time of Co		Jinin	
Site Data-Pre Developn	nent (Data	in this section is only use	ed if Flow Contr	ol is required)		
Pro	e-Development	CN= 73	Time of C	oncentration Pre-Development=	<mark>10</mark> min	
Soil Data						
Tested S	oil Infiltration F	Rate= 10 in/hr (See	Note 4)	Destination Design=	5 in/hr	
Design S	oil Infiltration F	Rate= 4 in/hr		Soil Infiltration Rate		
Design Storms Used Fo	or Calculations	;				
Boguiromont	Poinfall Dor	th Design Storm				
Requirement Pollution Reduction	Rainfall Dep 0.8 inche		-			
Flow Control	5.1 inche		-			
Destination	5.1 inche		-			
	0.11110110					
Facility Data						
	-	ype= Infiltration Stormwa	ter Planter	Facility Surface Area=	323 sqft	
	Surface W			Facility Surface Perimeter=	93 ft	
_	Surface Len	·		Facility Bottom Area=	134 sqft	
	acility Side Slo	-		Facility Bottom Perimeter=	75 ft	
	Ponding Depth mwater Facility			Basin Volume=	179.0 cf	
	ving Medium (S		Datio of E	acility Area to Impervious Area=	0.090	
Deptil of Grov	ang Meululli (S	-(IIV)			0.030	

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.015 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater	
Facility = 186 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Stan	idards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.109 cfs	Peak Facility Overflow Rate= 0.038 cfs
Total Runoff Volume to Stormwater	
Facility = 1432 cf	Total Overflow Volume= 48 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data Peak Flow Rate = 0.043 cfs Total Runoff Volume = 692 cf	
Yes Facility Sizing Meets Flow Control Standards?	
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.109 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater Facility = 1432 cf	
Facility = 1432 cf Max. Depth of Stormwater in Facility= 8.9 in	Total Overflow Volume=0cf
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE	24 Hou		face Filtration/Infilt NRCS Type 1A Rai			adsheet	
	Version	2.1					
Project Information							
Project Name:	Fairway	Estates			Date:	<u>5/19/2022</u>	
Project Address:	<u>18-12-15</u>	<u>5-00-01500</u>			Permit Number:	<u>NA</u>	
	Florence	<u>e, OR</u>			Catchment ID:	<u>1F</u>	
Designer:	Clint Be						
Company:	EGR & A	Associates					
Instructions:							
 Complete this form for Provide a distinctive C calculations with the fa The maximum drainag For infiltration facilities 	atchment acility. le catchm in Class <i>I</i>	ID for each ent to be m A or B soils	facility coordinated with odeled per the Presump	the site basin tive Approach ing has been p	map to correlate th is 1 acre (43,560 S erfromed use an in	e appropriate F)	0.5 in/hr.
Design Requirements:							
Choose "Yes" from the d	ropdown	boxes belov	v next to the design stan	dards requiren	nents for this facility	/.	
Pollution Reducti Flow Cont Destinati	rol (FC)	Yes	*An infiltration facility must be	chosen as the facil	ity type to meet destinat	ion requirements	
Site Data-Post Develop	ment						
Total Square Footag In	-	ious Area= s Area CN=	<mark>3150</mark> sqft 98	Total	Square Footage P Pervi	ervious Area= ious Area CN=	0 sqft 85
Total Square Footage Wei		nage Area= erage CN=	3150 sft 98	Time of Co	ncentration Post	Development=	<mark>5</mark> min
Site Data-Pre Developm	nent	(Data in th	is section is only used	if Flow Contr	ol is required)		
	e-Develop	oment CN=	73	Time of C	oncentration Pre-	Development=	10 min
Soil Data							
		ition Rate= ition Rate=	<mark>10</mark> in/hr (See No 4 in/hr	te 4)		ation Design=	5 in/hr
Design Storms Used Fo	or Calcula	ations					
Requirement	Rainfa	all Depth	Design Storm				
Pollution Reduction		inches	Water Quality				
Flow Control		inches	Flood Control				
Destination		inches	Flood Control				
Facility Data	•						
r donity Data	Fac	ilite a Tama a m	Infiltration Otomourate	Diamtan	Feellit	C	200 45 - ===
		ace Width=	Infiltration Stormwate 8.5 ft	rianter	•	Surface Area=	286.45 sqft
		ce width=	33.7 ft		-	ce Perimeter= Bottom Area=	84.4 ft 117 sqft
		te Slopes=	3 to 1		•	om Perimeter=	66 ft
	Ponding	•	5 10 1				00 11
	mwater F		<mark>9</mark> in		E	Basin Volume=	158.8 cf
Depth of Grow	ving Medi	ium (Soil)=	<mark>2</mark> in	Ratio of F	acility Area to Imp	ervious Area=	0.091

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.013 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 164 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Stan	idards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.096 cfs	Peak Facility Overflow Rate= 0.033 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf	Total Overflow Volume= 42 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data	
Peak Flow Rate = 0.038 cfs Total Runoff Volume = 611 cf	
Yes Facility Sizing Meets Flow Control Standards?	
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.096 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 1263 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 8.9 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE		face Filtration/Infilt NRCS Type 1A Rair			adsheet	
	Version 2.1					
Project Information						
Project Name:	Fairway Estates			Date:	<u>5/19/2022</u>	
Project Address:	<u>18-12-15-00-01500</u>			Permit Number:	<u>NA</u>	
	Florence, OR			Catchment ID:	<u>1G</u>	
Designer:	Clint Beecroft					
Company:	EGR & Associates					
Instructions:						
1. Complete this form for	each drainage catch	ment in the project site t	hat is to be siz	ed per the Presum	ptive Approach.	
2. Provide a distinctive C	atchment ID for each	facility coordinated with	the site basin	map to correlate th	e appropriate	
calculations with the fa	acility.					
3. The maximum drainag	je catchment to be m	odeled per the Presumpt	tive Approach	is 1 acre (43,560 Sl	F)	
4.For infiltration facilities	in Class A or B soils	where no infiltration testi	ing has been p	erfromed use an in	filtration rate of 0).5 in/hr.
For all facilities use a	maximum soil infiltrat	ion rate of 2.5 in/hr for to	psoil/growing	medium.		
Design Requirements:						
Choose "Yes" from the d	ropdown boxes below	v next to the design stan	dards requiren	nents for this facility	<i>.</i>	
Dellution Deducti		1				
Pollution Reducti						
Flow Cont						
Destinati	on (DT) Yes	*An infiltration facility must be o	chosen as the faci	lity type to meet destinati	on requirements	
Site Data-Post Develop	ment					
Total Square Footag	e Impervious Area=	3325 sqft	Total	Square Footage P	ervious Area=	0 sqft
	pervious Area CN=				ous Area CN=	85
	•				Le la	
Total Square Footag	e of Drainage Area=	3325 sft	Time of Co	ncentration Post I	Development=	5 min
Wei	ghted Average CN=	98			-	
Site Data-Pre Developn	nent (Data in th	his section is only used	if Flow Cont	ol is required)		
	•			• •		10
	e-Development CN=	73	Time of C	oncentration Pre-I	Jevelopment=	10 min
Soil Data						
Tested S	oil Infiltration Rate=	10 in/hr (See No	te 4)	Destin	ation Design=	5 in/hr
Design S	oil Infiltration Rate=	4 in/hr		Soil In	filtration Rate	
Design Storms Used Fo	or Calculations					
Requirement	Rainfall Depth	Design Storm				
Pollution Reduction	0.8 inches	Water Quality				
Flow Control	5.1 inches	Flood Control				
Destination	5.1 inches	Flood Control				
Facility Data						
		Infiltration Stormwater	r Planter	-	Surface Area=	301.75 sqft
	Surface Width=	<mark>8.5</mark> ft		-	ce Perimeter=	88 ft
	Surface Length=			•	Bottom Area=	124 sqft
	acility Side Slopes=	3 to 1		Facility Botto	om Perimeter=	70 ft
	Ponding Depth			_		107.0
	mwater Facility=	<mark>9</mark> in	D-41 6 -		asin Volume=	167.3 cf
Depth of Grov	ving Medium (Soil)=	<mark>2</mark> in	Ratio of F	acility Area to Imp	ervious Area=	0.091

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.014 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater	
Facility = 173 cf Max. Depth of Stormwater in Facility = 0.0 in	Total Overflow Volume=0cf
Max. Depth of Stormwater in Facility= 0.0 in Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Star	ndards?
YES Meets Requirement of No Facility Flooding?	
YES Meets Requirement for Maximum of 18 Hour D	Drawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.102 cfs	Peak Facility Overflow Rate= 0.035 cfs
Total Runoff Volume to Stormwater	
Facility = 1334 cf	Total Overflow Volume= 44 cf
Max. Depth of Stormwater in Facility= 9.0 in	Peak Off-Site Flow Rate Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data	
Peak Flow Rate = 0.040 cfs	
Total Runoff Volume = 645 cf	
Yes Facility Sizing Meets Flow Control Standards	?
YES Meets Requirement for Post Development offs	site flow less or equal to Pre-Development Flow?
YES Meets Requirement for Maximum of 18 Hour I	· · ·
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.102 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater Facility = 1334 cf	Total Overflow Volume= 0 cf
Facility = 1334 cf Max. Depth of Stormwater in Facility= 8.9 in	Total Overflow Volume=0cf
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding?	
YES Meets Requirement for Maximum of 30 hour D	vrawdown Time?

EUGENE							
	Version 2.1						
Project Information							
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>			
Project Address:	<u>18-12-15-00-01500</u>			Permit Number: <u>NA</u>			
	Florence, OR			Catchment ID: <u>2A</u>			
Designer:	Clint Beecroft						
Company:	EGR & Associates						
Instructions:							
1. Complete this form for	each drainage catch	ment in the project site t	hat is to be siz	ed per the Presumptive Approach.			
2. Provide a distinctive C	atchment ID for each	facility coordinated with	the site basin	map to correlate the appropriate			
calculations with the fa	acility.						
3. The maximum drainag							
4.For infiltration facilities	in Class A or B soils	where no infiltration testi	ing has been p	erfromed use an infiltration rate of 0	.5 in/hr.		
For all facilities use a	maximum soil infiltrat	ion rate of 2.5 in/hr for to	psoil/growing	medium.			
Design Requirements:							
Choose "Yes" from the d	ropdown boxes belov	v next to the design stand	dards requiren	nents for this facility.			
Dollution Doducti		l					
Pollution Reducti							
Flow Cont							
Destinati	on (DT) <mark>Yes</mark>	*An infiltration facility must be o	chosen as the facil	ity type to meet destination requirements			
Site Data-Post Develop	ment						
Total Square Footag	e Impervious Area=	3028 sqft	Total	Square Footage Pervious Area=	0 sqft		
In	pervious Area CN=	98		Pervious Area CN=	85		
Total Square Footage of Drainage Area= 3028 sft Time of Concentration Post Development= 5 min							
Wei	ghted Average CN=	98		_			
Site Data-Pre Developm	nent (Data in th	is section is only used	if Flow Contr	ol is required)			
Pro	e-Development CN=	73	Time of C	oncentration Pre-Development=	10 min		
Soil Data	•			· •			
	- II In filter tion Date						
	oil Infiltration Rate= oil Infiltration Rate=	10 in/hr (See No 4 in/hr	de 4)	Destination Design= Soil Infiltration Rate	5 in/hr		
		4 11/11		Son minutation Rate			
Design Storms Used Fo	or Calculations						
Requirement	Rainfall Depth	Design Storm					
Pollution Reduction	0.8 inches	Water Quality					
Flow Control	5.1 inches	Flood Control					
Destination	5.1 inches	Flood Control					
Facility Data							
	Eacility Type=	Infiltration Stormwater	r Plantor	Facility Surface Area=	275.4 sqft		
	Surface Width=	8.5 ft	aillei	Facility Surface Perimeter=	81.8 ft		
	Surface Length=	32.4 ft		Facility Bottom Area=	112 sqft		
-	acility Side Slopes=	3 to 1		Facility Bottom Perimeter=	64 ft		
	Ponding Depth	3 10 1		a acting bottom Fernineter-	0411		
	mwater Facility=	9 in		Basin Volume=	152.7 cf		
	/ing Medium (Soil)=	2 in	Ratio of F	acility Area to Impervious Area=	0.091		
	J						

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.012 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 158 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Sta	ndards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour	Drawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.093 cfs	Peak Facility Overflow Rate= 0.032 cfs
Facility = 1214 cf	Total Overflow Volume= 40 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data Peak Flow Rate = 0.037 cfs Total Runoff Volume = 587 cf Yes Facility Sizing Meets Flow Control Standards YES Meets Requirement for Post Development off	? site flow less or equal to Pre-Development Flow?
YES Meets Requirement for Maximum of 18 Hour	Drawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.093 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 1214 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 8.9 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour	Drawdown Time?

EUGENE		face Filtration/Infilt NRCS Type 1A Rair		ity Sizing Spreadsheet ution	
	Version 2.1				
Project Information					
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>	
Project Address:	<u>18-12-15-00-01500</u>			Permit Number: <u>NA</u>	
	Florence, OR			Catchment ID: <u>2B</u>	
Designer:	Clint Beecroft				
Company:	EGR & Associates				
Instructions:					
1. Complete this form for	· each drainage catch	ment in the project site the	hat is to be siz	ed per the Presumptive Approach	ι.
2. Provide a distinctive C	atchment ID for each	facility coordinated with	the site basin	map to correlate the appropriate	
calculations with the fa	acility.				
3. The maximum drainag	je catchment to be m	odeled per the Presumpt	tive Approach	s 1 acre (43,560 SF)	
4.For infiltration facilities	in Class A or B soils	where no infiltration testi	ng has been p	erfromed use an infiltration rate o	f 0.5 in/hr.
For all facilities use a	maximum soil infiltra	ion rate of 2.5 in/hr for to	psoil/growing	medium.	
Design Requirements:					
Choose "Yes" from the d	ropdown boxes belo	w next to the design stand	dards requiren	nents for this facility.	
		1			
Pollution Reducti					
Flow Cont					
Destinati	on (DT) Yes	*An infiltration facility must be o	chosen as the faci	ity type to meet destination requirements	
	-	-			
Site Data-Post Develop	ment				
Total Square Footag	e Impervious Area=	3220 sqft	Total	Square Footage Pervious Area=	= 0 sqft
	pervious Area CN=			Pervious Area CN=	
Total Square Footag	e of Drainage Area=	3220 sft	Time of Co	ncentration Post Development=	= 5 min
	ghted Average CN=			·····	
Site Data-Pre Developm		his section is only used	if Flow Contr	al is required)	
	•			· · · · ·	
Pro	e-Development CN=	73	Time of C	oncentration Pre-Development=	= <u>10</u> min
Soil Data					
Tested S	oil Infiltration Rate=	10 in/hr (See Not	te 4)	Destination Design=	= 5 in/hr
Design S	oil Infiltration Rate=	4 in/hr		Soil Infiltration Rate	<u>, </u>
Design Storms Used Fo	or Calculations				
Requirement	Rainfall Depth	Design Storm			
Pollution Reduction	0.8 inches	Water Quality			
Flow Control	5.1 inches	Flood Control			
Destination	5.1 inches	Flood Control			
	0.1				
Facility Data					
		Infiltration Stormwater	r Planter	Facility Surface Area=	
	Surface Width=	8.5 ft		Facility Surface Perimeter=	
	Surface Length=			Facility Bottom Area=	
	acility Side Slopes=	3 to 1		Facility Bottom Perimeter=	= 68 ft
	Ponding Depth				
	mwater Facility=	<mark>9</mark> in	-	Basin Volume=	
Depth of Grov	ving Medium (Soil)=	<mark>2</mark> in	Ratio of F	acility Area to Impervious Area=	0.091

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.013 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater	
Facility = 168 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Sta	ndards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour I	Drawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.099 cfs	Peak Facility Overflow Rate= 0.034 cfs
Total Runoff Volume to Stormwater	
Facility = 1291 cf	Total Overflow Volume= 43 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data Peak Flow Rate = 0.039 cfs Total Runoff Volume = 625 cf Yes Facility Sizing Meets Flow Control Standards	?
YES Meets Requirement for Post Development off YES Meets Requirement for Maximum of 18 Hour I	site flow less or equal to Pre-Development Flow? Drawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.099 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater	
Facility = 1291 cf	Total Overflow Volume=0 cf
Max. Depth of Stormwater in Facility= 8.9 in Drawdown Time= 0.2 hours	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour E	Drawdown Time?

EUGENE		face Filtration/Infilt NRCS Type 1A Rai		ty Sizing Spreadsheet ution	
	Version 2.1				
Project Information					
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>	
Project Address:	<u>18-12-15-00-01500</u>			Permit Number: <u>NA</u>	
	Florence, OR			Catchment ID: <u>2C</u>	
Designer:	Clint Beecroft				
Company:	EGR & Associates				
Instructions:					
1. Complete this form for	r each drainage catc	nment in the project site	that is to be siz	ed per the Presumptive Approach.	
2. Provide a distinctive C	atchment ID for eac	n facility coordinated with	n the site basin	map to correlate the appropriate	
calculations with the fa	acility.				
3. The maximum drainag	ge catchment to be n	odeled per the Presump	otive Approach i	s 1 acre (43,560 SF)	
4.For infiltration facilities	in Class A or B soils	where no infiltration test	ting has been p	erfromed use an infiltration rate of (0.5 in/hr.
For all facilities use a	maximum soil infiltra	tion rate of 2.5 in/hr for to	opsoil/growing r	nedium.	
Design Requirements:					
Choose "Yes" from the d	lropdown boxes belo	w next to the design star	ndards requirem	ents for this facility.	
Delletten Dedect		1			
Pollution Reducti					
Flow Cont					
Destinati	on (DT) Yes	*An infiltration facility must be	chosen as the facil	ty type to meet destination requirements	
Site Data-Post Develop	ment				
Total Square Footag	e Impervious Area	3150 sqft	Total	Square Footage Pervious Area=	0 sqft
	npervious Area CN:			Pervious Area CN=	85
	•			L	
Total Square Footage of Drainage Area= 3150 sft Time of Concentration Post Development= 5 min					
	Weighted Average CN= 98				
Site Data-Pre Developn	nent (Data in t	nis section is only used	d if Flow Contr	ol is required)	
Dr	e-Development CN=	73	Time of C	oncentration Pre-Development=	10 min
	e-Development Cit-	15	Time of Co		
Soil Data					
Tested S	oil Infiltration Rate	: <u>10</u> in/hr (See No	ote 4)	Destination Design=	5 in/hr
Design S	oil Infiltration Rate	· 4 in/hr		Soil Infiltration Rate	
Design Storms Used Fo	or Calculations				
Requirement	Rainfall Depth	Design Storm]		
Pollution Reduction	0.8 inches	Water Quality			
Flow Control	5.1 inches	Flood Control			
Destination	5.1 inches	Flood Control			
	0.1 menes				
Facility Data					
		Infiltration Stormwate	er Planter	Facility Surface Area=	286.45 sqft
	Surface Width		_	Facility Surface Perimeter=	84.4 ft
	Surface Length=			Facility Bottom Area=	117 sqft
	acility Side Slopes	3 to 1		Facility Bottom Perimeter=	66 ft
	Ponding Depth			Ĩ	
	mwater Facility=	<mark>9</mark> in	_	Basin Volume=	158.8 cf
Depth of Grov	ving Medium (Soil)=	in 2 in	Ratio of Fa	acility Area to Impervious Area=	0.091

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.013 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 164 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Stan	idards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.096 cfs	Peak Facility Overflow Rate= 0.033 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf	Total Overflow Volume= 42 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data	
Peak Flow Rate = 0.038 cfs Total Runoff Volume = 611 cf	
Yes Facility Sizing Meets Flow Control Standards?	
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.096 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 1263 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 8.9 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene Version 2.1 Project Information Project Name: Fairway Estates Project Address: 18-12-15-00-01500 Florence, OR Permit Number: Designer: Clint Beecroft Company: EGR & Associates	
Project Information Project Name: Fairway Estates Project Name: Fairway Estates Project Address: 18-12-15-00-01500 Project Address: 18-12-15-00-01500 Florence, OR Catchment ID: Designer: Clint Beecroft Company: EGR & Associates	
Project Name: Fairway Estates Date: 5/19/2022 Project Address: 18-12-15-00-01500 Permit Number: NA Florence, OR Catchment ID: 2D Designer: Clint Beecroft Catchment ID: 2D Company: EGR & Associates EGR & Associates EGR & Associates	
Project Address: 18-12-15-00-01500 Permit Number: NA Florence, OR Catchment ID: 2D Designer: Clint Beecroft 2D Company: EGR & Associates EGR & Associates	
Florence, OR Catchment ID: Designer: Clint Beecroft Company: EGR & Associates	
Designer: <u>Clint Beecroft</u> Company: <u>EGR & Associates</u>	
Company: <u>EGR & Associates</u>	
Instructions:	
1. Complete this form for each drainage catchment in the project site that is to be sized per the Presumptive Approach.	
2. Provide a distinctive Catchment ID for each facility coordinated with the site basin map to correlate the appropriate	
calculations with the facility.	
3. The maximum drainage catchment to be modeled per the Presumptive Approach is 1 acre (43,560 SF)	
4. For infiltration facilities in Class A or B soils where no infiltration testing has been perfromed use an infiltration rate of 0.5 in/hr.	
For all facilities use a maximum soil infiltration rate of 2.5 in/hr for topsoil/growing medium.	
Design Requirements:	
Choose "Yes" from the dropdown boxes below next to the design standards requirements for this facility.	
Pollution Reduction (PR) Yes	
Flow Control (FC) Yes	
Destination (DT) Yes *An infiltration facility must be chosen as the facility type to meet destination requirements	
Site Data-Post Development	
Total Square Footage Impervious Area= 3292 sqft Total Square Footage Pervious Area= 0 sqft	
Impervious Area CN= 98 Pervious Area CN= 85	
Total Square Footage of Drainage Area= 3292 sft Time of Concentration Post Development= 5 min	
Weighted Average CN= 98	
Site Data-Pre Development (Data in this section is only used if Flow Control is required)	
Pre-Development CN= 73 Time of Concentration Pre-Development= 10 min	
Soil Data	
Soil Data Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 4 in/hr Soil Infiltration Rate Design Storms Used For Calculations Infiltration Rate Infiltration Rate	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 4 in/hr Soil Infiltration Rate Design Storms Used For Calculations Requirement Requirement Rainfall Depth Design Storm	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= Design Soil Infiltration Rate= Dim/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Flow Control 5.1 inches Flood Control	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Flow Control 5.1 inches Flood Control Destination 5.1 inches Flood Control	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Flow Control 5.1 inches Flood Control	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Flow Control 5.1 inches Flood Control Destination 5.1 inches Flood Control	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Flow Control 5.1 inches Flood Control Destination 5.1 inches Flood Control Destination 5.1 inches Flood Control Facility Data Facility Type= Infiltration Stormwater Planter Facility Surface Area= 299.2 sqft Surface Width= 8.5 ft Facility Surface Perimeter= 87.4 ft	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Elood Control Destination 5.1 inches Flood Control Destination 5.1 inches Flood Control Destination 5.1 inches Flood Control Destination 5.1 inches Flood Control Facility Data Facility Type= Infiltration Stormwater Planter Facility Surface Area= 209.2 sqft	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Flow Control 5.1 inches Flood Control Destination 5.1 inches Flood Control Facility Data Facility Type= Infiltration Stormwater Planter Facility Surface Area= 299.2 sqft Surface Width= 8.5 ft Facility Surface Perimeter= 87.4 ft Surface Length= 35.2 ft Facility Bottom Area= 123 sqft Facility Side Slopes= 3 to 1 Facility Bottom Perimeter= 69 ft	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Flow Control 5.1 inches Flood Control Destination 5.1 inches Flood Control Facility Data Facility Type= Infiltration Stormwater Planter Facility Surface Area= 299.2 sqft Surface Width= 8.5 ft Facility Surface Perimeter= 87.4 ft Surface Length= 35.2 ft Facility Bottom Area= 123 sqft Facility Side Slopes= Max. Ponding Depth To 1	
Tested Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Soil Infiltration Rate= 10 in/hr (See Note 4) Destination Design= 5 in/hr Design Storms Used For Calculations Requirement Rainfall Depth Design Storm Pollution Reduction 0.8 inches Water Quality Flow Control 5.1 inches Flood Control Destination 5.1 inches Flood Control Facility Data Facility Type= Infiltration Stormwater Planter Facility Surface Area= 299.2 sqft Surface Width= 8.5 ft Facility Surface Perimeter= 87.4 ft Surface Length= 35.2 ft Facility Bottom Area= 123 sqft Facility Side Slopes= 3 to 1 Facility Bottom Perimeter= 69 ft	

Pollution Reduction-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.014 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs			
Facility = 172 cf	Total Overflow Volume= 0 cf			
Max. Depth of Stormwater in Facility= 0.0 in				
Drawdown Time= 0.2 hours				
Yes Facility Sizing Meets Pollution Reduction Sta	ndards?			
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour	Drawdown Time?			
Flow Control-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.101 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate=0.034 cfs			
Facility = 1320 cf	Total Overflow Volume= 44 cf			
	Peak Off-Site Flow Rate			
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs			
Drawdown Time= 0.2 hours				
<u>Pre-Development Runoff Data</u> Peak Flow Rate = 0.040 cfs Total Runoff Volume = 639 cf Yes Facility Sizing Meets Flow Control Standards	?			
YES Meets Requirement for Post Development of YES Meets Requirement for Maximum of 18 Hour	isite flow less or equal to Pre-Development Flow? Drawdown Time?			
Destination-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.101 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs			
Facility = 1320 cf	Total Overflow Volume= 0 cf			
Max. Depth of Stormwater in Facility= 8.9 in				
Drawdown Time= 0.2 hours				
Yes Facility Sizing Meets Destination Standards?				
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?				

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene							
	Version 2.1							
Project Information								
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>				
Project Address:	<u>18-12-15-00-01500</u>			Permit Number: <u>NA</u>				
	Florence, OR			Catchment ID: <u>2E</u>				
Designer:	Clint Beecroft							
Company:	EGR & Associates							
Instructions								
 Complete this form for Provide a distinctive C calculations with the fa The maximum drainag For infiltration facilities 	 Instructions: Complete this form for each drainage catchment in the project site that is to be sized per the Presumptive Approach. Provide a distinctive Catchment ID for each facility coordinated with the site basin map to correlate the appropriate calculations with the facility. The maximum drainage catchment to be modeled per the Presumptive Approach is 1 acre (43,560 SF) For infiltration facilities in Class A or B soils where no infiltration testing has been perfromed use an infiltration rate of 0.5 in/hr. For all facilities use a maximum soil infiltration rate of 2.5 in/hr for topsoil/growing medium. 							
Design Requirements:								
Choose "Yes" from the d	ropdown boxes belov	v next to the design stan	dards requirem	ents for this facility.				
Pollution Reducti Flow Cont Destinati	rol (FC) Yes	*An infiltration facility must be	chosen as the facil	ty type to meet destination requirements				
Site Data-Post Develop	ment							
Total Square Footag In	e Impervious Area= pervious Area CN=	<mark>1952</mark> sqft 98	Total	Square Footage Pervious Area= Pervious Area CN=	0 sqft 85			
Total Square Footag Wei	e of Drainage Area= ghted Average CN=	1952 sft 98	Time of Co	ncentration Post Development=	5 min			
Site Data-Pre Developn	nent (Data in th	is section is only used	l if Flow Contr	ol is required)				
	e-Development CN=	73	Time of C	oncentration Pre-Development=	10 min			
Soil Data								
	oil Infiltration Rate= oil Infiltration Rate=	<mark>10</mark> in/hr (See No 4 in/hr	ote 4)	Destination Design= Soil Infiltration Rate				
Design Storms Used Fo	or Calculations							
Poquiromont	Rainfall Depth	Dosign Storm						
Requirement Pollution Reduction	0.8 inches	Design Storm Water Quality						
Flow Control	5.1 inches	Flood Control						
Destination	5.1 inches	Flood Control						
Facility Data	•							
	Facility Tra		n Diante i	Faailite Oranfaare A	400.0			
	Facility Type= Surface Width=	Infiltration Stormwate 8.5 ft	rPlanter	Facility Surface Area=	<u>180.2</u> sqft 59.4 ft			
	Surface Width=	21.2 ft		Facility Surface Perimeter= Facility Bottom Area=				
F	acility Side Slopes=	3 to 1		Facility Bottom Perimeter=				
	Ponding Depth			- adding Bottom Formeter-				
in Stor	mwater Facility= /ing Medium (Soil)=	<mark>9</mark> in 2 in	Ratio of F	Basin Volume= acility Area to Impervious Area=				
Deptil of Glow				acinty Area to impervious Area-	0.032			

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.008 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 102 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.1 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Star	ndards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	Prawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.060 cfs	Peak Facility Overflow Rate= 0.020 cfs
Total Runoff Volume to Stormwater	
Facility = 783 cf	Total Overflow Volume= 25 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data Peak Flow Rate = 0.024 cfs Total Runoff Volume = 379 cf	
Yes Facility Sizing Meets Flow Control Standards?	?
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? Prawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.060 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater Facility = 783 cf	Total Overflow Volume= 0 cf
Facility = 783 cf Max. Depth of Stormwater in Facility= 8.9 in	Total Overflow Volume=0cf
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene						
	Version	2.1					
Project Information							
Project Name:	Fairway	Estates			Date: <u>5/19</u>	/2022	
Project Address:	<u>18-12-15</u>	<u>5-00-01500</u>			Permit Number: <u>NA</u>		
	Florence	e, OR			Catchment ID: 2F		
Designer:	Clint Be	ecroft					
Company:	EGR & A	Associates					
Instructions:							
 Complete this form for 2. Provide a distinctive C calculations with the fa 3. The maximum drainag 4.For infiltration facilities 	atchment acility. je catchm	ID for each ent to be m	facility coordinated with odeled per the Presump	the site basin tive Approach	map to correlate the app s 1 acre (43,560 SF)	propriate	n/hr
			ion rate of 2.5 in/hr for to				
		30111111111		psoli/growing i			
Design Requirements:							
Choose "Yes" from the d	ropdown	boxes belov	v next to the design stan	dards requirem	ents for this facility.		
Pollution Reducti Flow Cont Destinati	rol (FC)	Yes	*An infiltration facility must be	chosen as the facil	ity type to meet destination requ	uirements	
Site Data-Post Develop	ment						
Total Square Footag In	-	ious Area= s Area CN=	<mark>4970</mark> sqft 98	Total	Square Footage Pervio Pervious /		<mark>0</mark> sqft 85
Total Square Footag Wei		nage Area= erage CN=	4970 sft 98	Time of Co	ncentration Post Devel	opment=	5 min
Site Data-Pre Developn	nent	(Data in th	is section is only used	l if Flow Contr	ol is required)		
	e-Develop	oment CN=	73	Time of C	oncentration Pre-Devel	opment=	10 min
Soil Data							
		ition Rate= ition Rate=	<mark>10</mark> in/hr (See No 4 in/hr	ote 4)	Destination Soil Infiltra		5 in/hr
Design Storms Used Fo	or Calcula	ations					
			Decime Otome				
Requirement		all Depth	Design Storm				
Pollution Reduction		inches	Water Quality				
Flow Control Destination		inches inches	Flood Control Flood Control				
	5.1	inches					
Facility Data							
	Fac	ility Type=	Infiltration Stormwate	r Planter	Facility Surfa	ce Area=	425.25 sqft
	Surfa	ce Width=	10.5 ft		Facility Surface Pe	erimeter=	102 ft
		e Length=	<mark>40.5</mark> ft		Facility Botto		216 sqft
	-	le Slopes=	3 to 1		Facility Bottom Pe	erimeter=	84 ft
	Ponding						
in Stor Depth of Grow	mwater F ving Medi	-	9 in 2 in	Ratio of F	Basin acility Area to Impervio	Volume= us Area=	248.1 cf 0.086
	-		I				

Pollution Reduction-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.021 Cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs			
Facility = 259 cf	Total Overflow Volume= 0 cf			
Max. Depth of Stormwater in Facility= 0.0 in				
Drawdown Time= 0.2 hours				
Yes Facility Sizing Meets Pollution Reduction Star	idards?			
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?			
Flow Control-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.152 cfs	Peak Facility Overflow Rate= 0.049 cfs			
Total Runoff Volume to Stormwater				
Facility = 1993 cf	Total Overflow Volume= 70 cf			
	Peak Off-Site Flow Rate			
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs			
Drawdown Time= 0.2 hours				
Pre-Development Runoff Data Peak Flow Rate = 0.060 cfs Total Runoff Volume = 964 cf				
Yes Facility Sizing Meets Flow Control Standards?				
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?			
Destination-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.152 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs			
Facility = 1993 cf	Total Overflow Volume=0 cf			
Max. Depth of Stormwater in Facility= 8.9 in				
Drawdown Time= 0.2 hours				
Yes Facility Sizing Meets Destination Standards?				
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?				

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene							
	Version 2.1							
Project Information								
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>				
Project Address:	<u>18-12-15-00-01500</u>			Permit Number: <u>NA</u>				
	Florence, OR			Catchment ID: <u>3A</u>				
Designer:	Clint Beecroft							
Company:	EGR & Associates							
Instructions								
 Complete this form for Provide a distinctive C calculations with the fa The maximum drainag For infiltration facilities 	 Instructions: Complete this form for each drainage catchment in the project site that is to be sized per the Presumptive Approach. Provide a distinctive Catchment ID for each facility coordinated with the site basin map to correlate the appropriate calculations with the facility. The maximum drainage catchment to be modeled per the Presumptive Approach is 1 acre (43,560 SF) For infiltration facilities in Class A or B soils where no infiltration testing has been perfromed use an infiltration rate of 0.5 in/hr. For all facilities use a maximum soil infiltration rate of 2.5 in/hr for topsoil/growing medium. 							
Design Requirements:								
Choose "Yes" from the d	ropdown boxes belov	v next to the design stan	dards requirem	ents for this facility.				
Pollution Reducti Flow Cont Destinati	rol (FC) Yes	*An infiltration facility must be	chosen as the facil	ity type to meet destination requirements				
Site Data-Post Develop	ment							
Total Square Footag In	e Impervious Area= npervious Area CN=	<mark>3154</mark> sqft 98	Total	Square Footage Pervious Area= Pervious Area CN=	0 sqft 85			
Total Square Footag Wei	e of Drainage Area= ghted Average CN=	3154 sft 98	Time of Co	ncentration Post Development=	<mark>5</mark> min			
Site Data-Pre Developn	nent (Data in th	is section is only used	l if Flow Contr	ol is required)				
	e-Development CN=	73	Time of C	oncentration Pre-Development=	10 min			
Soil Data								
	oil Infiltration Rate= oil Infiltration Rate=	<mark>10</mark> in/hr (See No 4 in/hr	ote 4)	Destination Design= Soil Infiltration Rate	5 in/hr			
Design Storms Used Fo	or Calculations							
Requirement	Rainfall Depth	Design Storm						
Pollution Reduction	0.8 inches	Water Quality						
Flow Control	5.1 inches	Flood Control						
Destination	5.1 inches	Flood Control						
Facility Data	<u> </u>							
	Essility Type=	Infiltration Stormusta	r Diantor	Egoility Surface Area-	286.45 ooff			
	Surface Width=	Infiltration Stormwate 8.5 ft	rianter	Facility Surface Area= Facility Surface Perimeter=	286.45 sqft 84.4 ft			
	Surface Length=	33.7 ft		Facility Bottom Area=	117 sqft			
F	acility Side Slopes=	3 to 1		Facility Bottom Perimeter=	66 ft			
	Ponding Depth							
in Stor	mwater Facility= ving Medium (Soil)=	<mark>9</mark> in 2 in	Ratio of F	Basin Volume= acility Area to Impervious Area=	158.8 cf 0.091			

Pollution Reduction-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.013 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs				
Facility = 164 cf	Total Overflow Volume=0 cf				
Max. Depth of Stormwater in Facility= 0.0 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Pollution Reduction St	tandards?				
YES Meets Requirement of No Facility Flooding YES Meets Requirement for Maximum of 18 Hou					
Flow Control-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.097 cfs	Peak Facility Overflow Rate= 0.033 cfs				
Total Runoff Volume to Stormwater					
Facility = 1265 cf	Total Overflow Volume= 42 cf				
	Peak Off-Site Flow Rate				
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs				
Drawdown Time= 0.2 hours					
<u>Pre-Development Runoff Data</u> Peak Flow Rate = 0.038 cfs Total Runoff Volume = 612 cf					
Yes Facility Sizing Meets Flow Control Standard	ls?				
YES Meets Requirement for Post Development of YES Meets Requirement for Maximum of 18 Hou	offsite flow less or equal to Pre-Development Flow? r Drawdown Time?				
Destination-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.097 cfs	Peak Facility Overflow Rate= 0.000 cfs				
Total Runoff Volume to Stormwater Facility = 1265 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 8.9 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Destination Standards	?				
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?					

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene				
	Version 2.1				
Project Information					
Project Name:	Fairway Estate	<u>es</u>	Date: <u>5/19/2022</u>		
Project Address:	<u>18-12-15-00-01</u>	<u>1500</u>	Permit Number: <u>NA</u>		
	Florence, OR		Catchment ID: <u>3B</u>		
Designer:	Clint Beecroft				
Company:	EGR & Associ	ates			
Instructions:					
1. Complete this form for	r each drainage	catchment in the project site	e that is to be sized per the Presumptive Approach.		
2. Provide a distinctive C	atchment ID for	each facility coordinated with	ith the site basin map to correlate the appropriate		
calculations with the fa	acility.				
3. The maximum drainag	ge catchment to	be modeled per the Presum	nptive Approach is 1 acre (43,560 SF)		
4.For infiltration facilities	in Class A or B	soils where no infiltration tes	esting has been perfromed use an infiltration rate of 0.5 in/hr.		
For all facilities use a	maximum soil in	filtration rate of 2.5 in/hr for	topsoil/growing medium.		
Design Requirements:					
Choose "Yes" from the c	lropdown boxes	below next to the design sta	andards requirements for this facility.		
Pollution Reducti		es a la companya de la compan			
Flow Cont	rol (FC) Ye	<mark>S </mark>			
Destinati	on (DT) Ye	S *An infiltration facility must b	be chosen as the facility type to meet destination requirements		
Site Data-Post Develop	ment				
Total Square Footag	e Impervious A	rea= 1986 sqft	Total Square Footage Pervious Area=0sqft		
Total Square Footage Impervious Area 1986 sqft Total Square Footage Pervious Area 0 sqft Impervious Area CN= 98 Pervious Area CN= 85					
	ipervious Area	UN - 30			
Total Square Footag	e of Drainage A	rea= 1986 sft	Time of Concentration Post Development= 5 min		
	ghted Average				
Site Data-Pre Developn	nent (Data	in this section is only use	ed if Flow Control is required)		
Pr	e-Development	CN= 73	Time of Concentration Pre-Development= 10 min		
Soil Data					
Tested S	oil Infiltration R	ate= <u>10</u> in/hr (See N	Note 4) Destination Design= 5 in/hr		
	oil Infiltration R		Soil Infiltration Rate		
Design Storms Used F					
Requirement	Rainfall Dep	V			
Pollution Reduction	0.8 inche				
Flow Control	5.1 inche				
Destination	5.1 inche	s Flood Control			
Facility Data					
	Facility T	ype= Infiltration Stormwat	ter Planter Facility Surface Area= 180.4 sqft		
	Surface Wi		Facility Surface Perimeter= 54.8 ft		
	Surface Len		Facility Bottom Area= 77 sqft		
-	acility Side Slo	-	Facility Bottom Perimeter= 37 ft		
	Ponding Depth				
	mwater Facility		Basin Volume= 104.3 cf		
	ving Medium (S		Ratio of Facility Area to Impervious Area 0.091		
Depth of Glov		~/			

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.008 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 104 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Star	ndards?
YES Meets Requirement of No Facility Flooding?	
YES Meets Requirement for Maximum of 18 Hour D	Prawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.061 cfs	Peak Facility Overflow Rate= 0.014 cfs
Total Runoff Volume to Stormwater	
Facility = 797 cf	Total Overflow Volume= 23 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff DataPeak Flow Rate =0.024 cfsTotal Runoff Volume =385 cf	
Yes Facility Sizing Meets Flow Control Standards	?
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	site flow less or equal to Pre-Development Flow? Drawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.061 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs
Facility = 797 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 8.7 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene				
	Version 2.1				
Project Information					
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>	
Project Address:	<u>18-12-15-00-01500</u>			Permit Number: <u>NA</u>	
	Florence, OR			Catchment ID: <u>3C</u>	
Designer:	Clint Beecroft				
Company:	EGR & Associates				
Instructions					
Instructions:					
	-			ed per the Presumptive Approach.	
		facility coordinated with	i the site basin	map to correlate the appropriate	
calculations with the fa	,	adalad nor the Broqump	tivo Approach i	a 1 aaro (12 560 SE)	
3. The maximum drainag				erfromed use an infiltration rate of	0.5 ip/br
		ion rate of 2.5 in/hr for to			0.5 m/m.
				nedidin.	
Design Requirements:					
Choose "Yes" from the d	ropdown boxes belov	v next to the design stan	dards requirem	ents for this facility.	
Pollution Reducti	on (PR) Yes				
Flow Cont					
	· · ·				
Destinati		*An infiltration facility must be	chosen as the facil	ity type to meet destination requirements	
Site Data-Post Develop	ment				
		2050			
Total Square Footag	-	3250 sqft	Total	Square Footage Pervious Area=	0 sqft
In	pervious Area CN=	98		Pervious Area CN=	85
Total Square Footag	of Drainago Aroa-	3250 sft	Time of Co	noontration Boot Dovelopment-	5 min
Total Square Footage	ghted Average CN=	98	Time of Co	ncentration Post Development=	.
Site Data-Pre Developn	nent (Data in th	is section is only used	l if Flow Contr	ol is required)	
Pre	e-Development CN=	73	Time of C	oncentration Pre-Development=	10 min
Soil Data					
Tested S	oil Infiltration Rate=	10 in/hr (See No	ote 4)	Destination Design=	5 in/hr
Design S	oil Infiltration Rate=	4 in/hr		Soil Infiltration Rate	
Design Storms Used Fo	or Calculations				
		Decision Storm			
Requirement Pollution Reduction	Rainfall Depth 0.8 inches	Design Storm Water Quality			
Flow Control	5.1 inches	Flood Control			
Destination	5.1 inches	Flood Control			
	0.1 110100				
Facility Data					
		Infiltration Stormwate	r Planter	Facility Surface Area=	294.95 sqft
	Surface Width=	8.5 ft		Facility Surface Perimeter=	86.4 ft
	Surface Length=	34.7 ft		Facility Bottom Area=	121 sqft
	acility Side Slopes=	3 to 1		Facility Bottom Perimeter=	68 ft
	Ponding Depth			Desir Values-	162 E of
	mwater Facility=	<mark>9</mark> in 2 in	Datis of F	Basin Volume=	163.5 cf
Depth of Grov	/ing Medium (Soil)=	<mark>2</mark> in	Ratio of Fa	acility Area to Impervious Area=	0.091

Pollution Reduction-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.013 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater	
Facility = 169 cf	Total Overflow Volume= 0 cf
Max. Depth of Stormwater in Facility= 0.0 in	
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Pollution Reduction Star	ndards?
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	vrawdown Time?
Flow Control-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.099 cfs	Peak Facility Overflow Rate= 0.034 cfs
Total Runoff Volume to Stormwater	
Facility = 1304 cf	Total Overflow Volume= 43 cf
	Peak Off-Site Flow Rate
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs
Drawdown Time= 0.2 hours	
Pre-Development Runoff Data Peak Flow Rate = 0.039 cfs Total Runoff Volume = 630 cf	
Yes Facility Sizing Meets Flow Control Standards?	
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?
Destination-Calculation Results	
Peak Flow Rate to Stormwater Facility = 0.099 cfs	Peak Facility Overflow Rate= 0.000 cfs
Total Runoff Volume to Stormwater Facility = 1304 cf	Total Overflow Volume= 0 cf
Facility = 1304 cf Max. Depth of Stormwater in Facility= 8.9 in	Total Overflow Volume=0cf
Drawdown Time= 0.2 hours	
Yes Facility Sizing Meets Destination Standards?	
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	rawdown Time?

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene						
	Version 2.1						
Project Information							
Project Name:	Fairway Estates			Date: <u>5/10/2022</u>			
Project Address:	<u>18-12-15-00-01500</u>			Permit Number: <u>NA</u>			
	Florence, OR			Catchment ID: <u>3D</u>			
Designer:	Clint Beecroft						
Company:	EGR & Associates						
Instructions:							
1. Complete this form for	· each drainage catch	ment in the project site t	that is to be siz	ed per the Presumptive Approac	h.		
2. Provide a distinctive C	atchment ID for each	facility coordinated with	the site basin	map to correlate the appropriate			
calculations with the fa	acility.						
3. The maximum drainag	e catchment to be m	odeled per the Presump	tive Approach	s 1 acre (43,560 SF)			
4.For infiltration facilities	in Class A or B soils	where no infiltration test	ing has been p	erfromed use an infiltration rate o	of 0.5 in/hr.		
For all facilities use a	maximum soil infiltra	ion rate of 2.5 in/hr for to	opsoil/growing	nedium.			
Design Requirements:							
Choose "Yes" from the d	ropdown boxes belo	v next to the design stan	dards requiren	ents for this facility.			
		1					
Pollution Reducti							
Flow Cont							
Destinati	on (DT) Yes	*An infiltration facility must be	chosen as the faci	ity type to meet destination requirements			
	-						
Site Data-Post Develop	ment						
Total Square Footag	Total Square Footage Impervious Area= 4286 sqft Total Square Footage Pervious Area= 0 sqft						
	pervious Area CN=			Pervious Area CN			
Total Square Footage	e of Drainage Area=	4286 sft	Time of Co	ncentration Post Development	t= 5 min		
	ghted Average CN=			·····			
Site Data-Pre Developn		is section is only used	l if Flow Cont	ol is required)			
	•						
	e-Development CN=	73	Time of C	oncentration Pre-Development	t= <u>10</u> min		
Soil Data							
Tested Se	oil Infiltration Rate=	10 in/hr (See No	ote 4)	Destination Design	i=5 in/hr		
Design S	oil Infiltration Rate=	4 in/hr		Soil Infiltration Rat	e		
Design Storms Used Fo	or Calculations						
Requirement	Rainfall Depth	Design Storm					
Pollution Reduction	0.8 inches	Water Quality					
Flow Control	5.1 inches	Flood Control					
Destination	5.1 inches	Flood Control					
	0.111101100						
Facility Data							
		Infiltration Stormwate	r Planter	Facility Surface Area			
	Surface Width=	<mark>8.5</mark> ft		Facility Surface Perimeter			
	Surface Length=			Facility Bottom Area			
	acility Side Slopes=	3 to 1		Facility Bottom Perimeter	r= 90 ft		
	Ponding Depth						
	mwater Facility=	<mark>9</mark> in	B (1) 5 =	Basin Volume			
Depth of Grow	/ing Medium (Soil)=	<mark>2</mark> in	Ratio of F	acility Area to Impervious Area	= 0.090		

Pollution Reduction-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.018 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs				
Facility = 223 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 0.0 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Pollution Reduction Star	ndards?				
YES Meets Requirement of No Facility Flooding?					
YES Meets Requirement for Maximum of 18 Hour E	Drawdown Time?				
Flow Control-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.131 cfs	Peak Facility Overflow Rate= 0.045 cfs				
Total Runoff Volume to Stormwater					
Facility = 1719 cf	Total Overflow Volume= 58 cf				
	Peak Off-Site Flow Rate				
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs				
Drawdown Time= 0.2 hours					
Pre-Development Runoff Data Peak Flow Rate = 0.052 cfs Total Runoff Volume = 831 cf					
Yes Facility Sizing Meets Flow Control Standards	?				
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	site flow less or equal to Pre-Development Flow? Drawdown Time?				
Destination-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.131 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs				
Facility = 1719 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 8.9 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Destination Standards?					
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?					

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene					
	Version 2.1					
Project Information						
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>		
Project Address:	<u>18-12-15-00-0150</u>	<u>0</u>		Permit Number: <u>NA</u>		
	Florence, OR			Catchment ID: <u>3E</u>		
Designer:	Clint Beecroft					
Company:	EGR & Associate	<u>s</u>				
Instructions:						
1. Complete this form for	r each drainage cat	chment in the project site	that is to be siz	ed per the Presumptive Approach.		
2. Provide a distinctive C	atchment ID for ea	ch facility coordinated with	n the site basin	map to correlate the appropriate		
calculations with the fa	acility.					
3. The maximum drainag	ge catchment to be	modeled per the Presump	otive Approach i	s 1 acre (43,560 SF)		
4.For infiltration facilities	in Class A or B so	s where no infiltration tes	ting has been p	erfromed use an infiltration rate of 0	.5 in/hr.	
For all facilities use a	maximum soil infilt	ation rate of 2.5 in/hr for t	opsoil/growing r	nedium.		
Design Requirements:						
Choose "Yes" from the c	lropdown boxes be	ow next to the design star	ndards requirem	ents for this facility.		
Dellection Deducet		-				
Pollution Reducti		_				
Flow Cont						
Destinati	on (DT) Yes	*An infiltration facility must be	chosen as the facil	ty type to meet destination requirements		
	-					
Site Data-Post Develop	ment					
Total Square Footag	e Impervious Area	= 3444 sqft	Total	Square Footage Pervious Area=	0 sqft	
	npervious Area Cl			Pervious Area CN=	85	
Total Square Footag	e of Drainage Area	= 3444 sft	Time of Co	ncentration Post Development=	5 min	
	ghted Average CI					
Site Data-Pre Developm		this section is only used	d if Flow Contr	ol is required)		
Pro	e-Development Cl	= <u>73</u>	Time of Co	oncentration Pre-Development=	<mark>10</mark> min	
Soil Data						
Tested S	oil Infiltration Rate	= 10 in/hr (See N	ote 4)	Destination Design=	5 in/hr	
Design S	oil Infiltration Rate	= 4 in/hr		Soil Infiltration Rate		
Design Storms Used F	or Calculations					
			1			
Requirement	Rainfall Depth	Design Storm	-			
Pollution Reduction	0.8 inches	Water Quality	-			
Flow Control	5.1 inches	Flood Control	-			
Destination	5.1 inches	Flood Control	J			
Facility Data						
	Facility Type	= Infiltration Stormwate	er Planter	Facility Surface Area=	312.8 sqft	
	Surface Widtl			Facility Surface Perimeter=	90.6 ft	
	Surface Length= 36.8 ft Facility Bottom Area= 129 sqft					
F	acility Side Slope			Facility Bottom Perimeter=	73 ft	
	Ponding Depth					
	mwater Facility=	9 in		Basin Volume=	173.3 cf	
	ving Medium (Soil		Ratio of Fa	acility Area to Impervious Area=	0.091	
	3					

Pollution Reduction-Calculation Results						
Peak Flow Rate to Stormwater Facility = 0.014 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs					
Facility = 180 cf	Total Overflow Volume= 0 cf					
Max. Depth of Stormwater in Facility= 0.0 in						
Drawdown Time= 0.2 hours						
Yes Facility Sizing Meets Pollution Reduction S	standards?					
YES Meets Requirement of No Facility Flooding YES Meets Requirement for Maximum of 18 Hor						
Flow Control-Calculation Results						
Peak Flow Rate to Stormwater Facility = 0.105 cfs	Peak Facility Overflow Rate= 0.036 cfs					
Total Runoff Volume to Stormwater Facility = 1381 cf	Total Overflow Volume= 46 cf					
	Peak Off-Site Flow Rate					
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs					
Drawdown Time= 0.2 hours						
<u>Pre-Development Runoff Data</u> Peak Flow Rate = 0.042 cfs Total Runoff Volume = 668 cf						
Yes Facility Sizing Meets Flow Control Standard	ds ?					
YES Meets Requirement for Maximum of 18 Ho	offsite flow less or equal to Pre-Development Flow? ur Drawdown Time?					
Destination-Calculation Results						
Peak Flow Rate to Stormwater Facility = 0.105 cfs	Peak Facility Overflow Rate= 0.000 cfs					
Total Runoff Volume to Stormwater Facility = 1381 cf	Total Overflow Volume=0 cf					
Max. Depth of Stormwater in Facility= 8.9 in						
Drawdown Time= 0.2 hours						
Yes Facility Sizing Meets Destination Standards	s?					
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?						

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene					
	Version 2.1					
Project Information						
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>		
Project Address:	<u>18-12-15-00-01500</u>			Permit Number: <u>NA</u>		
	Florence, OR			Catchment ID: <u>3F</u>		
Designer:	Clint Beecroft					
Company:	EGR & Associates					
Instructions:						
1. Complete this form for	each drainage catch	ment in the project site t	hat is to be siz	ed per the Presumptive Approach.		
2. Provide a distinctive C	atchment ID for each	facility coordinated with	the site basin	map to correlate the appropriate		
calculations with the fa	acility.					
3. The maximum drainag						
4.For infiltration facilities	in Class A or B soils	where no infiltration testi	ing has been p	erfromed use an infiltration rate of (0.5 in/hr.	
For all facilities use a	maximum soil infiltrat	ion rate of 2.5 in/hr for to	psoil/growing	medium.		
Design Requirements:						
Choose "Yes" from the d	ropdown boxes below	v next to the design stan	dards requiren	nents for this facility.		
Bollution Boducti		l i i i i i i i i i i i i i i i i i i i				
Pollution Reducti						
Flow Cont						
Destinati	on (DT) Yes	*An infiltration facility must be	chosen as the faci	lity type to meet destination requirements		
Site Data-Post Develop	ment					
Total Square Footag	e Impervious Area=	3864 sqft	Total	Square Footage Pervious Area=	<mark>0</mark> sqft	
In	pervious Area CN=	98		Pervious Area CN=	85	
				-		
Total Square Footage	e of Drainage Area=	3864 sft	Time of Co	ncentration Post Development=	<mark>5</mark> min	
Wei	ghted Average CN=	98				
Site Data-Pre Developn	nent (Data in th	is section is only used	if Flow Cont	ol is required)		
Pre	-Development CN=	73	Time of C	oncentration Pre-Development=	10 min	
Soil Data				•		
	oil Infiltration Rate=	10 in/hr (See No	te 4)	Destination Design=	5 in/hr	
	oil Infiltration Rate=	4 in/hr		Soil Infiltration Rate	5 11/11	
Design Storms Used Fo	or Calculations	-				
Requirement	Rainfall Depth	Design Storm				
Pollution Reduction	0.8 inches	Water Quality				
Flow Control	5.1 inches	Flood Control				
Destination	5.1 inches	Flood Control				
Facility Data						
	Facility Type=	Infiltration Stormwate	r Planter	Facility Surface Area=	349.35 sqft	
	Surface Width=	8.5 ft		Facility Surface Perimeter=	99.2 ft	
	Surface Length= 41.1 ft Facility Bottom Area= 146 sqft					
F	acility Side Slopes=	3 to 1		Facility Bottom Perimeter=	81 ft	
	Ponding Depth					
	mwater Facility=	<mark>9</mark> in		Basin Volume=	193.5 cf	
Depth of Grow	/ing Medium (Soil)=	<mark>2</mark> in	Ratio of F	acility Area to Impervious Area=	0.090	
		-			-	

Pollution Reduction-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.016 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs				
Facility = 201 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 0.0 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Pollution Reduction Star	ndards?				
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	Prawdown Time?				
Flow Control-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.118 cfs	Peak Facility Overflow Rate= 0.041 cfs				
Total Runoff Volume to Stormwater					
Facility = 1550 cf	Total Overflow Volume= 52 cf				
	Peak Off-Site Flow Rate				
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs				
Drawdown Time= 0.2 hours					
Pre-Development Runoff Data Peak Flow Rate = 0.047 cfs Total Runoff Volume = 749 cf					
Yes Facility Sizing Meets Flow Control Standards?	?				
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? Prawdown Time?				
Destination-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.118 cfs	Peak Facility Overflow Rate= 0.000 cfs				
Total Runoff Volume to Stormwater Facility = 1550 cf	Total Overflow Volume= 0 cf				
Facility = 1550 cf Max. Depth of Stormwater in Facility= 8.9 in	Total Overflow Volume=0cf				
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Destination Standards?					
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?					

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene						
	Version	2.1					
Project Information							
Project Name:	Fairway	Estates			Date: <mark>5</mark>	<u>5/19/2022</u>	
Project Address:	<u>18-12-15</u>	<u>5-00-01500</u>			Permit Number: <u>N</u>	<u>AA</u>	
	Florence	e, OR			Catchment ID: 3	<u>3G</u>	
Designer:	Clint Be	ecroft					
Company:	EGR & A	Associates					
Instructions:							
1. Complete this form for	each dra	inage catch	ment in the project site	that is to be siz	ed per the Presumpti	ive Approach.	
2. Provide a distinctive C	atchment	ID for each	facility coordinated with	the site basin	map to correlate the	appropriate	
calculations with the fa	acility.						
3. The maximum drainag	je catchm	ent to be m	odeled per the Presump	tive Approach	is 1 acre (43,560 SF))	
4.For infiltration facilities	in Class A	A or B soils	where no infiltration test	ing has been p	erfromed use an infill	tration rate of 0.	5 in/hr.
For all facilities use a	maximum	soil infiltrat	ion rate of 2.5 in/hr for to	opsoil/growing	medium.		
Design Requirements:							
Choose "Yes" from the d	ropdown l	boxes belov	v next to the design stan	idards requiren	nents for this facility.		
			1				
Pollution Reducti	. ,						
Flow Cont	. ,						
Destinati	on (DT)	Yes	*An infiltration facility must be	chosen as the faci	lity type to meet destination	n requirements	
		•					
Site Data-Post Develop	ment						
Total Square Footag	e Impervi	ious Area=	5366 sqft	Total	Square Footage Per	rvious Area=	0 sqft
	-	Area CN=	98			us Area CN=	85
	iportioue	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	00				00
Total Square Footage	e of Drain	nage Area=	5366 sft	Time of Co	ncentration Post De	evelopment=	5 min
		erage CN=	98				
	-	-		Lif Flow Cont	ol ic required)		
Site Data-Pre Developn	nent	(Data in th	is section is only used		oi is required)		
Pre	e-Develop	oment CN=	73	Time of C	oncentration Pre-De	evelopment=	10 min
Soil Data							
Tested Se	oil Infiltra	tion Rate=	10 in/hr (See No	ote 4)	Destinat	tion Design=	5 in/hr
Design S	oil Infiltra	tion Rate=	4 in/hr		Soil Infi	iltration Rate	
Design Storms Used Fo	or Calcula	ations					
	1			1			
Requirement		all Depth	Design Storm				
Pollution Reduction		inches	Water Quality				
Flow Control		inches	Flood Control				
Destination	5.1	inches	Flood Control				
Facility Data							
	Fac	ility Type=	Infiltration Stormwate	r Planter	Facility Su	urface Area=	482.8 sqft
		ce Width=	8.5 ft		Facility Surface		130.6 ft
Surface Length= 56.8 ft Facility Bottom Area= 209 sqft							
F		le Slopes=	3 to 1		Facility Bottom		113 ft
	Ponding	•			,	-	
	mwater F		<mark>9</mark> in		Bas	sin Volume=	267.1 cf
Depth of Grow		-	<mark>2</mark> in	Ratio of F	acility Area to Imper	rvious Area=	0.090
1						le contra de la co	

Pollution Reduction-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.022 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs				
Facility = 280 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 0.0 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Pollution Reduction Star	dards?				
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?				
Flow Control-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.164 cfs	Peak Facility Overflow Rate= 0.056 cfs				
Total Runoff Volume to Stormwater	Tatal Quarter Malana 70 st				
Facility = 2152 cf	Total Overflow Volume= 73 cf				
Max. Depth of Stormwater in Facility= 9.0 in	Peak Off-Site Flow Rate Filtration Facility Underdrain= N\A cfs				
Drawdown Time= 0.2 hours					
Pre-Development Runoff Data					
Peak Flow Rate = 0.065 cfs					
Total Runoff Volume = 1041 cf					
Yes Facility Sizing Meets Flow Control Standards?					
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? rawdown Time?				
Destination-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.164 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs				
Facility = 2152 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 8.9 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Destination Standards?					
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?					

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene					
	Version 2.1					
Project Information						
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>		
Project Address:	18-12-15-00-01500			Permit Number: NA		
	Florence, OR			Catchment ID: <u>3H</u>		
Designer:	Clint Beecroft					
Company:	EGR & Associates					
Instructions:						
1. Complete this form for	each drainage catch	ment in the project site t	hat is to be siz	ed per the Presumptive Approach.		
2. Provide a distinctive C	atchment ID for each	facility coordinated with	the site basin	map to correlate the appropriate		
calculations with the fa						
3. The maximum drainag	e catchment to be m	odeled per the Presump	tive Approach	is 1 acre (43,560 SF)		
4.For infiltration facilities	in Class A or B soils	where no infiltration test	ing has been p	erfromed use an infiltration rate of	0.5 in/hr.	
For all facilities use a	maximum soil infiltrat	ion rate of 2.5 in/hr for to	psoil/growing	medium.		
Design Requirements:						
Choose "Yes" from the d	ropdown boxes below	v next to the design stan	dards requiren	nents for this facility.		
Pollution Reducti	on (PR) Yes					
Flow Cont						
	· · ·					
Destinati		*An infiltration facility must be	chosen as the faci	lity type to meet destination requirements		
Site Data-Post Develop	ment					
Total Square Footag	-		Total	Square Footage Pervious Area=	<mark>0</mark> sqft	
In	pervious Area CN=	98		Pervious Area CN=	85	
Total Square Footag	-		Time of Co	ncentration Post Development=	<mark>5</mark> min	
Wei	ghted Average CN=	98				
Site Data-Pre Developm	nent (Data in th	is section is only used	if Flow Contr	ol is required)		
Pro	e-Development CN=	73	Time of C	oncentration Pre-Development=	10 min	
	bevelopment on	10				
Soil Data						
	oil Infiltration Rate=		te 4)	Destination Design=	5 in/hr	
Design S	oil Infiltration Rate=	4 in/hr		Soil Infiltration Rate		
Design Storms Used Fo	or Calculations					
Requirement	Rainfall Depth	Design Storm				
Pollution Reduction	0.8 inches	Water Quality				
Flow Control Destination	5.1 inches 5.1 inches	Flood Control Flood Control				
	5. I Inches					
Facility Data						
	Facility Type=	Infiltration Stormwate	r Planter	Facility Surface Area=	349.35 sqft	
	Surface Width=	<mark>8.5</mark> ft		Facility Surface Perimeter=	99.2 ft	
	Surface Length=	<mark>41.1</mark> ft		Facility Bottom Area=	146 sqft	
F	acility Side Slopes=			Facility Bottom Perimeter=	81 ft	
	Ponding Depth			-		
	mwater Facility=	<mark>9</mark> in		Basin Volume=	193.5 cf	
Depth of Grov	/ing Medium (Soil)=	<mark>2</mark> in	Ratio of F	acility Area to Impervious Area=	0.090	
L						

Pollution Reduction-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.016 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs				
Facility = 201 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 0.0 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Pollution Reduction Star	ndards?				
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	Prawdown Time?				
Flow Control-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.118 cfs	Peak Facility Overflow Rate= 0.041 cfs				
Total Runoff Volume to Stormwater					
Facility = 1550 cf	Total Overflow Volume= 52 cf				
	Peak Off-Site Flow Rate				
Max. Depth of Stormwater in Facility= 9.0 in	Filtration Facility Underdrain= N\A cfs				
Drawdown Time= 0.2 hours					
Pre-Development Runoff Data Peak Flow Rate = 0.047 cfs Total Runoff Volume = 749 cf					
Yes Facility Sizing Meets Flow Control Standards?	?				
YES Meets Requirement for Post Development offs YES Meets Requirement for Maximum of 18 Hour D	ite flow less or equal to Pre-Development Flow? Prawdown Time?				
Destination-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.118 cfs	Peak Facility Overflow Rate= 0.000 cfs				
Total Runoff Volume to Stormwater Facility = 1550 cf	Total Overflow Volume= 0 cf				
Facility = 1550 cf Max. Depth of Stormwater in Facility= 8.9 in	Total Overflow Volume=0cf				
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Destination Standards?					
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?					

					-	
EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene					
	Version 2.1					
Project Information						
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>		
Project Address:	18-12-15-00-01500			Permit Number: <u>NA</u>		
	Florence, OR			Catchment ID: 3		
Designer:	Clint Beecroft			_		
Company:	EGR & Associates					
Instructions:						
1. Complete this form for	each drainage catch	ment in the project site t	that is to be siz	ed per the Presumptive Approach.		
	-			map to correlate the appropriate		
calculations with the fa		,				
3. The maximum drainag	,	odeled per the Presump	tive Approach	is 1 acre (43.560 SF)		
				perfromed use an infiltration rate of 0.5	in/hr.	
		ion rate of 2.5 in/hr for to				
			······································			
Design Requirements:						
Choose "Yes" from the d	ropdown boxes below	v next to the design stan	dards requiren	nents for this facility.		
Dollution Doducti						
Pollution Reducti						
Flow Cont						
Destinati	on (DT) Yes	*An infiltration facility must be	chosen as the faci	ity type to meet destination requirements		
Site Data-Post Develop	ment					
Total Square Footag	e Impervious Area=	3903 sqft	Total	Square Footage Pervious Area=	<mark>0</mark> sqft	
	pervious Area CN=	98		Pervious Area CN=	85	
Total Square Footage	e of Drainage Area=	3903 sft	Time of Co	ncentration Post Development=	5 min	
	ghted Average CN=	98				
				· · · · ·		
Site Data-Pre Developn	nent (Data in th	is section is only used	I if Flow Contr	ol is required)		
Pre	e-Development CN=	73	Time of C	oncentration Pre-Development=	<mark>10</mark> min	
Soil Data						
	oil Infiltration Rate=	10 in/hr (See No	ote 4)	Destination Design=	5 in/hr	
	oil Infiltration Rate=	4 in/hr		Soil Infiltration Rate		
Design Storms Used Fo	or Calculations					
Requirement	Rainfall Depth	Design Storm				
Pollution Reduction	0.8 inches	Water Quality				
Flow Control	5.1 inches	Flood Control				
Destination	5.1 inches	Flood Control				
	J. I linches					
Facility Data						
	Facility Type=	Infiltration Stormwate	r Planter	Facility Surface Area=	354.45 sqft	
	Surface Width=	<mark>8.5</mark> ft		Facility Surface Perimeter=	100.4 ft	
	Surface Length=	41.7 ft		Facility Bottom Area=	149 sqft	
F	acility Side Slopes=	3 to 1		Facility Bottom Perimeter=	82 ft	
	Ponding Depth					
	mwater Facility=	<mark>9</mark> in		Basin Volume=	196.3 cf	
Depth of Grow	ving Medium (Soil)=	<mark>2</mark> in	Ratio of F	acility Area to Impervious Area=	0.091	

Pollution Reduction-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.016 cfs	Peak Facility Overflow Rate=0.000 cfs				
Total Runoff Volume to Stormwater Facility = 203 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 0.0 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Pollution Reduction Stan	idards?				
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?				
Flow Control-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.119 cfs	Peak Facility Overflow Rate= 0.039 cfs				
Total Runoff Volume to Stormwater					
Facility = 1565 cf	Total Overflow Volume= 51 cf				
Mars Darith of Otomorphic in Facility - 0.0 in	Peak Off-Site Flow Rate				
Max. Depth of Stormwater in Facility= 9.0 in Drawdown Time= 0.2 hours	Filtration Facility Underdrain N\A cfs				
Pre-Development Runoff Data					
Peak Flow Rate = 0.047 cfs					
Total Runoff Volume = 757 cf					
Yes Facility Sizing Meets Flow Control Standards?					
	ite flow less or equal to Pre-Development Flow?				
YES Meets Requirement for Maximum of 18 Hour D	rawdown Time?				
Destination-Calculation Results					
Peak Flow Rate to Stormwater Facility = 0.119 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs				
Facility = 1565 cf	Total Overflow Volume= 0 cf				
Max. Depth of Stormwater in Facility= 8.9 in					
Drawdown Time= 0.2 hours					
Yes Facility Sizing Meets Destination Standards?					
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour Drawdown Time?					

EUGENE	Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet 24 Hour Storm, NRCS Type 1A Rainfall Distribution City of Eugene					
	Version 2.1					
Project Information						
Project Name:	Fairway Estates			Date: <u>5/19/2022</u>		
Project Address:	18-12-15-00-01500			Permit Number: NA		
	Florence, OR			Catchment ID: 3J		
Designer:	Clint Beecroft					
Company:	EGR & Associates					
Instructions:						
1. Complete this form for	each drainage catch	ment in the project site th	nat is to be size	d per the Presumptive Approach.		
	-			nap to correlate the appropriate		
calculations with the fa		,				
3. The maximum drainage	e catchment to be m	odeled per the Presumpti	ve Approach is	1 acre (43,560 SF)		
				rfromed use an infiltration rate of 0.	5 in/hr.	
		ion rate of 2.5 in/hr for top				
Design Requirements:		'	0 0			
Design Requirements.						
Choose "Yes" from the d	ropdown boxes below	v next to the design stand	lards requirem	ents for this facility.		
Pollution Reducti	on (PR) Yes	1				
Flow Cont						
Destinati	on (DT) Yes	*An infiltration facility must be c	hosen as the facilit	y type to meet destination requirements		
Site Date Deat Develor						
Site Data-Post Develop	ment					
Total Square Footag	e Impervious Area=	5628 sqft	Total S	quare Footage Pervious Area=	<mark>0</mark> sqft	
In	npervious Area CN=	98		Pervious Area CN=	85	
Total Square Footag	e of Drainage Area=	5628 sft	Time of Cor	centration Post Development=	<mark>5</mark> min	
Wei	ghted Average CN=	98				
Site Data-Pre Develop	nent (Data in th	is section is only used	if Flow Contro	l is required)		
•	•					
Pro	e-Development CN=	73	Time of Co	ncentration Pre-Development=	<mark>10</mark> min	
Soil Data						
	oil Infiltration Rate=	10 in/hr (See Note	e 4)	Destination Design=	5 in/hr	
	oil Infiltration Rate=		c +)	Soil Infiltration Rate	5 11/11	
Design Storms Used Fo	or Calculations					
Requirement	Rainfall Depth	Design Storm				
Pollution Reduction	0.8 inches	Water Quality				
Flow Control	5.1 inches	Flood Control				
Destination	5.1 inches	Flood Control				
Essility Data						
Facility Data	_					
		Infiltration Stormwater	Planter	Facility Surface Area=	510 sqft	
	Surface Width=			Facility Surface Perimeter=	137 ft	
	Surface Length=			Facility Bottom Area=	222 sqft	
	acility Side Slopes=	3 to 1		Facility Bottom Perimeter=	119 ft	
	Ponding Depth					
in Stor	mwater Facility=	9 in		Basin Volume=	282.1 cf	
	ving Medium (Soil)=		— — —	cility Area to Impervious Area=	0.091	

Pollution Reduction-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.023 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs			
Facility = 293 cf	Total Overflow Volume= 0 cf			
Max. Depth of Stormwater in Facility= 0.0 in				
Drawdown Time= 0.2 hours				
Yes Facility Sizing Meets Pollution Reduction Star	ndards?			
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 18 Hour D	Drawdown Time?			
Flow Control-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.172 cfs	Peak Facility Overflow Rate= 0.052 cfs			
Total Runoff Volume to Stormwater				
Facility = 2257 cf	Total Overflow Volume= 71 cf			
May Danth of Charmyneter in Facility	Peak Off-Site Flow Rate			
Max. Depth of Stormwater in Facility= 9.0 in Drawdown Time= 0.2 hours	Filtration Facility Underdrain= N\A cfs			
Pre-Development Runoff Data Peak Flow Rate = 0.068 cfs Total Runoff Volume = 1092 cf				
Yes Facility Sizing Meets Flow Control Standards	?			
YES Meets Requirement for Post Development offsite flow less or equal to Pre-Development Flow? YES Meets Requirement for Maximum of 18 Hour Drawdown Time?				
Destination-Calculation Results				
Peak Flow Rate to Stormwater Facility = 0.172 cfs Total Runoff Volume to Stormwater	Peak Facility Overflow Rate= 0.000 cfs			
Facility = 2257 cf	Total Overflow Volume= 0 cf			
Max. Depth of Stormwater in Facility= 8.9 in				
Drawdown Time= 0.2 hours				
Yes Facility Sizing Meets Destination Standards?				
YES Meets Requirement of No Facility Flooding? YES Meets Requirement for Maximum of 30 hour D	Prawdown Time?			

	Worksheet fe	or Basin	1 Pipe
Project Description			
Friction Method	Manning Formula		
Solve For	Normal Depth		
Input Data			
Roughness Coefficient		0.013	
Channel Slope		0.00500	ft/ft
Diameter		1.00	ft
Discharge		1.32	ft³/s
Results			
Normal Depth		0.51	ft
Flow Area		0.41	ft²
Wetted Perimeter		1.60	ft
Hydraulic Radius		0.25	ft
Top Width		1.00	ft
Critical Depth		0.49	ft
Percent Full		51.4	%
Critical Slope		0.00607	ft/ft
Velocity		3.25	ft/s
Velocity Head		0.16	ft
Specific Energy		0.68	ft
Froude Number		0.90	
Maximum Discharge		2.71	ft³/s
Discharge Full		2.52	ft³/s
Slope Full		0.00137	ft/ft
Flow Type	SubCritical		
GVF Input Data			
Downstream Depth		0.00	ft
Length		0.00	ft
Number Of Steps		0	
GVF Output Data			
Upstream Depth		0.00	ft
Profile Description			
Profile Headloss		0.00	ft
Average End Depth Over Rise		0.00	%
Normal Depth Over Rise		51.41	%
Downstream Velocity		Infinity	ft/s

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Worksheet for Basin 1 Pipe

GVF Output Data			
Upstream Velocity	Infinity	ft/s	
Normal Depth	0.51	ft	
Critical Depth	0.49	ft	
Channel Slope	0.00500	ft/ft	
Critical Slope	0.00607	ft/ft	

Messages

Notes

Peak flow based on 25 year overflow from Basins 1 and 2 facilities. Total impervious surface area is 43,097 s.f.. Peak runoff is 0.0137 gpm per square foot, or 1.32 cfs.

	Worksheet for Basir	Pipe
Project Description		
Friction Method	Manning Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Diameter	0.83	ft
Discharge	0.60	ft³/s
Results		
Normal Depth	0.36	ft
Flow Area	0.23	ft²
Wetted Perimeter	1.19	ft
Hydraulic Radius	0.19	ft
Top Width	0.82	ft
Critical Depth	0.34	ft
Percent Full	43.4	%
Critical Slope	0.00614	ft/ft
Velocity	2.66	ft/s
Velocity Head	0.11	ft
Specific Energy	0.47	ft
Froude Number	0.90	
Maximum Discharge	1.65	ft³/s
Discharge Full	1.53	ft³/s
Slope Full	0.00077	ft/ft
Flow Type	SubCritical	
GVF Input Data		
Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	C	
GVF Output Data		
Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	43.43	%
Downstream Velocity	Infinity	ft/s

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Worksheet for Basin Pipe

GVF Output Data			
Upstream Velocity	Infinity	ft/s	
Normal Depth	0.36	ft	
Critical Depth	0.34	ft	
Channel Slope	0.00500	ft/ft	
Critical Slope	0.00614	ft/ft	

Messages

Notes

Peak flow based on 25 year overflow from Basin 2 facilities. Total impervious surface area is 19,612 s.f.. Peak runoff is 0.0137 gpm per square foot, or 0.60 cfs.

	Worksheet fo	or Basin	Pipe
Project Description			
Friction Method	Manning Formula		
Solve For	Normal Depth		
Input Data			
Roughness Coefficient		0.013	
Channel Slope		0.00450	ft/ft
Diameter		1.00	ft
Discharge		1.18	ft³/s
Results			
Normal Depth		0.50	ft
Flow Area		0.39	ft²
Wetted Perimeter		1.56	ft
Hydraulic Radius		0.25	ft
Top Width		1.00	ft
Critical Depth		0.46	ft
Percent Full		49.6	%
Critical Slope		0.00594	ft/ft
Velocity		3.03	ft/s
Velocity Head		0.14	ft
Specific Energy		0.64	ft
Froude Number		0.86	
Maximum Discharge		2.57	ft³/s
Discharge Full		2.39	ft³/s
Slope Full		0.00110	ft/ft
Flow Type	SubCritical		
GVF Input Data			
Downstream Depth		0.00	ft
Length		0.00	ft
Number Of Steps		0	
GVF Output Data			
Upstream Depth		0.00	ft
Profile Description			
Profile Headloss		0.00	ft
Average End Depth Over Rise		0.00	%
Normal Depth Over Rise		49.62	%
Downstream Velocity		Infinity	ft/s

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Worksheet for Basin Pipe

GVF Output Data		
Upstream Velocity	Infinity	ft/s
Normal Depth	0.50	ft
Critical Depth	0.46	ft
Channel Slope	0.00450	ft/ft
Critical Slope	0.00594	ft/ft

Messages

Notes

Peak flow based on 25 year overflow from Basin 3 facilities. Total impervious surface area is 38,745 s.f.. Peak runoff is 0.0137 gpm per square foot, or 1.18 cfs.