



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

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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 36-inch 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 Florence Stormwater Management Design Manual, Revised September 2011 (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 pre-development 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 [Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet](#). 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-percent 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.

Table 1. Conveyance Pipe Size Summary

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"

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

VICINITY MAP

Legend

Cannery Point

Shoreline Dr

Rhododendron Dr

MARINERS VILLAGE

SITE

FLORENCE GOLF LINKS

PHASE 1

Gustaw River

Tournament Dr

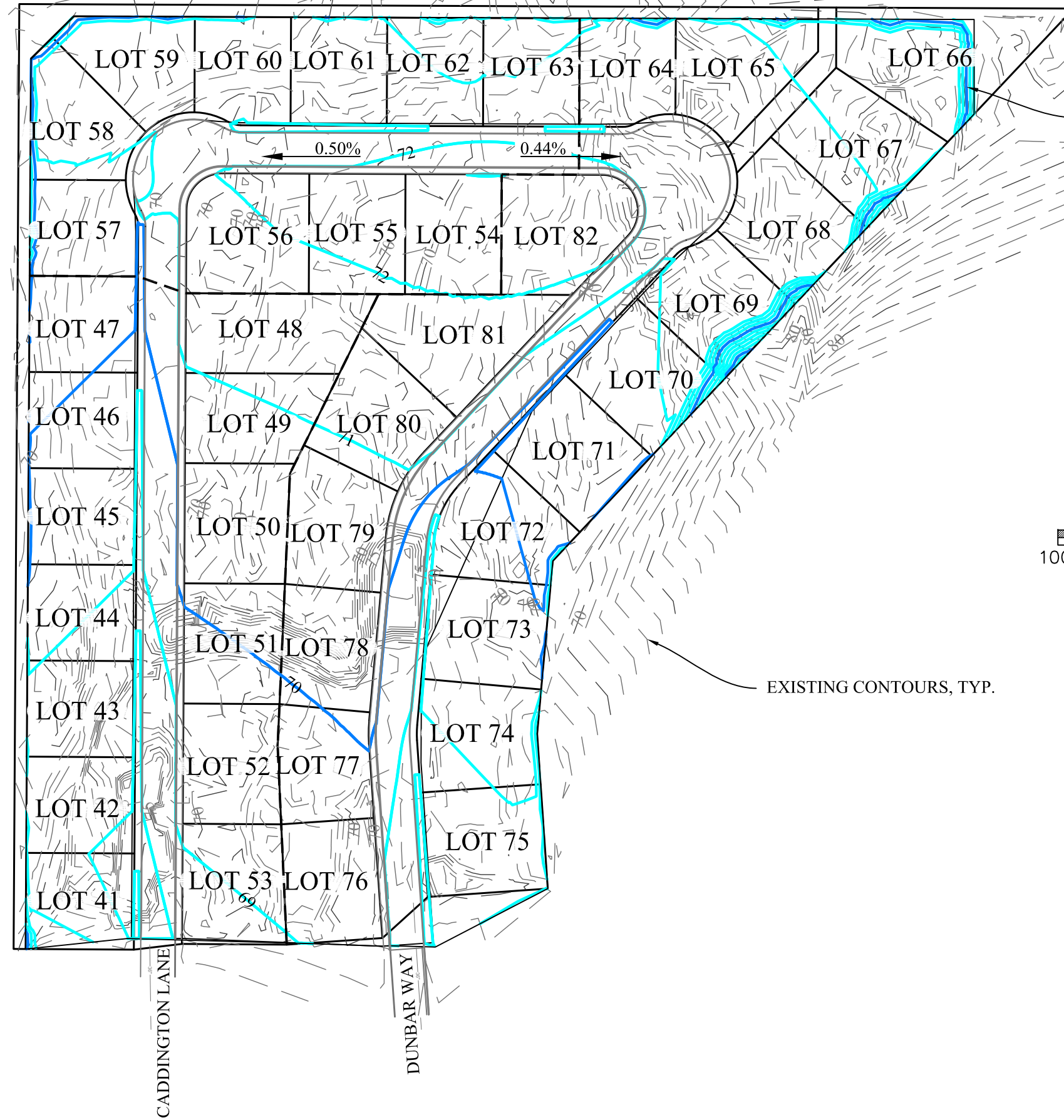
5286

Siano Loop

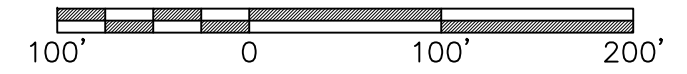
35th St



1000 ft



FINAL CONTOURS, TYP.



TOPOGRAPHIC BASE PROVIDED BY
 WOBBE & ASSOCIATES, INC.
 ELEVATION DATUM = NGVD 1929 ±0.2
 CONTOUR INTERVAL = ONE FOOT

EXISTING CONTOURS, TYP.

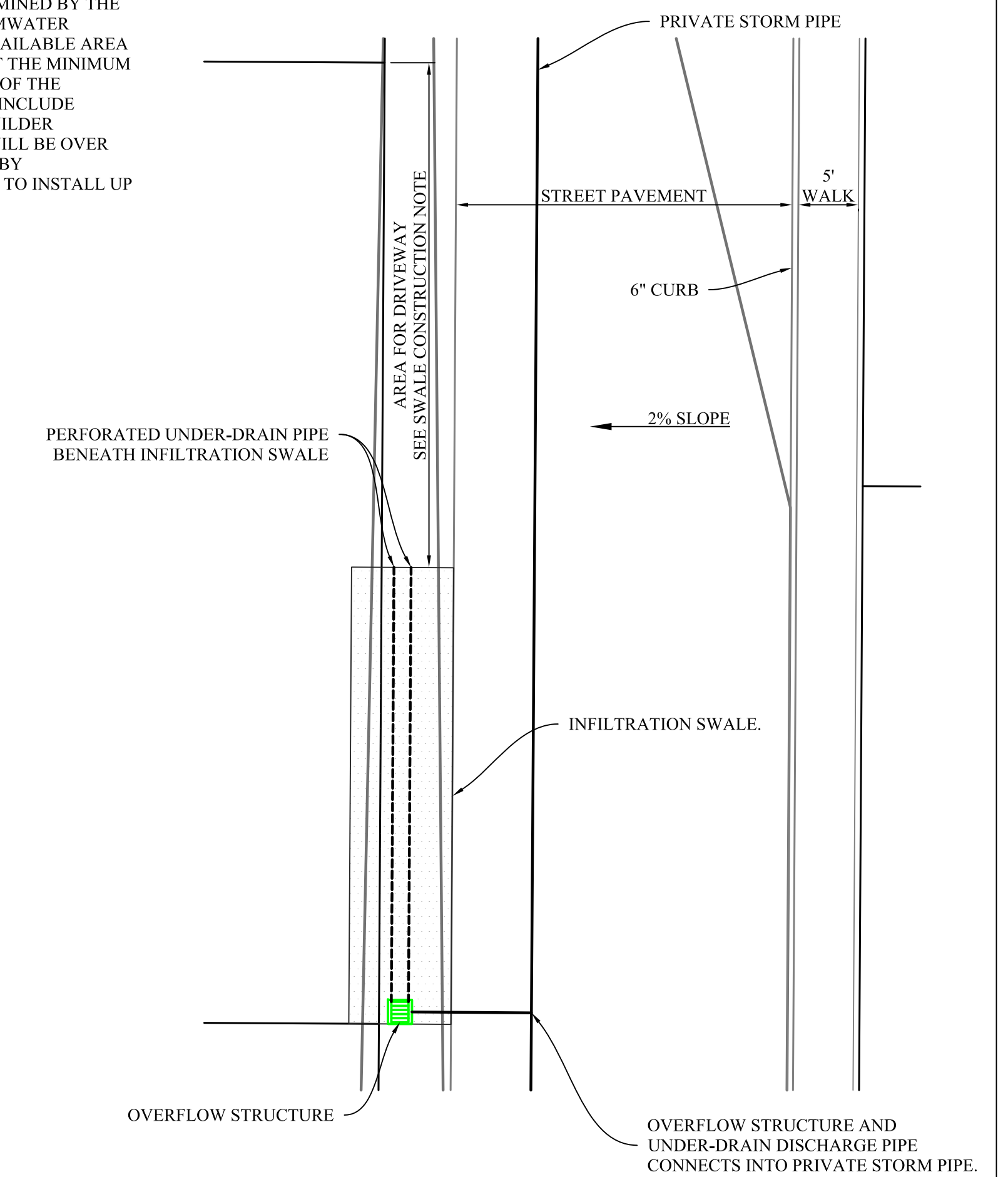
**PRELIMINARY
 SITE GRADING PLAN
 FAIRWAY ESTATES PUD
 FLORENCE, OREGON
 SEPTEMBER 2022**

STORMWATER FACILITY DESIGN NOTES

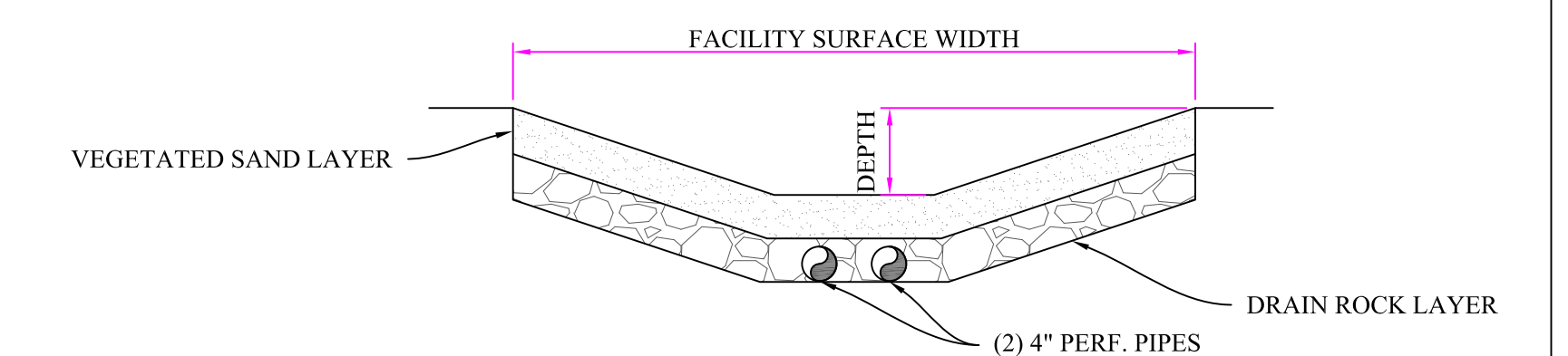
1. FACILITIES ARE SIZED PER THE PRESUMPTIVE APPROACH.
2. RUNOFF CALCULATIONS ARE PER THE UNIT HYDROGRAPH METHOD, 24 HOUR STORM, NRCS TYPE IA RAINFALL DISTRIBUTION.
3. FACILITIES ARE SIZED TO MEET POLLUTION REDUCTION, FLOW CONTROL, AND FINAL DESTINATION (INFILTRATION FACILITY) STANDARDS. PER FLORENCE STORMWATER MANUAL, A WATER QUALITY DESIGN RAINFALL DEPTH OF 0.8 INCHES IS USED FOR POLLUTION REDUCTION AND A 25-YEAR RECURRENCE INTERVAL RAINFALL DEPTH OF 5.06 INCHES IS USED FOR FLOW CONTROL AND FINAL DESTINATION.
4. THE INFILTRATION RATE OF DUNE SAND IS CONSERVATIVELY AT LEAST 10 INCHES PER HOUR. THE FLORENCE STORMWATER MANUAL LIMITS THE DESIGN INFILTRATION RATE TO THE INFILTRATION RATE OF THE GROWING MEDIUM WHICH IS GIVEN AS A MAXIMUM 4 INCHES PER HOUR. THE RESULTING FACILITY SIZES AND DEPTH WERE DESIGNED TO STORE A 25-YEAR EVENT AT THIS INFILTRATION RATE.
5. FINAL DESTINATION IS INFILTRATION INTO GROUNDWATER. FOR AN ESCAPE ROUTE, STORMWATER FACILITIES WILL INCLUDE OVERFLOW PIPES THAT DISCHARGE INTO THE PRIVATE PIPED STORMWATER SYSTEM. THE PIPED SYSTEM DISCHARGES INTO A PUBLIC STORM DRAIN PIPE LOCATED IN RHODODENDRON DRIVE THAT DISCHARGES IN THE SIUSLAW RIVER SOUTHWEST OF THE SITE. IN EVENT THE PIPED SYSTEM CAPACITY IS EXCEEDED, THEN THE FINAL ESCAPE ROUTE IS AT THE LOW POINT OF THE PHASE 1 PROJECT ON TOURNAMENT DRIVE WHERE A DEPRESSED PATH BETWEEN LOTS 28 AND 29 CONNECTS TO AN OPEN SPACE TO THE SOUTH.

SWALE CONSTRUCTION NOTE

LOCATIONS FOR DRIVEWAYS ARE UNKNOWN AND WILL BE DETERMINED BY THE HOME BUILDERS. FOR THAT REASON, THE MINIMUM SIZE OF STORMWATER FACILITIES WERE CALCULATED AND SHOWN ON THIS MAP. THE AVAILABLE AREA FOR A DRIVEWAY VARIES FOR LOTS ADJACENT TO THE SWALE BUT THE MINIMUM IS APPROXIMATELY 30 FEET. THEREFORE, DURING CONSTRUCTION OF THE ROADWAYS ALL FRONTAGE ON ONE SIDE OF THE ROADWAY WILL INCLUDE INSTALLATION OF THE STORMWATER SWALE. WHEN THE HOME BUILDER INSTALLS THE DRIVEWAY TO LOTS ADJACENT TO THE SWALE, IT WILL BE OVER THE TOP OF THE STORMWATER SWALE THAT IS INTERCONNECTED BY PERFORATED PIPES. LOTS ADJACENT TO THE SWALE WILL BE ABLE TO INSTALL UP TO A 30-FOOT WIDE DRIVEWAY ACROSS THE SWALE.



TYPICAL STREET-SIDE SWALE PLAN
N.T.S.



TYPICAL STORMWATER SWALE
N.T.S.

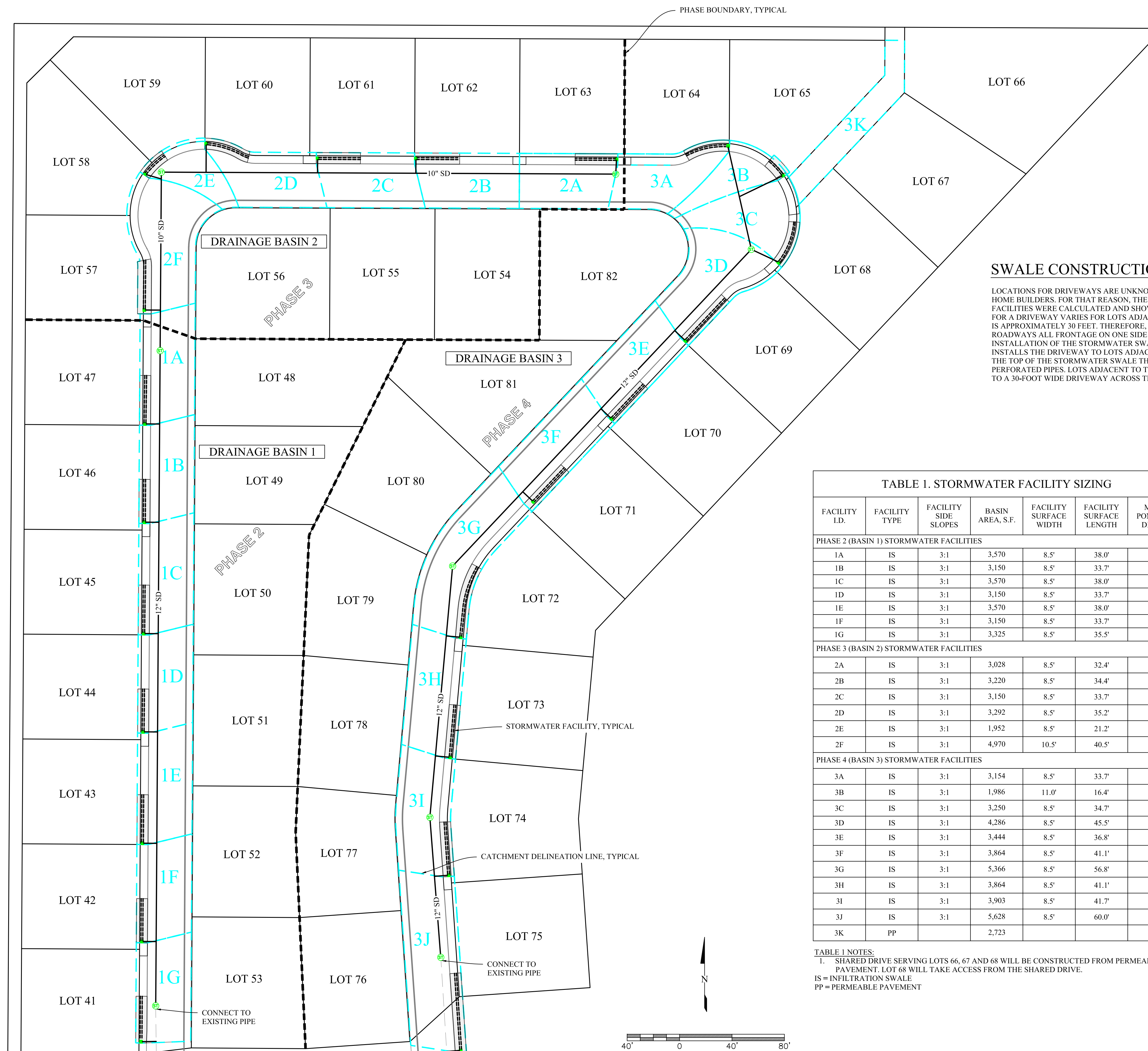


TABLE 1. STORMWATER FACILITY SIZING

FACILITY I.D.	FACILITY TYPE	FACILITY SIDE SLOPES	Basin Area, S.F.	FACILITY SURFACE WIDTH	FACILITY SURFACE LENGTH	MAX. PONDING DEPTH
PHASE 2 (BASIN 1) STORMWATER FACILITIES						
1A	IS	3:1	3,570	8.5'	38.0'	9"
1B	IS	3:1	3,150	8.5'	33.7'	9"
1C	IS	3:1	3,570	8.5'	38.0'	9"
1D	IS	3:1	3,150	8.5'	33.7'	9"
1E	IS	3:1	3,570	8.5'	38.0'	9"
1F	IS	3:1	3,150	8.5'	33.7'	9"
1G	IS	3:1	3,325	8.5'	35.5'	9"
PHASE 3 (BASIN 2) STORMWATER FACILITIES						
2A	IS	3:1	3,028	8.5'	32.4'	9"
2B	IS	3:1	3,220	8.5'	34.4'	9"
2C	IS	3:1	3,150	8.5'	33.7'	9"
2D	IS	3:1	3,292	8.5'	35.2'	9"
2E	IS	3:1	1,952	8.5'	21.2'	9"
2F	IS	3:1	4,970	10.5'	40.5'	9"
PHASE 4 (BASIN 3) STORMWATER FACILITIES						
3A	IS	3:1	3,154	8.5'	33.7'	9"
3B	IS	3:1	1,986	11.0'	16.4'	9"
3C	IS	3:1	3,250	8.5'	34.7'	9"
3D	IS	3:1	4,286	8.5'	45.5'	9"
3E	IS	3:1	3,444	8.5'	36.8'	9"
3F	IS	3:1	3,864	8.5'	41.1'	9"
3G	IS	3:1	5,366	8.5'	56.8'	9"
3H	IS	3:1	3,864	8.5'	41.1'	9"
3I	IS	3:1	3,903	8.5'	41.7'	9"
3J	IS	3:1	5,628	8.5'	60.0'	9"
3K	PP		2,723			

TABLE 1 NOTES:
1. SHARED DRIVE SERVING LOTS 66, 67 AND 68 WILL BE CONSTRUCTED FROM PERMEABLE PAVEMENT. LOT 68 WILL TAKE ACCESS FROM THE SHARED DRIVE.
IS = INFILTRATION SWALE
PP = PERMEABLE PAVEMENT

EXISTING PHASE 1

DRAINAGE BASIN PLAN

APPENDIX B

SIZING SPREADSHEETS AND CALCULATIONS



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: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 1A
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.015 cfs
Total Runoff Volume to Stormwater Facility = 186 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.109 cfs
Total Runoff Volume to Stormwater Facility = 1432 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.038 cfs
Total Overflow Volume = 48 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.109 cfs
Total Runoff Volume to Stormwater Facility = 1432 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown 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 Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 1B
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.013"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="164"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/>	in			
Drawdown Time=	<input type="text" value="0.2"/>	hours			

Yes Facility Sizing Meets Pollution Reduction Standards?

- Meets Requirement of No Facility Flooding?
- Meets Requirement for Maximum of 18 Hour Drawdown Time?

Flow Control-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.096"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.033"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1263"/>	cf	Total Overflow Volume=	<input type="text" value="42"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/>	in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/>	cfs
Drawdown Time=	<input type="text" value="0.2"/>	hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/>	cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.038"/>	cfs
Total Runoff Volume =	<input type="text" value="611"/>	cf

Yes Facility Sizing Meets Flow Control Standards?

- Meets Requirement for Post Development offsite flow less or equal to Pre-Development Flow?
- Meets Requirement for Maximum of 18 Hour Drawdown Time?

Destination-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.096"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1263"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/>	in			
Drawdown Time=	<input type="text" value="0.2"/>	hours			

Yes Facility Sizing Meets Destination Standards?

- Meets Requirement of No Facility Flooding?
- Meets Requirement for Maximum of 30 hour Drawdown 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 Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 1C
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.015 cfs
Total Runoff Volume to Stormwater Facility = 186 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.109 cfs
Total Runoff Volume to Stormwater Facility = 1432 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.038 cfs
Total Overflow Volume = 48 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.109 cfs
Total Runoff Volume to Stormwater Facility = 1432 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown 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 Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 1D
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.013 cfs
Total Runoff Volume to Stormwater Facility = 164 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.096 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.033 cfs
Total Overflow Volume = 42 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.096 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 1E
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.015"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="186"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/> in		
Drawdown Time=	<input type="text" value="0.2"/> hours		

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 =	<input type="text" value="0.109"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.038"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1432"/> cf	Total Overflow Volume=	<input type="text" value="48"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/> in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/> cfs
Drawdown Time=	<input type="text" value="0.2"/> hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/> cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.043"/> cfs
Total Runoff Volume =	<input type="text" value="692"/> 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 =	<input type="text" value="0.109"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1432"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/> in		
Drawdown Time=	<input type="text" value="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?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 1F
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.013 cfs
Total Runoff Volume to Stormwater Facility = 164 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.096 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.033 cfs
Total Overflow Volume = 42 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.096 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 1G
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.014 cfs
Total Runoff Volume to Stormwater Facility = 173 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.102 cfs
Total Runoff Volume to Stormwater Facility = 1334 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.035 cfs
Total Overflow Volume = 44 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.102 cfs
Total Runoff Volume to Stormwater Facility = 1334 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



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24 Hour Storm, NRCS Type 1A Rainfall Distribution
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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 2A
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.012 cfs
Total Runoff Volume to Stormwater Facility = 158 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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
Total Runoff Volume to Stormwater Facility = 1214 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.032 cfs
Total Overflow Volume = 40 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.093 cfs
Total Runoff Volume to Stormwater Facility = 1214 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 2B
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.013"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="168"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/>	in			
Drawdown Time=	<input type="text" value="0.2"/>	hours			

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 =	<input type="text" value="0.099"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.034"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1291"/>	cf	Total Overflow Volume=	<input type="text" value="43"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/>	in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/>	cfs
Drawdown Time=	<input type="text" value="0.2"/>	hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/>	cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.039"/>	cfs
Total Runoff Volume =	<input type="text" value="625"/>	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 =	<input type="text" value="0.099"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1291"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/>	in			
Drawdown Time=	<input type="text" value="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?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 2C
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.013 cfs
Total Runoff Volume to Stormwater Facility = 164 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.096 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.033 cfs
Total Overflow Volume = 42 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.096 cfs
Total Runoff Volume to Stormwater Facility = 1263 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet
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City of Eugene

Version 2.1

Project Information

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
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.014 cfs
Total Runoff Volume to Stormwater Facility = 172 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 Facility = 1320 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.034 cfs
Total Overflow Volume = 44 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

Pre-Development Runoff Data

Peak Flow Rate = 0.040 cfs
Total Runoff Volume = 639 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 = 0.101 cfs
Total Runoff Volume to Stormwater Facility = 1320 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 2E
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.008"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="102"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.1"/> in		
Drawdown Time=	<input type="text" value="0.2"/> hours		

Yes Facility Sizing Meets Pollution Reduction Standards?

- Meets Requirement of No Facility Flooding?
- Meets Requirement for Maximum of 18 Hour Drawdown Time?

Flow Control-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.060"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.020"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="783"/> cf	Total Overflow Volume=	<input type="text" value="25"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/> in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/> cfs
Drawdown Time=	<input type="text" value="0.2"/> hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/> cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.024"/> cfs
Total Runoff Volume =	<input type="text" value="379"/> cf

Yes Facility Sizing Meets Flow Control Standards?

- Meets Requirement for Post Development offsite flow less or equal to Pre-Development Flow?
- Meets Requirement for Maximum of 18 Hour Drawdown Time?

Destination-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.060"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="783"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/> in		
Drawdown Time=	<input type="text" value="0.2"/> hours		

Yes Facility Sizing Meets Destination Standards?

- Meets Requirement of No Facility Flooding?
- Meets Requirement for Maximum of 30 hour Drawdown Time?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 2F
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.021"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="259"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/>	in			
Drawdown Time=	<input type="text" value="0.2"/>	hours			

Facility Sizing Meets Pollution Reduction Standards?

- Meets Requirement of No Facility Flooding?
- Meets Requirement for Maximum of 18 Hour Drawdown Time?

Flow Control-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.152"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.049"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1993"/>	cf	Total Overflow Volume=	<input type="text" value="70"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/>	in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/>	cfs
Drawdown Time=	<input type="text" value="0.2"/>	hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/>	cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.060"/>	cfs
Total Runoff Volume =	<input type="text" value="964"/>	cf

Facility Sizing Meets Flow Control Standards?

- Meets Requirement for Post Development offsite flow less or equal to Pre-Development Flow?
- Meets Requirement for Maximum of 18 Hour Drawdown Time?

Destination-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.152"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1993"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/>	in			
Drawdown Time=	<input type="text" value="0.2"/>	hours			

Facility Sizing Meets Destination Standards?

- Meets Requirement of No Facility Flooding?
- Meets Requirement for Maximum of 30 hour Drawdown Time?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 3A
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.013 cfs
Total Runoff Volume to Stormwater Facility = 164 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.097 cfs
Total Runoff Volume to Stormwater Facility = 1265 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.033 cfs
Total Overflow Volume = 42 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

Pre-Development Runoff Data

Peak Flow Rate = 0.038 cfs
Total Runoff Volume = 612 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 = 0.097 cfs
Total Runoff Volume to Stormwater Facility = 1265 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet
24 Hour Storm, NRCS Type 1A Rainfall Distribution
City of Eugene

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Project Information

Project Name:	<u>Fairway Estates</u>	Date:	<u>5/19/2022</u>
Project Address:	<u>18-12-15-00-01500</u>	Permit Number:	<u>NA</u>
	<u>Florence, OR</u>	Catchment ID:	<u>3B</u>
Designer:	<u>Clint Beecroft</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 performed 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)	<input type="text" value="Yes"/>	
Flow Control (FC)	<input type="text" value="Yes"/>	
Destination (DT)	<input type="text" value="Yes"/>	*An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area=	<input type="text" value="1986"/> sqft	Total Square Footage Pervious Area=	<input type="text" value="0"/> sqft
Impervious Area CN=	<input type="text" value="98"/>	Pervious Area CN=	<input type="text" value="85"/>
Total Square Footage of Drainage Area=	<input type="text" value="1986"/> sft	Time of Concentration Post Development=	<input type="text" value="5"/> min
Weighted Average CN=	<input type="text" value="98"/>		

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN=	<input type="text" value="73"/>	Time of Concentration Pre-Development=	<input type="text" value="10"/> min
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Soil Data

Tested Soil Infiltration Rate=	<input type="text" value="10"/> in/hr (See Note 4)	Destination Design=	<input type="text" value="5"/> in/hr
Design Soil Infiltration Rate=	<input type="text" value="4"/> in/hr	Soil Infiltration Rate	

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=	<input type="text" value="Infiltration Stormwater Planter"/>	Facility Surface Area=	<input type="text" value="180.4"/> sqft
Surface Width=	<input type="text" value="11"/> ft	Facility Surface Perimeter=	<input type="text" value="54.8"/> ft
Surface Length=	<input type="text" value="16.4"/> ft	Facility Bottom Area=	<input type="text" value="77"/> sqft
Facility Side Slopes=	<input type="text" value="3"/> to 1	Facility Bottom Perimeter=	<input type="text" value="37"/> ft
Max. Ponding Depth in Stormwater Facility=	<input type="text" value="9"/> in	Basin Volume=	<input type="text" value="104.3"/> cf
Depth of Growing Medium (Soil)=	<input type="text" value="2"/> in	Ratio of Facility Area to Impervious Area=	<input type="text" value="0.091"/>

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.008"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="104"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/>	in			
Drawdown Time=	<input type="text" value="0.2"/>	hours			

Yes Facility Sizing Meets Pollution Reduction Standards?

- Meets Requirement of No Facility Flooding?
- Meets Requirement for Maximum of 18 Hour Drawdown Time?

Flow Control-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.061"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.014"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="797"/>	cf	Total Overflow Volume=	<input type="text" value="23"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/>	in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/>	cfs
Drawdown Time=	<input type="text" value="0.2"/>	hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/>	cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.024"/>	cfs
Total Runoff Volume =	<input type="text" value="385"/>	cf

Yes Facility Sizing Meets Flow Control Standards?

- Meets Requirement for Post Development offsite flow less or equal to Pre-Development Flow?
- Meets Requirement for Maximum of 18 Hour Drawdown Time?

Destination-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.061"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="797"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.7"/>	in			
Drawdown Time=	<input type="text" value="0.2"/>	hours			

Yes Facility Sizing Meets Destination Standards?

- Meets Requirement of No Facility Flooding?
- Meets Requirement for Maximum of 30 hour Drawdown Time?



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Project Information

Project Name:	<u>Fairway Estates</u>	Date:	<u>5/19/2022</u>
Project Address:	<u>18-12-15-00-01500</u>	Permit Number:	<u>NA</u>
	<u>Florence, OR</u>	Catchment ID:	<u>3C</u>
Designer:	<u>Clint Beecroft</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 performed 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)	<input type="text" value="Yes"/>	
Flow Control (FC)	<input type="text" value="Yes"/>	
Destination (DT)	<input type="text" value="Yes"/>	*An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area=	<input type="text" value="3250"/> sqft	Total Square Footage Pervious Area=	<input type="text" value="0"/> sqft
Impervious Area CN=	<input type="text" value="98"/>	Pervious Area CN=	<input type="text" value="85"/>
Total Square Footage of Drainage Area=	<input type="text" value="3250"/> sft	Time of Concentration Post Development=	<input type="text" value="5"/> min
Weighted Average CN=	<input type="text" value="98"/>		

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN=	<input type="text" value="73"/>	Time of Concentration Pre-Development=	<input type="text" value="10"/> min
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Soil Data

Tested Soil Infiltration Rate=	<input type="text" value="10"/> in/hr (See Note 4)	Destination Design=	<input type="text" value="5"/> in/hr
Design Soil Infiltration Rate=	<input type="text" value="4"/> in/hr	Soil Infiltration Rate	

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=	<input type="text" value="Infiltration Stormwater Planter"/>	Facility Surface Area=	<input type="text" value="294.95"/> sqft
Surface Width=	<input type="text" value="8.5"/> ft	Facility Surface Perimeter=	<input type="text" value="86.4"/> ft
Surface Length=	<input type="text" value="34.7"/> ft	Facility Bottom Area=	<input type="text" value="121"/> sqft
Facility Side Slopes=	<input type="text" value="3"/> to 1	Facility Bottom Perimeter=	<input type="text" value="68"/> ft
Max. Ponding Depth in Stormwater Facility=	<input type="text" value="9"/> in	Basin Volume=	<input type="text" value="163.5"/> cf
Depth of Growing Medium (Soil)=	<input type="text" value="2"/> in	Ratio of Facility Area to Impervious Area=	<input type="text" value="0.091"/>

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.013 cfs
Total Runoff Volume to Stormwater Facility = 169 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.099 cfs
Total Runoff Volume to Stormwater Facility = 1304 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.034 cfs
Total Overflow Volume = 43 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.099 cfs
Total Runoff Volume to Stormwater Facility = 1304 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown 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 Date: 5/10/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 3D
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.018"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="223"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/> in		
Drawdown Time=	<input type="text" value="0.2"/> hours		

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 =	<input type="text" value="0.131"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.045"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1719"/> cf	Total Overflow Volume=	<input type="text" value="58"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/> in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/> cfs
Drawdown Time=	<input type="text" value="0.2"/> hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/> cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.052"/> cfs
Total Runoff Volume =	<input type="text" value="831"/> 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 =	<input type="text" value="0.131"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1719"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/> in		
Drawdown Time=	<input type="text" value="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?



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24 Hour Storm, NRCS Type 1A Rainfall Distribution
City of Eugene

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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 3E
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.014 cfs
Total Runoff Volume to Stormwater Facility = 180 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.105 cfs
Total Runoff Volume to Stormwater Facility = 1381 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.036 cfs
Total Overflow Volume = 46 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

Pre-Development Runoff Data

Peak Flow Rate = 0.042 cfs
Total Runoff Volume = 668 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 = 0.105 cfs
Total Runoff Volume to Stormwater Facility = 1381 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



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24 Hour Storm, NRCS Type 1A Rainfall Distribution
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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 3F
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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=
 Surface Width= ft Facility Surface Area= sqft
 Surface Length= ft Facility Surface Perimeter= ft
 Facility Side Slopes= to 1 Facility Bottom Area= sqft
 Max. Ponding Depth in Stormwater Facility= in Facility Bottom Perimeter= ft
 Depth of Growing Medium (Soil)= in Basin Volume= cf
 Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.016 cfs
Total Runoff Volume to Stormwater Facility = 201 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.118 cfs
Total Runoff Volume to Stormwater Facility = 1550 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.041 cfs
Total Overflow Volume = 52 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.118 cfs
Total Runoff Volume to Stormwater Facility = 1550 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 3G
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility = 0.022 cfs
Total Runoff Volume to Stormwater Facility = 280 cf
Max. Depth of Stormwater in Facility = 0.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 = 0.164 cfs
Total Runoff Volume to Stormwater Facility = 2152 cf
Max. Depth of Stormwater in Facility = 9.0 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.056 cfs
Total Overflow Volume = 73 cf
Peak Off-Site Flow Rate = N/A cfs
Filtration Facility Underdrain = N/A cfs

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 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 = 0.164 cfs
Total Runoff Volume to Stormwater Facility = 2152 cf
Max. Depth of Stormwater in Facility = 8.9 in
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs
Total Overflow Volume = 0 cf

Yes Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?



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24 Hour Storm, NRCS Type 1A Rainfall Distribution
City of Eugene

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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 3H
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.016"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="201"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/> in		
Drawdown Time=	<input type="text" value="0.2"/> hours		

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 =	<input type="text" value="0.118"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.041"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1550"/> cf	Total Overflow Volume=	<input type="text" value="52"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/> in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/> cfs
Drawdown Time=	<input type="text" value="0.2"/> hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/> cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.047"/> cfs
Total Runoff Volume =	<input type="text" value="749"/> 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 =	<input type="text" value="0.118"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1550"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/> in		
Drawdown Time=	<input type="text" value="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?



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24 Hour Storm, NRCS Type 1A Rainfall Distribution
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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 Project Address: 18-12-15-00-01500 Permit Number: NA
Florence, OR Catchment ID: 3!
 Designer: Clint Beecroft
 Company: EGR & Associates

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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.016"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="203"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/>	in			
Drawdown Time=	<input type="text" value="0.2"/>	hours			

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 =	<input type="text" value="0.119"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.039"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1565"/>	cf	Total Overflow Volume=	<input type="text" value="51"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/>	in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/>	cfs
Drawdown Time=	<input type="text" value="0.2"/>	hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/>	cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.047"/>	cfs
Total Runoff Volume =	<input type="text" value="757"/>	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 =	<input type="text" value="0.119"/>	cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/>	cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="1565"/>	cf	Total Overflow Volume=	<input type="text" value="0"/>	cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/>	in			
Drawdown Time=	<input type="text" value="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?



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Project Information

Project Name: Fairway Estates Date: 5/19/2022
 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 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 performed 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)
 Flow Control (FC)
 Destination (DT) *An infiltration facility must be chosen as the facility type to meet destination requirements

Site Data-Post Development

Total Square Footage Impervious Area= sqft Total Square Footage Pervious Area= sqft
 Impervious Area CN= Pervious Area CN=
 Total Square Footage of Drainage Area= sft Time of Concentration Post Development= min
 Weighted Average CN=

Site Data-Pre Development (Data in this section is only used if Flow Control is required)

Pre-Development CN= Time of Concentration Pre-Development= min

Soil Data

Tested Soil Infiltration Rate= in/hr (See Note 4) Destination Design= in/hr
 Design Soil Infiltration Rate= in/hr Soil Infiltration Rate

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= Facility Surface Area= sqft
 Surface Width= ft Facility Surface Perimeter= ft
 Surface Length= ft Facility Bottom Area= sqft
 Facility Side Slopes= to 1 Facility Bottom Perimeter= ft
 Max. Ponding Depth in Stormwater Facility= in Basin Volume= cf
 Depth of Growing Medium (Soil)= in Ratio of Facility Area to Impervious Area=

Pollution Reduction-Calculation Results

Peak Flow Rate to Stormwater Facility =	<input type="text" value="0.023"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="293"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="0.0"/> in		
Drawdown Time=	<input type="text" value="0.2"/> hours		

Yes Facility Sizing Meets Pollution Reduction Standards?

- 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 =	<input type="text" value="0.172"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.052"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="2257"/> cf	Total Overflow Volume=	<input type="text" value="71"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="9.0"/> in	Peak Off-Site Flow Rate	<input type="text" value="N/A"/> cfs
Drawdown Time=	<input type="text" value="0.2"/> hours	Filtration Facility Underdrain=	<input type="text" value="N/A"/> cfs

Pre-Development Runoff Data

Peak Flow Rate =	<input type="text" value="0.068"/> cfs
Total Runoff Volume =	<input type="text" value="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 =	<input type="text" value="0.172"/> cfs	Peak Facility Overflow Rate=	<input type="text" value="0.000"/> cfs
Total Runoff Volume to Stormwater Facility =	<input type="text" value="2257"/> cf	Total Overflow Volume=	<input type="text" value="0"/> cf
Max. Depth of Stormwater in Facility=	<input type="text" value="8.9"/> in		
Drawdown Time=	<input type="text" value="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?

Worksheet for 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	ft ³ /s

Results

Normal Depth	0.51	ft
Flow Area	0.41	ft ²
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	ft ³ /s
Discharge Full	2.52	ft ³ /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

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 Basin 2 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	ft ³ /s

Results

Normal Depth	0.36	ft
Flow Area	0.23	ft ²
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	ft ³ /s
Discharge Full	1.53	ft ³ /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	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	43.43	%
Downstream Velocity	Infinity	ft/s

Worksheet for Basin 2 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 for Basin 3 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	ft ³ /s

Results

Normal Depth	0.50	ft
Flow Area	0.39	ft ²
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	ft ³ /s
Discharge Full	2.39	ft ³ /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

Worksheet for Basin 3 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.