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Drainage Calculations for

Patrick Gemma Property
Parcel 3 of Partition Plat 2000-37
Tax Lot 4100, Map 5N 10W 30DA
City of Cannon Beach, Clatsop County, Oregon
#21-01-Gem

August 26, 2021



RENEWAL DATE: DECEMBER 31, 2022

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Design Criteria

Drainage Run-off

Location

Property coordinates

45°53'12.7"N 45.88685

123°57'47.3"W -123.963

Rainfall Depth

NOAA Atlas 2 – Precipitation-Frequency Atlas of the Western United States

24-hour duration

2-year interval = 4.5 inches

25-year interval = 6.3 inches

100-year interval = 7.5 interval

Narrative of Engineering Analysis

These calculations have been prepared to address the stormwater run-off currently running onto the subject property from adjacent areas.

Water from the adjacent property, 1603 Forest Lawn Road, is directed onto the property. Water from virtually all of Forest Lawn Drive is directed onto the property, either through a storm drainage system, or as direct run-off. Also, the water from the adjacent portion of Hemlock Street flows into the property.

The drainage system on Forest Lawn Drive collects water from the south end of the road and discharges it into near the southwestern corner.

Water from the roof of 1603 Forest Lawn Road is piped to the rear of the house, where it enters the subject property.

The attached calculations show the amount of water calculated as run-off for each contributing area.

The volumes are determined for a 24-hour interval, with 25- and 100-year storm recurrence.

Patrick Gemma					
Tax Lot 4100, Map 5S 10W 30DA					
Forest Lawn Drive, Cannon Beach, Oregon					
#21-01-Gem					
Water run-off from adjacent roadways and houses					
Southern Area	Northern Area				
Forest Lawn Road	Forest Lawn Road		Roadway	Roof Run-off	
Drainage System	Road Run-off		Hemlock St	1603 Forest Lawn Road	TOTAL
29,400	7,300	square feet	9,000	1,600	47,300
0.67	0.17	acres	0.21	0.04	1.09
Property coordinates					
45°53'12.7"N	45.886854				
123°57'47.3"W	-123.963131				
NOAA Atlas 2 - Precipitation-Frequency Atlas of the Western United States					
Southern Area	Northern Area				
Forest Lawn Road	Forest Lawn Road				
Drainage System	Road Run-off		Hemlock St	1603 Forest Lawn Road	TOTAL
2-year storm	24 hr precipitation				
4.5	4.5	inches	4.5	4.5	TOTAL
11,025	2,738	cf/day	3,375	600	17,738
82,688	20,531	gal/day	25,313	4,500	133,032
25-year storm	24 hr precipitation				
6.3	6.3	inches	6.3	6.3	TOTAL
15,435	3,833	cf/day	4,725	840	24,833
115,763	28,744	gal/day	35,438	6,300	186,245
100-year storm	24 hr precipitation				
7.5	7.5	inches	7.5	7.5	TOTAL
18,375	4,563	cf/day	5,625	1,000	29,563
137,813	34,219	gal/day	42,188	7,500	221,720

