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**RE028-22**

**ENGINEERING FOR THE COAN RESIDENCE DRYWELL**

for

Wayward R Studio  
PO Box 1808  
Bandon, OR 97411

by

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March 18, 2022

Narrative

This document presents supporting calculations for the design of a drywell for a residence located at map 29-15-01BB, TL 2000, Bandon, Oregon. The design considers a 25-year event.

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EXPIRES: 6/2023

RE 028-22

3/18/22

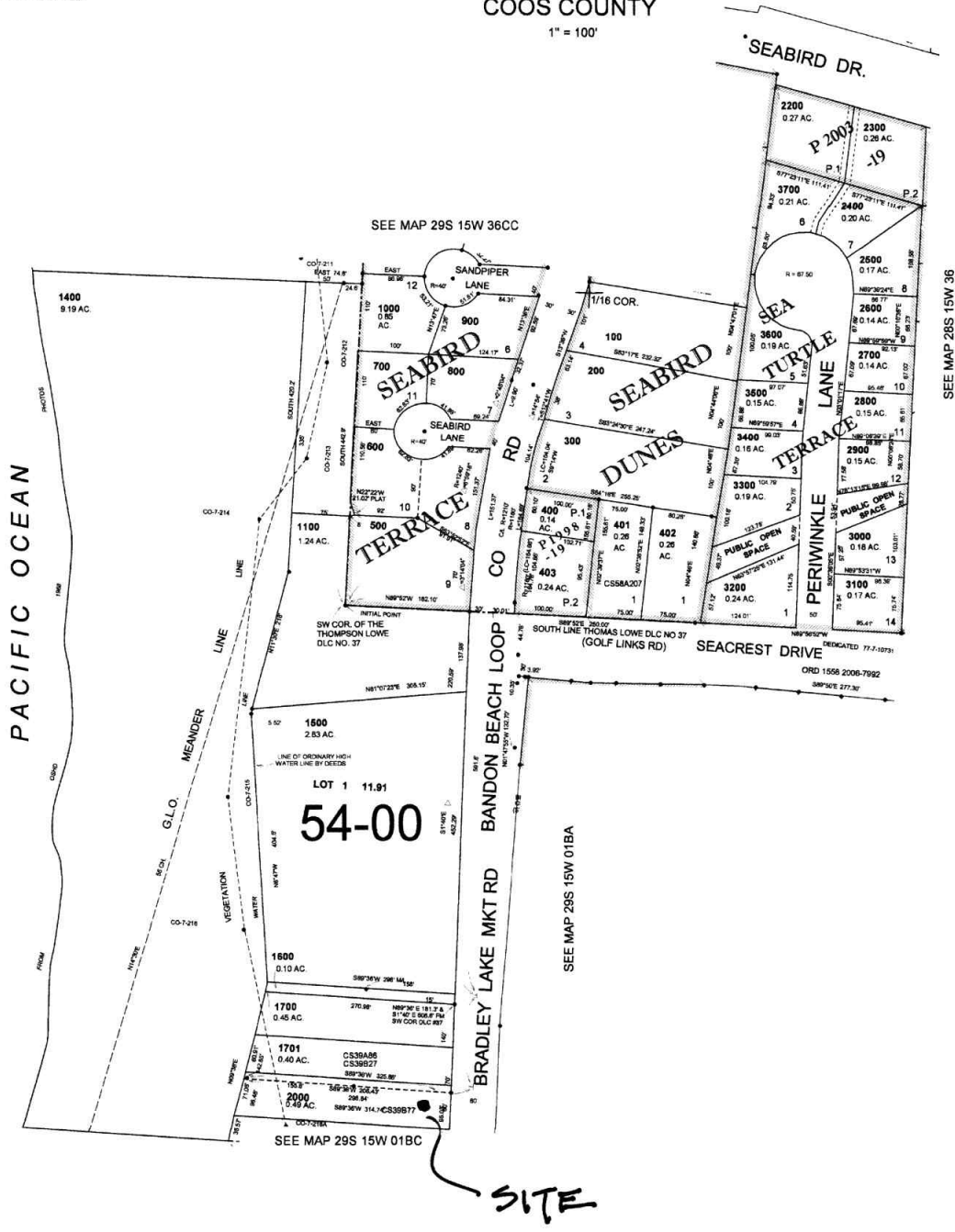
THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSE ONLY

NW1/4 NW1/4 SEC.1 T29S R15W W.M.  
COOS COUNTY

1" = 100'

29S 15W 01BB  
BANDON  
CANCELLED NO.

- 2101
- 1101
- 2100
- 1702
- 1802
- 1901
- 2001
- 1200
- 1300
- 1800
- 1801
- 1900



SEE MAP 28S 15W 36

SEE MAP 29S 15W 01BA

SEE MAP 29S 15W 01BC

SITE

11-12-2008  
29S 15W 01BB  
BANDON

IMPERVIOUS AREABUILDING AND PAVING = 6946 ft<sup>2</sup>

A = 0.16 ac

FROM ODOT ZONE 1, 25 YEAR EVENT

t (MIN)	INTENSITY (IN/HR)
10	2.8
30	1.8
100	0.8
400	0.50

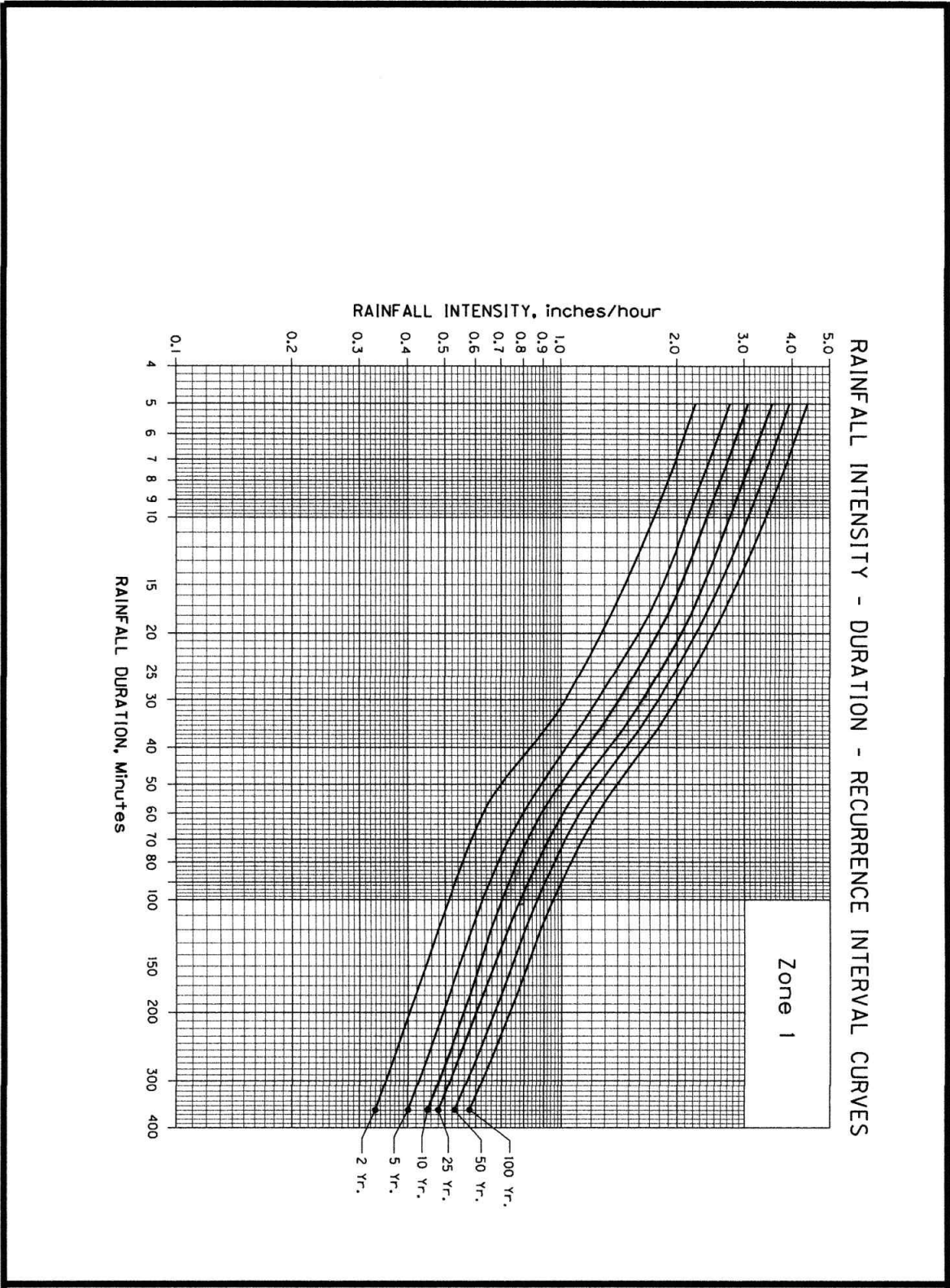
FROM OREGON ISOPHYCAL MAP  
24-HOUR, 25-YEAR EVENT

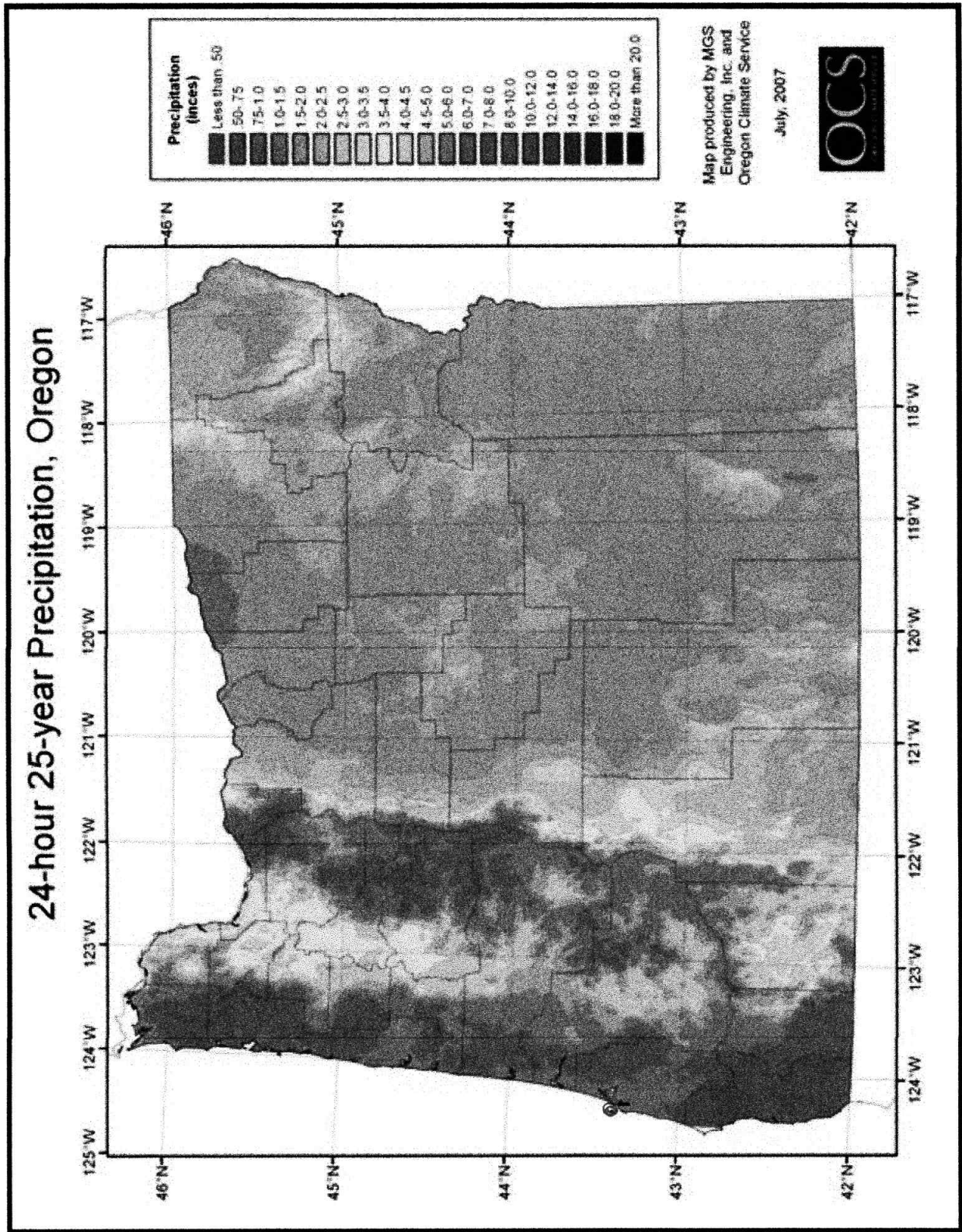
1440 MIN (24 HR), i = 0.25 IN/HR

CONSIDER 2 IN/HR INFILTRATION (SANDY)

$$\text{INFIL} = \left( \frac{2 \text{ IN}}{\text{HR}} \right) \left( \frac{1 \text{ HR}}{3600 \text{ SEC}} \right) \left( \frac{1 \text{ HR}}{12 \text{ IN}} \right)$$

$$= \underline{4.63 \times 10^{-5} \text{ cfs}}$$





$\bar{u} = 6 \text{ in/hr}$       $\bar{u}_{24} = 6 \text{ in}/24 \text{ hr}$   
 $\quad \quad \quad = 0.25 \text{ in/hr}$

RE028-22

Location: Bandon

10- year design event

**INPUT VALUES BELOW**

Time (min)	C	Area (in ac)	I (in/hr) from IDF curves	Inflow rate (cfs)	Inflow volume (cf)	Outflow rate (cfs)	Storage volume (cf)	Outflow volume (cf)	Storage+ Outflow volume (cf)	Delta
10	0.9	0.16	2.50	0.3600	216	0.0347	900	20.8	921	705
30	0.9	0.16	1.60	0.2304	415	0.0347	900	62.5	963	548
100	0.9	0.16	0.70	0.1008	605	0.0347	900	208.4	1108	504
400	0.9	0.16	0.45	0.0648	1555	0.0347	900	833.4	1733	178
1440	0.9	0.16	0.21	0.0302	2613	0.0347	900	3000.2	3900	1288

## Drywell Dimensions

Length 25 ft

Width 30 ft

Depth 3 ft

Inf rate 4.63E-05 cf / s / sf (2" per hour infilt rate)

Vv 0.4

Storage 900 cubic feet

Bottom area 750 sf

Rock vol 2250 cubic feet

Rock vol 83 cubic yards

AREA 750 sf

25 YEAR EVENT

# GENERAL NOTES

**PROJECT DESCRIPTION:**

- DRYWELL DESIGN AND SPECIFICATIONS TO MANAGE STORM WATER DRAINAGE FOR A PROPOSED RESIDENTIAL STRUCTURE WITH CONCRETE DRIVEWAY, 6946 SF OF IMPERVIOUS AREA (RESIDENCE AND DRIVEWAY); 25 YEAR EVENT

**PROPERTY LOCATION:**

- MAP 29-15-01BB, TL 2000

**DESIGN NOTES:**

- ASSUMED DATUM
- THIS PLAN IS FOR THE PROPOSED DRYWELL, ONLY; STRUCTURES AND PROPERTY LINES MAY BE APPROXIMATELY PLACED
- CONNECT ROOF DRAINAGE SYSTEM TO PIPE NETWORK AND ROUTE TO THE DRYWELL AS INDICATED
- PROVIDE CLEAN OUTS (CO) FOR LONG TERM MAINTENANCE AS SHOWN
- PIPE SHALL BE SCH40 PVC
- USE SOLID PIPE NETWORK TO ROUTE STORM WATER TO DRYWELL AT A MINIMUM SLOPE OF 0.5%
- USE PERF PIPE IN DRYWELL, S=0%

**DRYWELL AGGREGATE BACKFILL**

- FURNISH CLEAN, CRUSHED AGGREGATE FOR THE DRYWELL BACKFILL HAVING THE FOLLOWING GRADATION, OR SIMILAR

SIEVE	PERCENT PASSING
2"	100
1-1/2"	80-100
1"	0-15
3/4"	0-5

**GEOTEXTILE:**

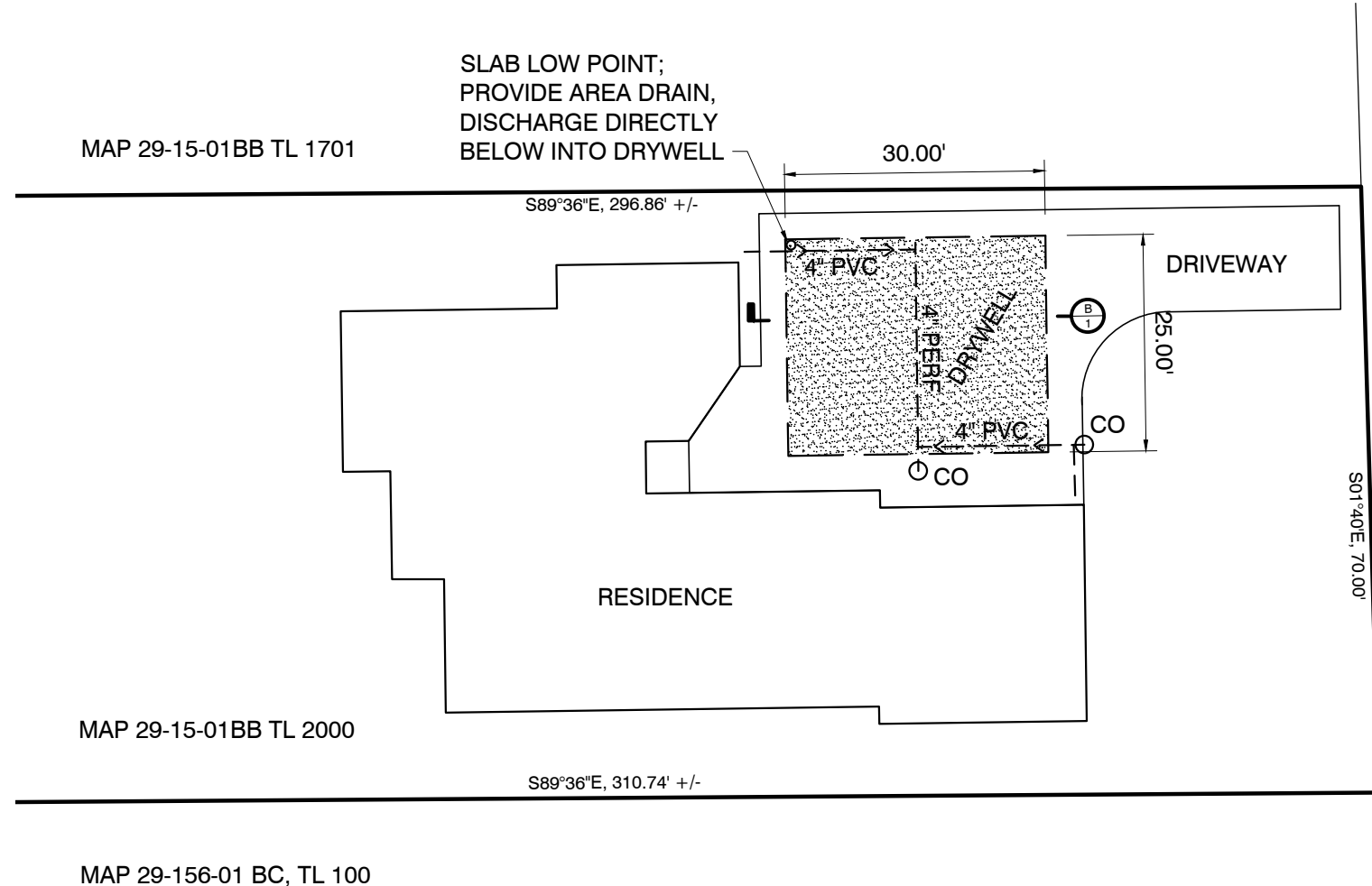
USE MIRAFI 140NL NON WOVEN GEOTEXTILE (OR SIMILAR) TO SEPARATE NATIVE MATERIAL FROM THE DRAINAGE AGGREGATE BACKFILL

**LONG TERM MAINTENANCE:**

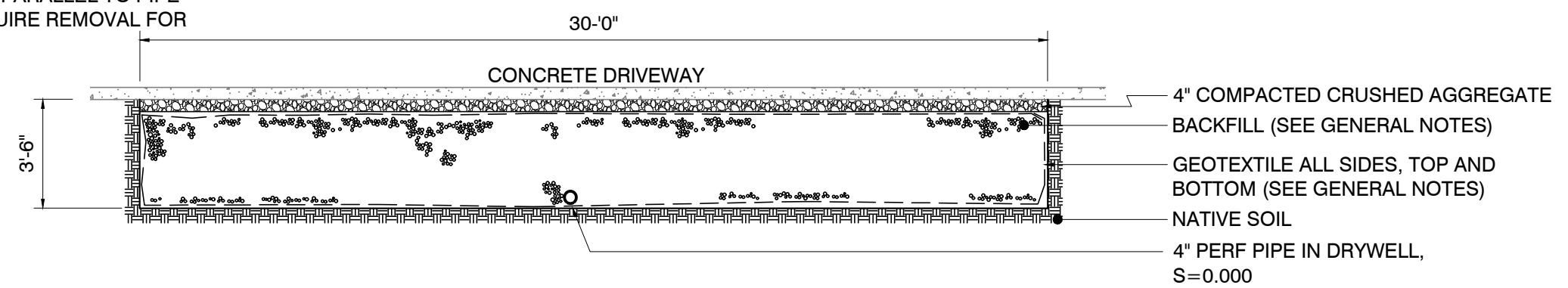
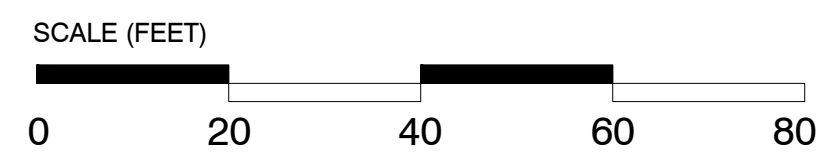
- PROVIDE CONCRETE SLAB JOINT OVER PERF PIPE IN DRYWELL AND TOOLED CONTRACTION JOINTS 5 FEET EITHER SIDE, PARALLEL TO PIPE
- A PORTION OF THE CONCRETE SLAB MAY REQUIRE REMOVAL FOR PIPE MAINTENANCE IN THE FUTURE



EXPIRES: 6/31/2023



**A DRYWELL SITE PLAN**  
1" = 20'



**B DRYWELL SECTION**  
1" = 4'

**COAN RESIDENCE  
DRYWELL**

TITLE

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PROJECT: RE028-22 DATE: MARCH 18, 22