

TIER 4 CLEAN DIESEL FLEET

Volume Concrete LLC.,
 4230 SE King Rd. no. 211
 Milwaukie, Oregon 97222
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APPROVED BY:	
PROJECT:	
ADDRESS:	



Concrete Mix Design:
 Cellular Concrete for
 Underground Pipe
 Decommissioning 90PCF
 NON-PERMEATING

NOTES:
<https://volumeconcrete.com/about/policies/>

Strength Maturity	7 Day	14 Day	28 Day
(f'c): >psi	260	360	400

AGGREGATES

ADDMIXTURES

Material / Source / Blend	Abs %	Quantity	Fluid Weight	G _{SSD}
Type I/II Cement / Ashgrove - Durkee, Oregon		512	lbs.	3.15
Water added / Municipal / potable water / ASTM 1602			205.6 lbs.	1.00
1½" - ¾" / Estacada Rock / max nom 1½"	1.8%	0	0 lbs.	2.64
¾" - ⅜" / Windsor Washed Natural / Blend	1.8%	0	0 lbs.	2.64
⅜" Windsor Washed Natural / Pea Gravel Blend	1.8%	0	0 lbs.	2.64
ASTM C 33 Concrete Sand / C33 / Estacada Rock	3%	1680	50.4 lbs.	2.58
Air Entrainment 90 / BASF / Master Builders / fluid oz.		0.0	0.0 lbs.	1.01
High Range Water Reducer / MasterPolyheed 980 / fluid oz.		0.0	0.0 lbs.	1.01
Non-Chloride Accelerator / Masterset AC534 / fluid oz.		0.0	0.0 lbs.	1.01
Viscosity Modifier / BASF / Master Builders / fluid oz.		0.0	0.0 lbs.	1.01
Fiber / GCP Strux BT50 2" / lbs. per cu.yd.		0	lbs.	
Total Weight (1 cubic yard) / lbs.		2448.0		
Total Water Content (including admixtures) / lbs.		256.0		
Water / Cementitious Material Ratio:		0.50		
Concrete Unit Weight, pcf		90.67		
Target Slump, in.		11 ± 1		
Foam, percent		50% ± 2.5		

Source of Concrete: Volume Concrete LLC.,	DRIVER RATIO:	0.79
Compliant with: ASTM C685/C685M-17, ASTM C1602, ASTM C150-21, ASTM 1600	SAND ONLY:	@ 7"
Prepared on:	10/04/2021	6:15pm
Addendum:		

Find these Downloads at www.volumeconcrete.com/documents
[ASTM C1602 water analysis report](#)
[Ashgrove mill spec report type I/II](#)
[Volume Concrete Mix Designs](#)
[Environmental Product Declaration](#)

Approved for:
 Rivergrove Water District - Lake Oswego

X UNDERGROUND	FLATWORK	X BACKFILL	X PUMPABLE
X TANK DECOMMISSIONING	SMOOTH TROWEL FINISH	STRUCTURAL	X 100'
X SEWER DECOMMISSIONING	BROOM FINISH	CURB & GUTTER	X 200'
X WATER LINE DECOMM.	EXPOSED AGGREGATE	CMU BLOCK FILL	X 300'
FOOTINGS	ACID WASHED FINISH	X FLOWABLE FILL	X 1200' w/HP Pumps