

BROOKLYN GRANGE



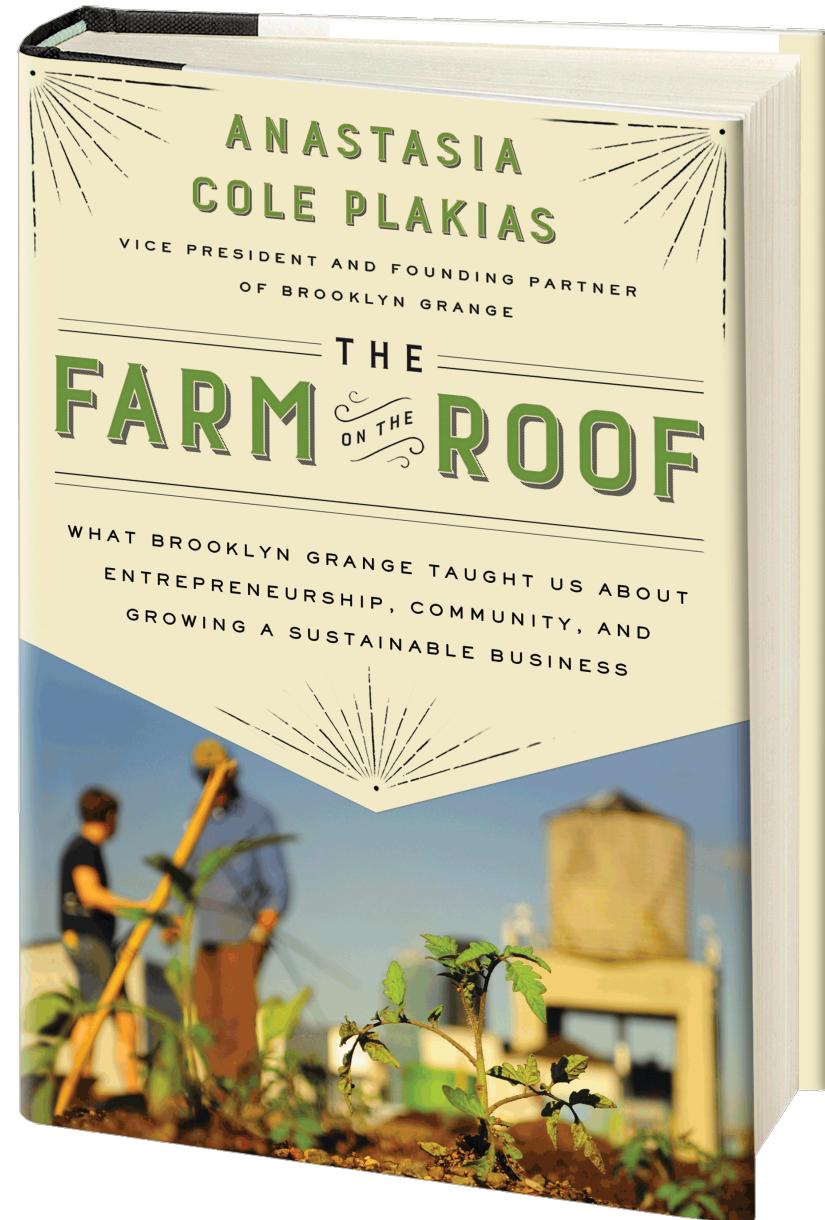
© VALERY RIZZO

Agenda

- Overview of Brooklyn Grange
- Conservation Areas:
 - Compost and Nutrient
 - Water
 - Soils

WE WROTE A BOOK ABOUT THE FARM

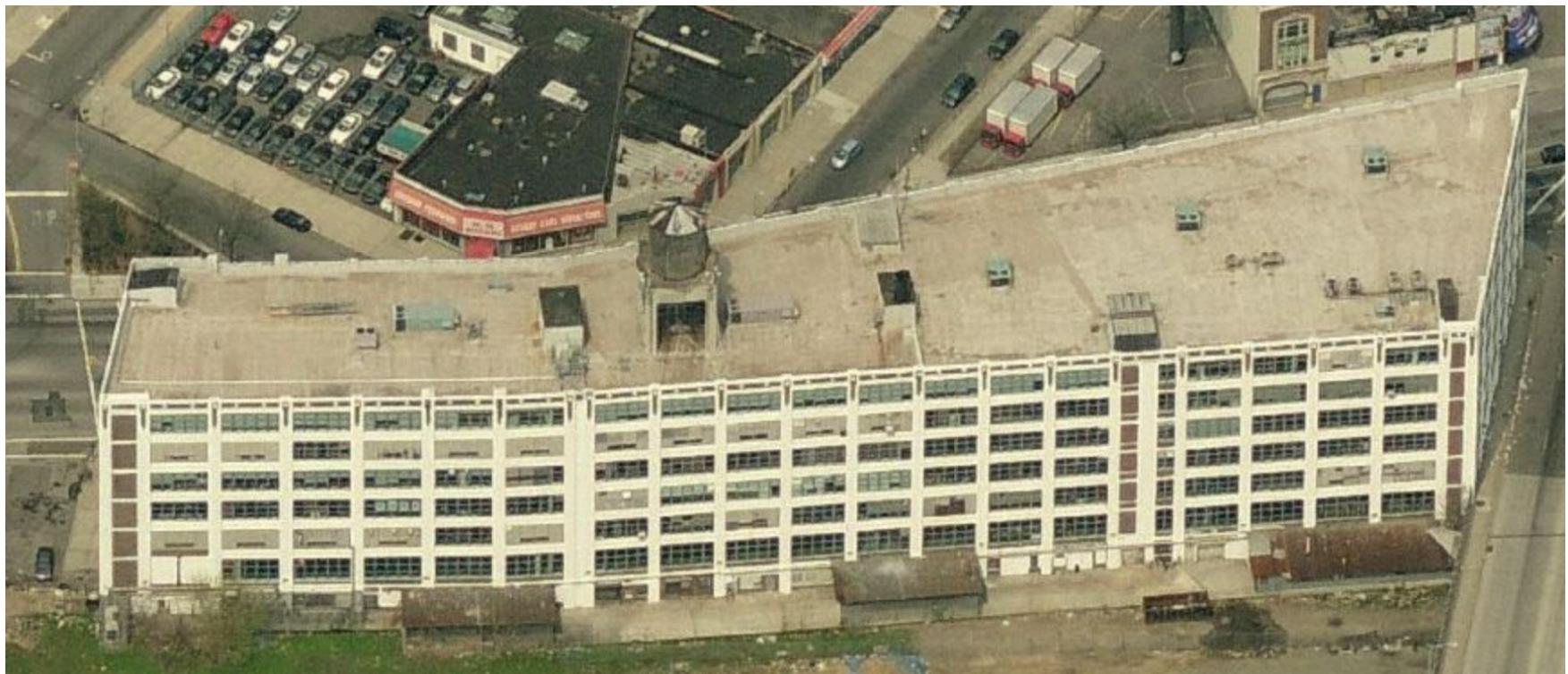
The book describes our experiences from an entrepreneurial standpoint. The story includes technical decisions and problem solving, marketing, business decisions, and the complexities of running a sustainably minded business in the real capitalist world.



BROOKLYN GRANGE

CONFIDENTIAL - PROPERTY OF BROOKLYN
GRANGE

2010 – 1st Farm



LOANS

5-YR NOTES



CROWD SOURCING

A NEW WAY TO Fund & Follow Creativity

Brooklyn Grange Rooftop Farm
Project by Brooklyn Kitchen

391 BACKERS
\$23,226 PLUNGED OF \$20,000 GOAL
0 HOURS TO GO

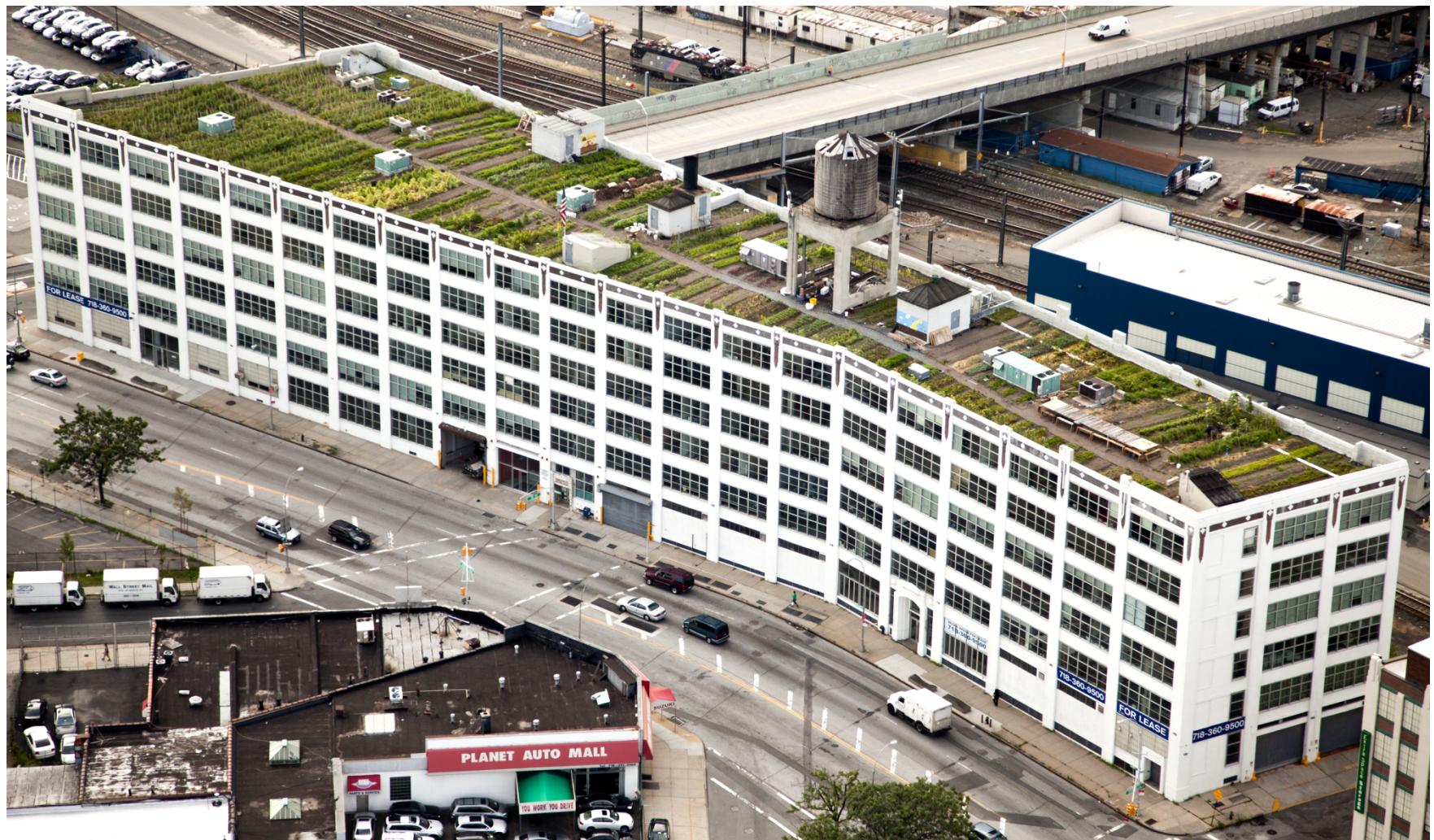
FUNDING SUCCESSFUL
This project successfully raised its funding goal on May 28, 2014.

EVENTS



EQUITY

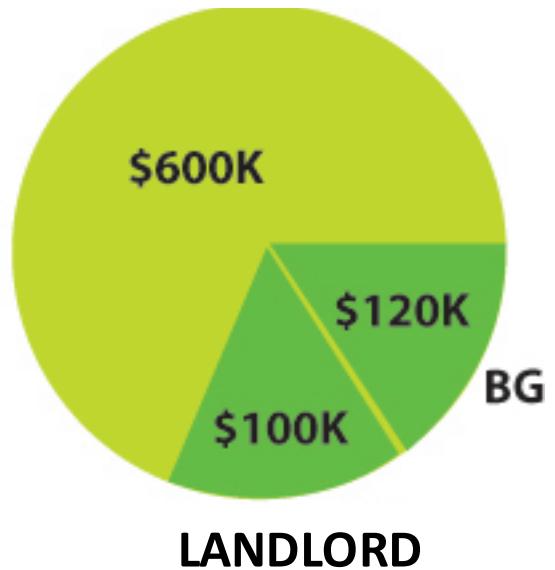




2012 – 2nd Farm



NYC DEPARTMENT OF
ENVIRONMENTAL PROTECTION (DEP)











Vegetable Sales Channels

- Wholesale (restaurants and grocers)
- Markets
- CSA









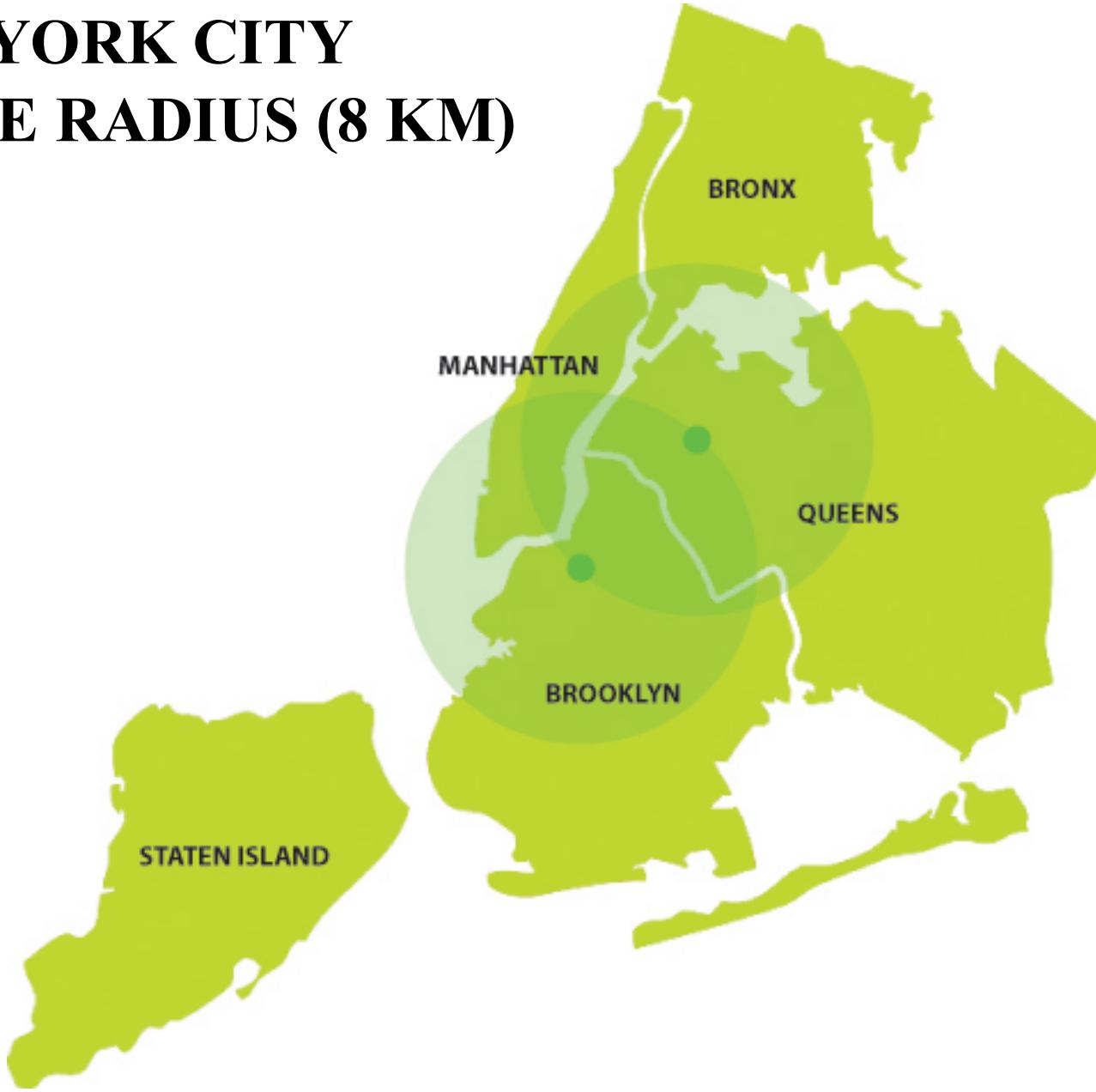








NEW YORK CITY 5 MILE RADIUS (8 KM)























Chickens



Composting









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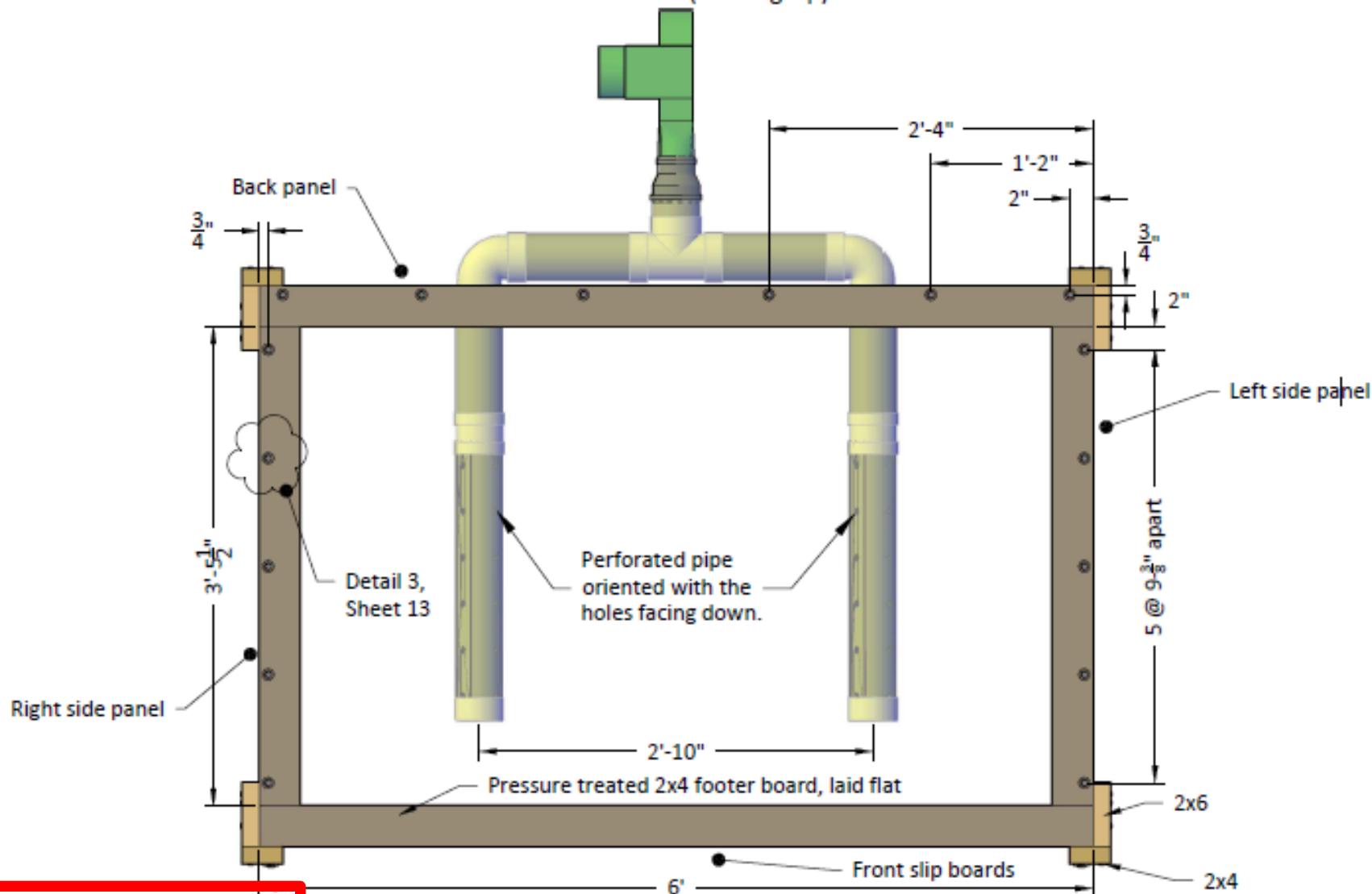
Composting





MICRO-BIN COMPOST SYSTEM

Bottom View (Looking Up)



















Soil Report

Job Name: Brooklyn Grange

Date: 4/25/2017

Company: Brooklyn Grange

Submitted By:

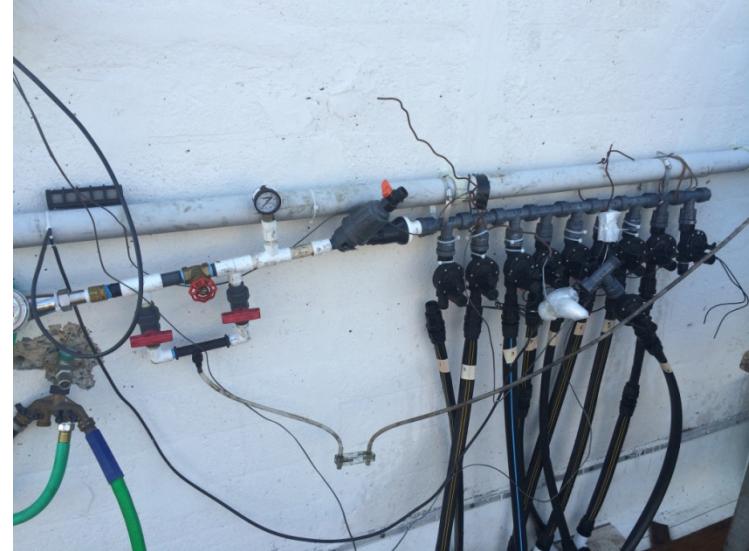
Sample Location	BNY West	BNY East	LIC West	LIC East	E-MH
Sample ID	A	B	C	D	
Lab Number	143	144	145	146	147
Sample Depth in Inches	6	6	6	6	6
Total Exchange Capacity (M.E.)	16.82	19.63	15.31	15.66	6.47
pH of Soil Sample	7.4	7.6	7.6	7.5	6.4
Organic Matter, Percent	29.54	19.65	14.33	13.06	2.45
ANIONS	SULFUR: p.p.m.	17	59	27	28
	Mehlich III Phosphorous: $\text{mg P}_2\text{O}_5 \text{ lbs / acre}$	981	1508	960	1061
EXCHANGEABLE CATIONS	CALCIUM: lbs / acre	Desired Value 5110	5338 6290	4165 4940	4258 5096
	MAGNESIUM: lbs / acre	484 729	565 644	441 465	450 428
	POTASSIUM: lbs / acre	524 210 -314	612 302 -310	477 255 -222	488 325 -163
	SODIUM: lbs / acre	29	39	55	48
	BASE SATURATION %	75.96	80.12	80.65	81.38
BASE SATURATION %	Calcium (60 to 70%)	18.06	13.67	12.65	11.39
	Magnesium (10 to 20%)	1.60	1.97	2.13	2.66
	Potassium (2 to 5%)	0.38	0.44	0.78	0.67
	Sodium (.5 to 3%)	4.00	3.80	3.80	3.90
	Other Bases (Variable)	0.00	0.00	0.00	0.00
	Exchangable Hydrogen (10 to 15%)	5.00	9.00	9.00	9.00
TRACE ELEMENTS	Boron (p.p.m.)	0.84	0.97	0.66	0.68
	Iron (p.p.m.)	176	194	211	202
	Manganese (p.p.m.)	32	37	29	30
	Copper (p.p.m.)	5.03	6.94	6.18	5.79
	Zinc (p.p.m.)	19.25	25.8	21.51	21.35
	Aluminum (p.p.m.)	128	88	197	181
OTHER					

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Irrigation

- Manifold with 10+ zones for watering.
- Combination of drip and aerial zones, on timer
- Includes Mazzei fertigation unit



- Drip Irrigation system
- 2 lines per row
- 8" Spacing of holes





Wobblers



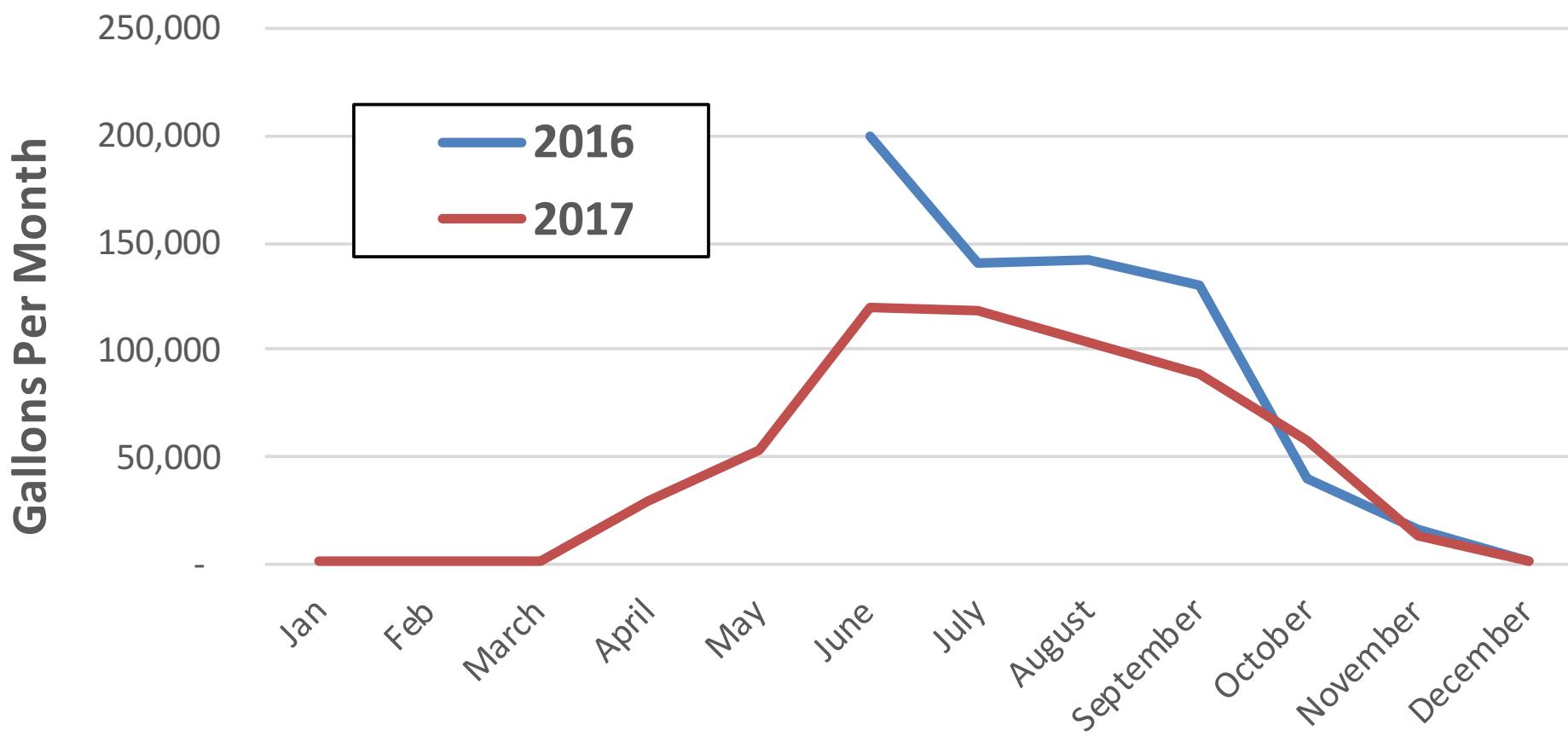






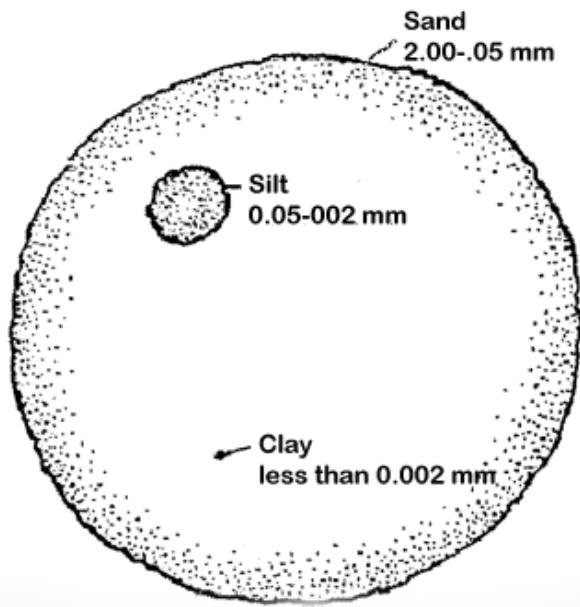


Water Use at Navy Yard Farm



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Relative size of soil grains (photo courtesy of U. of Nebraska-Lincoln Cooperative Extension at <http://www.ianr.unl.edu/pubs/fieldcrops/g964.htm#sw>)

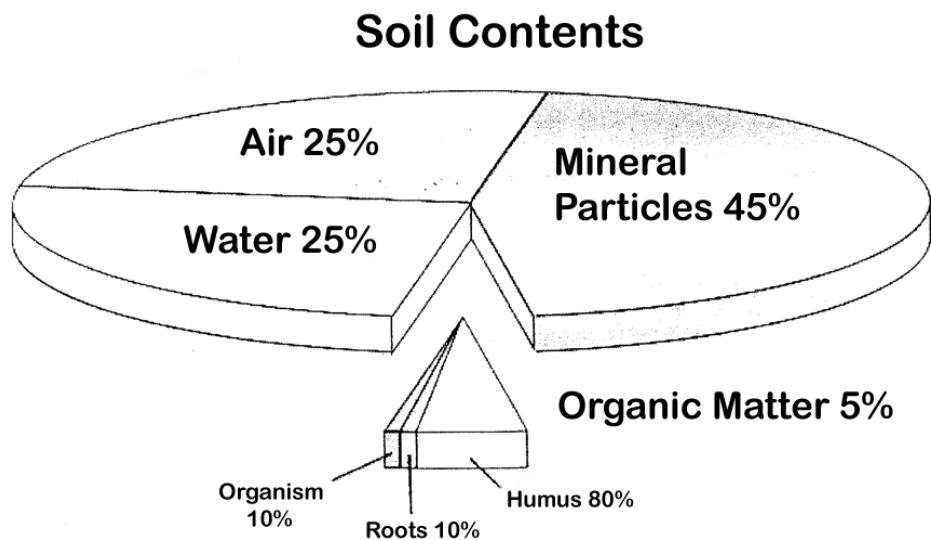
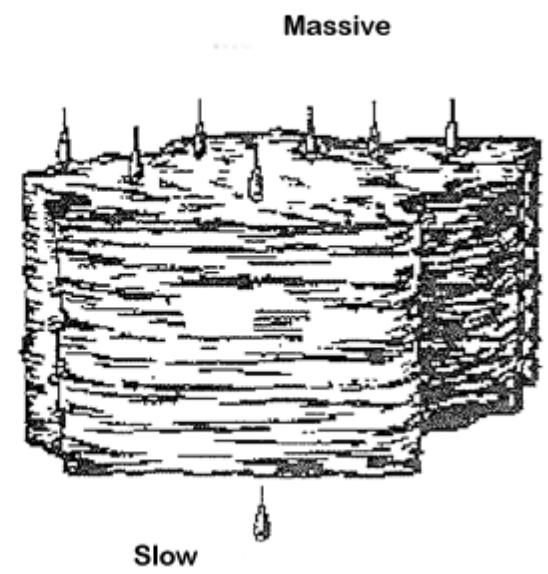
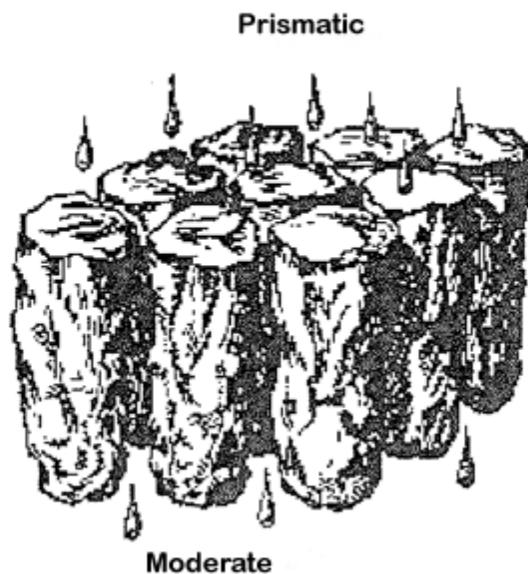
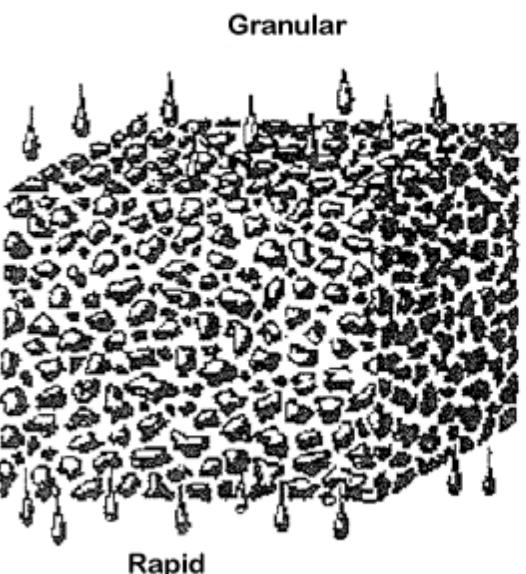
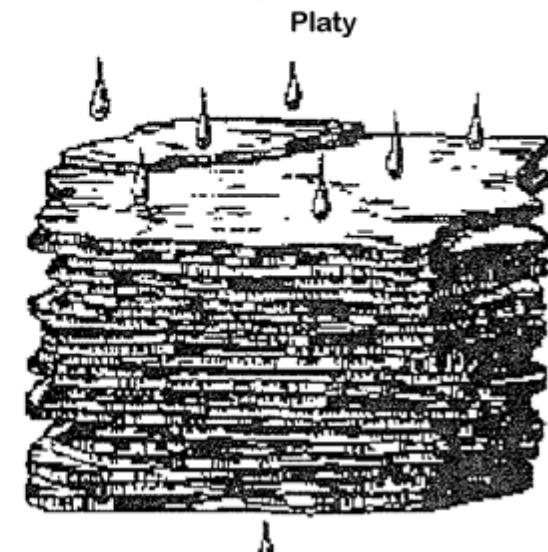
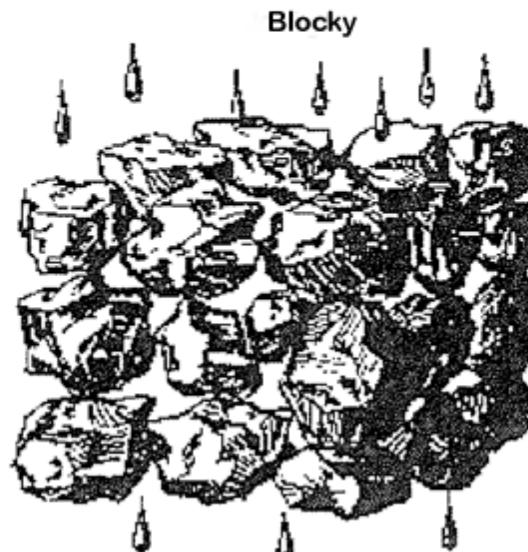
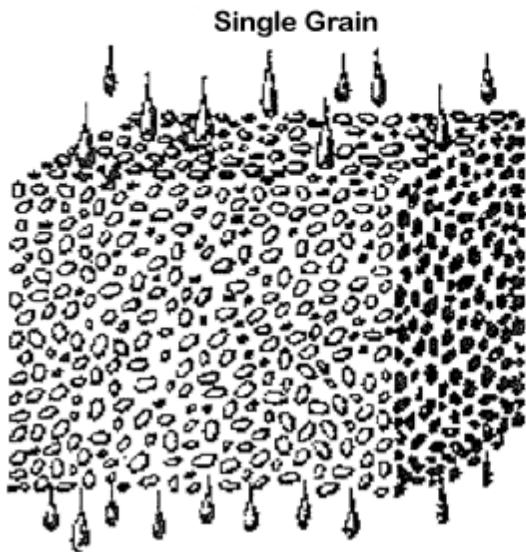


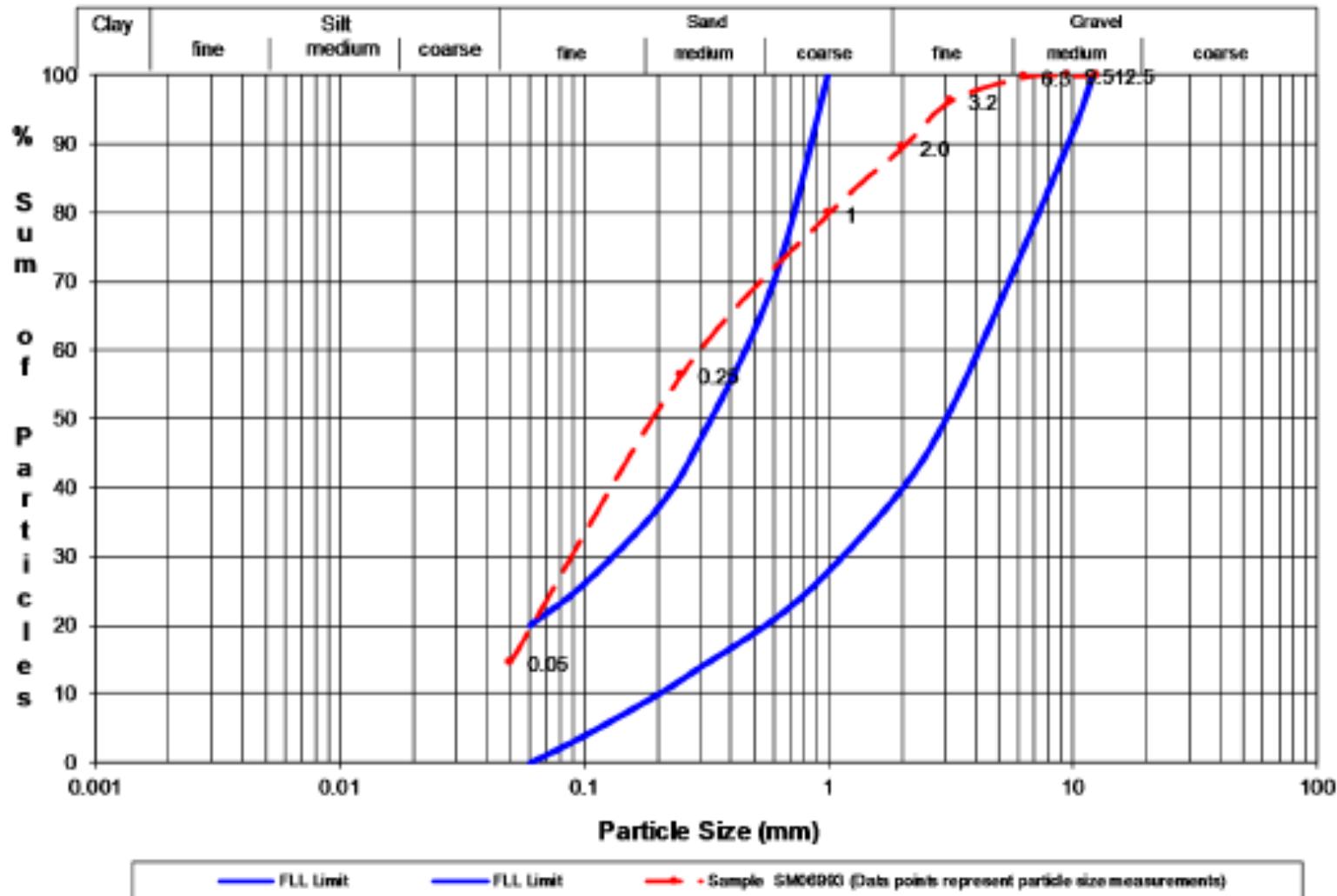
chart source: <http://www.physicalgeography.net/fundamentals/101.html>

Soil Structure and Its Effects on Absorption



Green Roof Media
FLL¹ Particle Size Distribution Graph
for Intensive Systems

**FLL Guidelines:
Intensive Green Site**





THANK YOU
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Appendix











LANZ
Basil 43
PRIMATO MALL
Lodi, CA
48

LANZ
Basil 43
PRIMATO MALL
Lodi, CA
48

LANZ
KRIM
PRIMATO MALL
Lodi, CA
48

KRIM

PRIMATO MALL
Lodi, CA
48

JALAPENO

PRIMATO MALL
Lodi, CA
48

MUNDIAL
Gourmet
THE ALL PURPOSE ALL PRACTICAL
4½" Utility/Bar Knife



Quick Harvester – *Farmer's Friend*





4-Row Seeder

Johnnys

Tillie *Carts & Tools*







Tilther *Johnnys*

<https://goo.gl/photos/LL1pFiyySqud3JhLA>





SOIL



FILTER FABRIC



DRAINAGE MAT

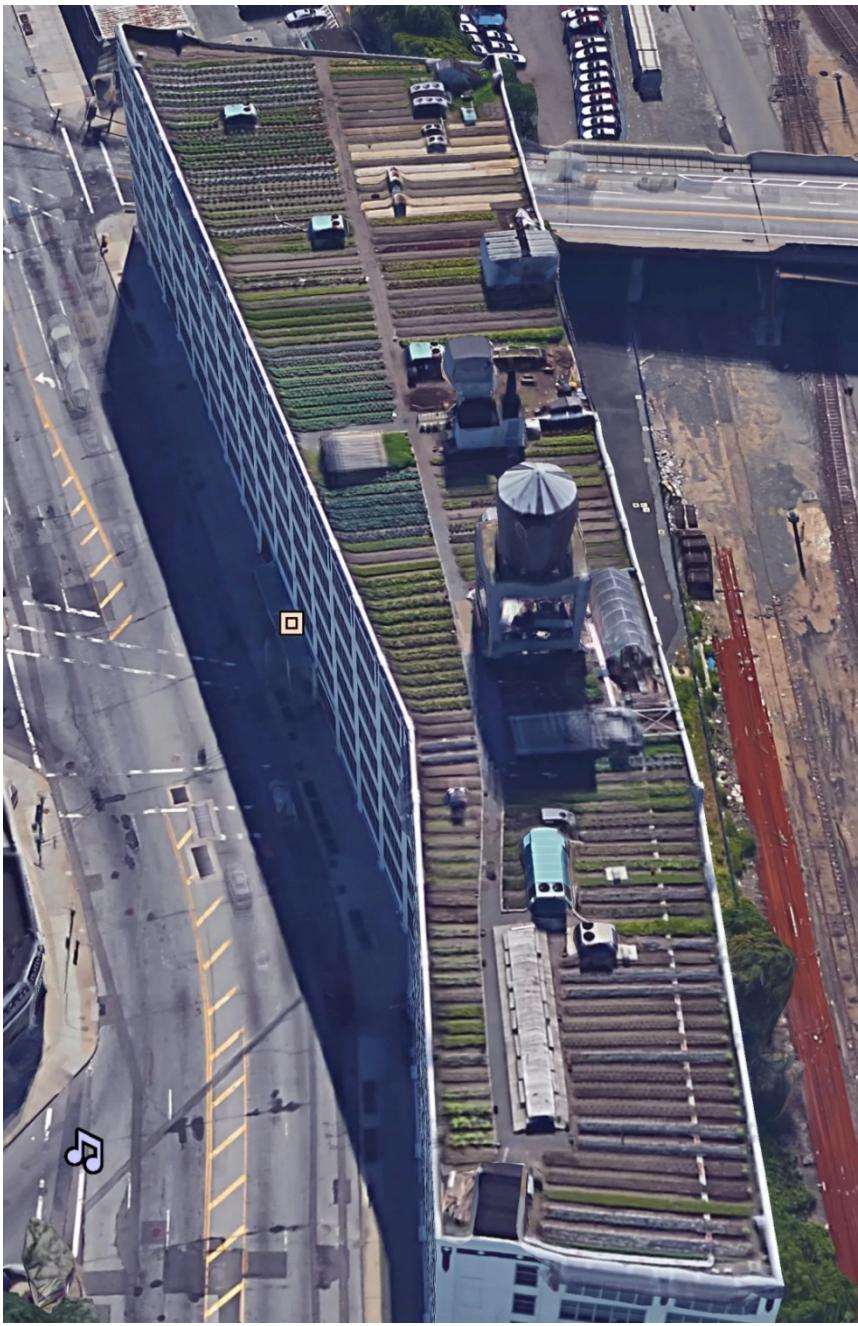
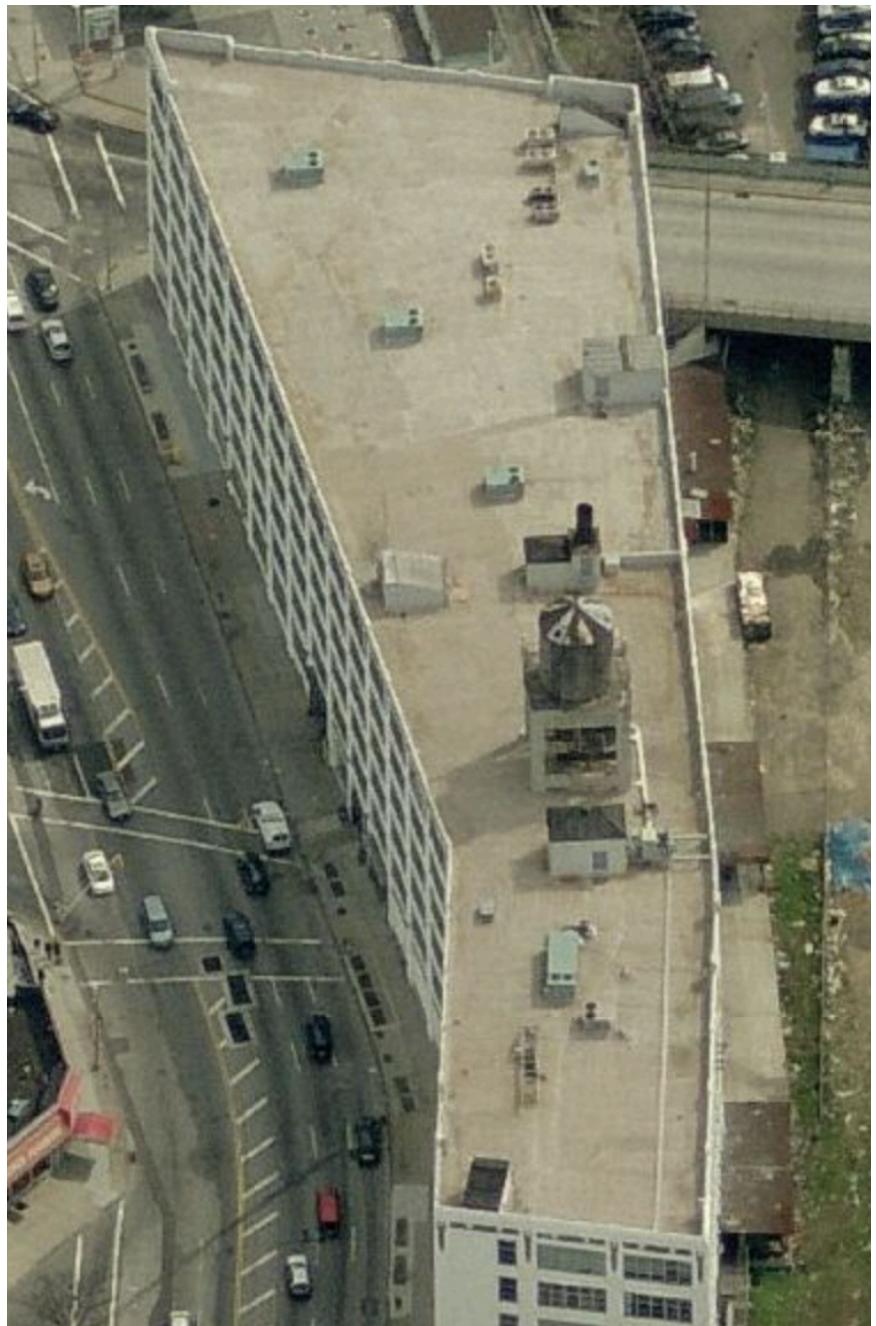


PROTECTION LAYER

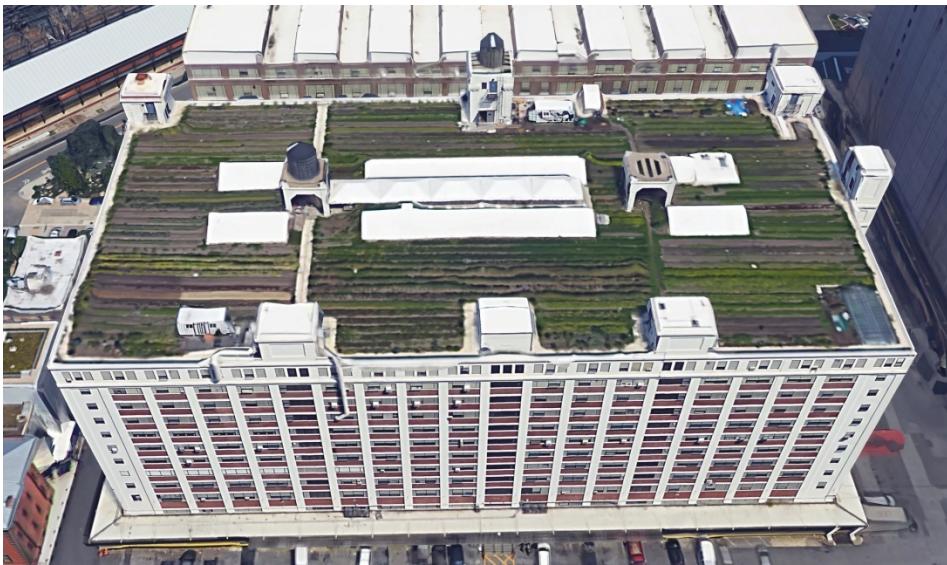


ROOT BARRIER









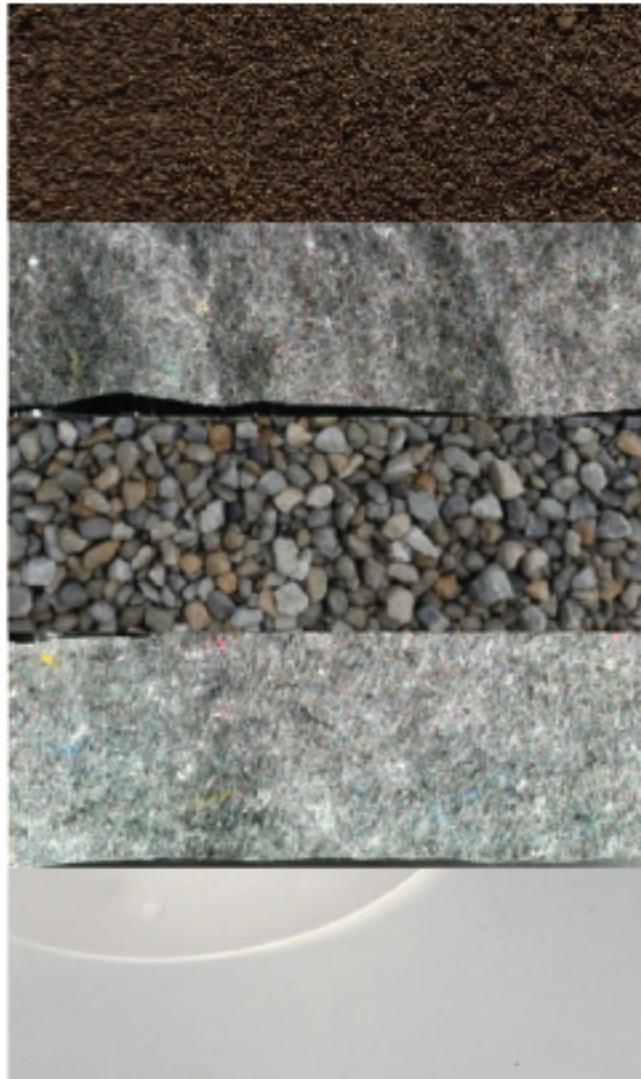
SOIL

FILTER FABRIC

AGGREGATE

PROTECTION LAYER

TPO



THANK YOU
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