

UNIVERSITY of
HOUSTON
HORTICULTURE SOCIETY

Burdette Keeland Jr.
Design and
Exploration Center
Greenroof

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Roof in
Spring 2014

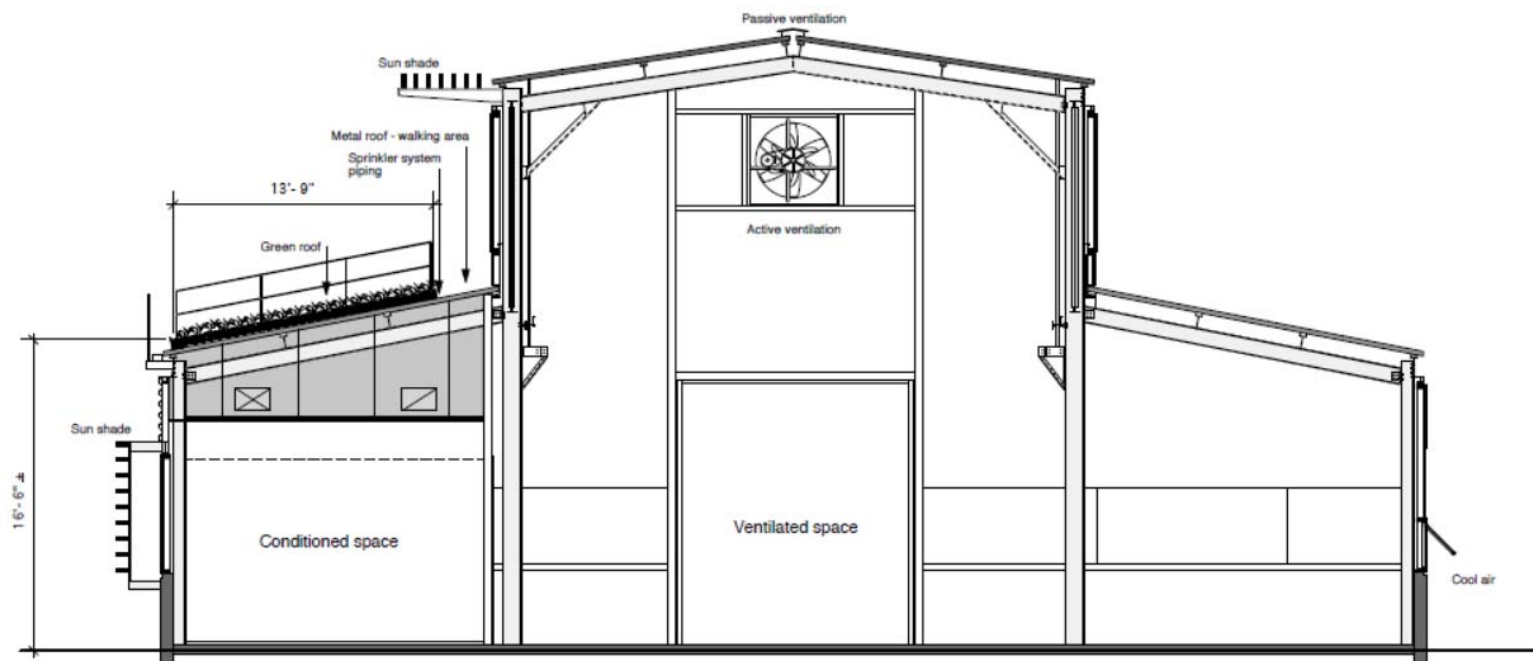


- Soaks up heat rather than reflecting it back like paved surfaces
- Absorb and utilize rainwater
- Moderates temperatures for interior of the building

Dealing with the slope, architectural constraints, and plant biology:

- A gauze-like fabric holds the roots in place
- Lightweight engineered soil dries quickly and stays in place
- Egg-crate-like underlayer beneath the soil stores water
- Drip irrigation to provide water
- Tested various native plants in a mockup next to the building.





Building Section



Gulf Muhly
Muhlenbergia capillaries

Sharp gayfeather
Liatris acidota

Blackfoot Daisy
Melampodium leucanthum

Mexican Oregano
Poliomintha longiflora

Purple Coneflower
Echinachea spip.

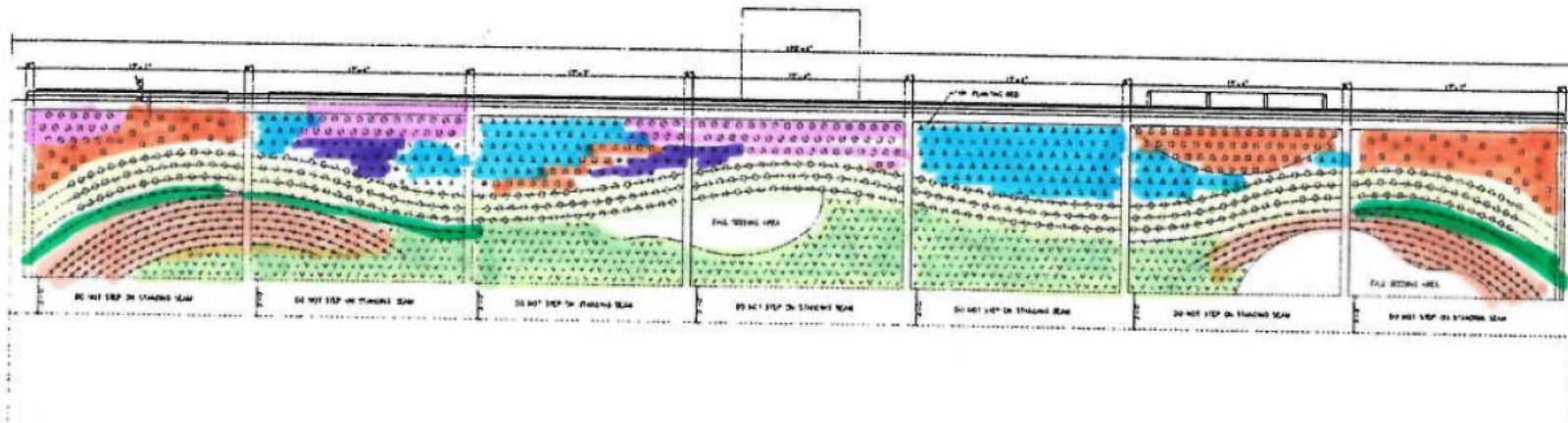
Mexican Feather Grass
Nassella (stipa) tenuissima

Catchfly
Silene subciliata

Indian Blanket
Gaillardia pulchella

Milkweed plant
Asclepias tuberosa

Little bluestem
Schizachyrium scorpariumhe

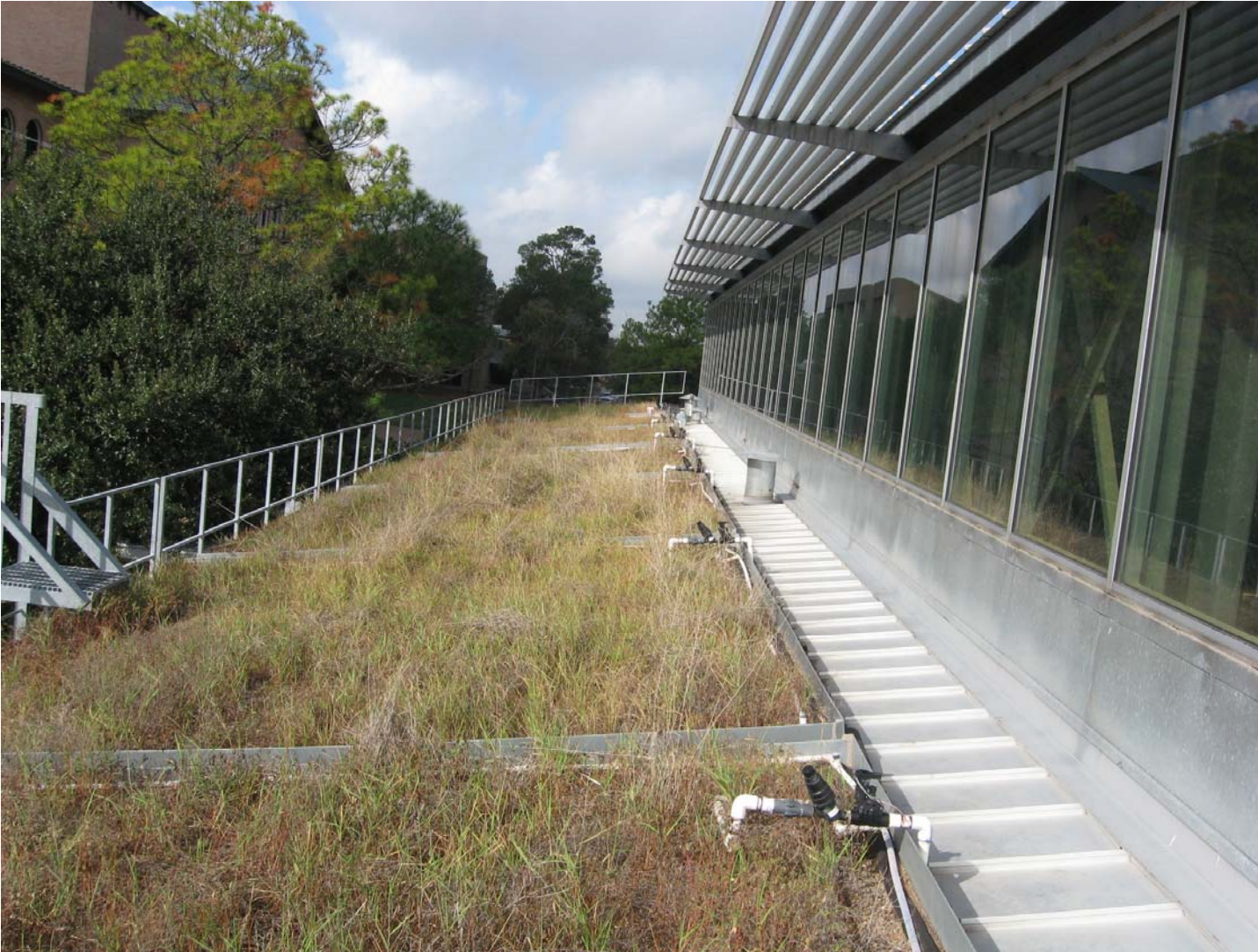


Completed in September 2007



Withstood Hurricane Ike in 2008

December 4, 2012

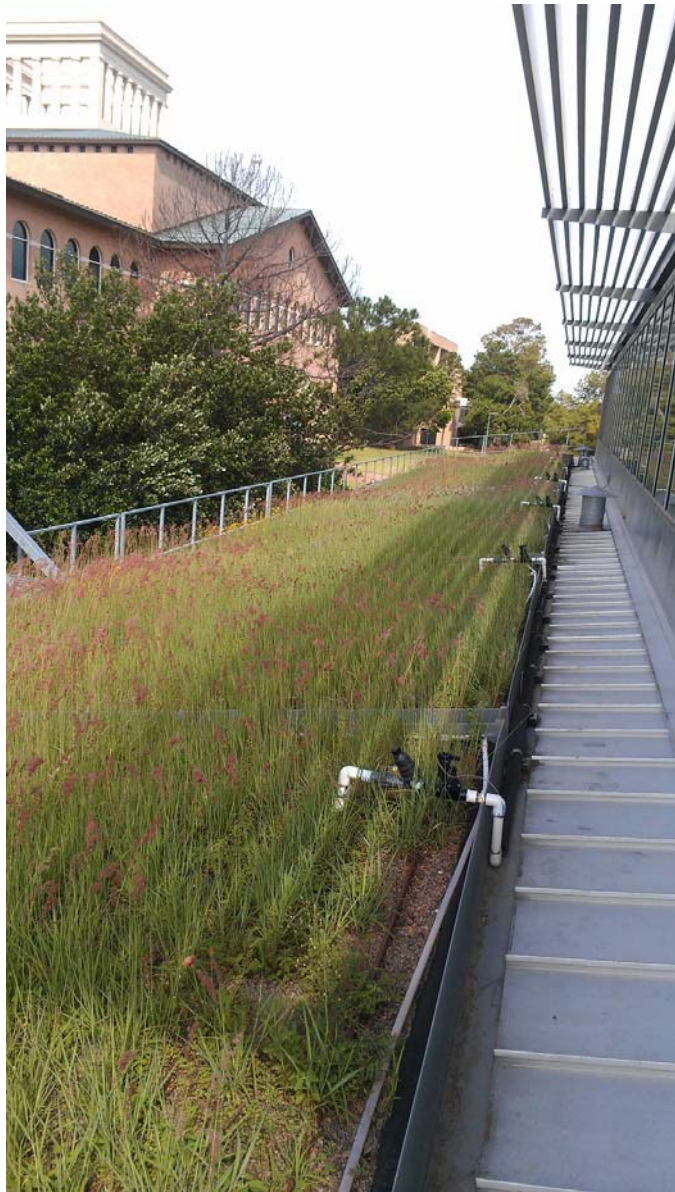


Met with Scott Barnes,
City of Houston and
Jaime Gonzalez, Katy
Prairie Conservancy

Provided suggestions
on managing the roof
and what has worked in
Houston.

Plans for Spring 2013

Pocket Prairie	Wildflowers and Buffalo Grass	Teaparty and Sedum	UH	Patches of known natives for easy seed collection	Teaparty and Sedum	Pocket Prairie
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May 2013





November 7, 2013
Picture by David Haydon

Spring 2014: Seeding Day!



April 11, 2014



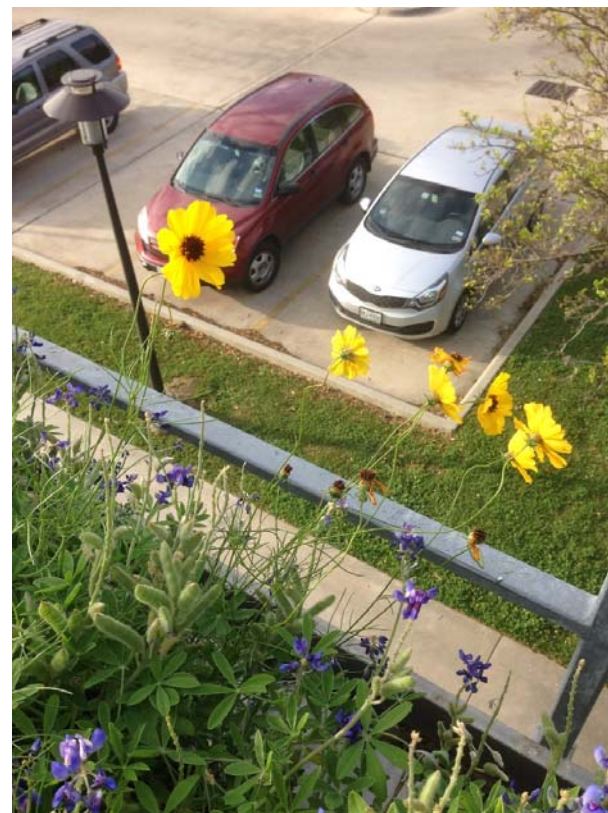
Indian Paint Brush and Bluebonnets



Cut leaf evening
primrose



Plains coreopsis





April 24, 2014



Evening Primrose



Indian Paint Brush and
Bluebonnets



Plains coreopsis



Indian Blanket

May 2, 2014



May 2, 2014





May 9, 2014

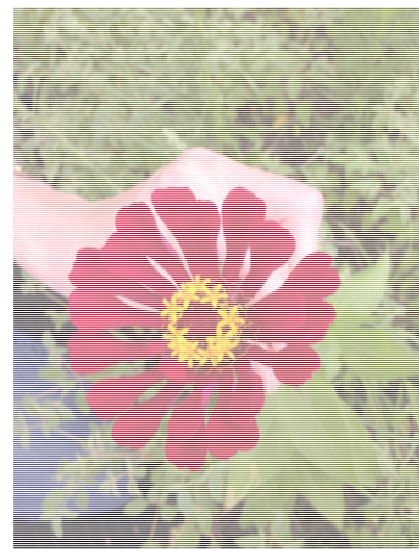




May 16, 2016

June 6, 2014





June 27, 2016



Mowing Day: December 12, 2014







Acknowledgements

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Yosef Kerzner, Rachel Gamblin, and Christopher Nguyen: Past Presidents of UH
Horticulture Society

UH Horticulture Society Students

Scott Barnes, City of Houston

Jaime Gonazlez, Katy Prairie Conservancy

Pick of the Crop

These hardy plants survive with minimal water and care

The Academy tested 35 native plant species to determine which would survive best on this roof. Nine finalists were selected—both annual plants and perennial wildflowers to cover 90 percent of the roof.

And the winners are...

Beach strawberry
Fragaria chiloensis



Self heal
Prunella vulgaris



Sea pink
Armeria maritima



Stonecrop
Sedum spathulifolium



Tidy-tips
Layia platyglossa



Goldfield
Lasthenia californica



Miniature lupine
Lupinus bicolor



California poppy
Eschscholzia californica



California plantain
Plantago erecta



Western columbine
Aquilegia formosa
Good nectar source for hummingbirds, bees and butterflies.



Common yarrow
Achillea millefolium
Withstands wind, drought and heat. Its flowers attract butterflies.



California phacelia
Phacelia californica
Drought-tolerant and attracts butterflies and bees.



Rocky Mountain penstemon
Penstemon strictus
Drought-tolerant plant that attracts butterflies.



Beach sagebrush
Ambrosia chamissonis
An aromatic coastal dune plant that is drought- and salt-tolerant.



Sea lettuce
Dudleya caespitosa
Succulent that only grows in California (endemic).



Point Joe fescue
Festuca brachyphylla
A bunch grass well-suited for poor soil and drought conditions.



Western sword fern
Polystichum munitum
Favors the understory of moist conifer forests. Can survive occasional dry periods.