



Gold Street Park



Reinvest Maryland: Heights – Baltimore

Sustainable Growth Challenge 2015/2016

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Acknowledgments

- Druid Heights Community Development Center
- Druid Heights Residents
- The Chesapeake Bay Trust
- Baltimore Office of Sustainability
- Parks & People
- Maryland Department of Natural Resources

Outline

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II. Inventory and Analysis

III. Process

IV. Design Solution

V. Material Selection

VI. Benefits

- *Environmental*

- *Social*

- *Economics*

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- *Costs*

VIII. Conclusion

Challenge

Reinvest in Druid Heights by revitalizing a vacant lot

- Address the needs and concerns of the community
- Improve the quality of life for residents
- Assure economic prosperity for the neighborhood
- Complement land preservation & natural resource protection efforts
- Meet the Triple Bottom Line

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INVENTORY & ANALYSIS

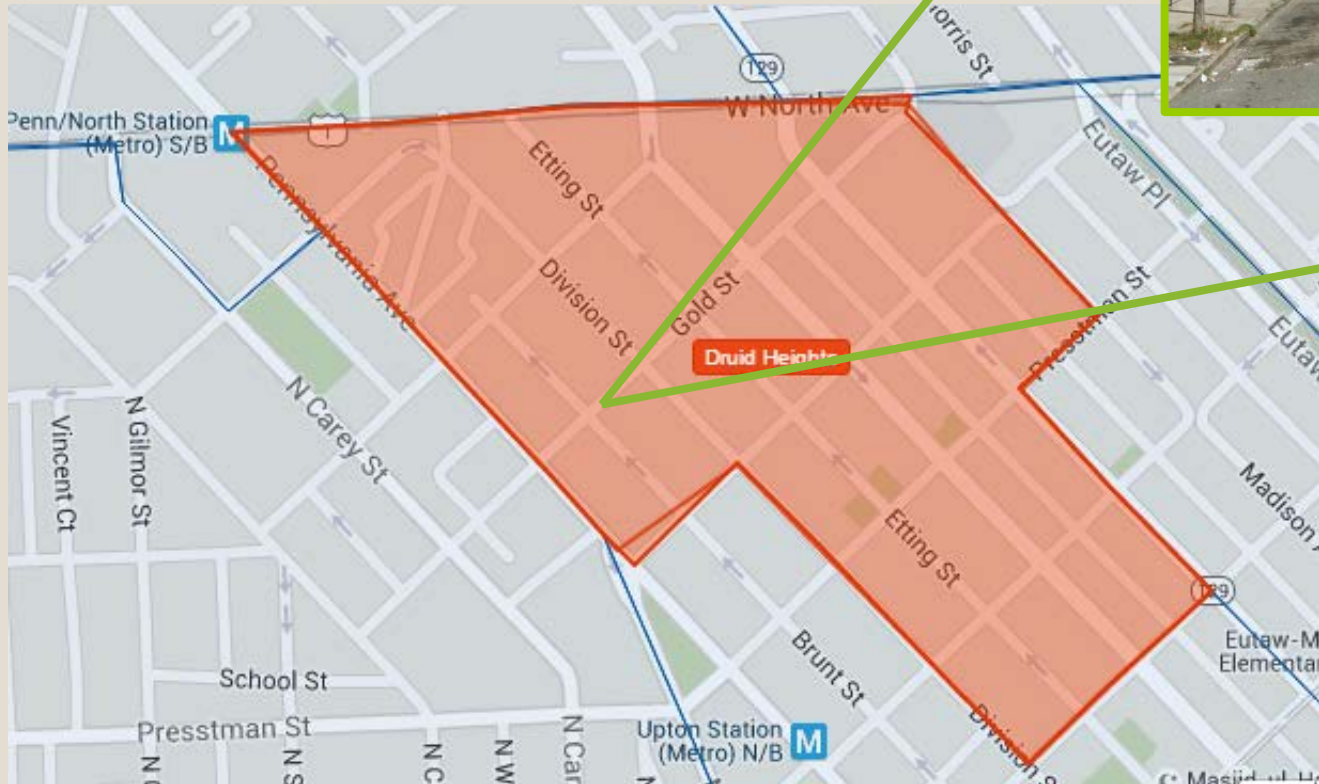
Neighborhood

- Neighborhood in transition
- Vacant row homes
- Drugs, crime and prostitution
- Depressed local economy



Circulation

- Intersection of Division Ave & Gold St.
- 2-way traffic with street parking

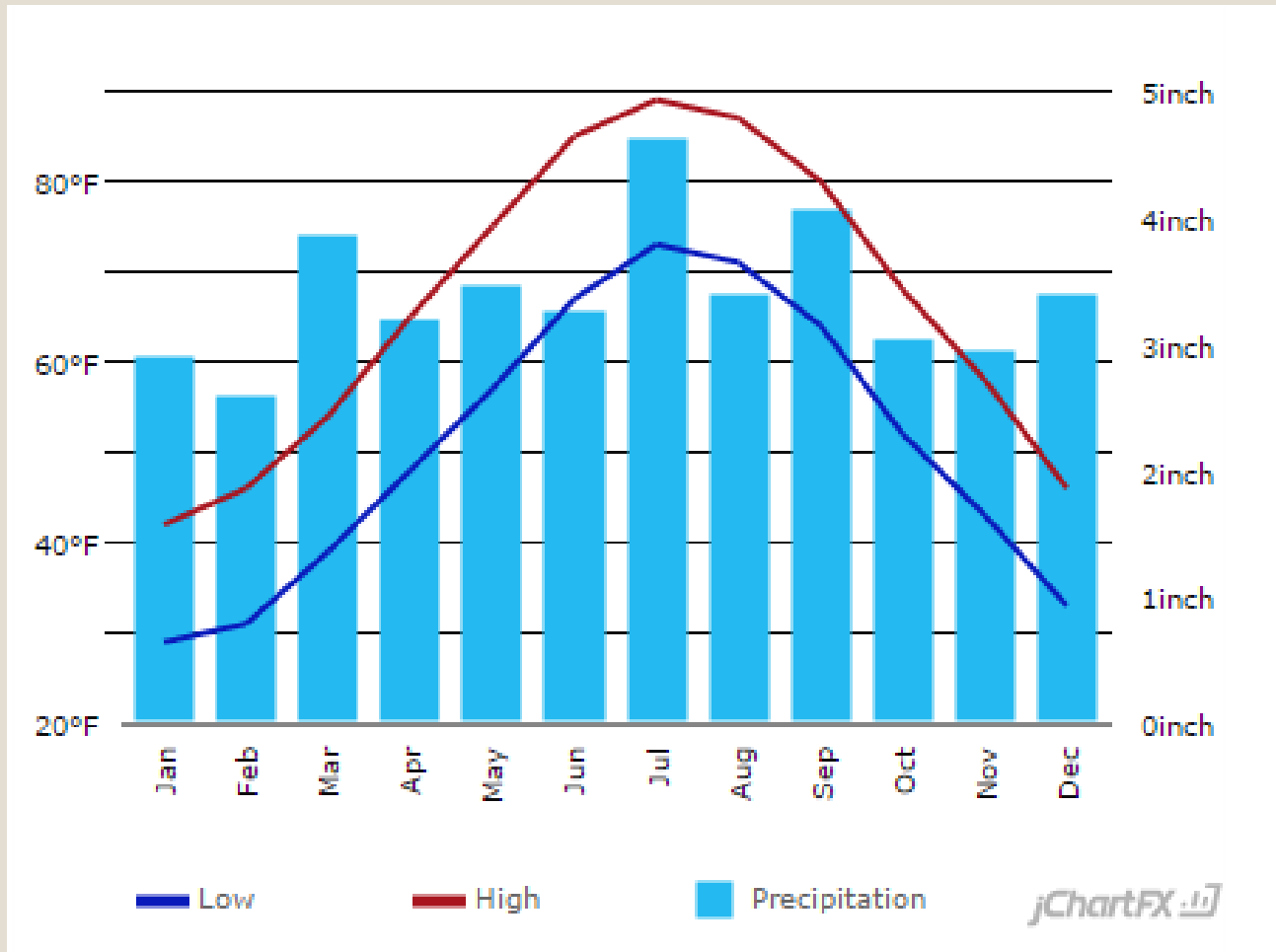


Sights and Sounds

- Urban Neighborhood
- Street Noise



Climate



- Average high/low temperature: 66.3 F/50.6F
- Possible freezing temperatures: November-Mid April
- Average annual precipitation: 40in
- Baltimore is protected from harsh weather variations year round by the Chesapeake Bay to the east and the Appalachian Mts to the west.

Site Survey

- Vacant Lot
- Former coal yard
- Invasive plant species
- Hydrologic soil rating: D
- Over grown vegetation encourages criminal activity



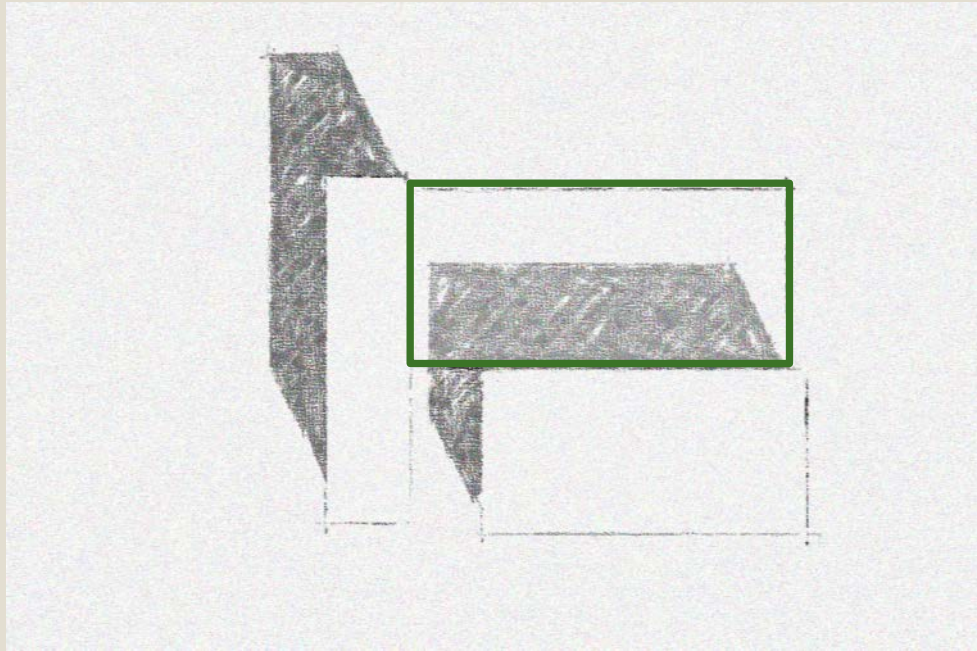
Hydrology and Drainage



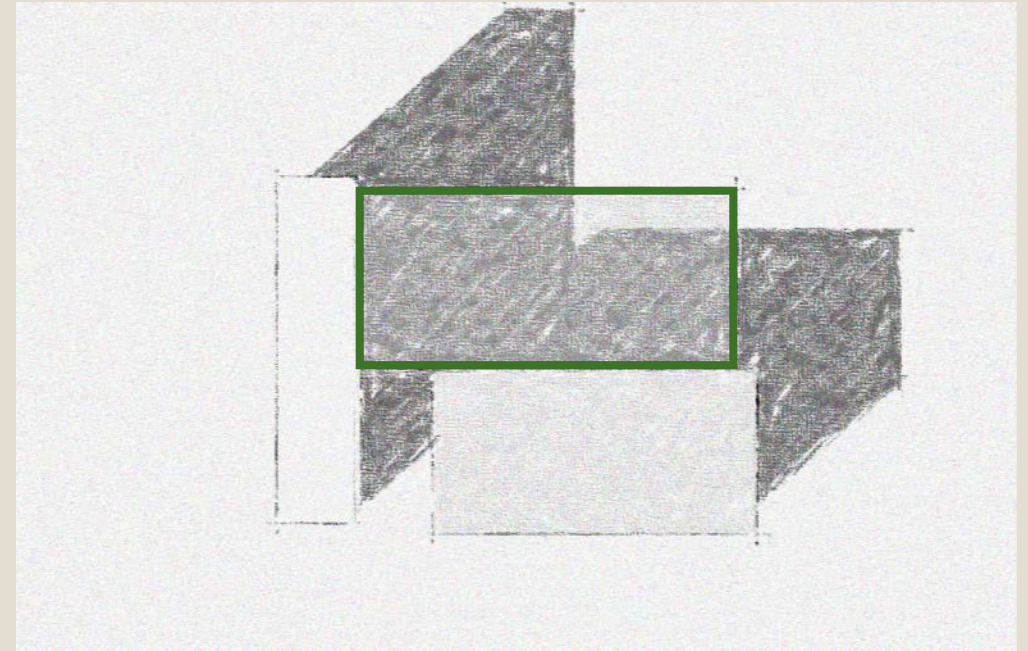
- Contour lines at 1ft intervals
- Land is relatively flat and water drains to the northeast.
- Baltimore is situated at the mouth of the Patapsco River and drains directly into the Chesapeake Bay.



Shade/Sun Analysis



Morning



Afternoon

Existing Vegetation



- Vacant urban lot with weeds
- Invasive plants



PROCESS



Community Meeting (October 24, 2015)



Voting: Community Engagement



Initial Designs



1st Design Meeting (November 19, 2015)





DESIGN SOLUTION

Presented December 10, 2015



Founders of the Community Development Center



Site Plan

LEGEND

1. Entrances
2. Stage
3. Meditation Area
4. Nature Play Space
5. Water Feature/Labyrinth
6. Rain Garden
7. Hill



1. East Entrance



2. Natural Play Area Water Feature



3. Stage



Stage at Night



4. Meditation Area



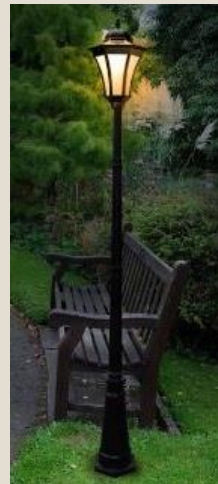


MATERIAL SELECTION

Material Selection



- Talkie tubes
- Wood stumps
- Boulders
- Brick and concrete
- Solar lamps



Trees for Performance



Betula nigra
River birch



Quercus phellos
Willow oak



Acer rubrum
Red maple

Plants for Phytoremediation



Brassica juncea
Indian mustard



Digitalis purpurea
foxglove



Violet spp.
violets



BENEFITS

Environmental

- 750 gal/yr treated in the bio-retention area
- 14,807 gal/yr intercepted by trees
- 2,287 lbs/yr atmospheric carbon reduction
- 100% recycling onsite materials
- Native vegetation for pollinators
- Water Quality
 - *Aligns with Baltimore's Small Watershed Action Plan (SWAP)*
 - *Contributes to a healthier Chesapeake Bay*
 - *Fits Baltimore's Watershed Agreement goals for*
 - Stormwater Management
 - Community Greening
 - Public Health
 - Development & Redevelopment
 - Trash Reduction



Social

- Attracts more single families to the Druid Heights
- Trees improve public perceptions of safety
- Parks strengthen community engagement; events/gathering spaces
- Trees remove suspended air particles and help allergy sufferers
- Parks increase recreational opportunities for residents
- Provides access to urban greenspace
- Trees reduce noise pollution



Economics



- Improves median home values
- Trees in urban settings can help reduce healthcare costs by up to \$10,000 annually
- Bio-retention areas are low maintenance
- Sustainable Urban Design can invigorate economic development in the neighborhood
 - *Druid Heights re-branding as “Arts & Entertainment District”*
 - *Re-zoned for Mixed-Use pending*





NEXT STEPS



Pre-Construction

- Funding
- Permitting
- Construction Documents
- Break Ground



Costs

Category	Description	Unit	Quantity	Unit Cost	Total Cost
General					
	Engineering and survey	ls	1	\$15,000	\$15,000
	Mobilization	ls	1	\$5,000	\$5,000
Erosion & sediment control					
	Stabilized construction entrance	ea	1	\$2,000	\$2,000
	Silt fence	lf	366	\$0.83	\$304
	Geotextile	sy	42	\$56	\$2,352
	Temporary seeding	sy	2,743	\$0.36	\$988
	Constructed sediment trap	ea	1	\$500	\$500
	Temporary channel	lf	100	\$5	\$500
Play Area					
	Nature Play space	ea	1	\$10,000.00	\$10,000
	Play Base	sy	58	\$2.35	\$136
	Tubes	ea	3	\$500	\$1,500
Earthwork					
	Excavation	cy	42	\$14.35	\$603
	Backfill	cy	81	\$6	\$486
	Load and haul	cy	39	\$15	\$585

Sitework					
	#8 aggregate	cy	60	50	\$3,000
	#57 aggregate	cy	119.2	50	\$5,960
	#2 aggregate	cy	119.2	44.5	\$5,304
	Permeable Pavers	sf	3,219	\$16	\$49,895
	Gabion seating wall - 6' long, 18" high	ea	18.5	\$550	\$10,175
	Fencing	lf	211	\$25.0	\$5,275
	Brick Wall	sf	734	\$50.6	\$37,140
	Solar Balmoral Single Lamp Post Light	ea	7	\$1,000.0	\$7,000
	Stage Concrete	cf	761	\$0.89	\$677
	Stage Brickwork	sf	35.8	\$50.6	\$1,811
Landscape					
	Fill bioretention with soil mixture	cy	42	\$35	\$1,470
	Trees	ea	6	\$350	\$2,100
	Shrubs	ea	20	\$120	\$2,400
	Groundcover & grasses	sf	6,081	\$9	\$54,732
Optional Water Features					
	Splash Pad	ea	1	\$145,000	\$145,000
	Meditation Fountain	ea	1	\$2,000.00	\$2,000

*Cost estimate is based on RSMeans Site Work & Landscape Cost Data (2013).

	Subtotal:	\$373,894
	Contingency:	20%
	Total:	\$448,672
	Subtotal without water features:	\$226,894
	Contingency:	20%
	Total:	\$272,272

Conclusion

- Reinvests in Maryland
- Addresses the needs and concerns of the community
- Improves the quality of life for residents
- Assures economic prosperity for the neighborhood
- Complements land preservation & natural resource protection efforts
- Triple Bottom Line
 - *Environmental Stewardship*
 - *Social Equity*
 - *Economic Growth*

