



Roland Water Tower Park
Maryland Historic Trust
Historic Preservation Easement Program
Change/Alteration Request Application
July 28, 2021 Support Materials



**Unknown
Studio**

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Project Narrative

Project Narrative

The Roland Water Tower site has witnessed many phases of Baltimore's history. Before the construction of the 1905 Italianate water tower, this site was part of a farmstead of Grandison Hoe, a freed man who owned and operated a farm here. The neighborhood of Hoes Heights, to the Park site's west, has long served as an African American enclave in Northeast Baltimore. Bounding the east and northern ends of the site are Roland Park—famous as an Olmsted Brothers' designed neighborhood for the City's wealthy and white, and one of Baltimore's first streetcar suburbs. To the south is Hampden, once a working mill community now reinvented as one of the City's artist communities. Following its short function as a standpipe for Baltimore's potable water storage tower system, the tower was quickly replaced by the reservoir system and the parcel then became a turnaround for the 'trackless trolley' in the 1940s, for buses in the 1960s, and eventually a nesting site for the City's thriving peregrine falcon population.

In 2020, the Roland Park Community Foundation successfully secured funding and City support for the stabilization of the tower and the creation of a public park on the site. The tower stabilization was completed this spring, and the Park team has recently completed concept design after a months-long community engagement process. The team has focused on a few simple moves that dramatically transform this site from a site predominantly for vehicles to a place for people.

Throughout the concept design phase, the design team shared preliminary conceptual approaches with Baltimore City Planning, Department of General Services, CHAP, and the Fire Marshall for early feedback and direction. The team has also delivered six community engagement workshops (half by zoom, half physically distanced on site), as well as two paper and digital surveys of community members with almost 870 combined respondents. The community's priorities show a desire for an even balance of programs and uses—from daily, individual use to small community gatherings and events — signaling that a flexible green space that serves all types of community members year round should be the design driver. Safety for children and traffic calming/street closure is a very high priority. Other community priorities include habitat, trees, and native plants, as well as information on the site's diverse history, from Ecological History to Grandison Hoe to the Tower and Trolley System.



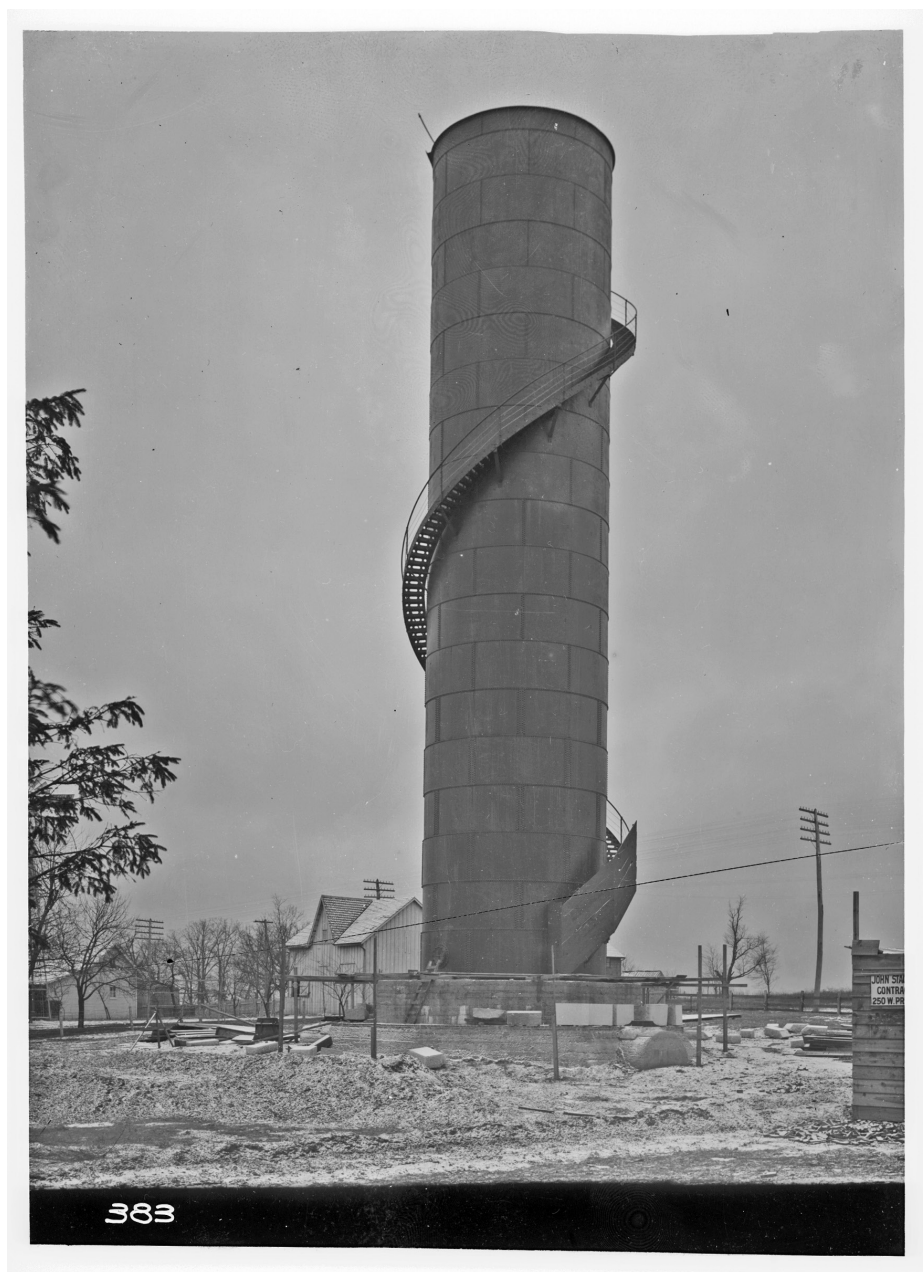
Playing at the Tower after the Stabilization, June 2021

The design and client team also discussed in-depth with the community the potential redesign, reduction or removal all together of the paved turnaround on the site. Together, this surface comprises 35% of the park's space, and its conversion to usable park space, pervious green space, or programmatic spaces for all ages is highly desired by the community, as evidenced by the outcomes of our survey work, shown in the attached materials.

Taking into account all feedback to-date, Unknown Studio has prepared a concept design, which will likely need to be phased over time according to fundraising capacity. The design seeks to unite both sides of the park – from Roland Avenue to Evans Chapel Road – creating a connective, community-focused green space that welcomes residents from the divers communities around the park. The preferred scheme preserves the symmetrical, historical viewshed from Roland Avenue with a new ADA-accessible path system that closely follows the 'horseshoe' of the road turnaround. On the opposite side of the tower, toward Evans Chapel Road, the new pathways and a small, flexible plaza area evoke the curvilinear neoclassical geometries that surrounded the water tower at its construction in 1905, and the strong legacy of Olmsted in the surrounding neighborhoods.

The design preserves all historic structures on site: the tower, stairs, iconic walls and original exedra bench at Roland Avenue and Evans Chapel Road, while bringing additional places for people to gather, wander, and sit. Using the entrance off Evans Chapel Road as the primary gathering space and access offers flexibility for community events, in addition to ADA access to the tower's plinth for the first time. Native trees and shrubs are set at the perimeter, framing the space, creating a feeling of enclosure and oasis, and reflecting the public's desire for green, habitat, and pollinator friendly plantings. The design preserves existing Zelkova trees that are in good health and outside the limit of site disturbance, while those that are in poor health or will be affected by sitework and grading necessary for ADA access will be replaced with new, native trees and mitigation meeting Baltimore City's requirements on-site and off-site. The Zelkovas are not original to the site design; based on historic site photos, they were planted sometime after 1957. Last, the design will bring water and power into the site, per community priorities, creating the opportunity to subtly and appropriately light the tower itself in the future.

Historic Photographs



Tower Construction, 1905



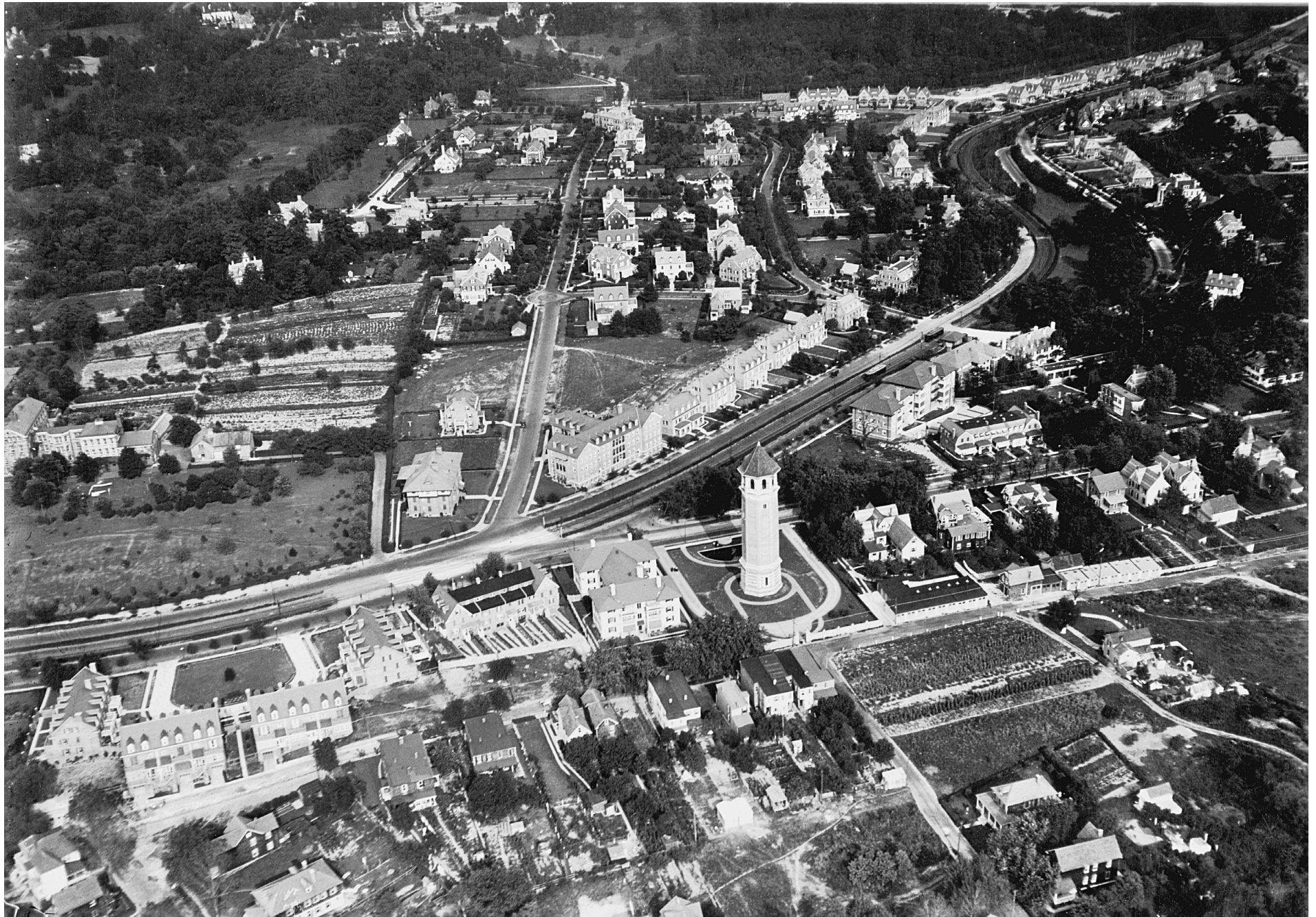
View of Tower from Roland Avenue, possibly during construction



"Looking west from a site between Rugby Road and Charles Street" from A Book of Pictures in Roland Park by George B. Simmons, 1912



Site Aerial, 1926



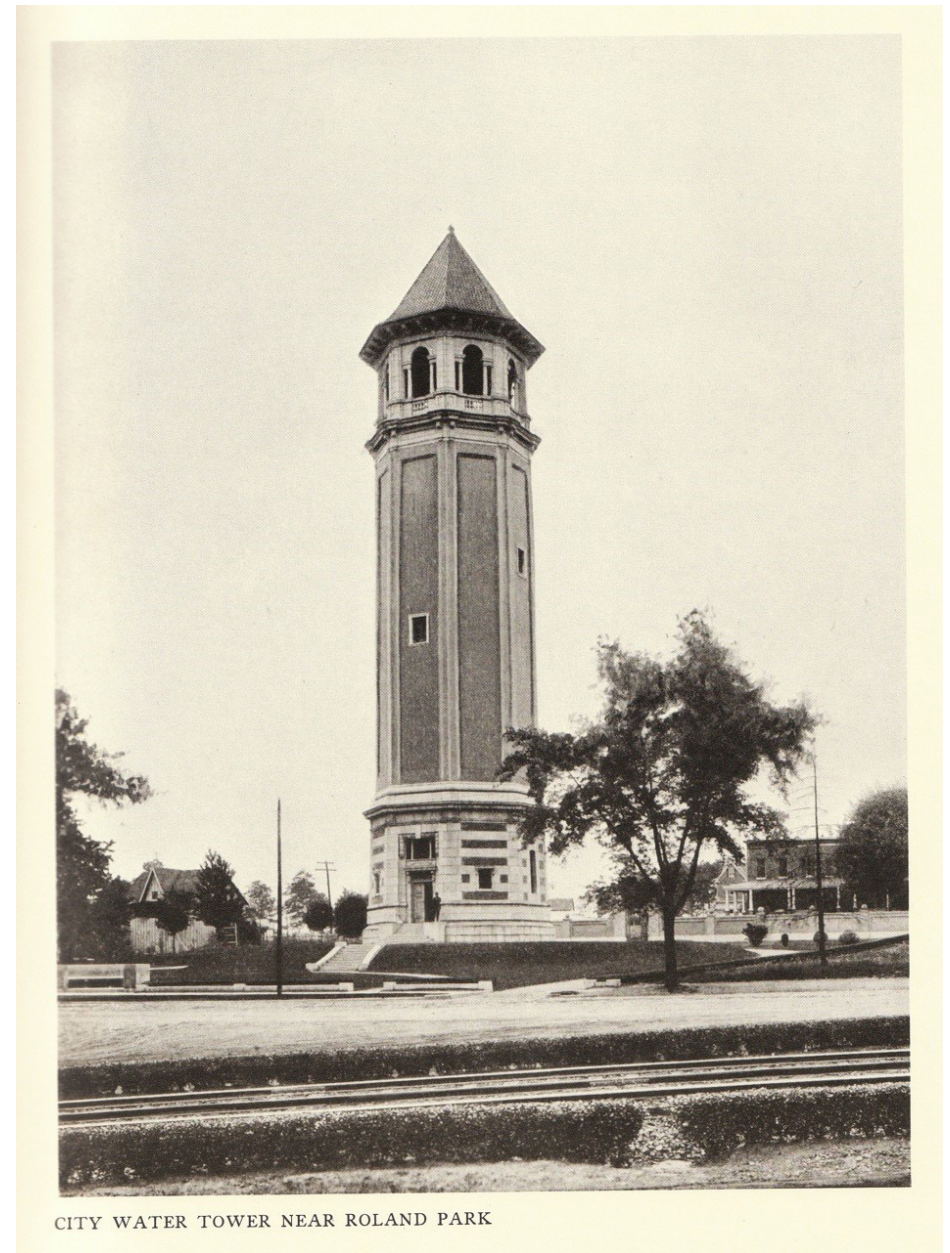
Site Aerial, 1920s, Hoes Heights neighborhood in foreground



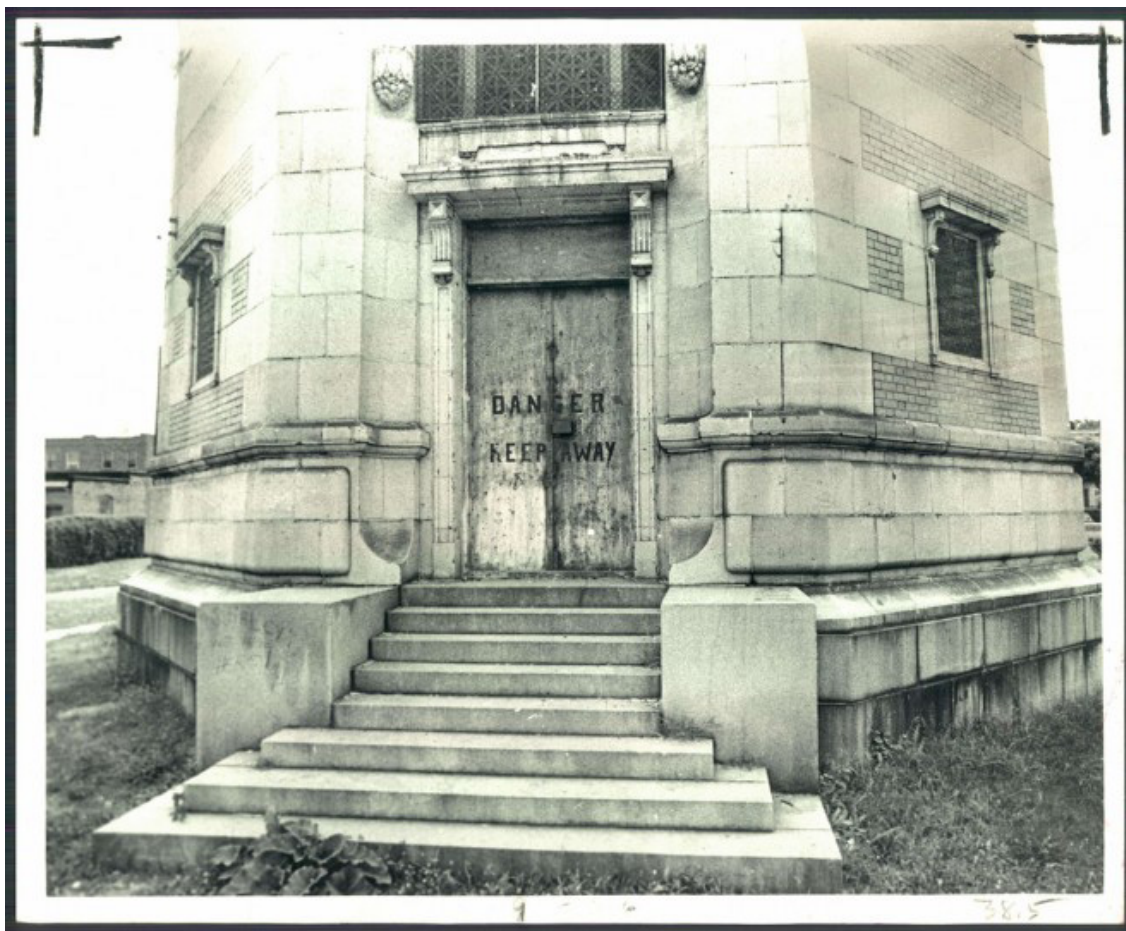
View of Tower from Roland Avenue, date unknown



View from Roland Avenue, trolley wires overhead



View from Roland Avenue, trolley tracks in foreground



Tower in Disuse, 1948



Site during Trolley Era, 1940s



Trackless Trolley in Site Turnaround, 1949



Site Aerial, 1957

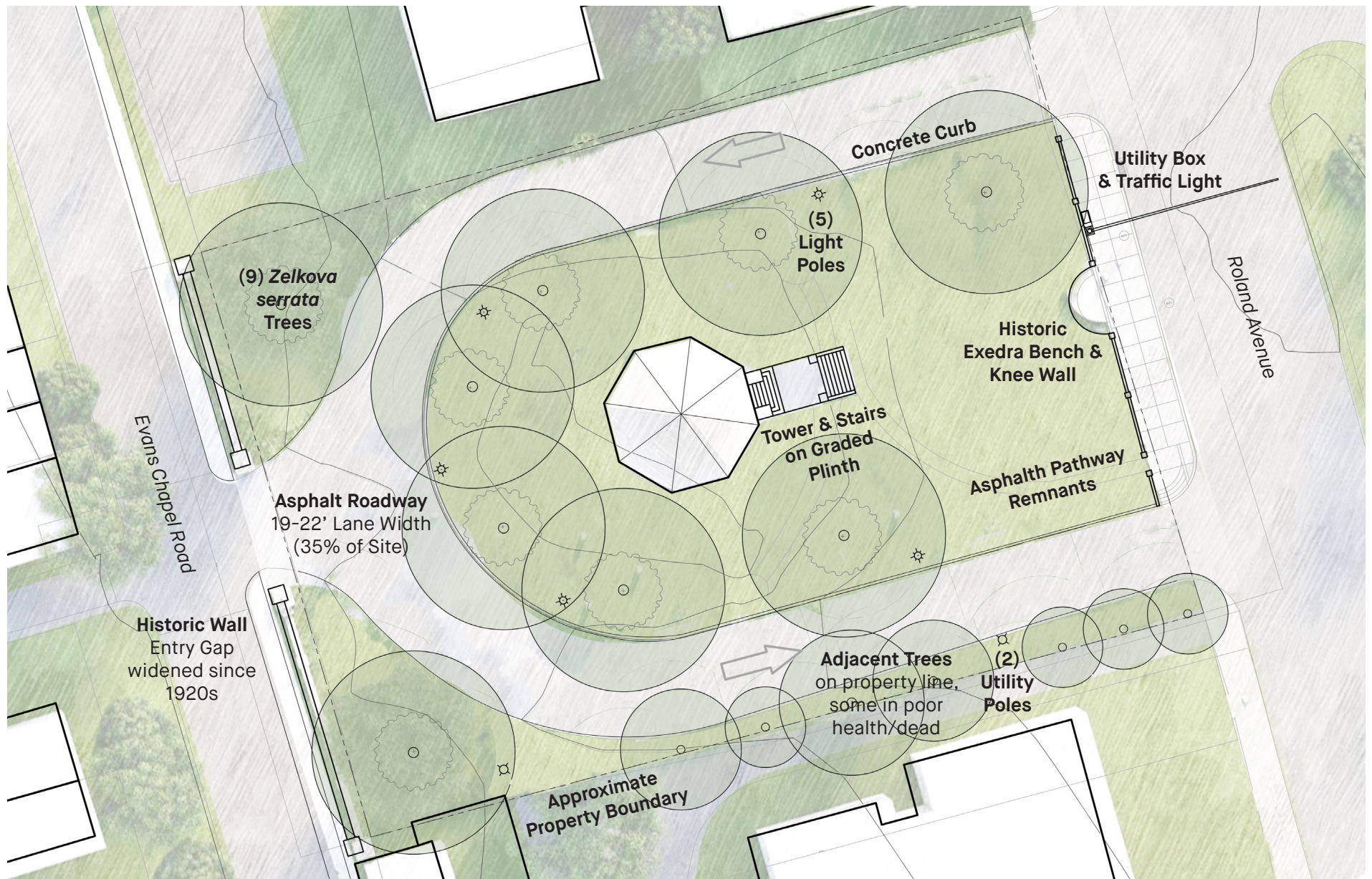
Current Site Conditions



Neighborhood Context



Site Aerial before Tower Stabilization Project, 2020



Current Site Conditions



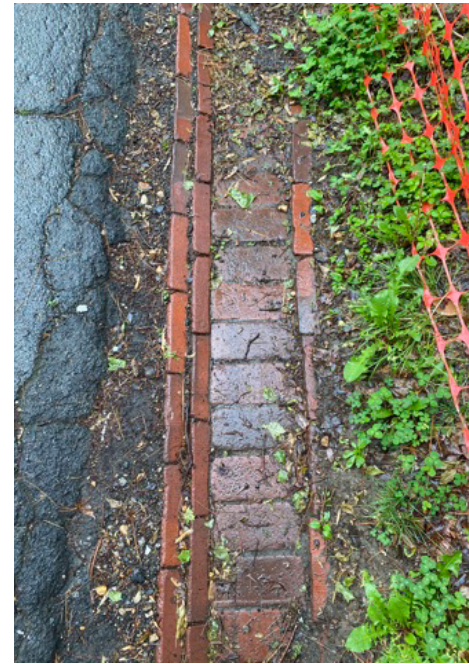
Evans Chapel Road Entrance



Historic Wall at Evans Chapel Road



Roadway Condition



Roadway Condition Details - Concrete Curb at inner edge; Brick & Concrete Runnel at outer edge



Roland Avenue Entrance



Historic Exedra Bench and Knee Wall at Roland Avenue



Healthy Existing Zelkova Tree to remain (3 total)



Zelkovas at Site Interior - impacted by current and planned construction (6 total)



Remnant Asphalt Paths - do not all follow historic path structure based on historic photographs



Granite Stairs and Plinth Grading up to Tower

Community Design Process



1

November 2020: Community Priorities 446 participants

- Zoom Meeting
- In-Person Event
- Digital Survey
- On-Site Comment Box

2

April 2021: Concept Design Options 320 participants

- Zoom Meeting
- In-Person Event
- Digital Survey
- On-Site Comment Box

3


June 2021: Preferred Concept Design 165 participants

- Zoom Meeting
- In-Person Event
- Digital Comment Box

1 November 2020: Community Priorities Survey

Choose 3 Veto 1	Choice 1	Choice 2	Choice 3	VETO
ELEMENTS	 CLOSED ROAD	 SHADE TREES	 POLLINATOR PLANTS	<i>Fenced in dog run</i>
ACTIVITY	 PERFORMANCE/EXHIBITION	<i>community parties</i> WILD CARD	 PLAYFULNESS	
WITH WHOM?	 COMMUNITY GATHERING	 FAMILY	 SMALL GROUP	
WHEN?	 EVENING TIME	 WEEKEND	 WEEKDAY	<i>thank you!</i>
WHAT DID WE FORGET?	<i>I love the idea of this as a community-building space. *also keen to make it environmentally friendly</i>			

64 In-Person Responses



Roland Water Tower Park - Concept Design

Initial Community Feedback Questionnaire

** Required*

Please fill out this short survey to guide the concept design of your community park. We want to hear about your ideas, wishes, anxieties, and excitement!

What is your connection to the Roland Water Tower Park? *

☐ I live nearby in the adjacent neighborhoods
☐ I live elsewhere in Baltimore
☐ Other: _____

Want to volunteer, learn more, or join the mailing list? Please visit:
rolandwatertower.org/#contact

Next Page 1 of 6

382 Digital Responses



Write-In Comments: Desires



Write-In Comments: Concerns

1 What Elements Would You Like to See in the Park?



SHADE TREES



POLLINATOR PLANTS



COMMUNITY LAWN



PLAZA SPACE



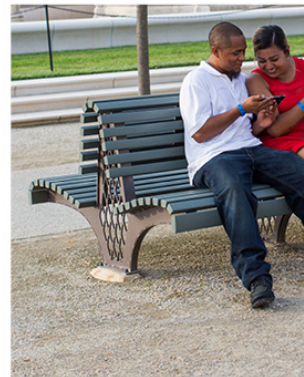
CLOSED ROAD



WATER FEATURE



**HISTORIC-INSPIRED
ELEMENTS**



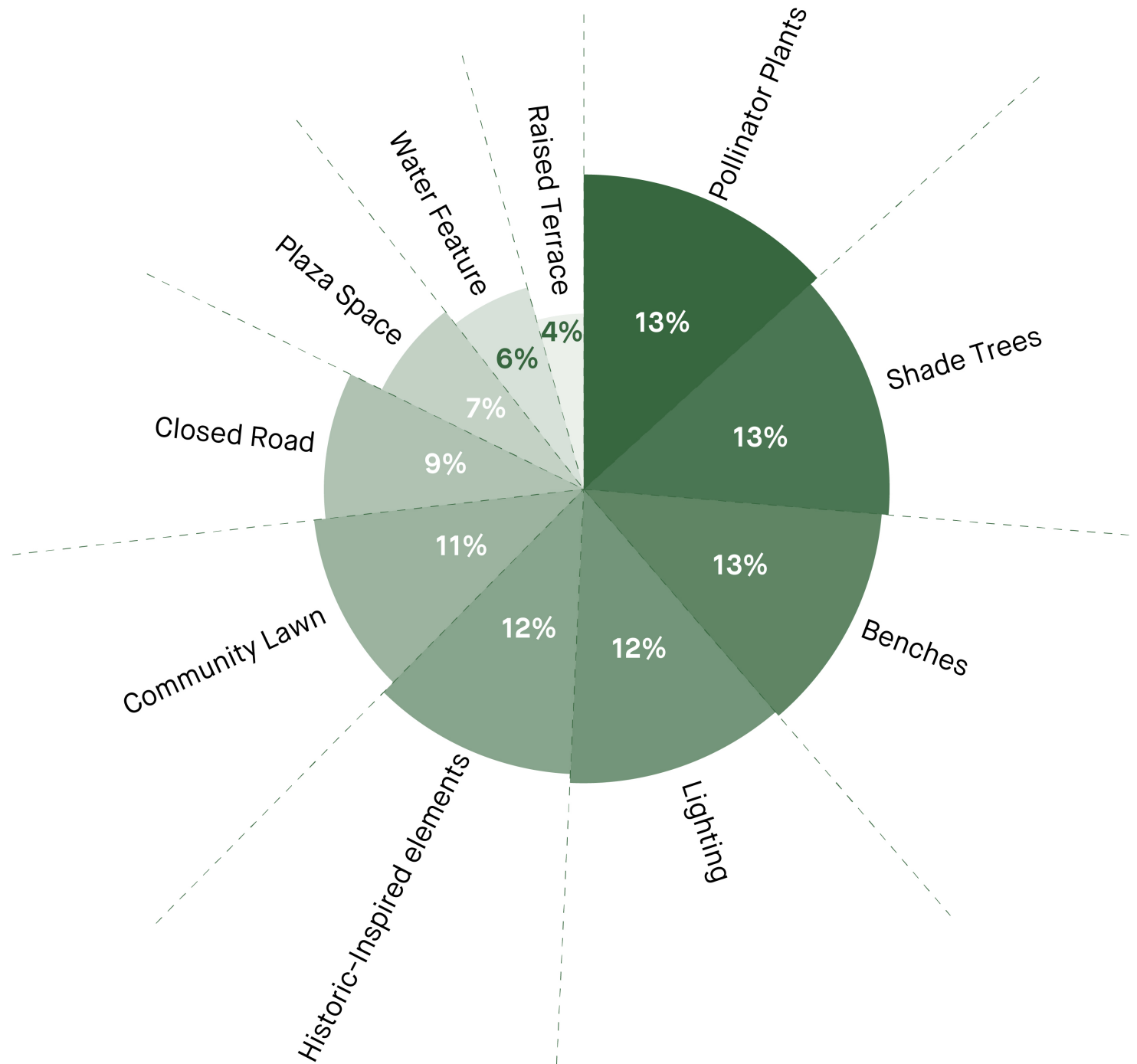
BENCHES



LIGHTING



RAISED TERRACE



2

What Activities Would You Like to See Happen in the Park?



PLAYFULNESS



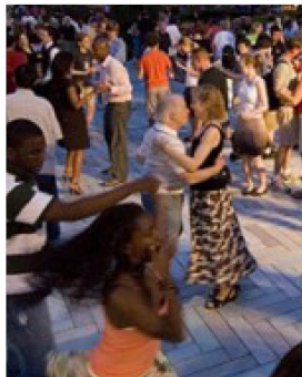
HISTORY



TEMPORARY ART



FLEXIBLE TABLES & CHAIRS



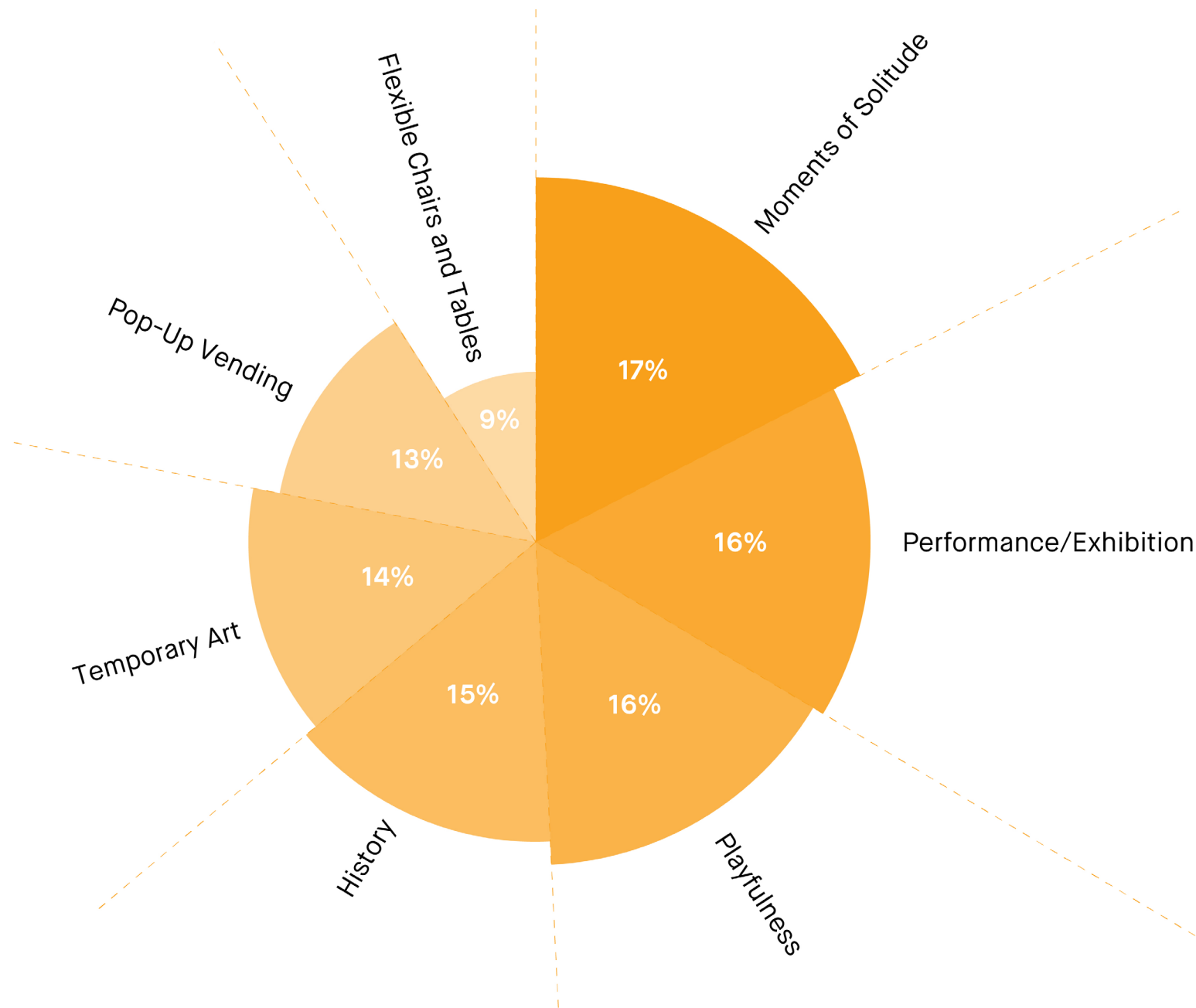
PERFORMANCE/EXHIBITION



POP-UP VENDING



MOMENTS OF SOLITUDE



3

With Whom Would You Use the Park?



ALONE



FRIEND / PARTNER



FAMILY



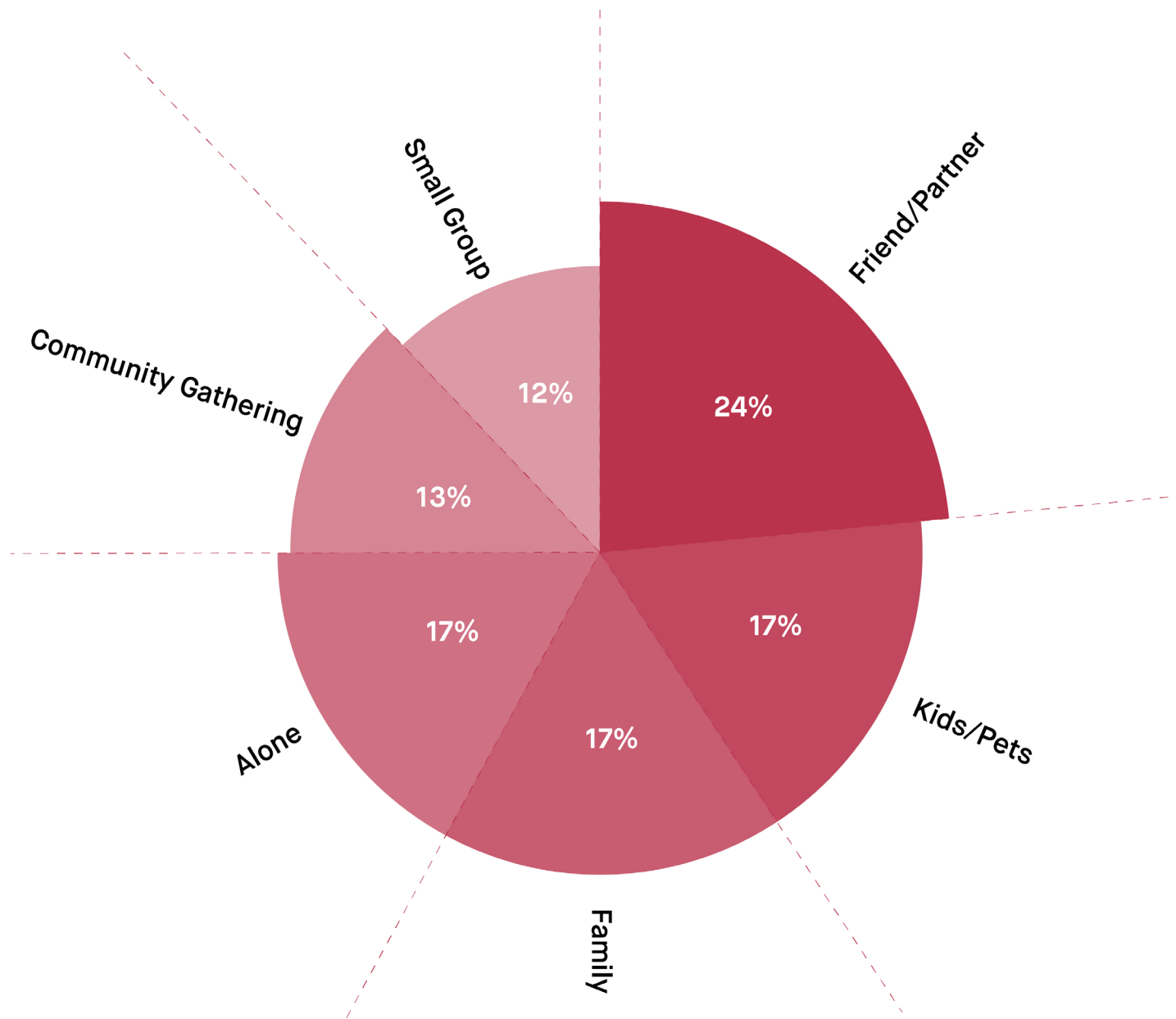
CHILDREN/PETS



SMALL GROUP



COMMUNITY
GATHERING



4

When Would You Use the Park?



SUMMERTIME HEAT



WINTERTIME COLD



WEEKDAY



WEEKEND



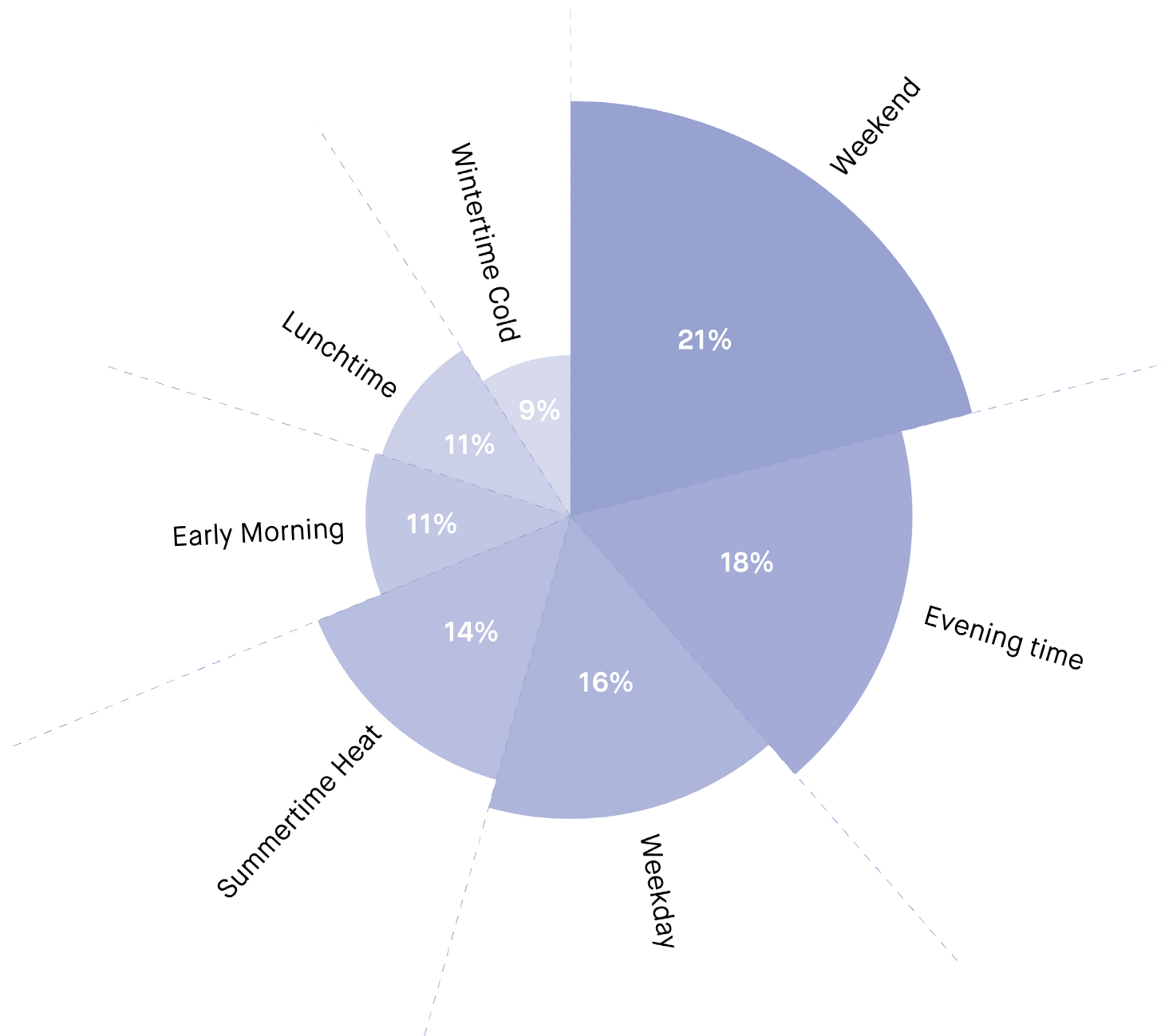
EARLY MORNING



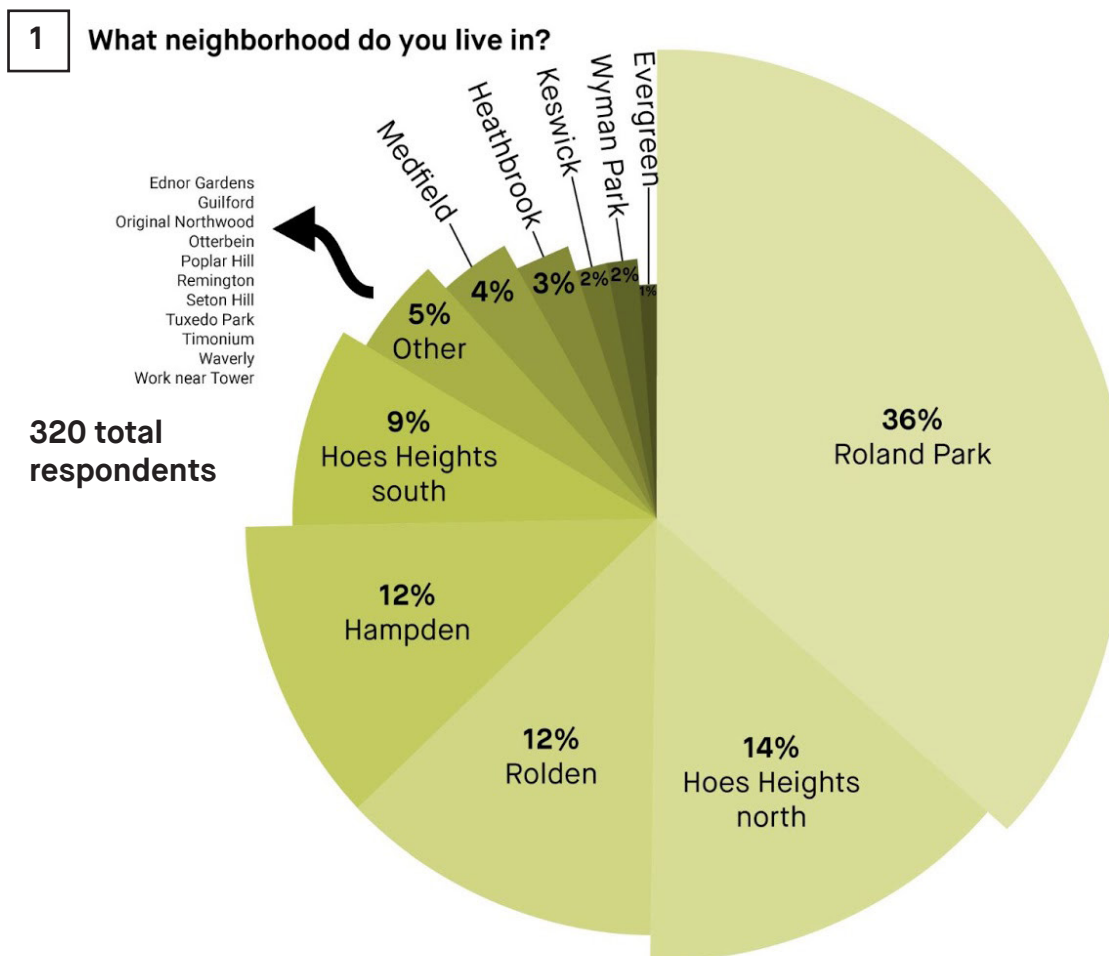
LUNCHTIME



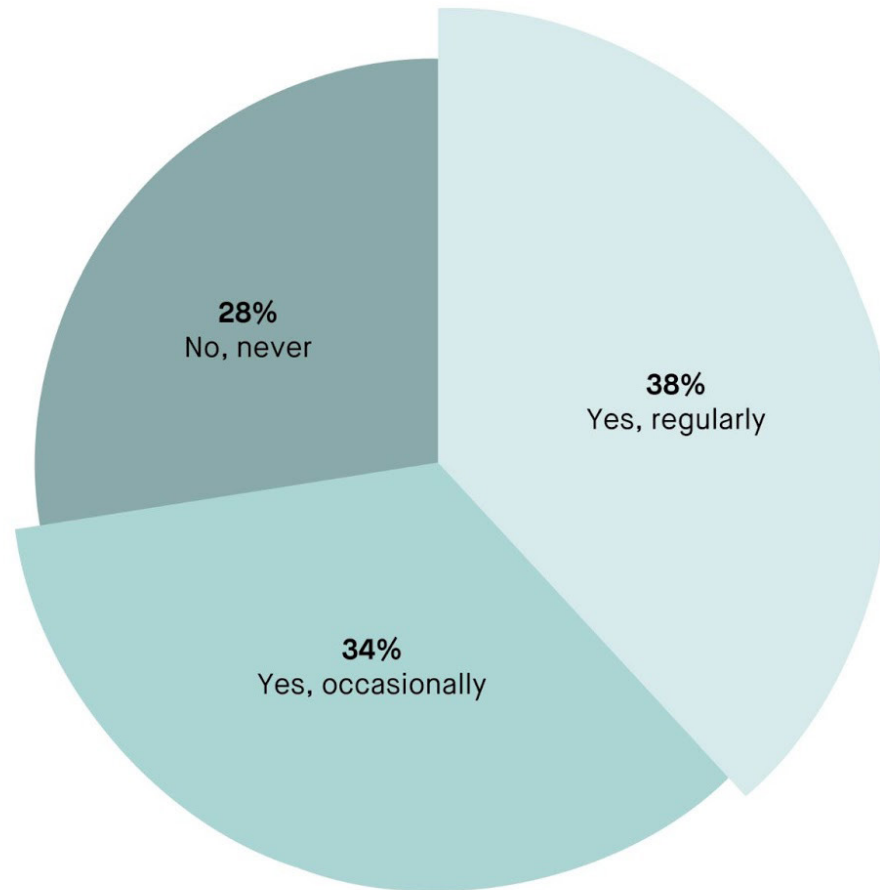
EVENING TIME



2 April 2021: Concept Design & Roadway Survey

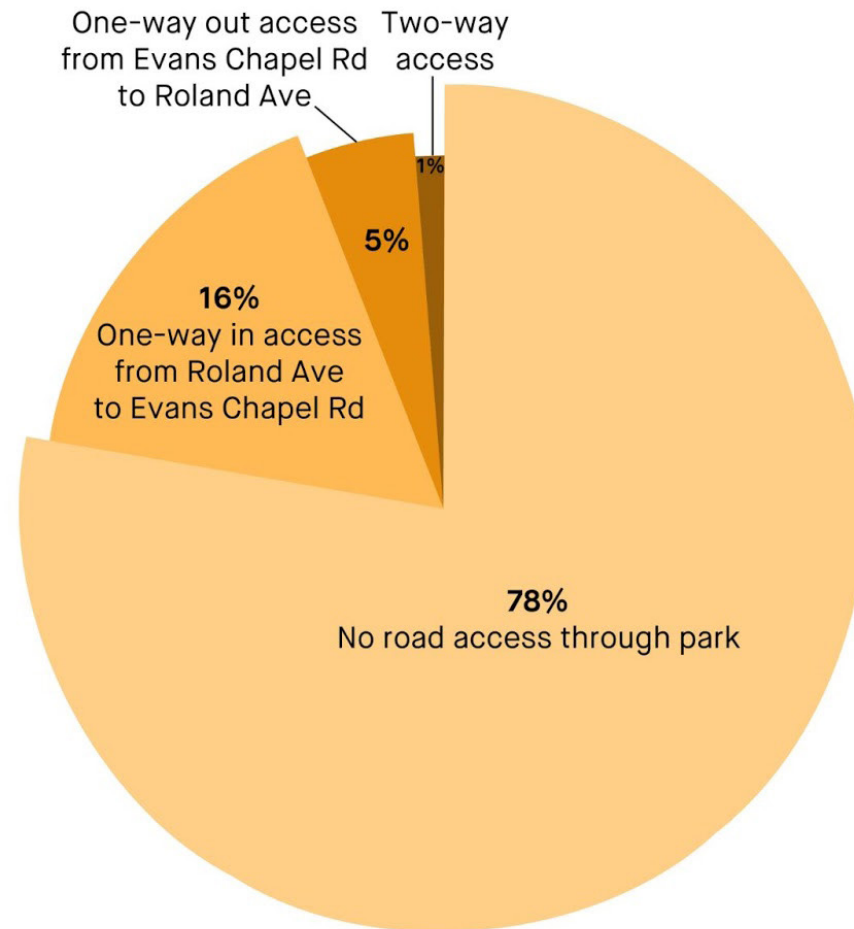


2 Before it was closed for construction during the Tower stabilization, did you use the roadway?



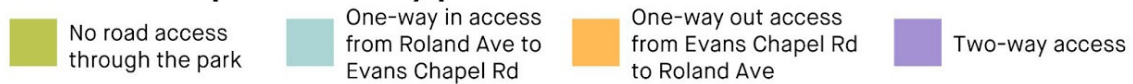
3

What is your preference for road access through the park?

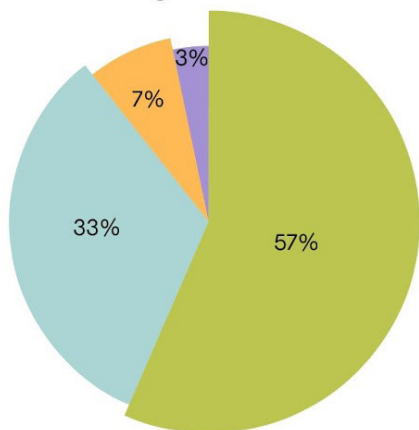


4

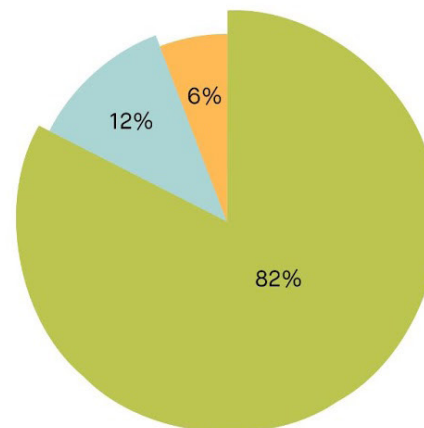
Road access preference by prior use:



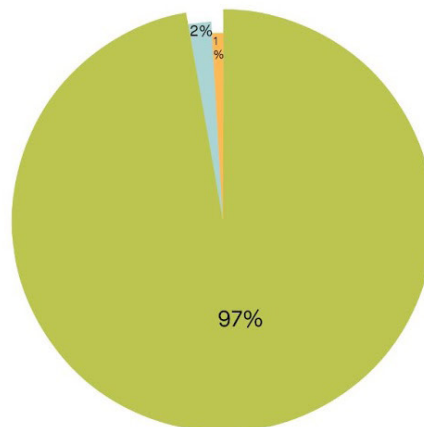
Regular use



Occasional use

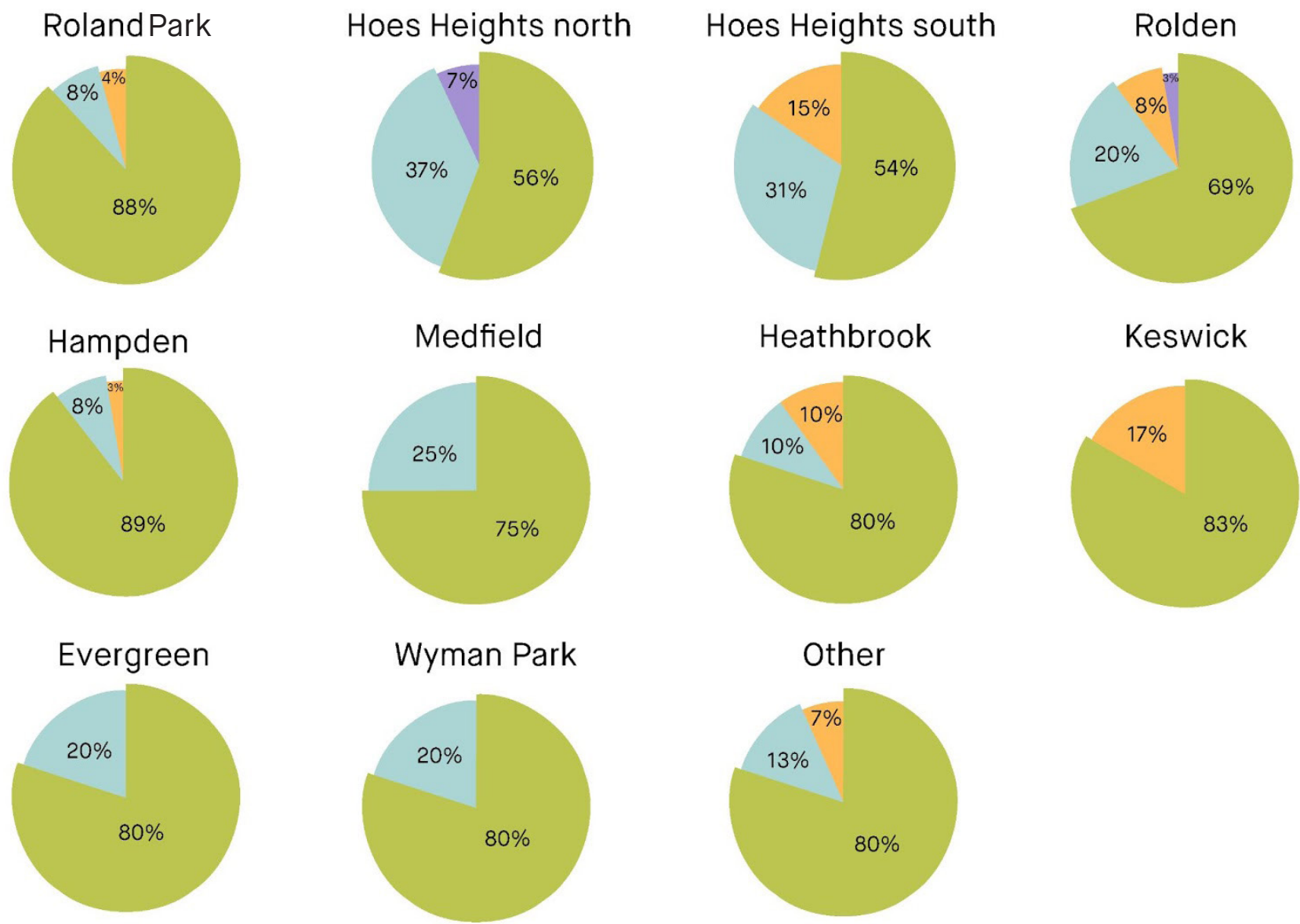
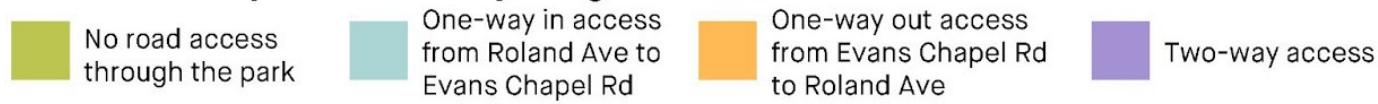


Never use



5

Road access preference by neighborhood:



6

Survey Write-In Preferences:

Minimalist - 16%

Gathering Place - 42%

**No Stated Preference /
Other Comments /
Elements of Both - 42%**



Option 1: The Minimalist



Option 2: The Gathering Place

Major Survey Takeaways & Adjustments

Concerns about maintenance:

- Limited non-turf planting areas to two zones adjacent to the Tower

Clear park boundaries (preferred in "Minimalist"):

- Included a continuous shrub border at both North and South site edges

Maintaining (healthy) existing trees:

- Planned to keep (3) ex. Zelkova trees and (3) ex. trees at the South edge
- Planned to remove Zelkova with dead wood in interior of park - they will be affected by sitework and ADA access grading.

"Minimalist" clean lines and "Gathering Place" nooks and crannies

- Keeping the overall form of the "Gathering Place" plan, but have clarified and simplified some curves

Site lighting and safety

- Planned to relocate the (5) existing light poles on site
- Future phase planned to add new pedestrian light poles throughout the park

Concept Design

Illustrative Concept Plan



Aerial View of Park



Concept Site Features



Entry View from Roland Avenue



View from Tower Steps out to Roland Avenue



Entry View from Evans Chapel Road



View out from Tower to Evans Chapel Road



Flexible Plaza at Evans Chapel Road



Symmetrical Path System at Roland Avenue



ROLAND
WATER TOWER

Baltimore, MD

Owner/Client:
Roland Park Community Foundation
P.O. Box 16241
Baltimore, MD 21210

Lead Landscape Architects / Urban Designers:

Unknown
Studio

2219 Saint Paul Street / Baltimore, MD 21218
P: 410.246.2946

DESIGN TEAM

Engineer
AMK Consulting Engineers
3300 Copper Mill Rd
Suite 201
Baltimore, MD 21211

LANDSCAPE PROTECTION + REMOVALS LEGEND

REMOVE PAVING AND CURB MATERIAL
AND BASE TO DEPTH REQUIRED TO
INSTALL PROPOSED IMPROVEMENTS,
TYP.

CLEAR AND GRUB EXISTING TURF AND
UNDERSTORY/GROUNDCOVER PLANT
MATERIAL TO DEPTH REQUIRED TO INSTALL
PROPOSED IMPROVEMENTS, TYP.

EXISTING TREE TO REMAIN

EXISTING TREE TO REMOVE

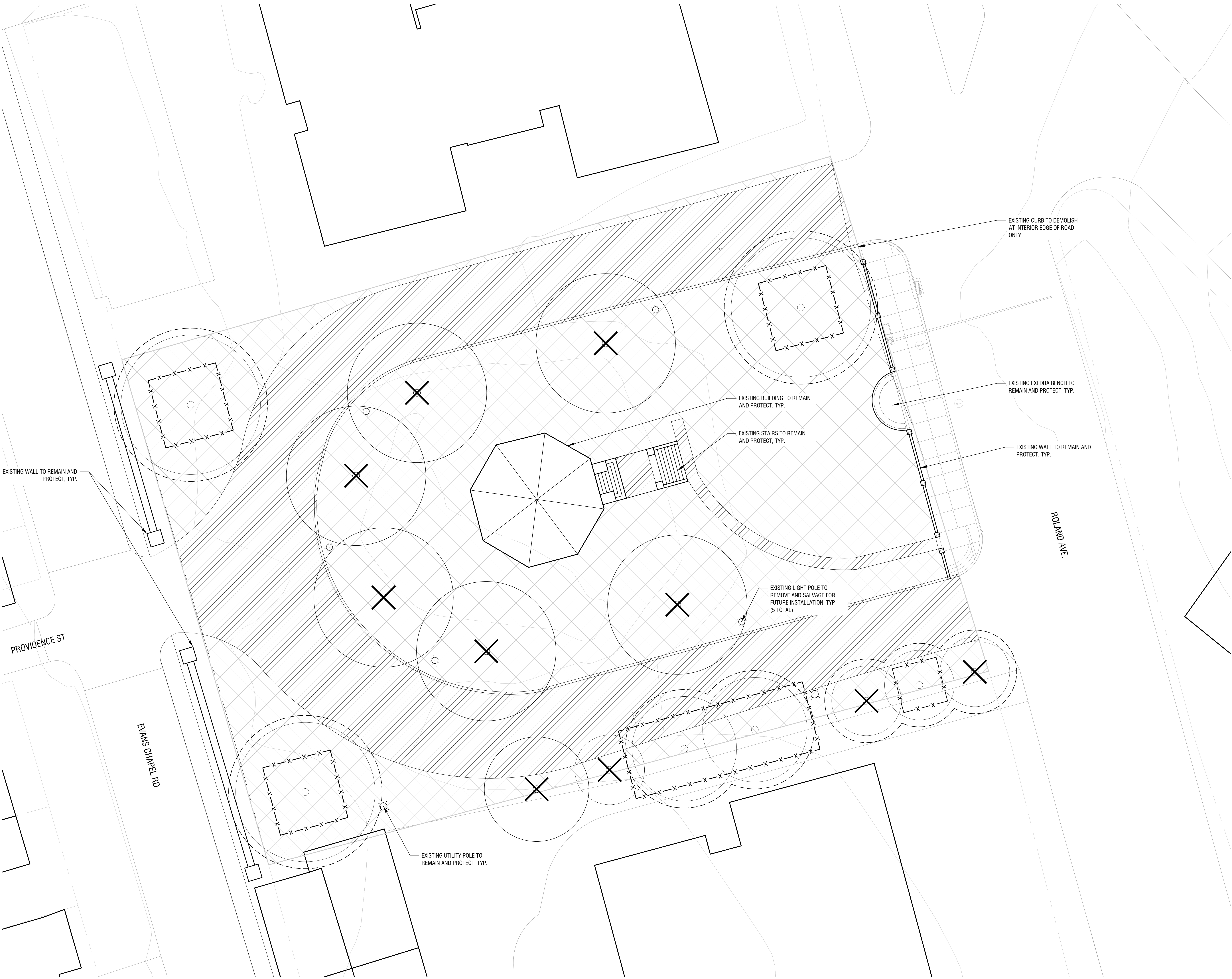
TREE PROTECTION FENCING
BASIS OF DESIGN: WOOD POSTS WITH
ORANGE CONSTRUCTION FENCE, 6'
HEIGHT WITH MULCH PLACED IN
INTERIOR, TYP.

SPECIAL EXCAVATION AREA:
HAND EXCAVATION ONLY

LANDSCAPE LIMIT OF WORK

NOTES:

- DEMOLITION AND PROTECTION PLAN
CORRESPONDS TO FULL VISION, L-000
DRAWING.
- CLEAR, GRUB AND GRIND STUMP TO
DEPTH REQUIRED IN ORDER TO INSTALL
FINISH MATERIAL AS SHOWN IN
DRAWINGS. BACKFILL ALL PITS.
- CLEAR AND GRUB ALL AREAS TO
RECEIVE PLANTING.
- REMOVE ALL INVASIVE PLANTING
- SPECIAL EXCAVATION REQUIRED AT
EXISTING TREES TO REMAIN.



ISSUE RECORD

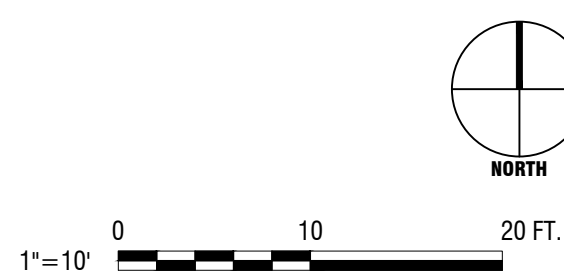
1	5/14/2021	Concept Pricing Set

KEY PLAN

Drawing Title

LANDSCAPE SURFACE DEMO +
PROTECTION PLAN

Scale:	As Shown	Drawn:	DK LDR
Date:	14 MAY 2021	Checked:	CA
Project No:	2008		
Drawing No:			



D-100

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CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND NOTING CONDITIONS
PRIOR TO PROCEEDING WITH THE WORK. SHEET SIZE 30" X 42" - NOT TO SCALE AT OTHER
SHEET SIZES. USE DIMENSIONS ONLY, DO NOT SCALE FROM DRAWINGS.

ROLAND
WATER TOWER

Baltimore, MD

Owner/Client:
Roland Park Community Foundation
P.O. Box 16214
Baltimore, MD 21210

Lead Landscape Architects / Urban Designers:

Unknown
Studio

2219 Saint Paul Street / Baltimore, MD 21216
P: 410.246.2946

DESIGN TEAM

Engineer
MK Consulting Engineers
3300 Clipper Mill Rd
Suite 201
Baltimore, MD 21211

LANDSCAPE MATERIALS LEGEND

PROPOSED PAVING:
UNIT PAVEMENT, SAND SET

PROPOSED PAVING:
UNIT PAVEMENT, SAND SET
VEHICULAR RATED

PROPOSED PLANTING:
SODDED TURF

PROPOSED PLANTING:
PERENNIAL BED

EXISTING TREE TO REMAIN

PROPOSED PLANTING:
FLOWERING UNDERSTORY TREE

PROPOSED PLANTING:
DECIDUOUS CANOPY TREE

PROPOSED PLANTING:
SHORT HEDGE

PROPOSED PLANTING:
TALL HEDGE

PROPOSED BENCHES:
CUSTOM

PROPOSED DRAINAGE:
STONE RUNNEL

PROPOSED PEDESTRIAN
LIGHT POLE

PROPOSED ELECTRICAL SERVICE

PROPOSED WATER SERVICE

PROPOSED HOSE BIB

PROPOSED GOR CONVENIENCE
OUTLET

LANDSCAPE LIMIT OF WORK

NOTES:
1. SEE L-900 FOR DETAILS AND L-901 FOR
PRECEDENT IMAGES OF FURNISHINGS AND
MATERIALS.

ISSUE RECORD

1 5/14/2021 Concept Pricing Set

KEY PLAN

Drawing Title

LANDSCAPE MATERIALS PLAN -
FULL VISION

Scale: As Shown
Date: 14 MAY 2021
Project No.: 0008
Drawing No.:
Shown: DK, LDR
Checked: CA

L-000

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CONSTRUCTION SHALL OBTAIN AND VERIFY ALL NECESSARY PERMITS PRIOR TO PROCEEDING WITH THE WORK. SHEET SIZE: 36" x 48" - NOT TO SCALE AT OTHER
SHEET SIZES. USE PREVIOUS EDITIONS FOR SCALE FROM DRAWINGS.

Details & Materials

New Trees & Existing Tree Protection

New Understory Flowering Trees (11)

Potential Species:

Amelanchier x grandiflora

Cercis canadensis

Cladrastis kentukea

Cornus florida

Halesia carolina

Magnolia virginiana

Serviceberry

Redbud

American Yellowwood

Flowering Dogwood

Carolina Silverbell

Sweetbay Magnolia

New Canopy Trees (2)

Potential Species:

Platanus x acerifolia 'Bloodgood'

Quercus bicolor

Ulmus americana 'Valley Forge'

Ulmus americana 'Princeton'

London Planetree

Swamp White Oak

American Elm (disease-resistant)

American Elm (disease-resistant)

Existing Trees to Remain and Protect:

Zelkova serrata (3)

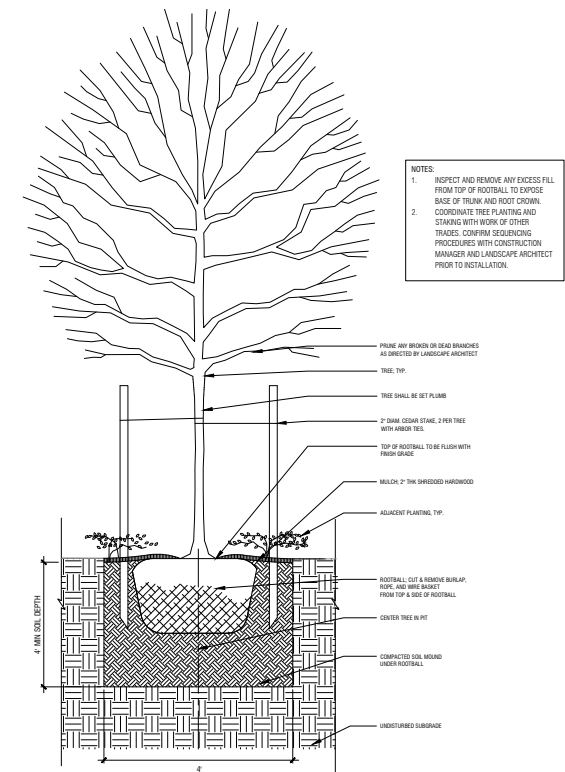
Acer spp. (2)

Pinus spp. (1)

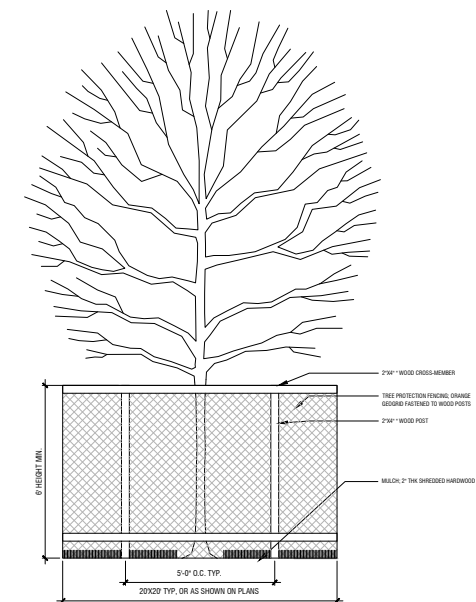
Japanese Zelkova

Maple species

Pine species



6 TREE PLANTING, TYP.
SCALE : 1" = 1'-0"



7 TREE PROTECTION FENCING, TYP.
SCALE : 1" = 1'-0"

Shrub and Turf Planting

Tall Shrub Border at North & South Site Edges

Potential Species:

Hamamelis x intermedia

Hydrangea quercifolia

Ilex verticillata

Lindera benzoin

Myrica pensylvanica

Viburnum dentatum

Viburnum x burkwoodii

Witch Hazel

Oakleaf Hydrangea

Winterberry Holly

Spicebush

Bayberry

Arrowwood Viburnum

Burkwood Viburnum

Low Shrubs at Roland Avenue/Historic Knee Wall

Potential Species:

Fothergilla 'Mt Airy'

Ilex glabra

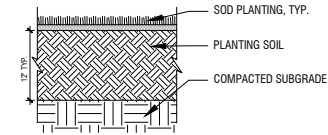
Itea virginica

Witch Alder

Inkberry Holly

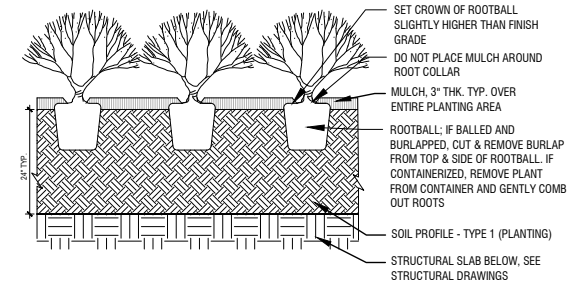
Sweetspire

NOTE: SOD PIECES SHALL BE PLACED HAND TIGHT AGAINST EACH OTHER, TYP. ENSURE THAT NO PLANTING SOIL AREAS ARE LEFT EXPOSED.



4 SOD PLANTING, TYP.
SCALE : 1" = 1'-0"

NOTE: REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING



SECTION

5 HEDGE/SHRUB PLANTING, TYP.
SCALE : 1" = 1'-0"

Paving & Drainage Details



Product Basis of Design
Wasau Tile H-Series Pavers

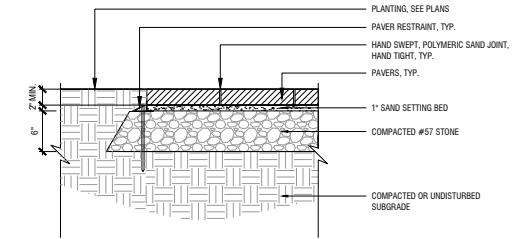
Paving Color Precedent



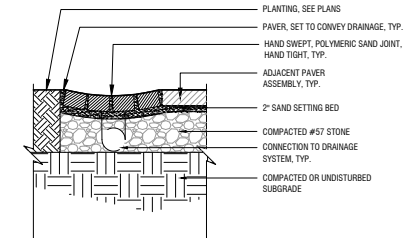
Paving Pattern Precedents



Stone Runnel Historic Precedent
throughout adjacent neighborhoods



1 UNIT PAVING ON SAND SETTING BED
SCALE : 1" = 1'-0"



3 DRAINAGE RUNNEL, TYP.
SCALE : 1" = 1'-0"

Bench Details

Concept Option 1

Retail Bench:

Basis of Design Vestre April Series Bench with backrest and armrest; anchoring with base plant; galvanized and powder-coated steel; RAL 6025-Fern green; standard wood.



Concept Option 2

Custom Bench:

Custom wood bench based on nearby historic benches in public shelters along University Avenue.



Lighting Details

**Existing Pedestrian Light Poles
to be Relocated and Refurbished:**
GE Luminaire High Hat, per Baltimore
City and Greater Roland Park Master
Plan standards



Tree Assessment

TREE ASSESSMENT & RECOMMENDATIONS

ROLAND WATER TOWER PARK
4210 Roland Avenue
Baltimore, MD 21210



July 25, 2021

Prepared for: Mary Page Michel, Roland Park Community Association

Prepared by: Claire Agre, PLA ASLA
Unknown Studio Landscape Architecture & Urban Design LLC

Unknown Studio

Landscape Architecture & Urban Design, LLC
2219 Saint Paul Street
Baltimore, Md 21218
T 410 246 2946
unknownstudio.la

As the preliminary concept design for Roland Water Tower Park was being developed by Unknown Studio along with a robust public engagement process in spring 2021, the health and potential impacts to tree canopy within the project area were evaluated. During the week of May 5, 2021, Unknown Studio conducted this tree assessment within the projected limit of disturbance, noting species, size, and health condition and recommendations. Within this report are assessments and recommendations for preservation, removal, and mitigation.

The site in question is slightly less than one acre and is operated by the Department of General Services. Historically, the site has operated as a standpipe for potable water for the vicinity, and later as a bus turnaround for the "trackless trolley." For most of the 20th century, the site was open and contained no trees, but did include paths, bench and wall structures, and shelters for bus drivers and riders. Subsequent to both these uses, ten *Zelkova serrata* (Japanese Zelkova) were planted. Given the timeline and size of these trees, it is estimated that the existing trees on-site date to the 1970s. This particular non-native elm species was widely planted across the eastern seaboard's cities as a substitute street and park tree to replace historic American Elm canopy lost in the earlier part of the century to Dutch Elm Disease, as the Japanese Elm spp are highly resistant to the fungus. Although a good candidate for urban conditions, and its vase-like form is appealing and offers deep shade, this species does not achieve the height or rotating form of the American Elm, nor does it offer the same native habitat value as the native Elm.

The Roland Park Community Foundation has an MOU with the City of Baltimore to manage the design, construction, and maintenance of a park within the site. This survey was conducted to assess the health of the existing trees and to understand mitigation needs based on caliper if certain trees need to be removed.

Unknown Studio follows the Guide for Plant Appraisal authored by the CTLA as summarized below:

Condition Rating	Tree Structure: Consider root condition and formation, trunk condition, and branch assembly	Tree Health: Consider crown indicators – including vigor, density, leaf size and stem shoot extensions	Tree Form: Consider the general shape and overall form.
Excellent	Root plate undisturbed and clear of any obstructions. Trunk flare has normal development. No visible trunk defects or cavities. Branch spacing/structure and attachments are free of any defects.	Perfect specimen with excellent form and vigor, along with a well-balanced crown. Trunk is sound and solid. No apparent pest problems. Normal to exceeding shoot length on new growth. Normal leaf size and color. Exceptional life expectancy for the species.	Ideal tree for that species, including shape and canopy symmetry, health, and density. Outstanding function on the site or location.
Good	Root plate appears normal, with only minor damage. Possible signs of root dysfunction around trunk flare. Minor trunk defects from previous injury, with good closure and less than 25% of bark section missing. Good branch habit; minor dieback with some signs of previous pruning. Co-dominant stem formation may be present, requiring minor corrections.	Imperfect canopy density in 10% or less of the tree. Lacks natural symmetry. Less than half the normal growth rate and minor deficiency in leaf development. Few pest issues or damage, and controllable if present. Normal branch and stem development with healthy growth. Typical life expectancy for the species.	Nearly ideal tree for that species, including shape and canopy symmetry, health, and density. Functions well on the site or location.
Fair	Root plate reveals previous damage or disturbance. Dysfunctional roots may be visible around the main stem. Evidence of trunk damage or cavities, with decay or defects present and less than 30% of bark sections missing on trunk. Co-dominant stems are present. Branching habit and attachments indicate poor pruning or damage, which requires moderate corrections.	Crown decline and dieback up to 30% of the canopy. Poor overall symmetry. Leaf size smaller and color somewhat chlorotic. Shoot extensions indicate some stunting and stressed growing conditions. Obvious signs of pest problems contribute to a lesser condition. Some decay areas found in the main stem and branches. Below-average life expectancy for the species.	Acceptable tree for that species. Tree shape and symmetry are adequate, with some substantial asymmetry in shape and canopy form. May have considerable concerns for its use and function on the site or location.
Poor	Root plate disturbance and defects indicate major damage, with girdling roots around the trunk	Lacking a full crown, with more than 50% decline and dieback that especially affects larger branches.	Poor tree for that species. Highly irregular canopy shape and undesirable form make it

	flare. Trunk reveals more than 50% of bark section missing. Branch structure has poor attachments, with several structurally important branches dead or broken. Canopy reveals signs of damage or previous topping or lion-tailing, with major corrective action required.	Stunting obvious, with little evidence of growth on smaller stems. Leaf size and color reveals overall stress in the plant. Insect or disease infestation may be severe. Extensive decay or hollow characteristics. Low life expectancy for the species.	unattractive and dysfunctional on the site or location.
Very Poor	Severe damage within the root plate and root collar exhibits major defects that could lead to tree death or failure. A majority of the bark or trunk is affected, either decayed or missing. Branching is extremely poor or severely topped, with severe dieback in canopy. Little or no opportunity for mitigation of any tree parts.	More than 70% of the canopy is in severe decline or dead. Canopy density is extremely low, with chlorotic and necrotic tissue dominating the canopy. Severe decay in the trunk and major branches. Root plate damage with a majority of roots damaged, diseased or missing. Very low life expectancy for the species.	Disagreeable tree for that species, with highly diminished function and aesthetic appeal on the site or location.

Figure 1. Tree condition ratings as described in the Guide for Plant Appraisal, 10th edition. Authored by the Council of Tree and Landscape Appraisers (CTLA), published by the International Society of Arboriculture.

Specimen 1: Zelkova Serrata

DBH: 28.5"

Canopy: n/a

Condition: Poor

Notes:

This tree's canopy has already been topped off and the remaining trunk and branches are suckering from the base and previously pruned branch locations.

Recommendation:

Remove. Grind and remove stump if grading and path network of future park requires a flush area.



Figure 2. Specimen #1 located on the southeast corner of the site.

Specimen 2: Zelkova Serrata

DBH: 32.48"

Canopy Radius: 27.5'

Condition: Good

Notes:

Symmetrical and full canopy, with even branching of small and large limbs. Some included bark at base of crown as is typical of species. Recently pruned. No apparent pests or girdling. Some previous injury apparent but no visible rot or major damage.

Recommendation:

Preserve. Specify tree protection fencing during construction based on caliper-derived critical root zone of 15" radius per caliper inch (CRZ). Do not permit heavy equipment or staging within CRZ. Excavation within CRZ only with prior approval by Landscape Architect. Monitor for signs of damage from contractor's equipment on-site.





Figure 3a-3c. Specimen #2 located on the northeast corner of the site.

Specimen 3: Zelkova Serrata

DBH: 24.21"

Canopy Radius: 22.5'

Condition: Poor

Notes:

Partial canopy, estimated 40% missing, likely due to deferred maintenance and shading out of canopy; and recent pruning visible. Hedera helix (English ivy) growth on trunk likely detrimental to this trees overall health, and made good inspection of trunk impossible. Invasive species and contractor staging on root flare detrimental to tree health.

Recommendation:

Remove and mitigate off site if required. Grind and remove stump if grading and path network of future park requires a flush area.



Figure 4a-4c. Specimen #3 located on the north central portion of site.

Specimen 4: Zelkova Serrata

DBH: 25"

Canopy Radius: 21.5'

Condition: Poor

Notes:

Partial canopy, estimated 40% missing, likely due to deferred maintenance and shading out of canopy; and recent pruning visible. Previous Hedera helix (English ivy) growth on trunk likely detrimental to this tree's overall health. Invasive species and contractor staging on root flare detrimental to tree health as well.

Recommendation:

Remove and mitigate off site if required. Grind and remove stump if grading and path network of future park requires a flush area.



Figure 5a-5c. Specimen #4 located on the south central berm on the site

Specimen 5: Zelkova Serrata

DBH: 18"

Canopy Radius: 20" at greatest extent, very asymmetrical

Condition: Poor

Notes:

Partial canopy, estimated 40-60% missing, likely due to deferred maintenance and shading out of canopy; and recent pruning visible. Invasive species on root flare detrimental to tree health as well.

Recommendation:

Remove and mitigate off site if required. Grind and remove stump if grading and path network of future park requires a flush area.



Figure 6a-6c. Specimen #5 located on the south central berm on the site

Specimen 6: Zelkova Serrata

DBH: 30"

Canopy Radius: 17.5' at greatest extent, very asymmetrical due to light levels.

Condition: Fair

Notes:

Partial canopy, estimated 40% missing, likely due to deferred maintenance and shading out of canopy; and recent pruning visible. Invasive species on root flare detrimental to tree health as well. Hedera helix invasive species detrimental to overall health.

Recommendation:

Monitor – if design calls for removal, follow other removal recommendations herein for living removals.



Figure 7a-7b. Specimen #6 located on the north central berm on the site

Specimen 7: Zelkova Serrata

DBH: 23.89"

Canopy Radius: 22.5'

Condition: Fair

Notes:

Partial canopy, estimated 40% missing, likely due to deferred maintenance and shading out of canopy; and recent pruning visible. Invasive species on root flare detrimental to tree health as well. Hedera helix invasive species detrimental to overall health. Staging of contractor materials at rootplate potentially long term detriment to tree health.

Recommendation:

Monitor – if design calls for removal, follow other removal recommendations herein for living removals.



Figure 8a-8b. Specimen #7 located on the southwest berm on the site

Specimen 8: Zelkova Serrata

DBH: 28.34"

Canopy Radius: 20'

Condition: Poor

Notes:

Partial canopy, estimated 50% missing, likely due to deferred maintenance and shading out of canopy; and recent pruning visible. Invasive species on root flare detrimental to tree health as well. Hedera helix invasive species detrimental to overall health. Staging of contractor materials at rootplate potentially long term detriment to tree health.

Recommendation:

Remove and mitigate off site if required. Grind and remove stump if grading and path network of future park requires a flush area.



Figure 9a-9b. Specimen #8 located on the northwest berm on the site

Specimen 9: Zelkova Serrata

DBH: 26.75

Canopy Radius: 25'

Condition: Good

Notes:

Well rounded canopy with some dead wood. Estimated 10-20% missing, likely due to deferred maintenance. Some girdling of roots observed.

Recommendation:

Preserve. Specify tree protection fencing during construction based on caliper-derived critical root zone of 15" radius per caliper inch (CRZ). Do not permit heavy equipment or staging within CRZ. Excavation within CRZ only with prior approval by Landscape Architect. Monitor for signs of damage from contractor's equipment on-site.



Figure 10a-10b. Specimen #9 located on the southwest portion of the site.

Specimen 10: Zelkova Serrata

DBH: 30.25

Canopy Radius: 22.5' - Asymmetrical

Condition: Good

Notes:

Slightly asymmetrical canopy likely due to pruning due to adjacent overhead wires. Estimated 20% missing. Some girdling of roots observed.

Recommendation:

Preserve. Specify tree protection fencing during construction based on caliper-derived critical root zone of 15" radius per caliper inch (CRZ). Do not permit heavy equipment or staging within CRZ. Excavation within CRZ only with prior approval by Landscape Architect. Monitor for signs of damage from contractor's equipment on-site.



Figure 11a-11c. Specimen #10 located on the northwest portion of site.





**Unknown
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