CAPITAL REPAIRS INVENTORY

• This inventory of items in need of repair on the Rose Kennedy Greenway was updated in Summer 2015. Annual inventories were previously compiled in 2013 & 2014.

• The 2015 report does not include the parcels acquired from the July 1st, 2015 lease signing.

• This report is not intended to capture anticipated future capital repair needs nor reflect the funding that would be necessary annually or over time.

• The ranged cost estimates for each item are very preliminary. Wide ranges are used in cases of significant uncertainty, such as fixes involving subsurface conditions.

• The Rose Kennedy Greenway Conservancy does not currently have a capital reserve or sufficient funding necessary to address the vast majority of these items.
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<td><strong>$843,000 - $1,288,500</strong></td>
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ACROSS THE GREENWAY
GREENWAY WIFI
Normal Deterioration

• **Details:**
  – Poor connectivity due to an outdated wifi system

• **Repair Option:**
  – Upgrade wifi system

• **Cost Estimate:** $100,000 – 200,000
HORTICULTURE CONTAINERS
Accident/Vandalism

• **Details:**
  – Damage primarily incurred as a result of vandalism/accidents
  – Approximately a dozen containers of various size and style, located across the park, will need attention
  – This problem presents an aesthetic issue

• **Repair Option:**
  – Replacement for severe damage; possible in-house repairs to lesser damaged containers

• **Cost Estimate:** $7,500 – 10,000
TREES GRATES
Normal Deterioration

• **Details:**
  – 5 tree grates throughout the park are broken in some capacity
  – This problem presents an aesthetic issue, negatively impacts park maintenance and is a safety hazard

• **Repair Option:**
  – Welding repair required on some; others need complete replacement
  – In-house

• **Cost Estimate:** $5,000 – 7,500
NORTH END PARKS
CHANNEL FOUNTAIN LEAK
Design/Install Flaw

• Details:
  – Water leaking along multiple points of fountain wall joint due to failure of joint sealant
  – If not repaired before winter, moisture behind wall will freeze, increasing likelihood of structural damage
  – This item is carried over from 2014, and is in the process of being fixed, but there remains more work to be completed
  – This problem presents an aesthetic issue, and will continue to deteriorate, increasing repair cost

• Repair Option:
  – Replace joint sealant and install backer rod in wall cap above water line
  – In-house repair

• Cost Estimate: $7,000 – 10,000
NORTH END ENGRAVINGS FADING & DAMAGE

Normal Deterioration

- **Details:**
  - Details of historical map on southwest corner are wearing and chipping
  - Engraving near the northeast corner of the park is fading
  - This problem presents aesthetic issues

- **Repair Options:**
  - Repair damaged map features and paint with lithichrome paint
  - In house repair or contract out

- **Cost Estimates:** $2,500 – 5,000
BOXWOOD RENOVATIONS
Design/Install Flaw

• Details:
  – There is an invasive weed and the boxwoods were installed too close together
  – A more dynamic landscape is desired on the Surface Artery side of Parcel 10 that would increase plant variety and year round seasonal interest
  – Renovations would mimic the new boxwood design on Parcel 8, which was installed the summer of 2015
  – This problem presents aesthetic issues and negatively impacts park operations

• Repair Option:
  – Horticulture and irrigation costs
  – Contract out

• Cost Estimate: $175,000 – 225,000
SIDEWALK SLABS BUCKLING
Normal Deterioration

• Details:
  – Sidewalk slabs have heaved due to tunnel vibrations and frost damage
  – Problem worsens in winter; sidewalk is not ADA compliant
  – Construction area is approximately 12’x16’ adjacent to Hanover St on the north side of Parcel 10
  – This problem concerns a basic park amenity

• Repair Option:
  – Remove and reset slabs; re-grade surface below
  – Contract out

• Cost Estimate: $5,000 – 10,000
RESET STONE SLABS IN FOUNTAIN
Normal Deterioration

• **Details:**
  - 6 slabs in the fountain need to be reset, as they have heaved
  - Water enters joints, and when it freezes the slabs are disturbed, creating trip hazards
  - This problem is an aesthetic issue, concerns a basic park amenity, and is a safety issue

• **Repair Option:**
  - Contract out work

• **Cost Estimate:** $10,000 – 12,000
RESET GRANITE SLABS
Normal Deterioration

• **Details:**
  – 30 slabs need to be reset, the slabs have heaved
  – Water enters joints, and when it freezes the slabs are disturbed, creating trip hazards
  – This problem is an aesthetic issue, concerns a basic park amenity, and is a safety issue

• **Repair Option:**
  – Contract-out

• **Cost Estimate:** $12,000 – 16,000
STONE WALL CAPS & GRANITE PAVERS CRACKING
Design/Install Flaw

**Details:**

- The bases of the fountain railings were not installed properly allowing moisture to seep through the spaces between the stones
- Freezing conditions put stress on the joints, causing stone caps and adjacent granite pavers to crack
- All of the caps need to be reset, some replaced, but those on the north side of Parcel 10 and south side of Parcel 8 are priorities
- This problem continues to deteriorate; repair costs may rise

**Repair Option:**

- Remove stone cappings and reset, re-cut or replace as necessary; replace any broken pavers
- In-house repair or contract out

**Cost Estimate:** $20,000 – 30,000
RE-GROUT FOR JOINT ISSUES
Normal Deterioration

• Details:
  – Joints need to be re-grouted due to normal deterioration
  – If not done, water enters joint, freezes and causes pavers to heave upwards
  – Amount of work is beyond the capacity of the Greenway team
  – This problem presents an aesthetic issue, will continue to deteriorate and increase repair cost, and negatively impacts park operations

• Repair Option:
  – Re-grout joints where grouting has deteriorated with flexible sealant
  – Contract out

• Cost Estimate: $50,000 – 55,000
WHARF DISTRICT PARKS
SKATEBOARD DAMAGE
Accident/Vandalism

• **Details:**
  – Skateboards are damaging the granite, benches and planters by applying wax and using the features to skate on
  – Previous deterrents are not working; next remedy attempt will increase the frequency of deterrents
  – This problem concerns a park amenity and will continue to deteriorate, increasing repair costs

• **Repair Option:**
  – Increase number of deterrents; repair damaged areas
  – Contract out

• **Cost Estimate:** $15,000 – 25,000
RINGS FOUNTAIN: LEAK INTO VAULT A/C DUCTS
Design/Install Flaw & Cause Unknown

• **Details:**
  – In the vault there are (future-use) empty conduits that seem to be leaking water
  – Water is causing metal cabinet to rust
  – This problem will continue to deteriorate, increasing repair cost

• **Repair Option:**
  – Find water source, seal duct from water penetration

• **Cost Estimate:** $15,000 – 50,000

Photos show damage caused by leak
RINGS FOUNTAIN STEP LIGHTS MALFUNCTION
Design/Install Flaw

• **Details:**
  – All of the 29 lights embedded in the steps adjacent to the Rings Fountain do not function; condensation has built up inside some of the fixtures
  – The lights are part of the original site design and contribute to the park’s visual appeal; they also have a safety function
  – The original lights are no longer manufactured
  – This problem presents aesthetic issues and concerns a basic park amenity

• **Repair Option:**
  – Select alternative lights and retrofit the step light settings

• **Cost Estimate:** $20,000 – 30,000
LIGHT BLADES REPAINT
Normal Deterioration

• **Details:**
  – The light blades on Parcels 15 & 16 contain 12 structures
  – They need to be repainted periodically due to scratches, damage or normal wear and tear of the elements
  – This problem presents an aesthetic issue

• **Repair Option:**
  – Repaint the 12 structures
  – Contract out

• **Cost Estimate:** $15,000 – 20,000
DRIP IRRIGATION SYSTEM RETROFIT
Design/Install Flaw

• Details:
  – The below-ground drip irrigation system is insufficient for watering the amigdaloid beds, which are part of the original site design
  – The turf is dying as a result, and the birch trees receive inadequate irrigation during the summer
  – This problem presents aesthetic issues and negatively impacts park operations

• Repair Option:
  – Convert the existing drip zone into a spray zone by capping drip lines and installing new pipping with 35 -40 spray heads
  – Contract out

• Cost Estimate: $7,000 – 10,000
WHARF DISTRICT ENGRAVINGS FADING

Normal Deterioration

- **Details:**
  - Hardscape engravings in the Wharf District, including the Immigrant Letters engravings, are fading
  - This problem presents aesthetic issues

- **Repair Options:**
  - Paint with lithichrome paint
  - In-house repair or contract out

- **Cost Estimate:** $2,500 – 5,000
SIDEWALK REMOVAL
Design/Install Flaw

• Details:
  – The sidewalk leads to a non-pedestrian paved strip, entering Atlantic Ave with no correlating crosswalk
  – Add light-touch landscape improvements
  – This problem presents an aesthetic issue and is a safety hazard

• Repair Option:
  – Jackhammer removal of sidewalk and its base; replace with soil & sod

• Cost Estimate: $10,000 – 15,000
P18 IRRIGATION
Design/Install Flaw

- **Details:**
  - Currently only the lawns are irrigated on P18

- **Repair Option:**
  - Install drip irrigation system into beds

- **Cost Estimate:** $10,000 – 15,000
RESET UTILITY COVERS
Design/Install Flaw

• Details:
  – Utility covers do not match the ground elevation, which has only been amplified with settling that occurs naturally over time
  – 6 units need to be adjusted
  – This problem presents an aesthetic issue, negatively impacts park operations and is a trip hazard

• Repair Option:
  – Reset the frame to the appropriate elevation; some regrading of the soil will be required

• Cost Estimate: $20,000 – 30,000
PROMENADE LONDON PLANE TREES
Cause Unknown

**Details:**
- Seven trees currently in need of removal
- Spread throughout the Wharf District parks
- Plans in place to remove two trees and investigate the tree pit for causes
- This problem presents aesthetic issue and is a safety hazard

**Repair Option:**
- Replace with new trees

**Cost Estimate:** $20,000 – 25,000
RE-GROUT FOR JOINT ISSUES
Normal Deterioration

• **Details:**
  - Joints need to be re-pointed or re-caulked due to normal deterioration
  - If not done, water enters joint, freezes and causes pavers to heave
  - Amount of work is beyond the time capacity of the Greenway team
  - This problem presents an aesthetic issue, will continue to deteriorate and increase repair cost, and negatively impacts park operations

• **Repair Option:**
  - Re-point or re-seal joints where mortar or sealant have failed
  - Contract out

• **Cost Estimate:** $25,000 – 30,000
TRASHCANS
Design/Install Flaw & Normal Deterioration

- **Details:**
  - As a park, there is a movement to transition to a unified barrel system with side by side recycling and consistent branding
  - The white industrial metal trash cans throughout the Wharf District Parks are rusting due to non-galvanized manufacture, causing unsightly appearance
  - There are 23 barrels in the Wharf District
  - This problem presents an aesthetic issue

- **Repair Option:**
  - Remove current trash cans; replace with new ones

- **Cost Estimate:** $65,000 – 100,000
METAL AND WOOD BENCHES

Normal Deterioration

• Details:
  – Wear and tear have damaged the metal finishing; exposed metal has started to rust
  – There are a total of 75 benches in the Wharf District Parks
  – Some wooden slats on the benches are badly warped – 18 top slats and 28 bottom slats need replacing
  – This problem presents aesthetic issues and concerns a basic park amenity

• Repair Option:
  – Investigate whether refinishing the benches would be cost-effective; otherwise, replacements are needed

• Cost Estimate: $30,000 – 50,000
FORT POINT CHANNEL PARKS
STONE DUST PATH MAINTENANCE PROBLEMS
Design/Install Flaw

• Details:
  – Stone dust path cannot stand up to high-intensity use during most of the year, or be plowed during the winter
  – Strong rainstorms cut channels into the path, making it uneven; pedestrians use at their own risk during the winter
  – There is considerable erosion of the path complicating maintenance of the park
  – This problem presents an aesthetic issue, concerns a basic park amenity and negatively impacts park operations

• Repair Option:
  – Design and install a more durable asphalt or Chipseal path

• Cost Estimate: $50,000 – 100,000
CHIPSEAL PATH DEFECT
Design/Install Flaw

• **Details:**
  – Path has permanent aesthetic flaws due to installation problems
  – Most of the pebbles that were supposed to adhere to the asphalt base layer are gone
  – This problem presents aesthetic issues

• **Repair Options:**
  – Remove and reinstall the path
  – Contract out

• **Cost Estimate:** $25,000 – 40,000
STREET TREES
Cause Unknown

- **Details:**
  - 24 trees along the Atlantic Street side of these three parcels have failed to establish
  - Potential cause could be the underground steam line effecting tree roots
  - This problem presents an aesthetic issue

- **Repair Option:**
  - Remove and replace, either with a 3” caliper tree or with a bigger more mature tree
  - Pending confirmation of cause, consideration for re-design *

- **Cost Estimate:** $36,000 – 50,000+

* Re-design cost is not represented in this estimate
DEWEY SQUARE
RE-GRADE DEWEY ROAD
Normal Deterioration

• Details:
  – The nature of a gravel road requires regrading as result of use
  – The road on Dewey has become uneven, and the number of ruts are increasing
  – This problem presents an aesthetic issue, will continue to deteriorate, increasing repair costs, and negatively impacts park operations

• Repair Option:
  – Regrade the road
  – Contract out

• Cost Estimate: $2,500 – 5,500
GRANITE PAVERS SETTLING
Normal Deterioration

• **Details:**
  – Natural settling of the pavers, and the dynamic nature of the tunnel, causes an uneven surface
  – This presents an aesthetic issue and is a safety hazard

• **Repair Option:**
  – Contract out

• **Cost Estimate:** $6,000 – 10,000
LEANING LIGHT POLE
Accident/Vandalism

• **Details:**
  - Light pole leans to one side; cause due to impact from vehicle
  - This problem presents an aesthetic issue

• **Repair Option:**
  - Remove and replace granite base and existing pole
  - Contract out

• **Cost Estimate:** $6,500 – 8,000
LAWN TREES – DOGWOOD DISEASE
Cause Known

• **Details:**
  – Decline of 8 Dogwood trees from the original design due to disease
  – One tree has been removed; 7 left to address
  – This problem presents an aesthetic issue and will continue to deteriorate, increasing repair costs.

• **Repair Option:**
  – Remove and replace, potentially with an improved species

• **Cost Estimate:** $5,000 – 15,000
CHINATOWN PARK
FOUNTAIN FIXTURE LEAK
Normal Deterioration

• **Details:**
  – Flexible sealant used is waterproofed, but has a limited life span
  – Worsens with time, as the sealant’s waterproof abilities fade
  – This problem presents an aesthetic issue

• **Repair Option:**
  – Re-seal with flexible sealant
  – In-house

• **Cost Estimate:** $3,500 – 4,000
GINKO TREES
Cause Known

- **Details:**
  - Two trees currently in need of removal
  - Result of winter stress and impact of interrupted irrigation
  - This problem presents an aesthetic issue and is a safety hazard

- **Repair Option:**
  - Replace with new trees

- **Cost Estimate:** $5,000 – 7,500
METAL BENCH FINISH DAMAGE
Normal Deterioration

• Details:
  – Paint is chipping off all 4 benches due to normal use
  – While chipping is not as severe or noticeable on all the benches, at least one bench is in very poor condition and needs to be removed and re-finished off-site
  – This problem presents an aesthetic issue

• Repair Options:
  – Sand, seal, and paint benches with a powder finish off-site
  – Contract out

• Cost Estimate: $10,000 – 15,000
LED LIGHT UPGRADE
Design/Install Flaw

• **Details:**
  – Current light fixtures do not provide adequate light levels and are costly to maintain
  – Transitioning to LED light fixtures will reduce maintenance costs, reduce energy use and provide increased level of illumination
  – There are a total of 23 lights. One light has been replaced as a test case and was successful
  – This problem presents an aesthetic issue and is a safety concern

• **Repair Option:**
  – Remove current light fixtures, replace with the LED light packages

• **Cost Estimate:** $15,000 – 18,000
ADDITIONAL RAILING ON RED CAGES
Design/Install Flaw

• Details:
  – When the bamboo is young, there are no horizontal rails to support its growth, and it spills out
  – Additional horizontal rails would contain the bamboo
  – This problem presents an aesthetic issue and negatively impacts park operations

• Repair Option:
  – Install additional supports

• Cost Estimate: $20,000 – 30,000
ITEMS RESOLVED SINCE LAST REPORT

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