



John D. Spreckels Center Lawn Bowling Green Turf Replacement Project

July 18, 2023

Item Agenda

- Staff Presentation
 1. Background/Timeline
 - a. City Council Direction Feb 16, 2021
 2. Review of Issues and Options
 3. Council Direction Requested
- Public Comment
- Council Questions
- Council Deliberation and Action



Background/Timeline

1. **2010:** LBG complex was constructed replacing the existing grass turf with an artificial surface (Green). The Green had a 10-year life expectancy.
2. **April 2017:** JDSC opens for community use.
3. **Late 2019:** Mounds appeared under the Green.
 - a. Determined the mounds were puffball mushroom fungus, *Pisolithus arhizus/tinctorius* (dyeball or deadman's foot fungus).
 - b. Staff slowed the fungus by fungicidal injections, but this required puncturing the Green.



Background/Timeline

4. **Feb 16, 2021:** Staff presented the project to City Council.
 - a) Staff assumption based on: Rutgers University/PACE Turf/WCA reports.
 - b) Staff recommendation: Remove 4 trees on D Ave., install root barrier on north side of Green, install a pump to divert drainage from JDSC roof, and replace sub-base/base/Green.
 - c) Staff statement: “At this time, there are no known remedies for the fungus and eradication is difficult to impossible. The more mitigation measures employed, the greater the opportunity for success.”
 - d) Council approves staff recommendation with exception of removal of trees, directs design a (horizontal) barrier of some material within a reasonable budget.



Background/Timeline

5. **Feb 2021 – May 2022:** Significant staff turnover, project management moved to PS&E.
6. **June 7, 2022:** Council approved contract for consultant to prepare bid documents.
7. **July 2022 – January 2023:** Met with bowlers and reviewed design, discussed options, etc....
8. **Feb 1, 2023:** Construction manager (CM) hired to provide root barrier location (and electrical e-generator) constructability review and cost estimates. Onsite survey performed by team to verify layers and plinth dimensions/condition.
9. **Feb 9, 2023:** Pathologist familiar with City's specific mushroom meets with team onsite and confirms fungi does not thrive on dead tree roots. UC Riverside letter supports this.



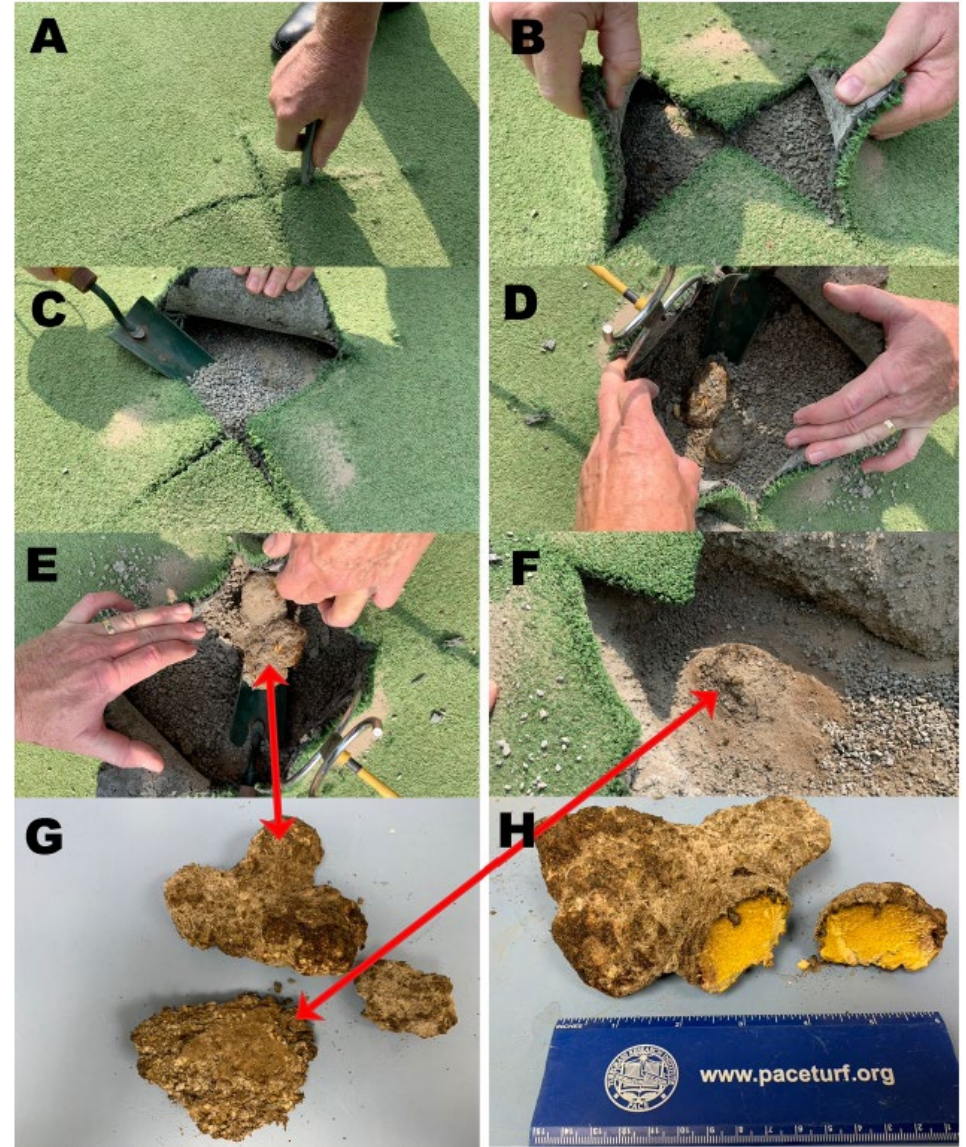
Background/Timeline

10. **Mar 2023:** Consultant, CM, and City discussed technical questions in order to complete the 100% CD's.
11. **Apr-May 2023:** Arborist and PSE re-evaluated trees relative to root barrier and drain pipe locations; West Coast Arborist report updated.
 - a) Identify/label full list of trees along D Ave./Library, table with distances for root pruning, site walk for drain pipe, all trees are considered woody and could provide medium for fungi.
12. **June 2023:** Bowlers and PSE agree project ready to be presented to City Council.
13. **July 2023:** Request Council direction.



Issues: D Avenue/Library Trees – JDSC Drainage





Psolithus tinctorius

Excavation of mounds from the Green and dissection.

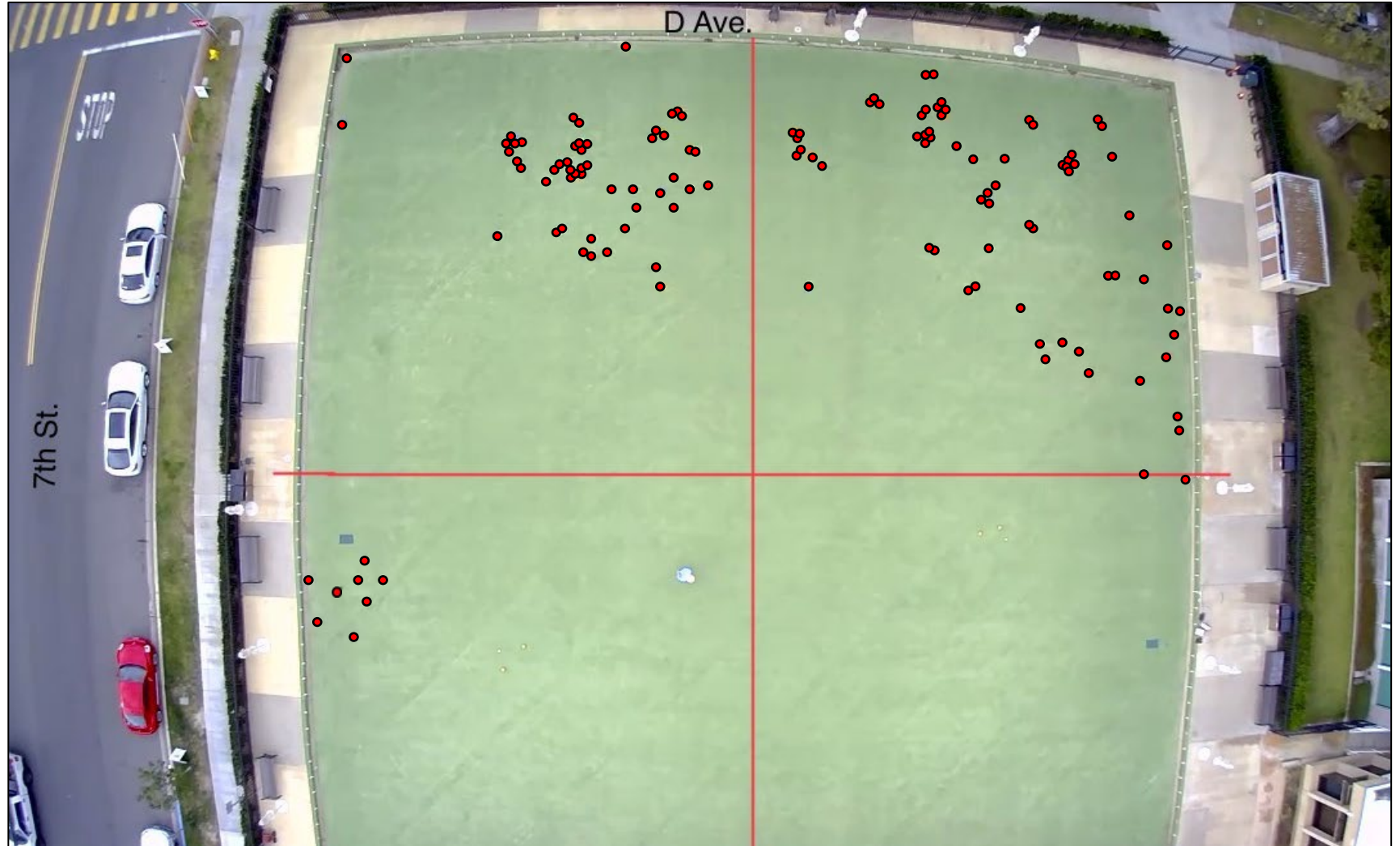


Follow Up to Council Direction

1. Horizontal barrier/subgrade remediation: Concrete, gravel, drainage system, bio barrier/fabric, salting, herbicides.
 - a) Percentage of assurance, cost.



Nov 30, 2023 – Mound History



Nov 30, 2023 – Irrigation Test



Feb 1, 2023 – Green Removal



Feb 1, 2023 – Green Removal



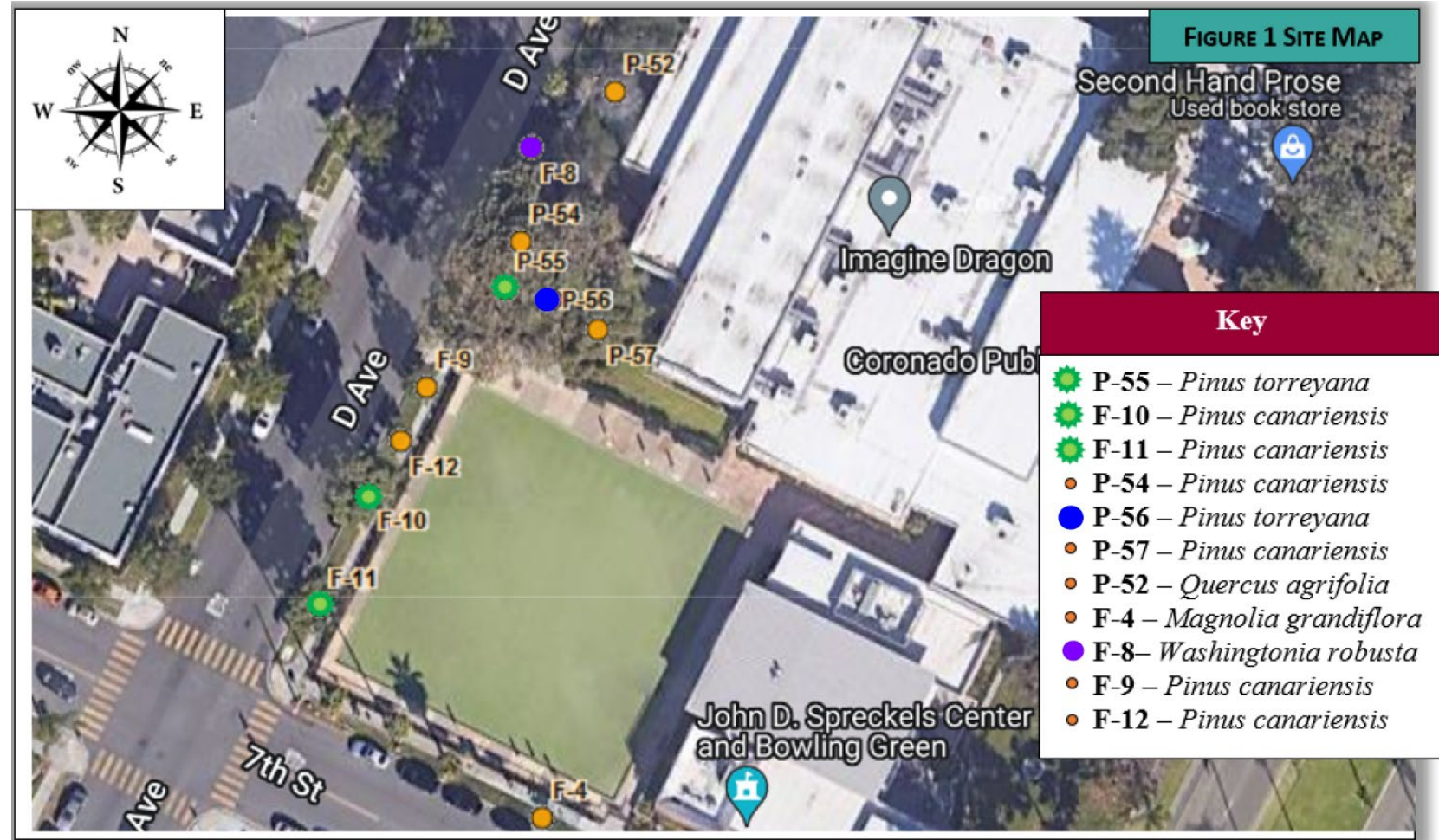
D Avenue – Hedges and City Fiber Optic



Tree P-56, Palm F-8 Removal

Arborists recommend removal of leaning tree (P-56) to eliminate it overcrowding and suppressing adjacent trees and to minimize root intrusion beneath green

Arborist recommends removal of palm tree (F-8) to accommodate drain pipes and save oak tree (P-52)



Tree P-56



P-56



P-56

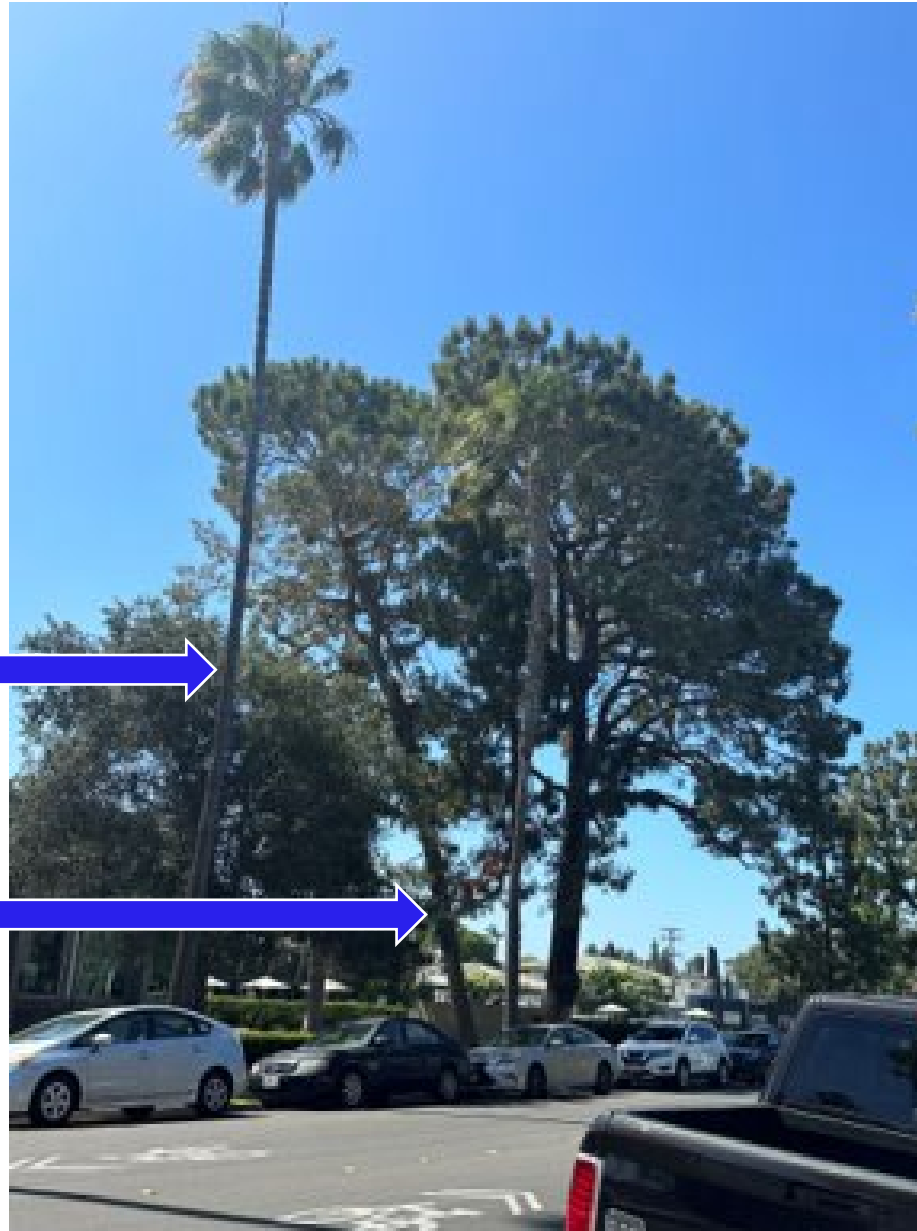


Palm F-8 and P-56

F-8



P-56



Construction Phasing

Phase I

1. Construct root barrier along D Avenue and Library
2. Complete roof drain system, installing pump to redirect water from Green

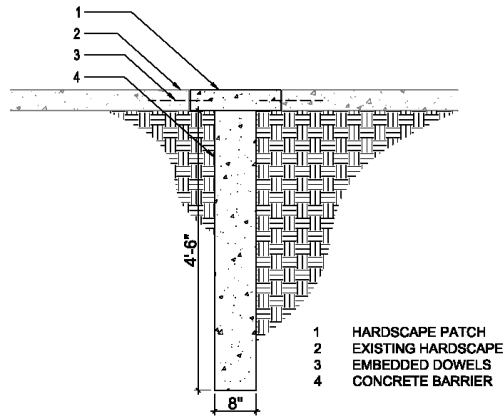
Phase II

1. Remove existing Green and repair base material as needed
2. Install new Green



Recommendation

- Construct Concrete Barrier along D Avenue and Library Side
- Install pump and drain system



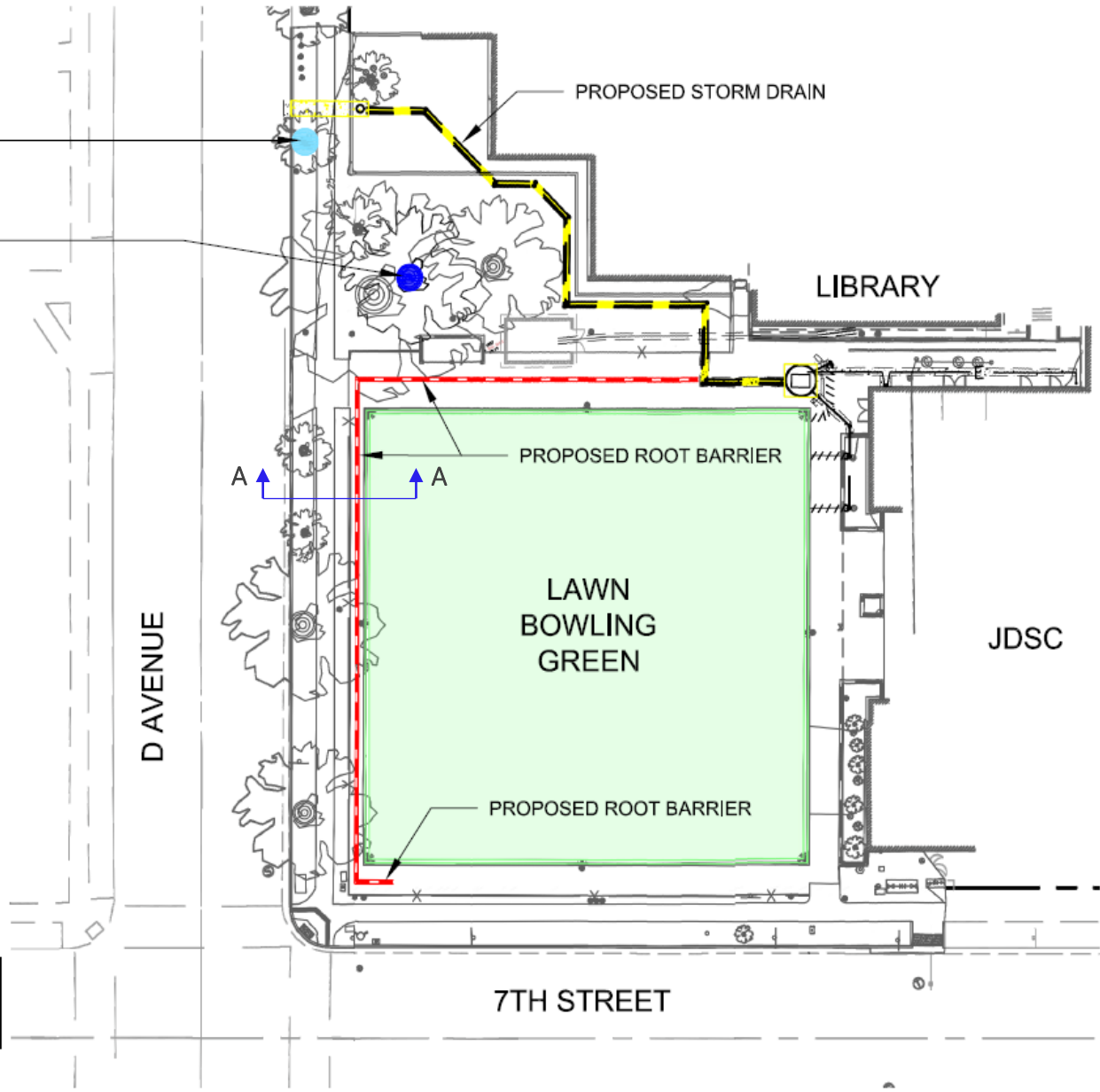
Section A-A



- = TREE TO BE REMOVED
- = TREE MAY BE REMOVED

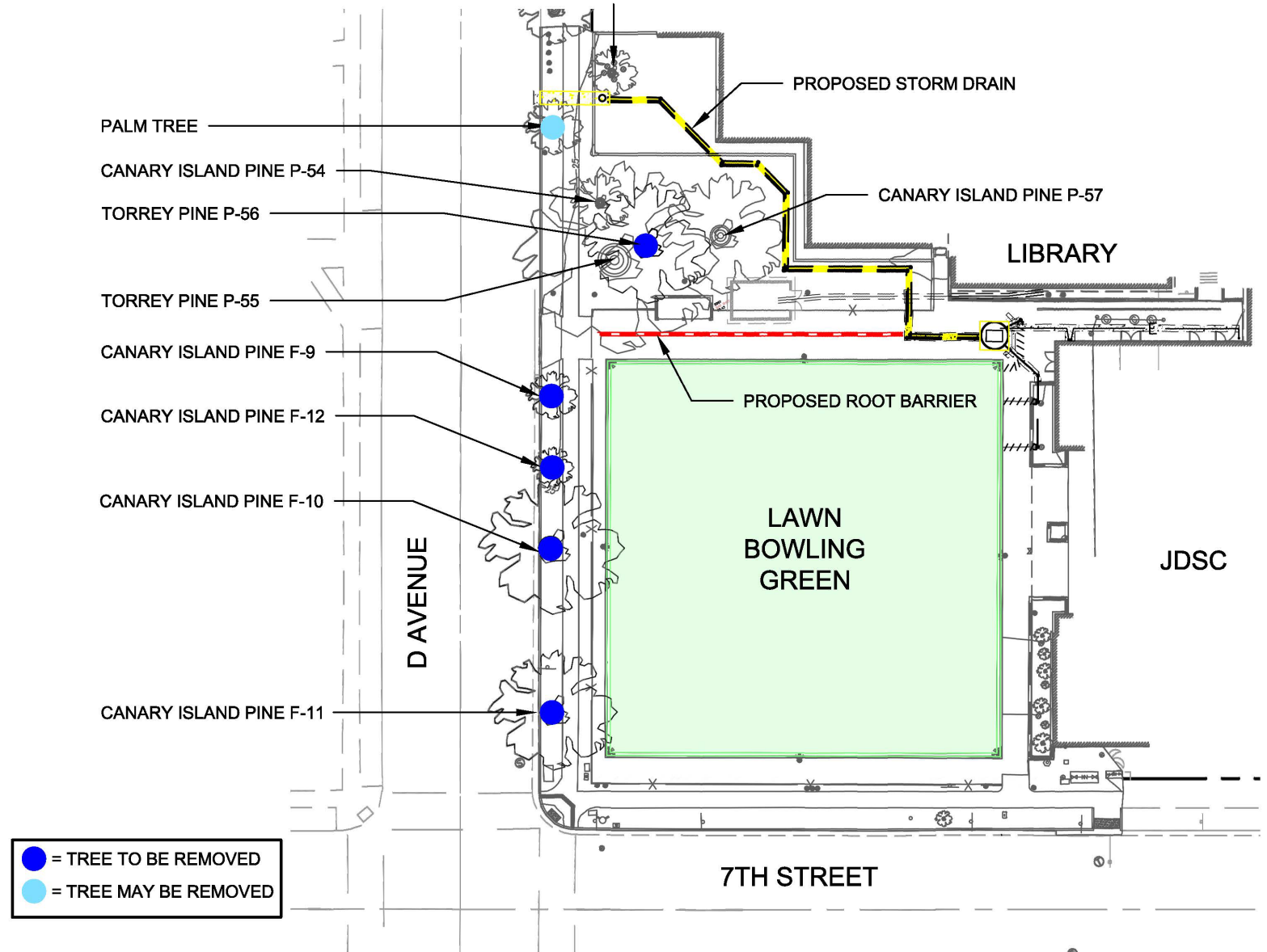
PALM TREE

TORREY PINE P-56



Alternative

- Remove Trees D Avenue
- Construct Concrete Barrier along Library Side Only

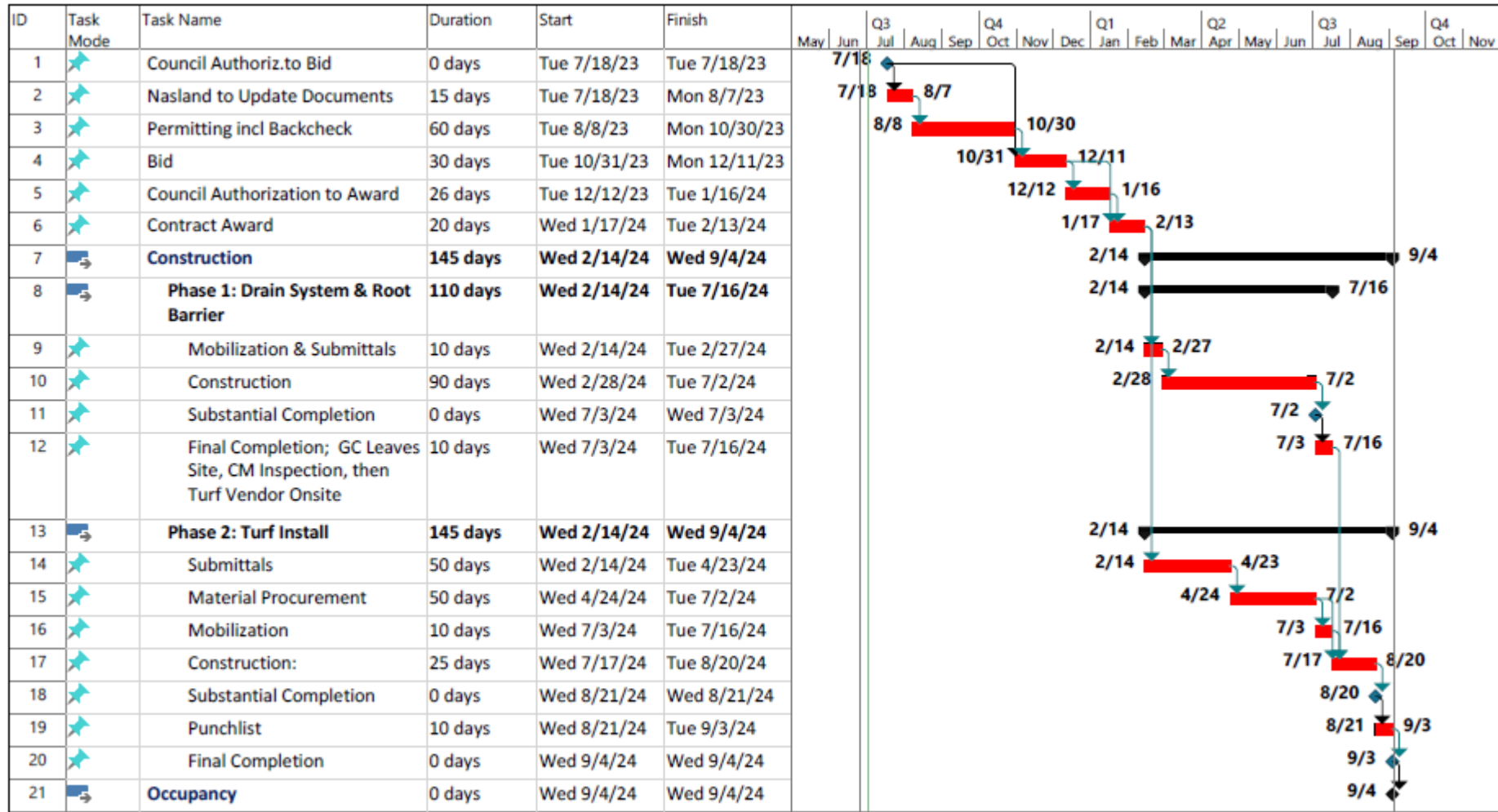


Project Budget

Description	CIP Budget Recommended	CIP Budget Alternative
Engineering Consultant	\$120,000	\$120,000
Design Phase Cost Estimating Consultant	\$9,180	\$9,180
Construction Management	\$59,976	\$59,976
Arborist	\$15,000	\$15,000
Permits, Bid Advertisement, Miscellaneous	\$58,118	\$53,578
Phase I: Root Barrier/Pump System	\$522,437	\$481,163
Phase II: As Needed Base Repair and Green Install	\$455,548	\$455,548
Contingency	\$67,917	\$62,551
Subtotal Budget	\$1,308,176	\$1,256,996
Current Total CIP Appropriation	\$800,000	\$800,000
Potential Additional Appropriation Request	\$508,176	\$456,996



Target Schedule



Request Council to:

1. Provide direction to staff
2. Approve removal of leaning torrey pine P-56
3. Authorize City Manager to Advertise the Lawn Bowling Green Turf Improvement Projects



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Questions?



Recommended

TREES and HEDGES REMAIN |
CONSTRUCT CONCRETE ROOT BARRIER

CONSTRUCTION SCOPE

GC

- Sawcut
- Demo existing concrete
- Trench
- Install concrete root barrier at sidewalk
- Dowel in at existing sidewalk, and install new sidewalk patch with specified finish
- Install drainage system with wet well and pump

\$1,308,000

Turf Contractor

- Existing turf to be removed
- Remove top layer of existing sand
- Maintain existing 6” playing base
- Repair playing base damaged by roots
- Existing plinth to remain; survey plinth to confirm it is level
- ½” new sand to be placed on top of existing base
- New turf to be installed on top of sand



Alternative

REMOVE TREES and NO ROOT BARRIER D AVE. | HEDGES REMAIN
CONSTRUCT ROOT BARRIER LIBRARY SIDE

CONSTRUCTION SCOPE

City

- Remove trees and not hedges
- No root barrier on D Ave.

General Contractor

- Construct root barrier Library side
- Install drain system
with wet well and pump

\$1,257,000

Turf Contractor

- Existing turf to be removed
- Remove top layer of existing sand
- Keep existing 6" playing base
- Repair playing base damaged by roots
- Existing plinth to remain; survey to confirm plinth is level
- ½" new sand to be placed on top of existing base
- New turf to be installed on top of sand

