

McMILLAN SAND FILTRATION SITE COMMUNITY CENTER & PARK DESIGN UPDATES

COMMISSION OF FINE ARTS SUBMISSION

4 MAY 2023



McMILLAN COMMUNITY CENTER LANDSCAPE DESIGN UPDATE

This submission is to provide an update on design-related matters regarding the McMillan Community Center landscape design.

The project was first reviewed by the Commission of Fine Arts in its meeting on June 28, 2020. The landscape design (see Figure 1) was approved at that time, contingent on the resolution of the following issues:

- reposition plaza bioretention features in order to avoid subdividing the central space;
- resolve circular benches at trees in the plaza;
- evaluate terraced walls and consider the use of structural soils and geotextiles for slope stabilization;
- reconsider proposed plantings at the playground and paralleling the Olmsted Walk;
- study further the placement of exercise stations along the Olmsted Walk to address potential conflicts.

The design team met with Commission of Fine Arts Staff on February 26, 2021 and presented updated designs addressing the Commission members' concerns. During that meeting, Commission Staff provided additional feedback on the updates and expressed satisfaction with the design revisions.

Since that time, the design has progressed through construction documentation. With construction of the community center well underway and site work currently progressing, the design team met with CFA Staff on March 6, 2023 to review minor updates to the site plan and to discuss a proposed revision to the CFA-approved location of the McMillan Memorial Fountain and its associated stone plaza and steps.

The minor site revisions, shown in Figure 2 and discussed on the following pages, include:

- revision of large portions of cast-in-place (impervious) paving, which has been replaced with permeable pavers to meet stormwater requirements;
- alteration of certain areas of lawn and shrub plantings into bioretention areas to improve site resiliency and harness runoff;
- design updates to the placement and sizing of exercise areas along the Olmsted Walk to avoid potential conflicts between uses;
- widening of the North Capitol Street sidewalk and replacement of aging trees with new ones.

A more major revision to the site plan relates to the location of the historic McMillan Memorial Fountain and its original stone paving and stone steps. When the Commission of Fine Arts reviewed the plan in 2020, those elements were shown on top of the elevated berm at the southwest corner of the site. The fountain and plaza were integrated into the overall circulation system and the rehabilitated stone steps would be installed on the corner of the berm, leading down from the fountain plaza to the intersection of Channing and First Streets. Because a DC-designated "heritage tree" is located in that vicinity, the design team evaluated various engineering solutions to install the steps while retaining the tree. Regrettably, a viable solution was not attainable so the design team considered alternatives to installing the stone steps near the tree.

While reviewing the on-site stakeout of the fountain in October 2022, DC Historic Preservation Office (HPO) recommended shifting the location of the fountain to the north. HPO reflected that the relocated site for the fountain would approximate the relationship of the fountain and steps at its original location a few hundred feet to the southwest at the intersection of Channing Street, with the stairs perpendicular to First Street. In addition, HPO said that their preferred site

for the fountain to the north of the southwest corner will provide more expansive views to the west and the southwest, especially due to the large canopy of the "heritage tree." In subsequent discussions HPO recommended that the design should include a plaza framing the fountain. The design team evolved the recommendation for the plaza into the scheme that is included in this submission for review by the Commission of Fine Arts.

On May 2, 2023, the design team met with CFA Staff and HPO to discuss this location and design. Minor changes discussed during that meeting were incorporated into the design shown within this submission. The following sheets provide details about the relocated fountain and the other minor site plan revisions.



Figure 1: Site plan approved by the CFA in June 2020

McMILLAN MEMORIAL FOUNTAIN, PLAZA, AND STEPS UPDATE

The McMillan Memorial Fountain, its stone plaza, and the original stone steps are proposed to be installed in a new location, just north of the southwest corner of the site.

When presented to the Commission of Fine Arts in June 2020, the fountain and plaza were shown at the southwest corner, with the stairs descending to the intersection of Channing and First Streets. This design was based upon recommendations made in the 2016 McMillan Sand Filtration Site Historic Preservation Plan by EHT Tracerics. That document stated (page 87) that the "large existing tree at the corner of First and Channing is not part of the historic planting of the Site, and should be removed." Because the tree has a circumference of greater than 100 inches, it is designated a "heritage tree." As such, the Owner has elected to preserve the tree rather than remove it. Engineering solutions to adapt the stone steps so that they could bridge over the critical root zone of the heritage tree were unsatisfactory to ensure that the tree would survive construction.

As a result, the design team has developed an alternative location for the McMillan Memorial Fountain and its associated stone steps and plaza paving. This revision relocates the fountain and its 2,000 square foot stone plaza forty feet north of the location shown in the 2020 submission to the Commission of Fine Arts. It reorients the rehabilitated stairs to descend from the fountain to First Street perpendicular to the north-south face of the westernmost berm rather than on the diagonal to First and Channing Streets. This revision restores the original alignment of the McMillan Memorial Steps along the face of a berm rather than at the intersection of two perpendicular berms. The relocation also changes the relationship of the

fountain to the Olmsted Walk: When shown to the Commission of Fine Arts in June 2020, circulation along the Olmsted Walk at the southwest former of the site passed through the fountain plaza via two 45-degree bends in the paved walk. By moving the plaza north of the southwest corner, the Olmsted Walk is now completely separate from the fountain plaza. A five-foot length of stone paving will serve as the transition from the Olmsted Walk to the fountain plaza. This offset allows the plaza to be more quiet and contemplative than the former condition where the Walk passed through the space.

The design has been further updated to provide two flanking plazas, one to the north and one to the south of the rehabilitated plaza. These will be smaller than the fountain plaza, and surfaced with compacted crushed granite edged with flush granite bands. Movable tables and chairs will be provided to encourage flexible use of these two seating areas.

STORMWATER MANAGEMENT UPDATE

When shown to the Commission of Fine Arts in 2020, the stormwater management program for the site consisted of bioretention features in the plaza and an infiltration trench in the recreation field. Geotechnical borings conducted after the 2020 submission found that the existing soils were inadequate for infiltration. Hence, the design has been revised to replace a large quantity of impervious paving with permeable pavers and to provide additional bioretention features in other locations on the site. This increases the resiliency of the site and provides a sustainable means to manage stormwater. Permeable pavers will be used in the entirety of the South Service Court and in the sunken plaza. Bioretention features have been added to the South Service Court and inserted along the southern face of the South Service Court filter cell wall. A terraced bioretention feature has been added to the west of the playground. These will capture runoff from the recreational field where soils do not provide adequate absorption of stormwater.

EXERCISE STATION UPDATES

Upon reviewing the exercise station designs in June 2020, the Commission members noted that potential conflicts could occur between people using the exercise stations and people using the Olmsted Walk. Since that time, the design team has worked with the DC Department of Parks and Recreation (DPR) to select exercise equipment. Coordination with the manufacturers of the equipment resulted in the reconfiguring of the exercise stations to ensure that use zones did not conflict with the surroundings. As such, the exercise stations have been resized and reoriented, with short paths providing access to them from the Olmsted Walk. Additionally, a lone exercise station on the north-south leg of the Olmsted Walk was moved to be near the three shown along the east-west leg of that path.

NORTH CAPITOL STREET PUBLIC SPACE UPDATE

The design along the east side of the site has been updated since June 2020 to provide a new, widened sidewalk along North Capitol Street. This improvement is in keeping with the North Capitol Streetscape Guidelines, produced in late 2019 by the DC Office of Planning and Department of Transportation. The former design retained the existing sidewalk and street trees while the updated design plants twelve new trees and doubles the width of the sidewalk along North Capitol Street.



Figure 2: Updated site plan. Note, updates marked * approved by CFA Staff in December 2020

McMILLAN MEMORIAL FOUNTAIN, PLAZA, AND STEPS UPDATE

The McMillan Memorial Fountain, once restored, will be relocated atop the berm just north of the southwest corner of the site, which is several hundred feet from its original location closer to the reservoir. The new setting is appropriate because, much like its original location, it commands exceptional views of the reservoir, of the Sand Filtration Site, and of the District of Columbia skyline while also serving its original purpose of honoring Senator McMillan within this context. The original granite paving that surrounded the fountain and the granite benches, if in acceptable condition, will also be installed. As a node on the path of the Walking Museum, the McMillan Memorial Fountain will be an exceptional location for interpretive opportunities about Senator James McMillan's legacy.

The 2020 plan proposed installing the historic steps at the southwest corner of the site, providing access to the elevated recreation field from the intersection of First and Channing Streets below. In order to preserve a non-historic DC-designated "heritage tree" present at that intersection, steps will not be installed in this location. Alternatively, the restored McMillan steps will be installed just to the north of the intersection of Channing and First Streets to provide the connection to the Olmsted Walk at the top of the berm.

Striving to create an integrated setting for the rehabilitated fountain and its four original stone benches, ancillary seating areas will be added to the north and south of the restored fountain plaza. This intervention formalizes the setting immediately surrounding the McMillan Memorial Fountain to make it more suitable for reinterpreting Senator McMillan's legacy. The rehabilitated fountain plaza will be enclosed by a clipped hedge, as was present in the original planting plan by Olmsted, Jr. To the north and south of the rehabilitated stone plaza, ADA-compliant

crushed gravel surfacing will be installed. This surfacing will be edged by an 12-inch-wide flush granite band. Movable tables and chairs will be provided in these two plazas to facilitate flexible programming and to establish a counterbalance to the more formalistic nature of the historic plaza. Shade trees will be planted to the east of these plazas to visually and physically buffer this area from the recreational field beyond. The plazas will be offset from the Olmsted Walk and its alignment trees so that the plaza and seating areas will be distinct from the circulation path. From this new vantage point, the fountain plaza and the flanking seating areas will access exceptional views of the McMillan Reservoir and Howard University to the west and of the Washington Monument and the District skyline to the southwest. Figures 6 and 8 illustrate the relationship of the steps to the fountain in the original configuration and in the proposed plan.

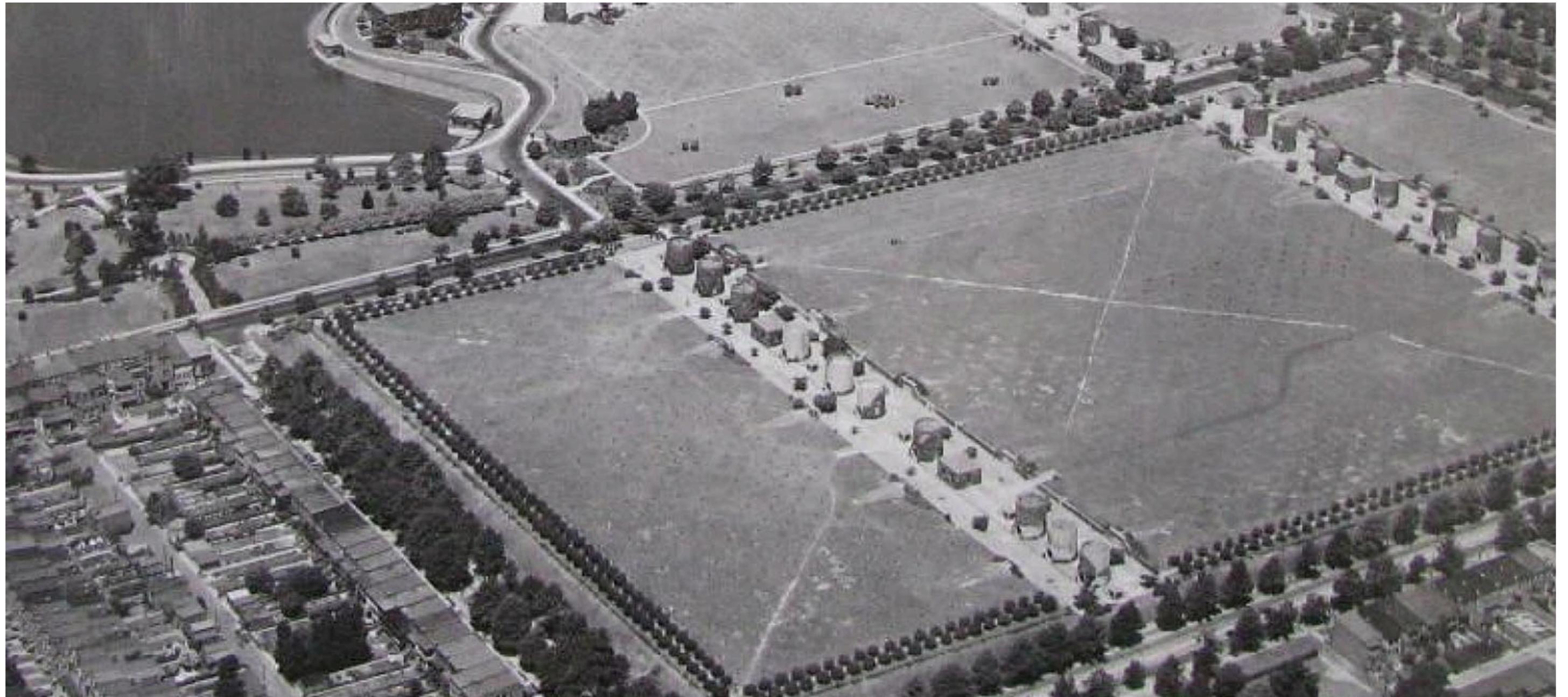
With respect to the planting of the steps leading to the McMillan Memorial Fountain, the contemporary approach balances several considerations: First, because the fountain and stairs will be rehabilitated and then reconstructed in a location that is not original, the planting plan is more interpretive in nature. Second, flanking the original McMillan Memorial Fountain stairs, Olmsted Jr. selected conifers that, while chosen to help formalize the grand approach and enhance the experience of compression and release as one ascended to the fountain, the plants ultimately grew into decidedly dense massings. Today, the landscape architect must balance the intended formalizing effect of Olmsted Jr.'s red cedar and hemlock hillside grove with the need to provide a safe environment with open views. The resulting planting plan interprets the original McMillan Fountain stair planting plan while maintaining open views for enhanced security.



General plan (1911)



View of stair to McMillan Memorial Fountain (circa 1913)



Aerial view (1931)

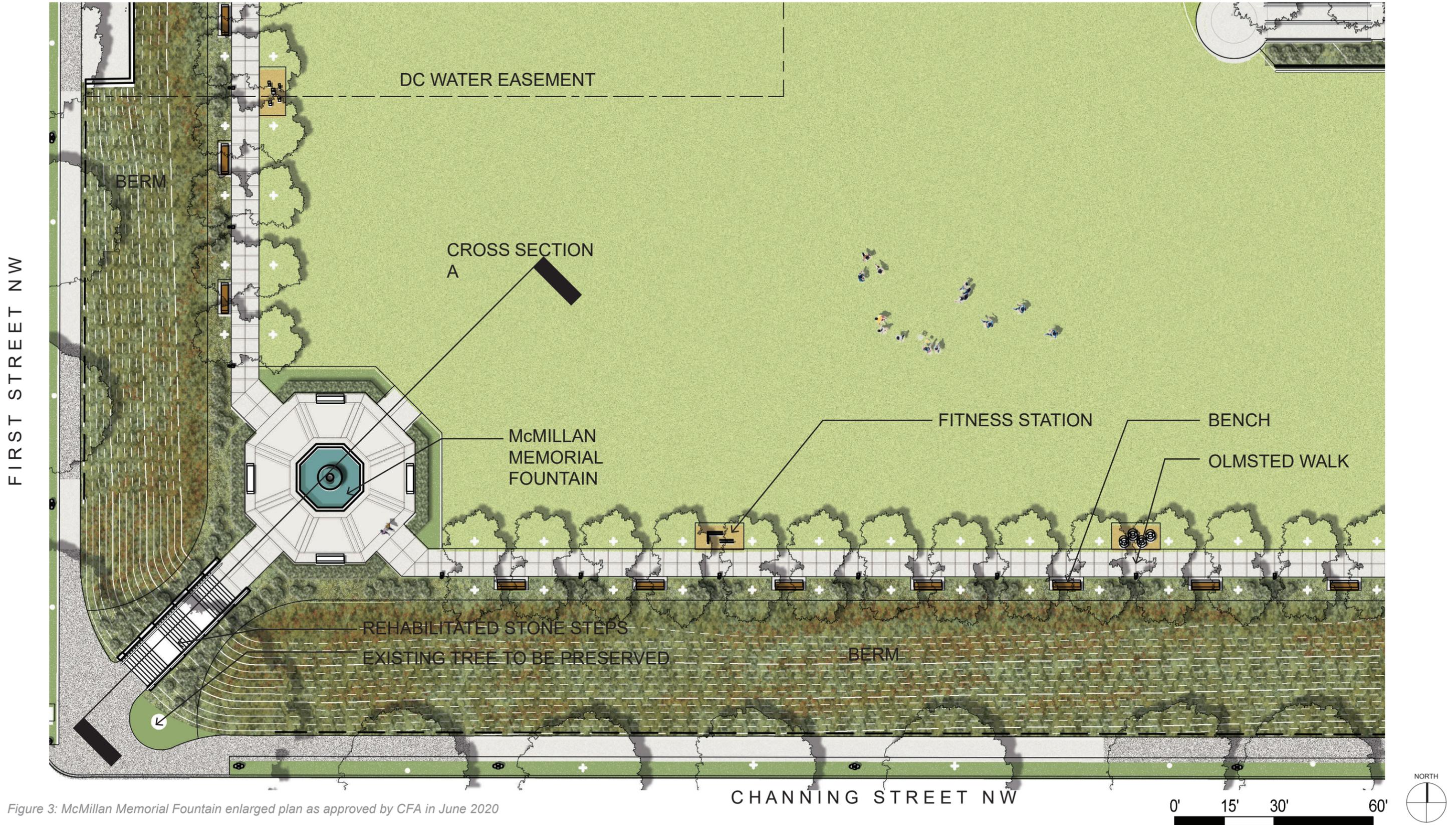
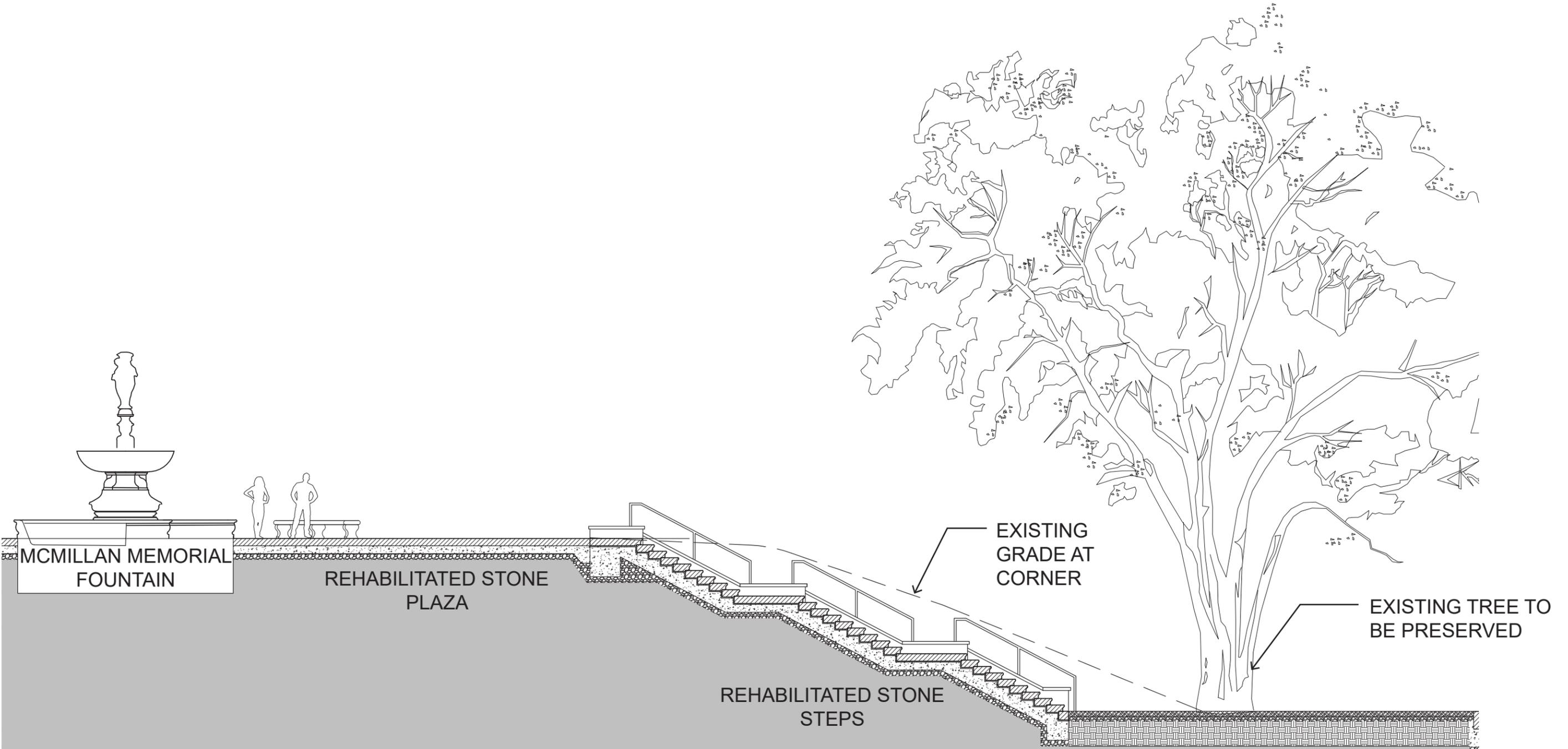
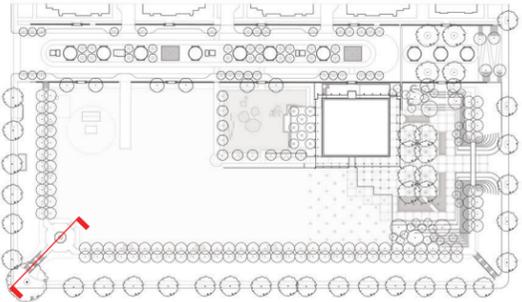


Figure 3: McMillan Memorial Fountain enlarged plan as approved by CFA in June 2020



Cross section A as presented to the CFA in June 2020



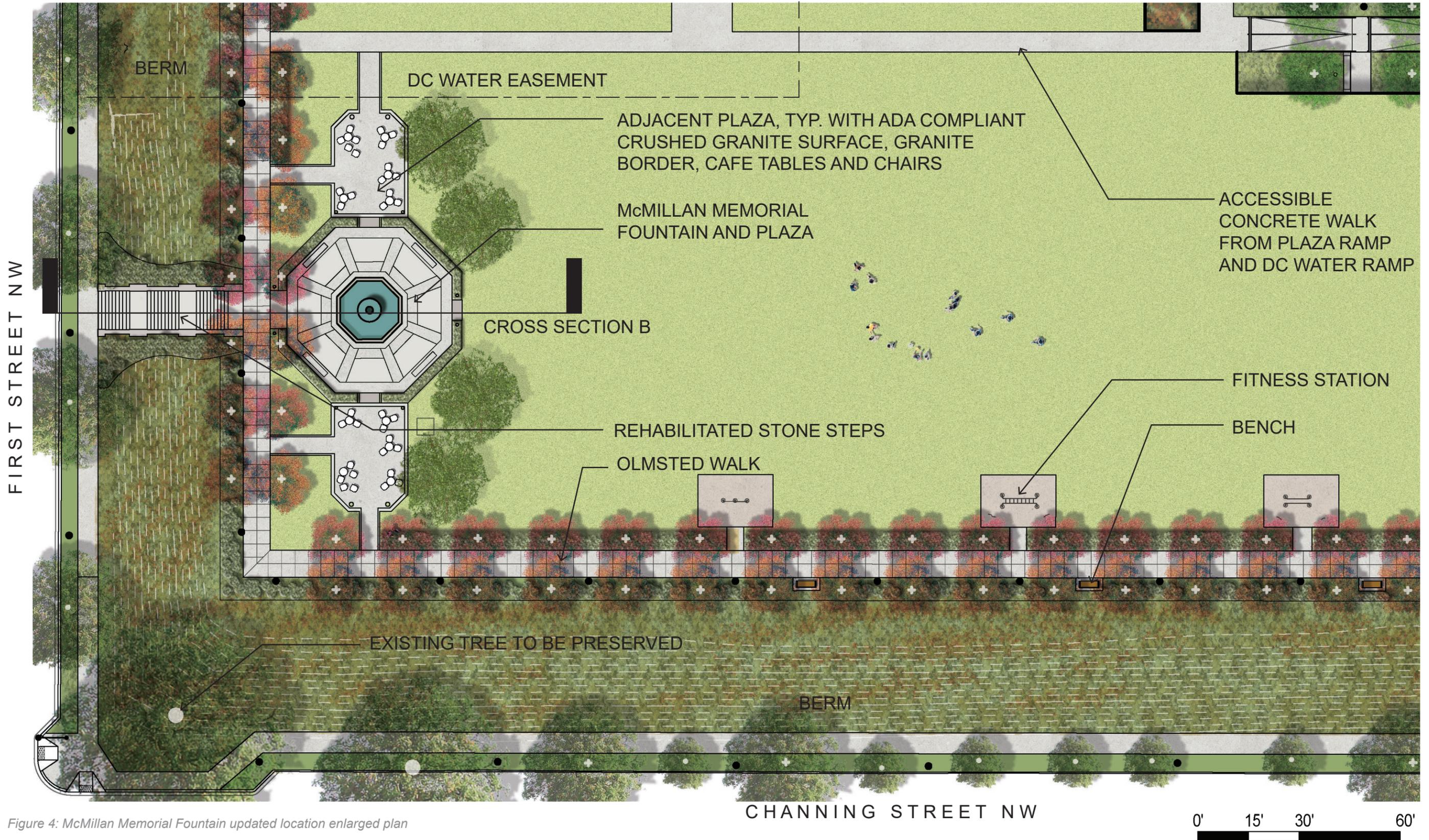
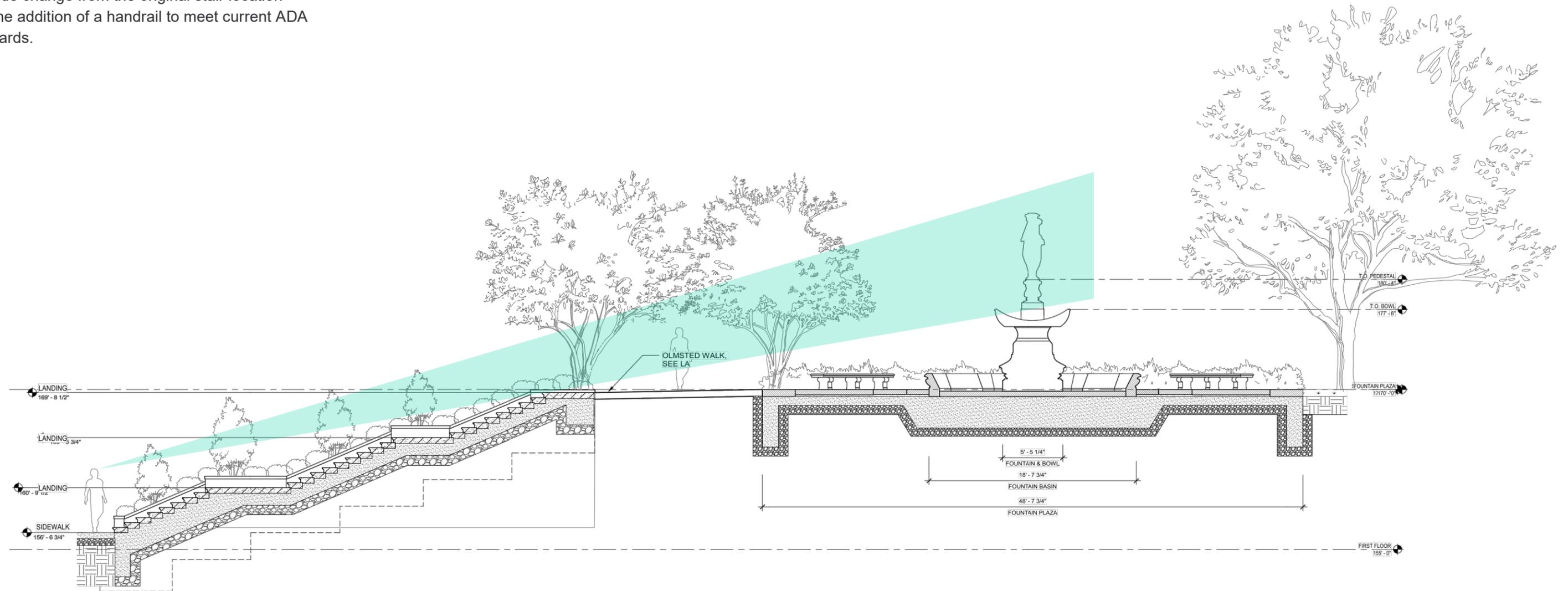
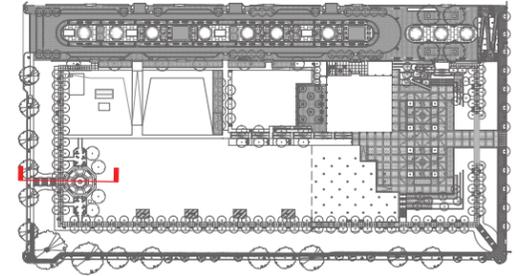


Figure 4: McMillan Memorial Fountain updated location enlarged plan

McMILLAN MEMORIAL FOUNTAIN AND STEPS

The historic fountain and steps will be restored at a new location just north of the corner of First Street NW and Channing Street NW. The updated location retains the heritage tree and restores the relationship of the McMillan Steps to the steep berm.

Adaptations to the original design include reducing the overall number of steps to account for the difference of grade change from the original stair location and the addition of a handrail to meet current ADA standards.



Cross section B showing updated location of steps and plaza along westernmost berm. Note cone of vision from First Street to fountain.

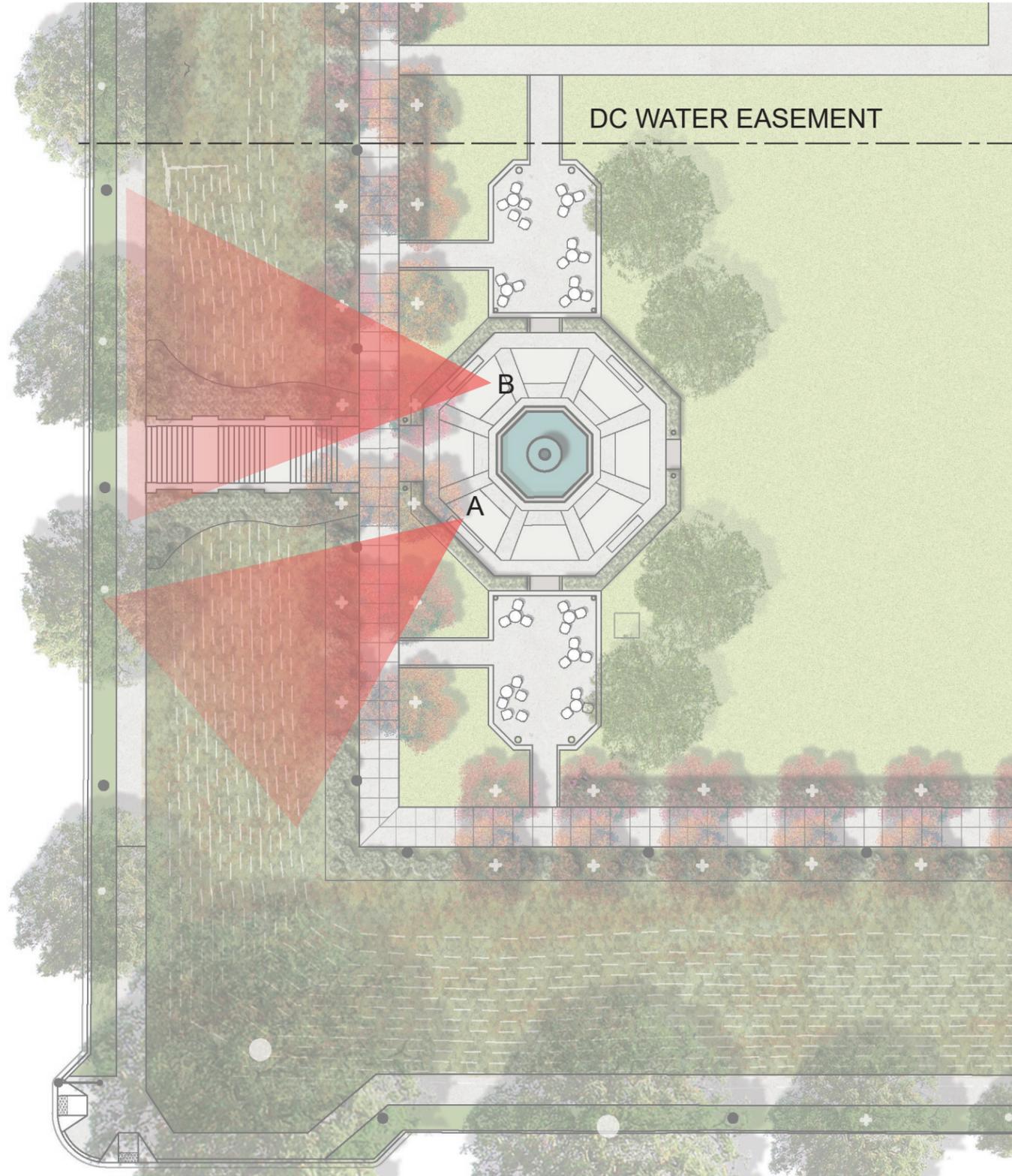


Figure 5: McMillan Memorial Fountain updated plan showing photo locations (NTS)



Photo A - looking southwest from proposed stair top landing



Photo B - looking west from proposed stair top landing

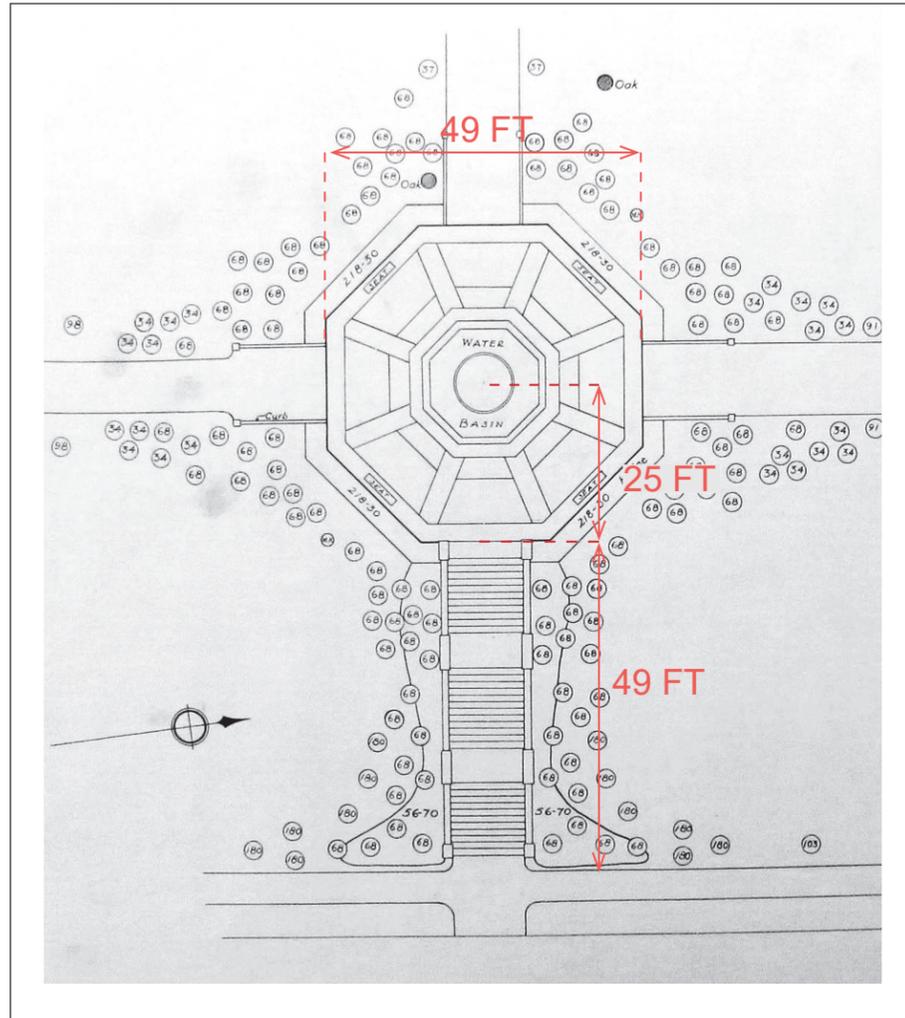


Figure 6: 1911 plan, scaled dimensions showing length of run at stone steps, distance from top landing to center of fountain plaza, and width of plaza (NTS)

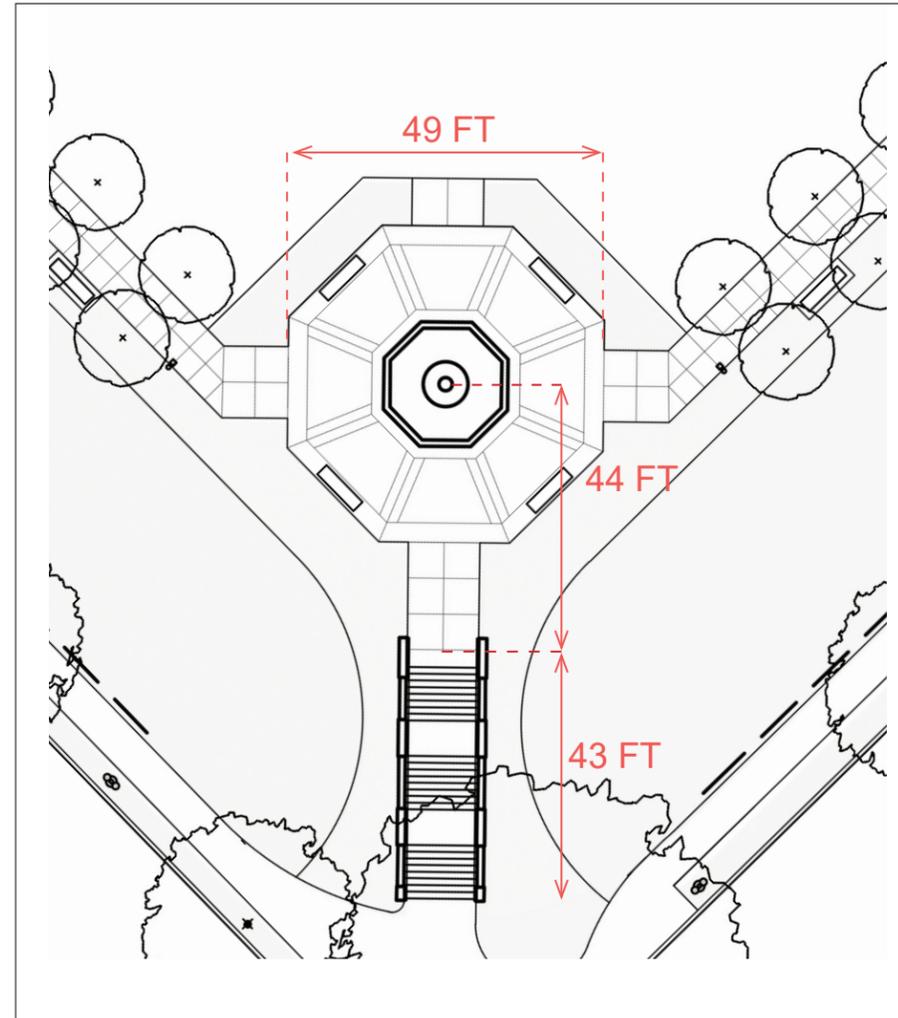


Figure 7: 2020 approved plan showing length of run at stone steps, distance from top landing to center of fountain plaza, and width of plaza (NTS)

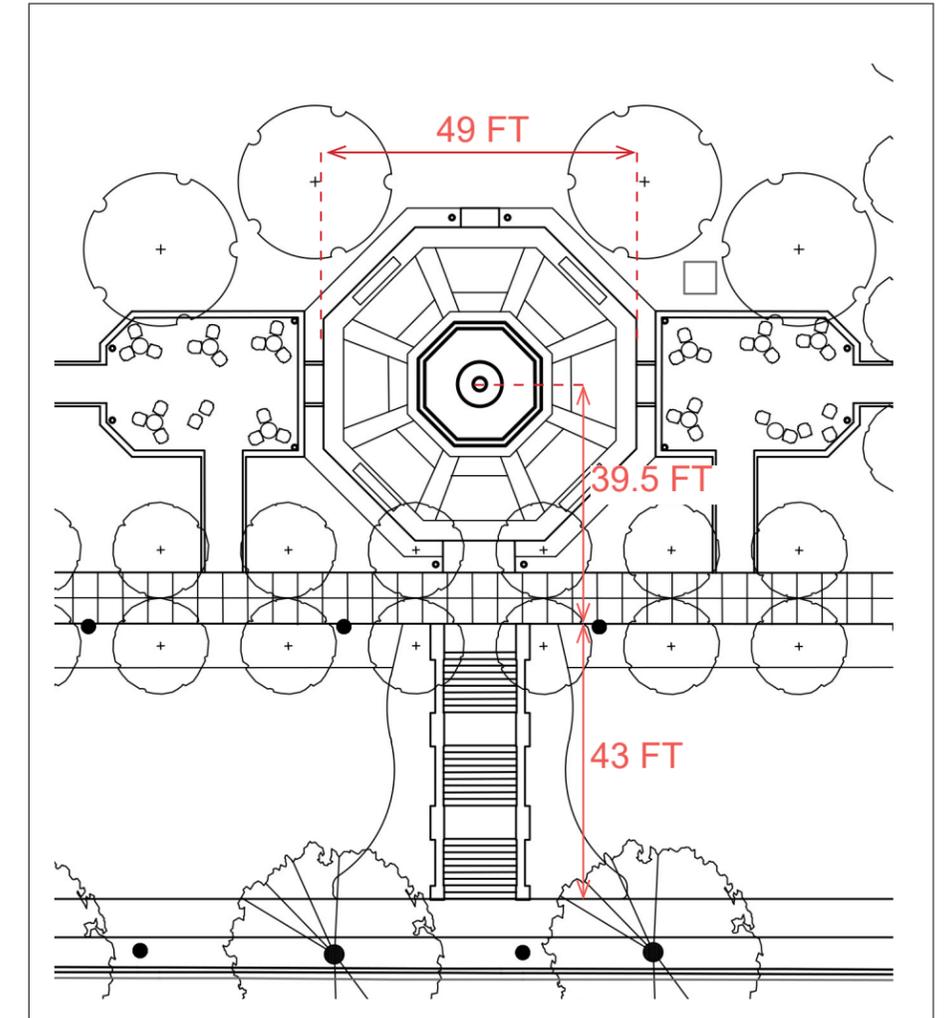


Figure 8: 2023 updated plan showing length of run at stone steps, distance from top landing to center of fountain plaza, and width of plaza (NTS)

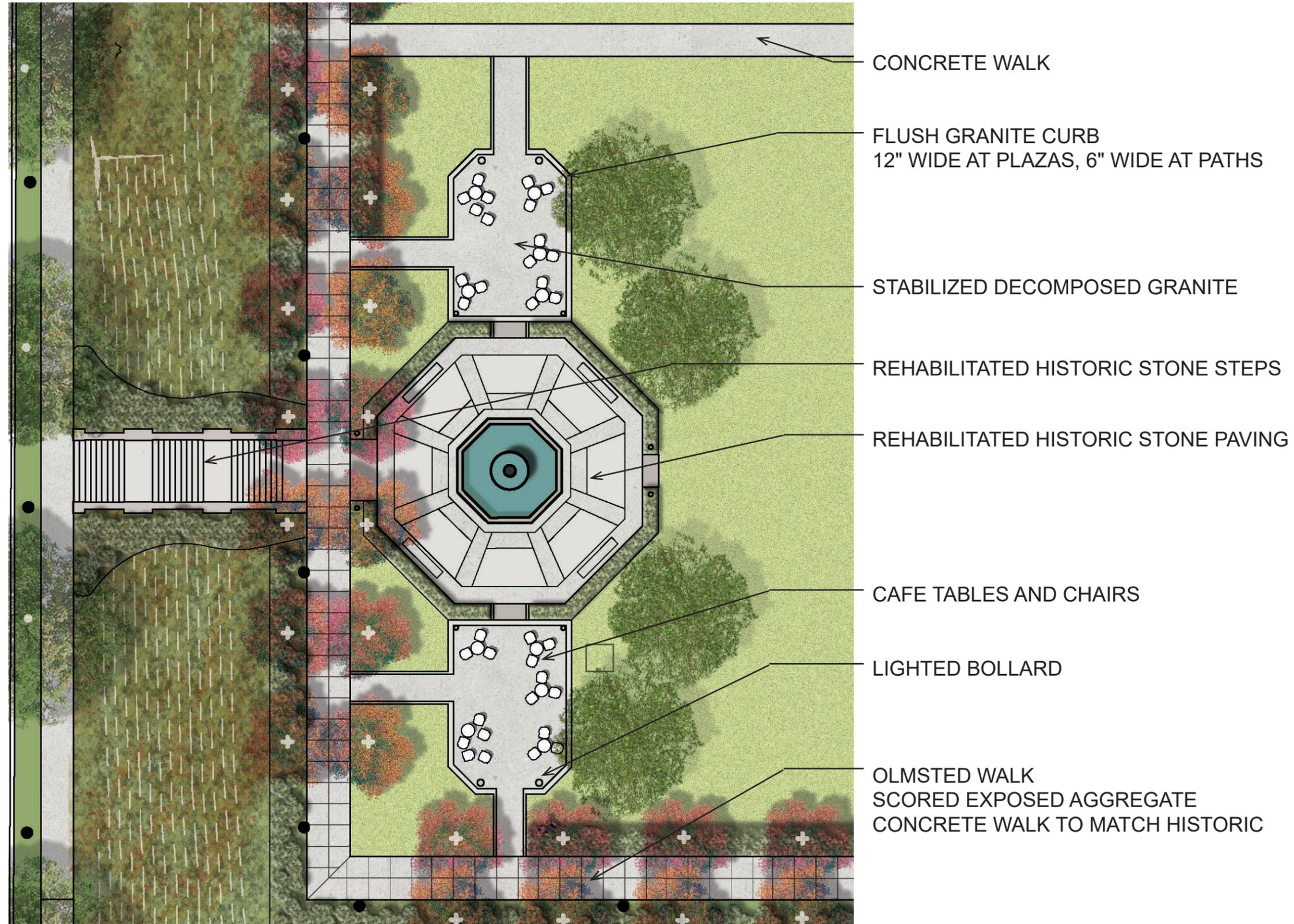


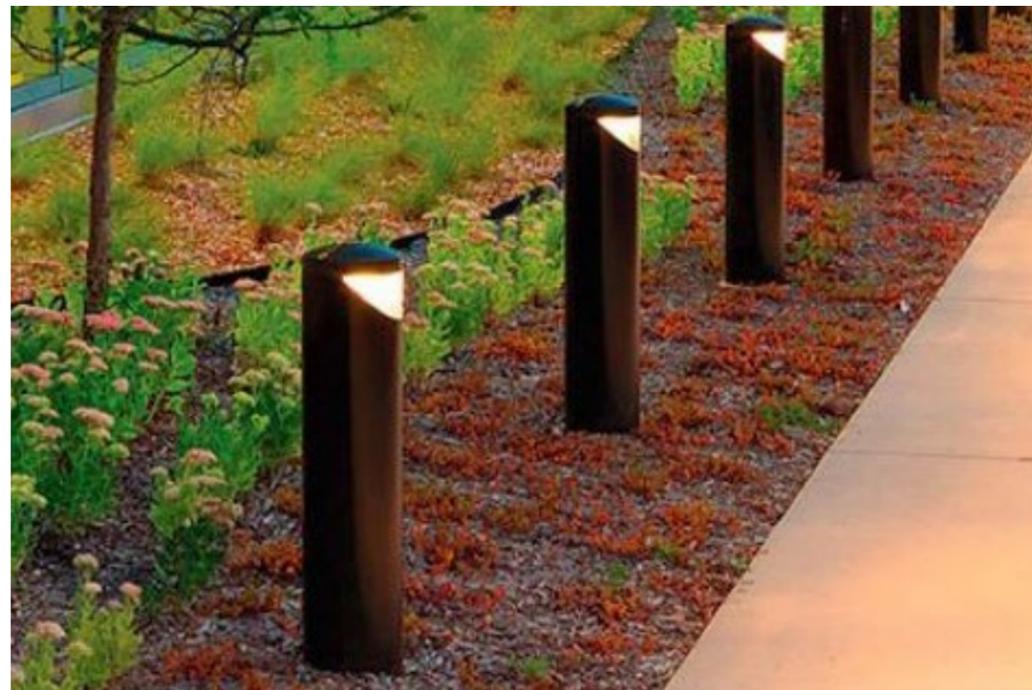
Figure 9: McMillan Memorial Fountain materials enlargement



FLUSH CURB (STONY CREEK GRANITE TO MATCH EX. STONE PAVING) 12" WIDE AT PLAZAS, 6" WIDE AT PATHS



STABILIZED DECOMPOSED GRANITE



LIGHTED BOLLARD



CAFE TABLES AND CHAIRS

BIORETENTION

Previously approved plans showed bioretention basins in the plaza only, which were sized and laid-out to capture stormwater from the plaza itself and from a small segment of the South Service Court. The design approved by CFA Staff in December 2020 comprised 2,745 square feet of bioretention in the plaza. At that time, it was assumed that additional stormwater would be captured in an infiltration trench located to the west of the playground.

Geotechnical borings performed in 2021 demonstrated that existing subsoils were not appropriate for infiltration. In order to meet stormwater management requirements and to retain stormwater on-site, the design has been modified to increase bioretention.

As shown in Figure 12, some 5,780 square feet of bioretention has been added to the site to meet stormwater requirements. These bioretention areas have been sited in areas previously shown as either turf grass or shrub and perennial planting beds. For the most part, these will be concrete-lined basins located in either the South Service Court or at the base of the original South Service Court filter cell retaining wall. Along the west side of the playground where the lawn will slope down to the South Service Court filter cell retaining wall, a terraced bioretention feature will harness stormwater from the play field. Seating areas will be installed along the terraced bioretention basins. All basins will be bordered by knee-high guardrails and the ponding depth will be approximately 18 inches.

The addition of bioretention features along the South Service Court wall provided an opportunity to create a pedestrian connection from the playground to the Olmsted Walk and westernmost portal.



Figure 10: Plaza layout showing configuration of bioretention basins, as shown to the CFA, June 2020

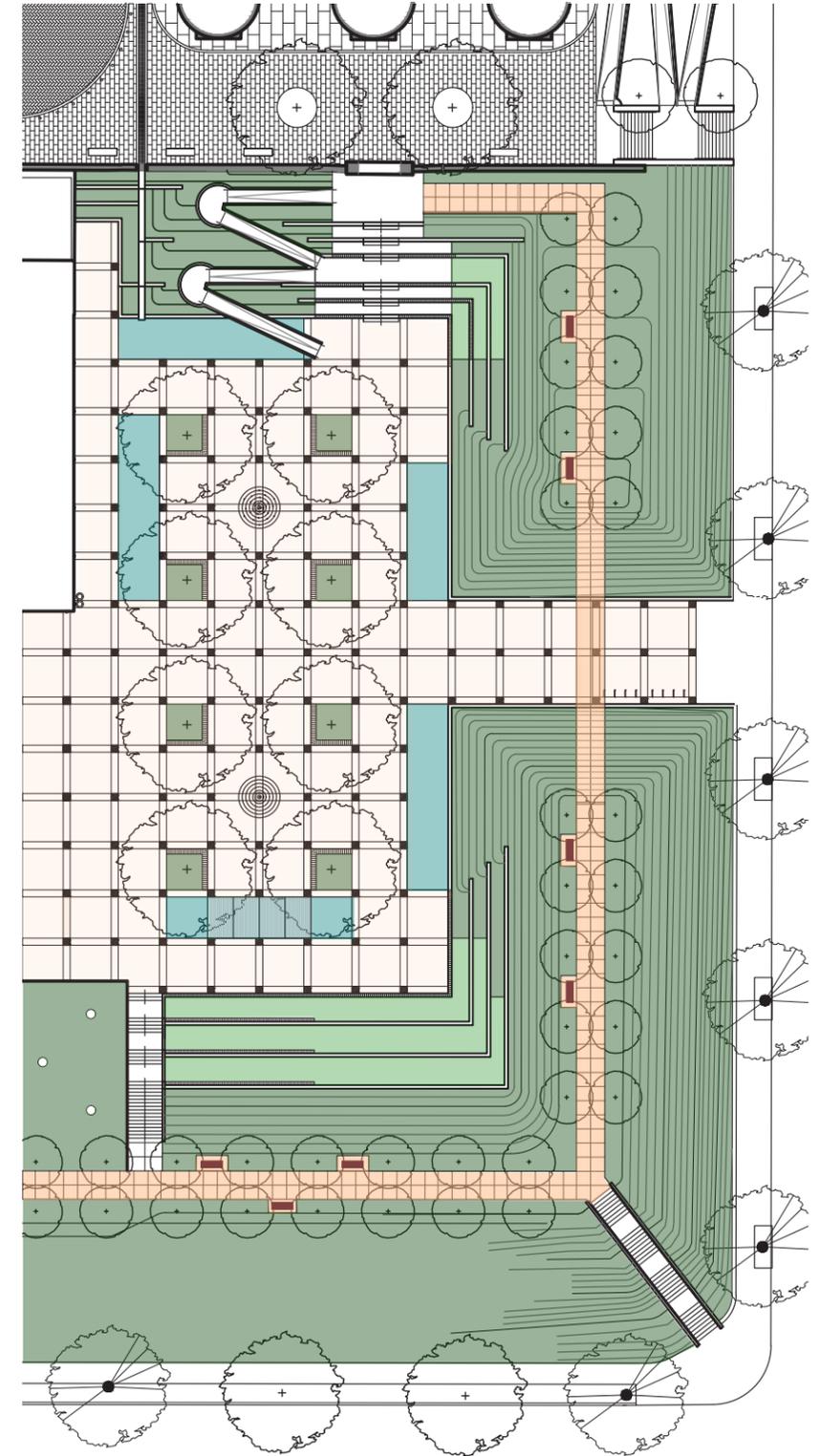


Figure 11: Plaza layout showing configuration of bioretention basins, as approved by CFA Staff, December 2020

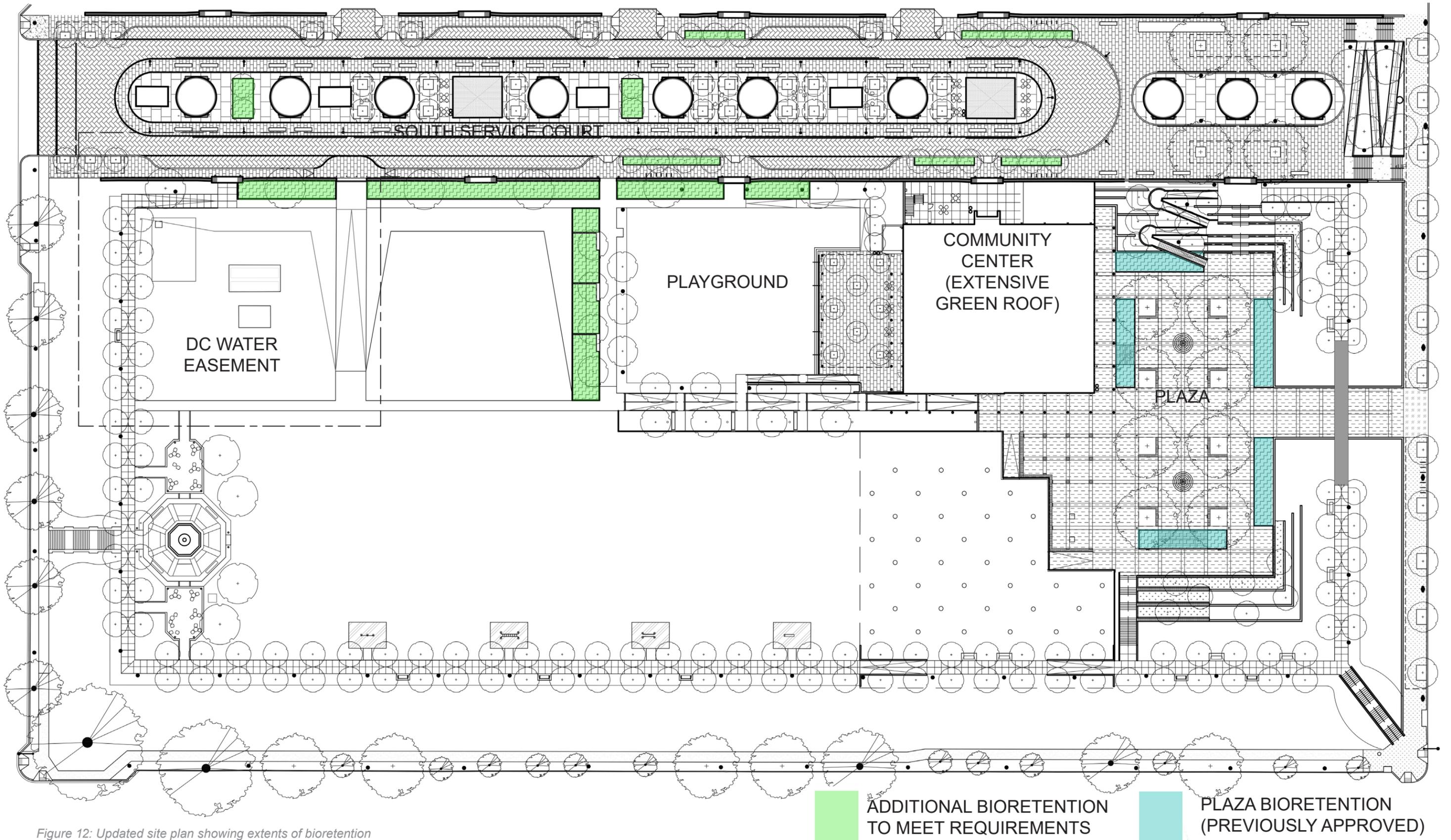


Figure 12: Updated site plan showing extents of bioretention

ADDITIONAL BIORETENTION TO MEET REQUIREMENTS

PLAZA BIORETENTION (PREVIOUSLY APPROVED)

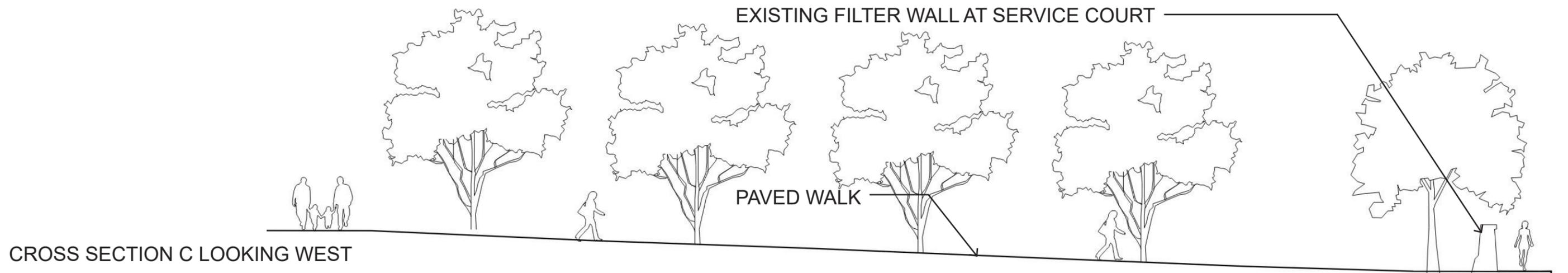
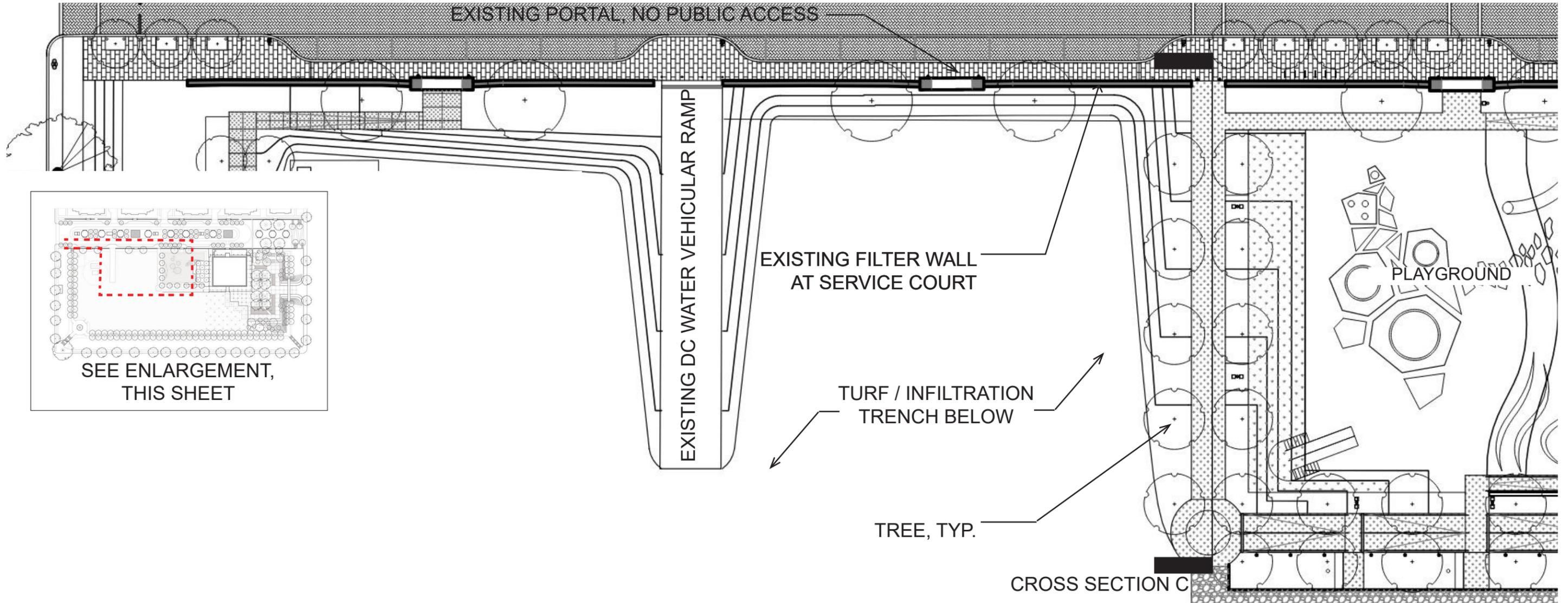


Figure 13: Turf lawn area and planting at infiltration trench, as approved by CFA, June 2020

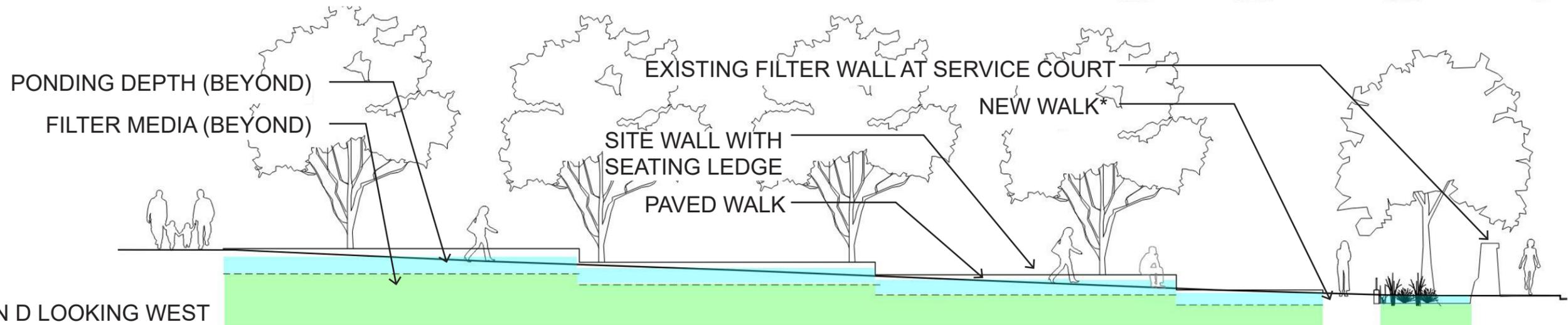
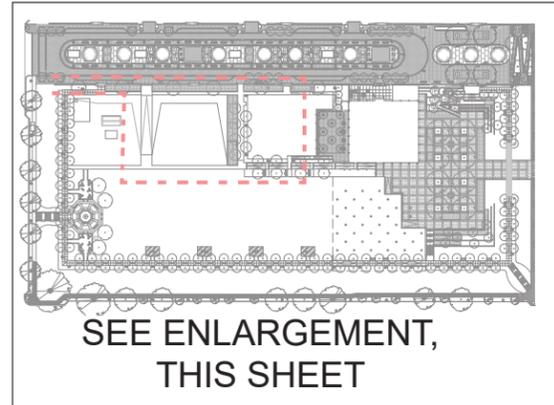
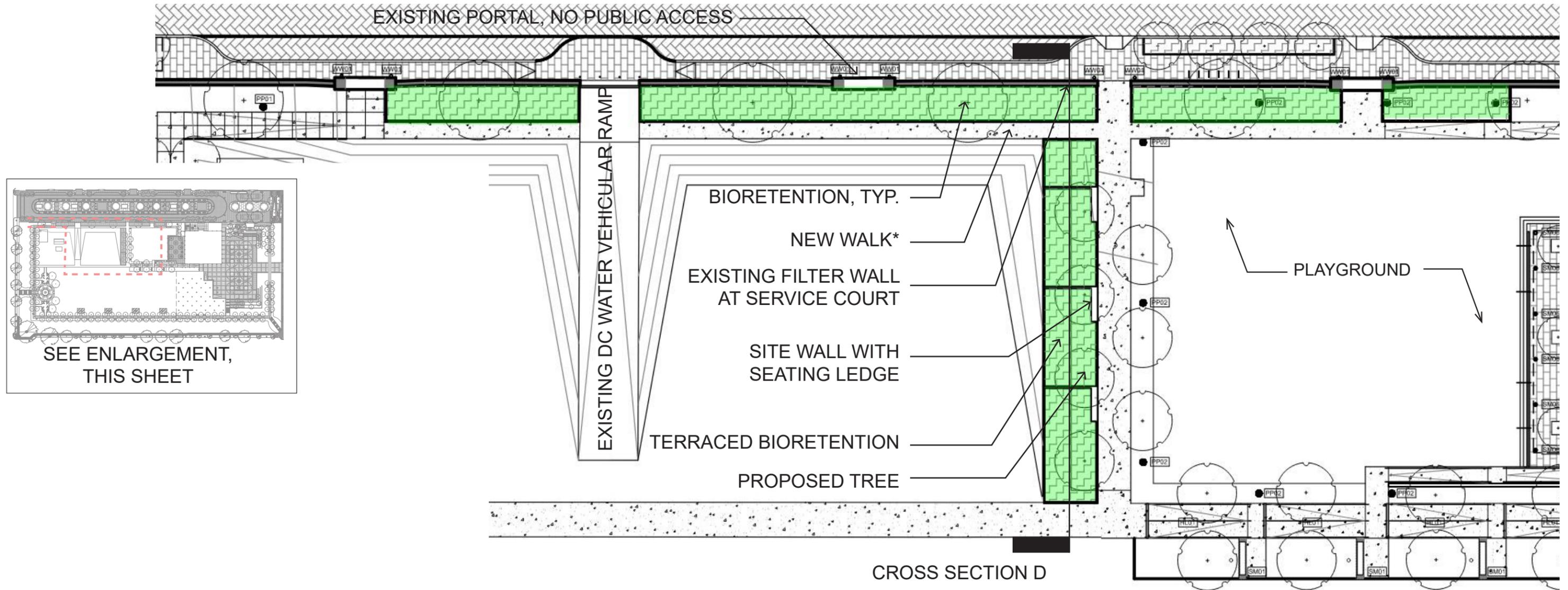


Figure 14: Updated site plan showing added bioretention. *Note new east-west walk connecting playground to west leg of Olmsted Walk and western portal, paralleling the new bioretention basin.

PAVING UPDATES

When presented to the Commission of Fine Arts in June 2020, all paving on the site was proposed to be impervious, as shown in Figure 15. Paving comprised cast in place concrete with a few areas of granite pavers in the plaza marking the former locations of filter cell columns.

In order to meet stormwater management requirements, many of the paved surfaces have been updated to be permeable, as shown in Figure 16. The vehicular and pedestrian areas of the South Service Court have been revised to be permeable pavers. Similarly, the paving plan for the plaza utilizes permeable pavers. These are configured using different colored pavers to retain the design intent of identifying the historic filter cell column grid. Because sheet flow from the South Service Court to the proposed runnel in the north part of the plaza would no longer be adequate to activate that feature, it has been removed from the project.

The revision of impervious paving to permeable surfaces increases sustainability of the site and treats most of the stormwater where it falls rather than conveying it directly to the stormwater sewer system.

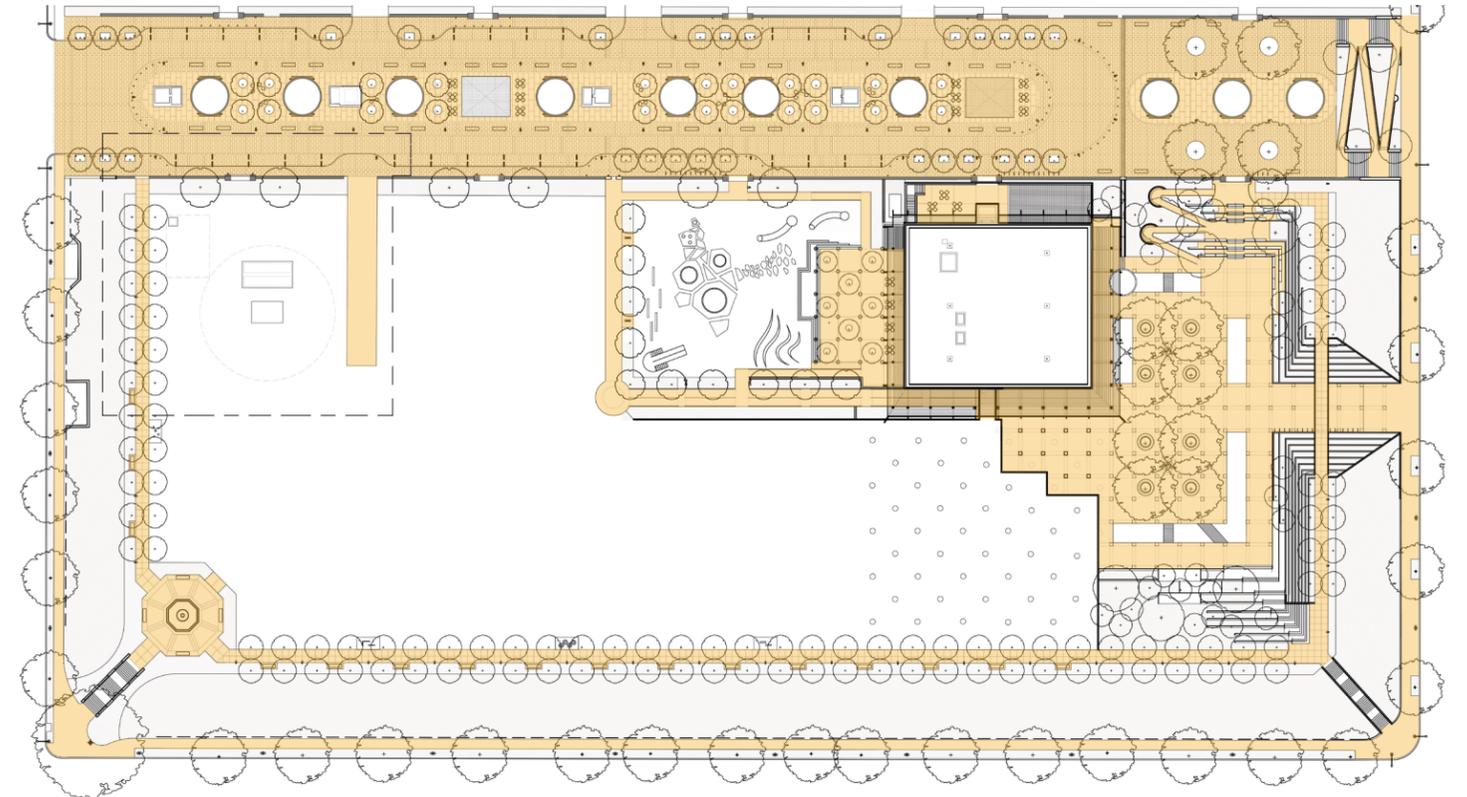


Figure 15: 2020 site plan showing impervious surfaces in orange

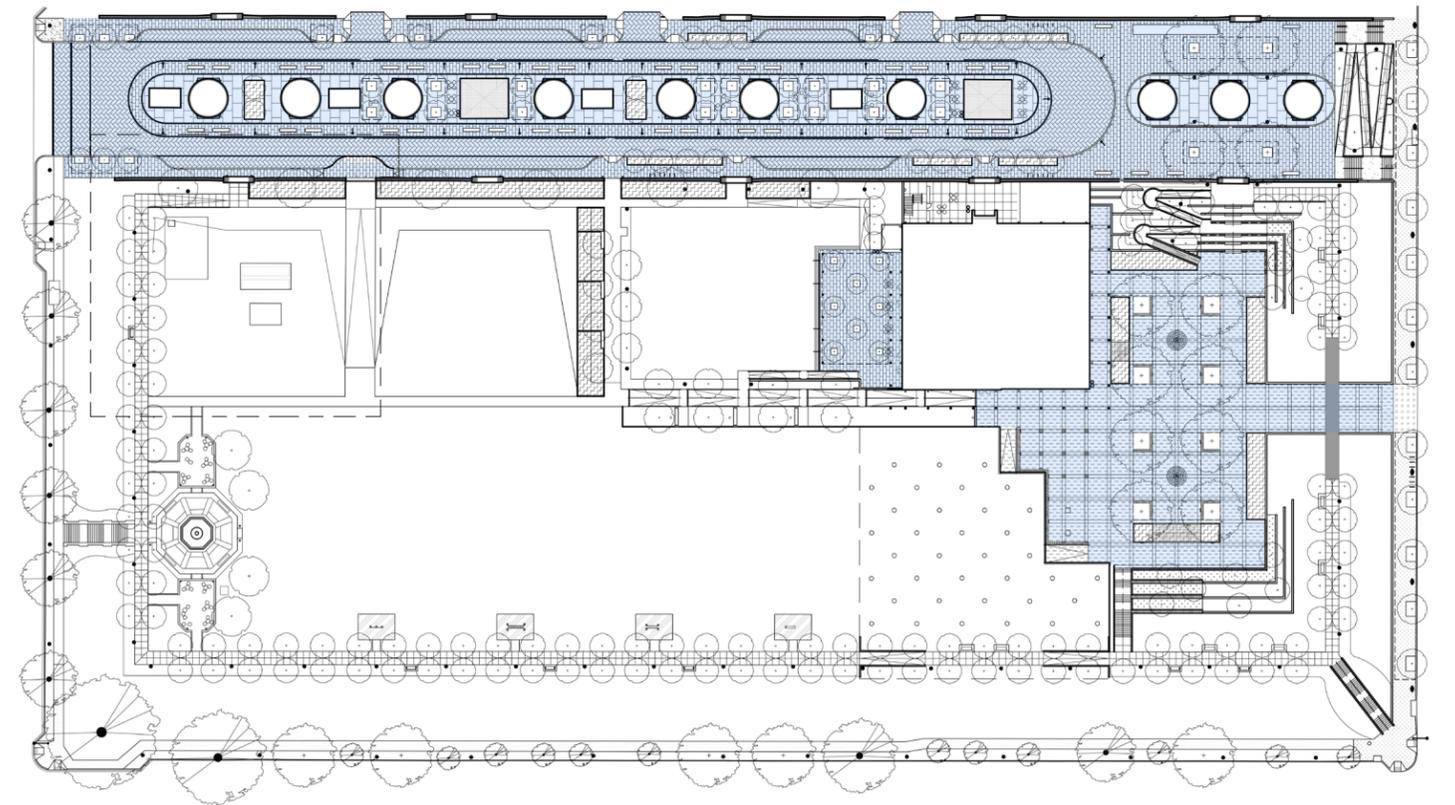


Figure 16: Updated site plan showing areas of permeable pavers in blue.

EXERCISE STATIONS

In June 2020, the Commission members recommended further study of the placement of exercise stations along the Olmsted Walk, commenting that using them may prove challenging due to their close proximity to the narrow walk. Exact sizing and layout of the fitness stations was unresolved pending coordination with DPR and the fitness equipment manufacturer.

The fitness stations have been consolidated along the southern stretch of the Olmsted Walk, and short paths lead to them from the path (see Figure 18). Olmsted Walk trees and fitness area layouts have been adjusted to provide adequate space for safe use of equipment and greater separation between uses of these areas and of the Olmsted Walk.

Tree spacing on the east-west leg of the Olmsted Walk is 21 feet on-center; the spacing on the north-south legs remains 20 feet on-center. The surfaces depicted are sized as required for safe use of the fitness equipment following the guidelines from the manufacturer.

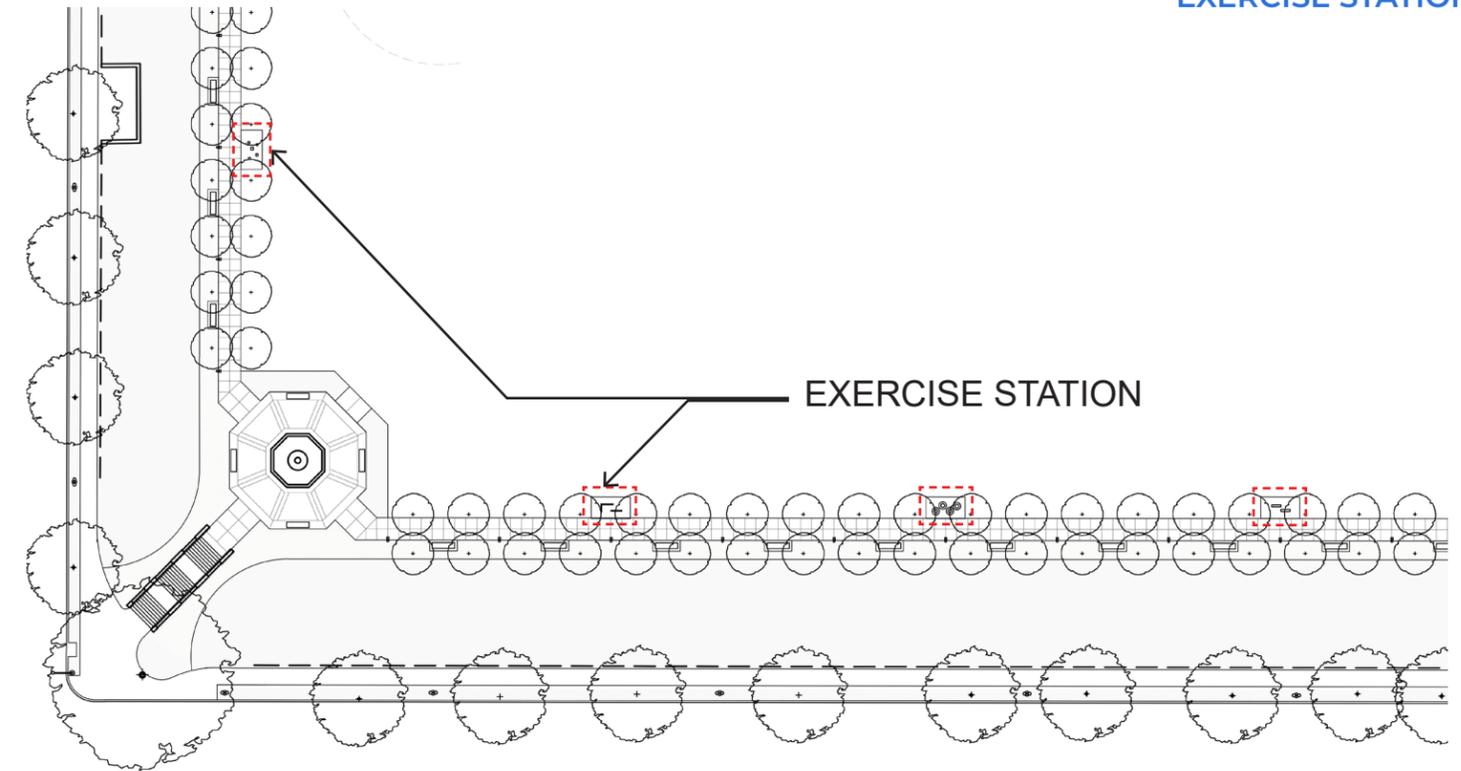


Figure 17: 2020 site plan enlargement showing exercise areas

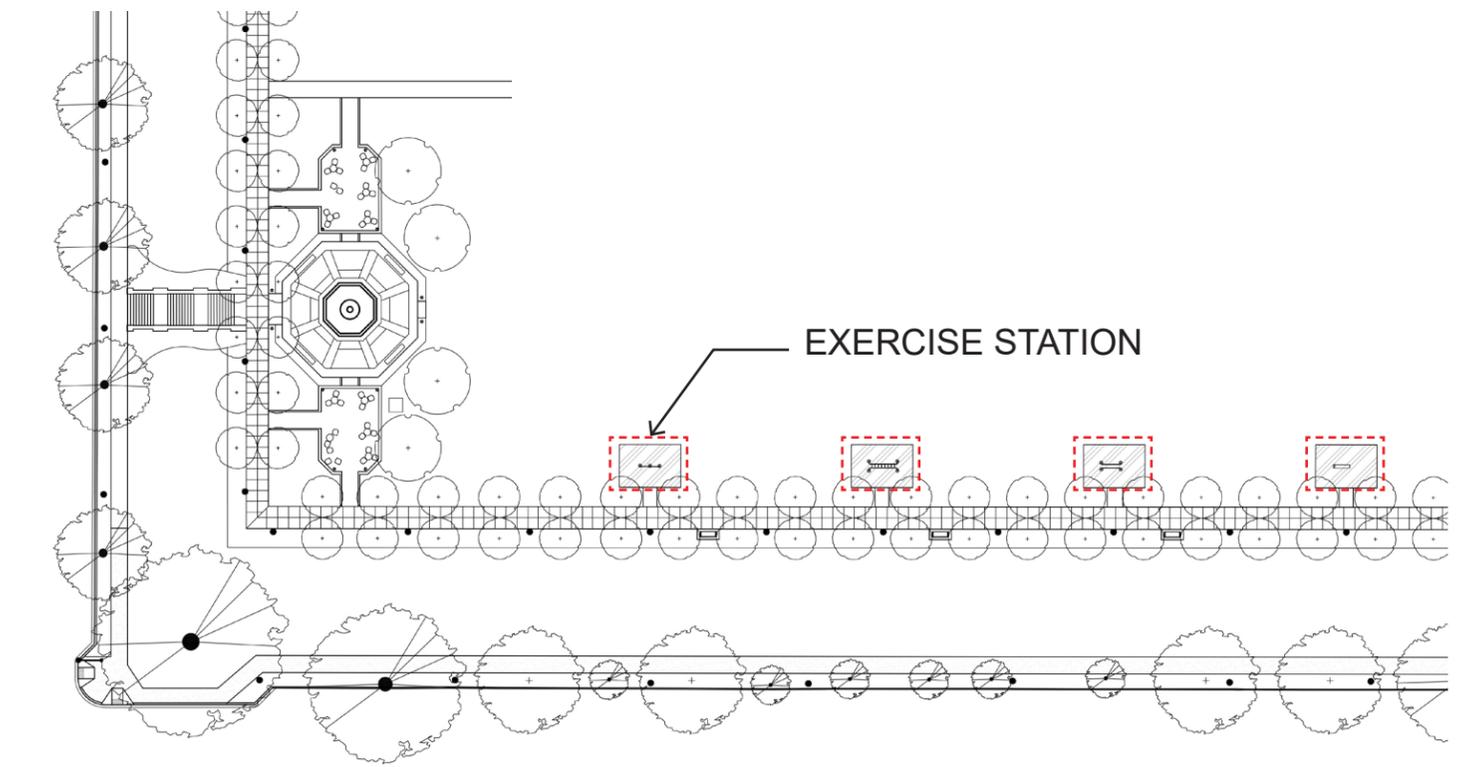


Figure 18: Updated site plan enlargement showing exercise areas

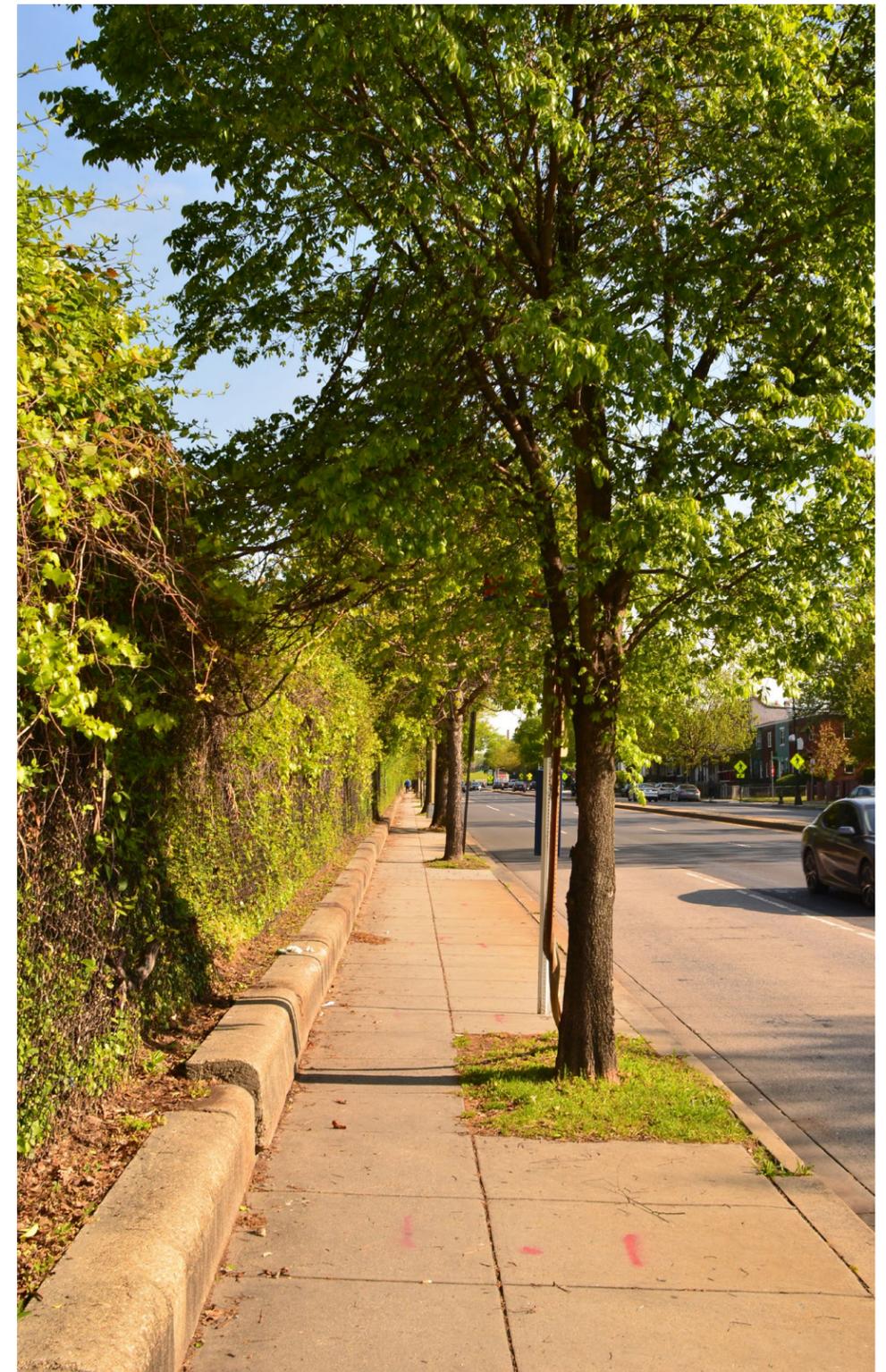
NORTH CAPITOL STREET PUBLIC SPACE

When presented to the Commission of Fine Arts in June 2020, the design did not include revisions to the existing sidewalk and trees along the west side of North Capitol Street. After the CFA submission, the design team was made aware of design guidelines for the North Capitol Street public space prepared by the DC Office of Planning and Department of Transportation. These guidelines stipulate that the sidewalk along North Capitol Street should be 14 feet wide, with a 4-6-foot-wide furnishing zone and an 8-10-foot-wide sidewalk zone.

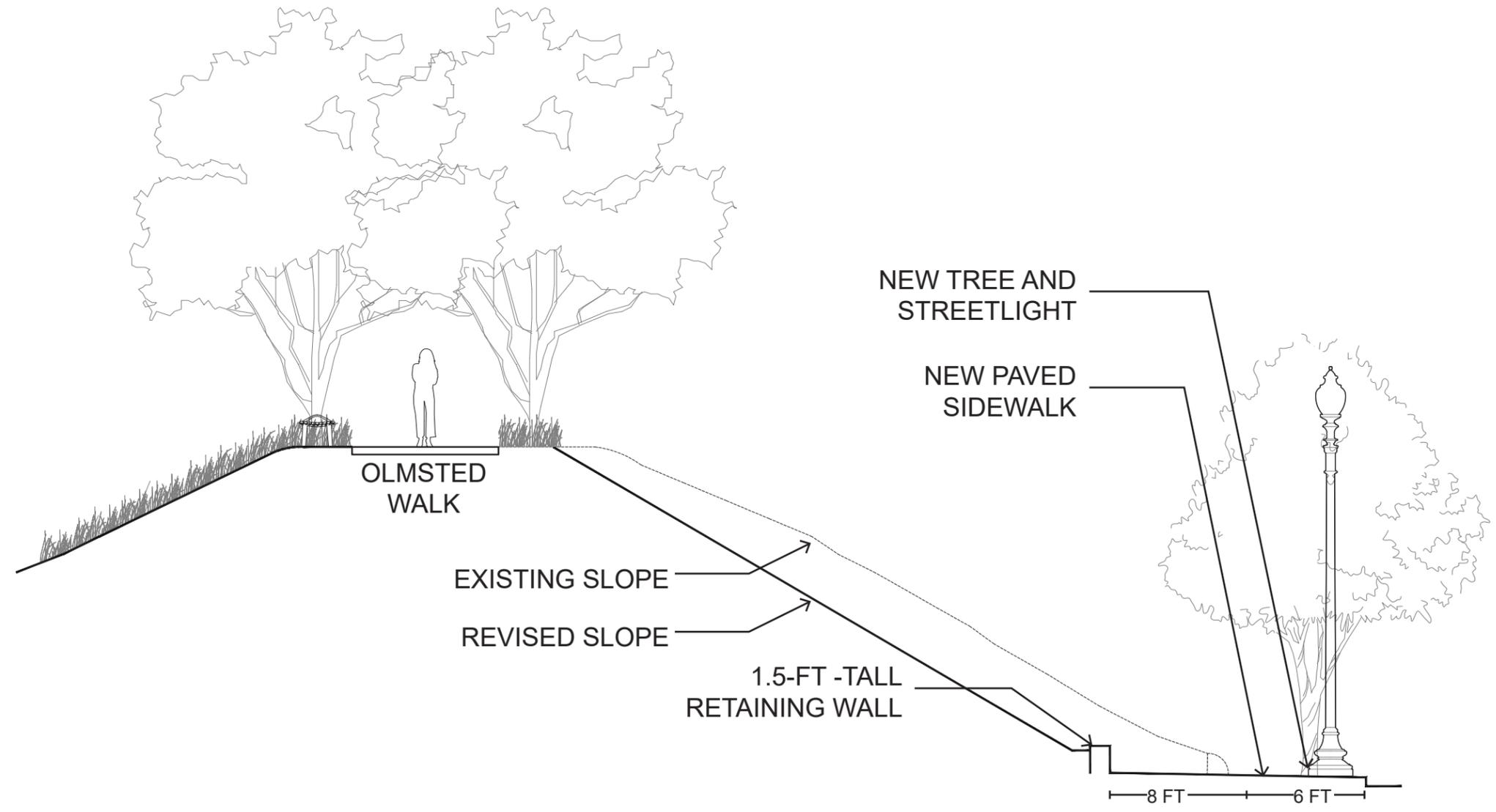
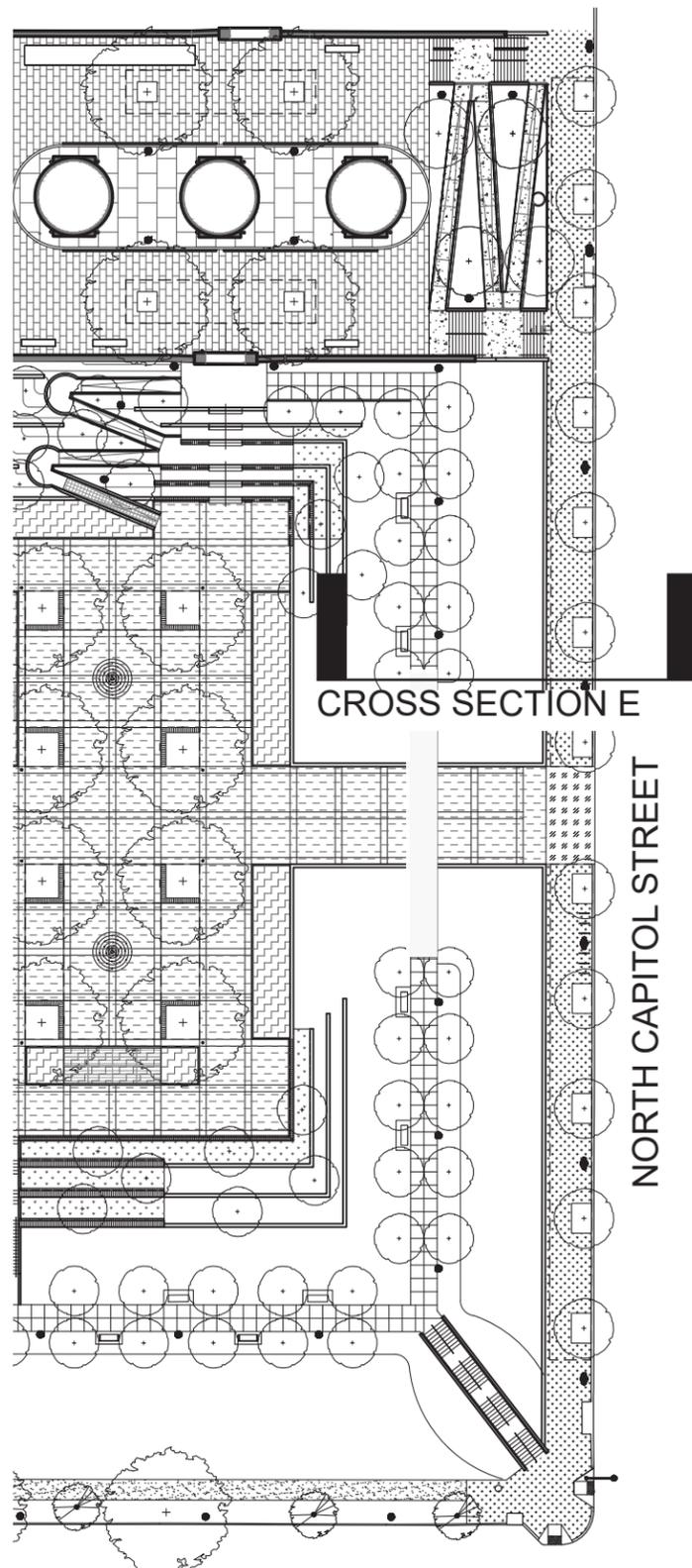
The design has been updated to provide the required 14-foot-wide sidewalk, as shown in Figure 20. Associated with this change, twelve new trees will be planted and DDOT-required soil volumes will be met. Because of the wider sidewalk, the existing berm facing North Capitol Street must be modified to push the toe westward. A new retaining wall will be constructed and reinforced geotextile stabilization will be added to prevent sloughing of the revised slope.



Figure 19: North Capitol Street public space, June 2020



Existing sidewalk along North Capitol Street, looking north. The existing sidewalk is less than 7 feet wide, pinching to less than 3 feet at tree pits.



CROSS SECTION E LOOKING NORTH

Figure 20: Updated site plan showing North Capitol Street public space.