

George's Hill Pump Station Project
S Georges Hill Drive
File # 3-24

Submission to City of Philadelphia Art Commission
Cover Letter
March 15, 2024

To whom it may concern,

Purpose of the Project

Philadelphia Water Department is looking to construct the new George's Hill Pump Station (GHPS). This new pump station will provide redundant water service source for the Belmont High Service Pressure District to maintain uninterrupted service during maintenance or rehabilitation activities. The design and operational plans for the new facility will be aligned with the existing BHPS to enhance the district's overall service efficiency and will be executed with a focus on minimal environmental impact and be aligned with Philadelphia's green initiatives.

The GHPS project involves constructing a new pump station, yard piping and valves, electrical switchgear, a standby engine-driven generator, retaining wall with ornamental fence, and an access road.

Existing Conditions

GHPS is being proposed at an undeveloped area within Fairmount Park, located at the northeast corner of the intersection of N George's Hill Drive and S George's Hill Drive. This area is primarily characterized by natural vegetation, including trees and brush, which will require careful management during the construction phase. The site's proximity to existing infrastructure, particularly the Mann Center and Belmont High Pump Station, and its integration within the park's landscape are key considerations for the project's design and execution.

Revisions

The Art Commissioners granted Concept Approval on January 10, 2024 (see attached). However, the Commissioners provided the following comments which will be addressed in the next presentation. These include:

- Provide lighting 3000K or less to protect wildlife.
- Show the proposed lights better in rendering.
- Suggested inclusion of solar panels on top of the roof and pervious pavers for the road for better stormwater management.
- Consider number of trees being removed.

Contact Information

Contact for questions and comments:

Jimena Larson

215-751-1400 ext. 250

jl Larson@nspiregreen.com

1520 Locust St #401, Philadelphia, PA 19102

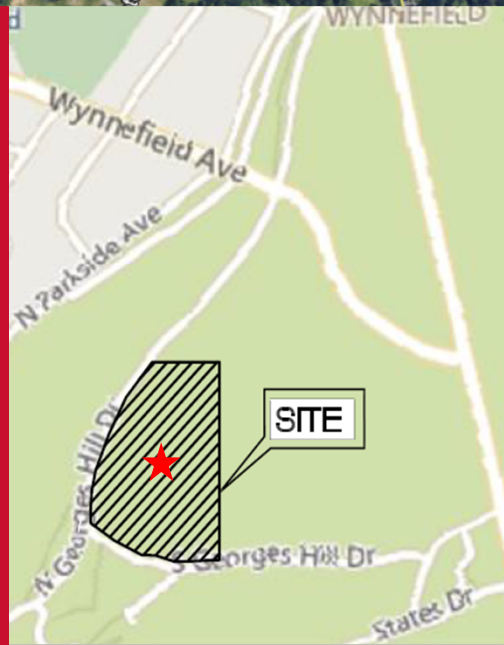
Contact who should receive the Commission's decision:

Troy Belcher

215.845.6775

Troy.belcher@hdrinc.com

1515 Market St, Suite 2020 Philadelphia PA, 19102



Art Commission Review - George's Hill Pump Station

Final Approval

HDR April 10, 2024





01 Background

02 Art Commission Conceptual
Approval Comments

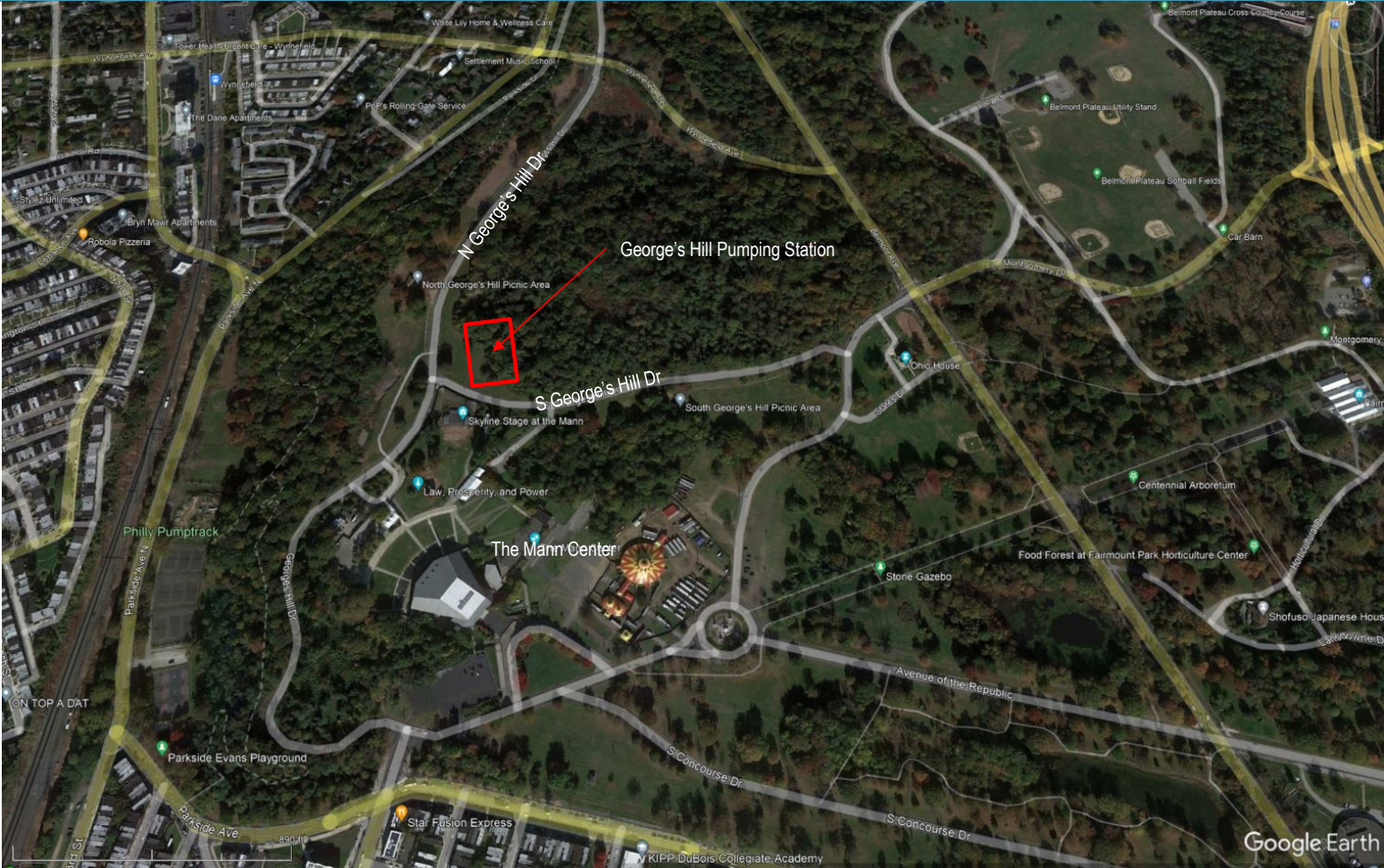
03 Conceptual Approval
Comment Responses

Background

- Potable Water Service
- Project in Belmont High Service Area (BHS)
 - BHS is currently only served by existing Belmont High Service Pump Station (BHPS), which does not meet PWD Level of Service Goals for 100% redundant water supply.
- George's Hill PS to supplement existing BHPS
 - New 16.5 Million Gallon Per Day Pump Station
 - Redundant Source Connection
 - Redundant Discharge Connection
 - Surge tank for Pressure Balance
 - On-Site Generator and Electrical Yard



George's Hill - Site Location



Conceptual Approval Comments

Georges Hill Pump Station Final Approval

Conceptual Approval Comment Responses

Georges Hill Pump Station Final Approval

Percent for Art Requirements

Percent for Art

- Per coordination with the Philadelphia Office of Arts, the project does not have an art requirement as it is infrastructure driven.

The logo for the Philadelphia Water Department is displayed on a dark brown rectangular background. The word "PHILADELPHIA" is written in a bold, white, sans-serif font at the top. Below it, the word "WATER" is written in a much larger, bold, white, sans-serif font. Underneath "WATER", the word "DEPARTMENT" is written in a smaller, white, sans-serif font, flanked by two horizontal white lines on either side.

PHILADELPHIA
WATER
— DEPARTMENT —

Noise Impacts

Noise Impacts – Generator

- Emergency standby generators operated in routine O&M and power outages only.
- Generator O&M includes:
 - Minimum O&M run time: 12 hours in a year.
 - (monthly maintenance)
 - Maximum O&M run time: 52 hours in a year
 - (weekly maintenance)
- Equipped with sound attenuation enclosure



Noise Impacts – Generator

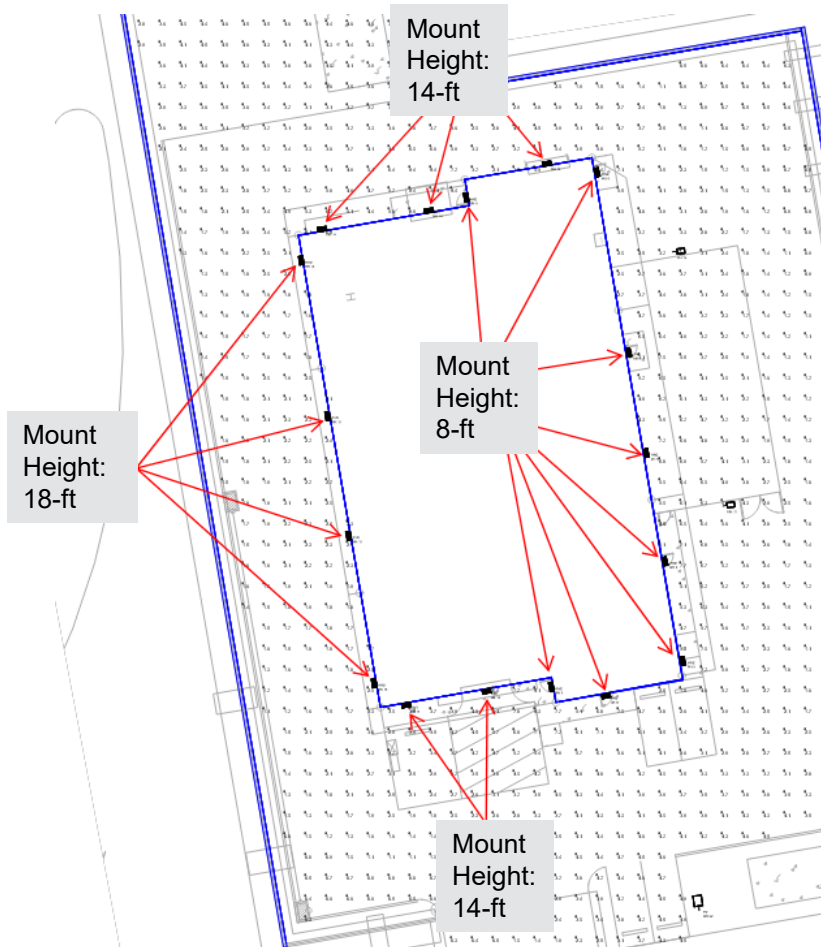
- Contract requires Generator to be 70-75dB at ~25-ft
 - Pedestrian walkway is minimum 75-ft from the generator:
 - 60 dB at this distance
 - Noise level equivalent to background music
 - Mann Center Stage is ~350-ft from the generator:
 - <50 dB at this distance
 - Noise level equivalent to average room noise
- Values do not account for any absorption from vegetation and fence.



2024 Hearing Health Foundation Noise Levels

Site Lighting

Site Lighting – Building Mounted Lights



Wall Mounted LED Lights on Building Face

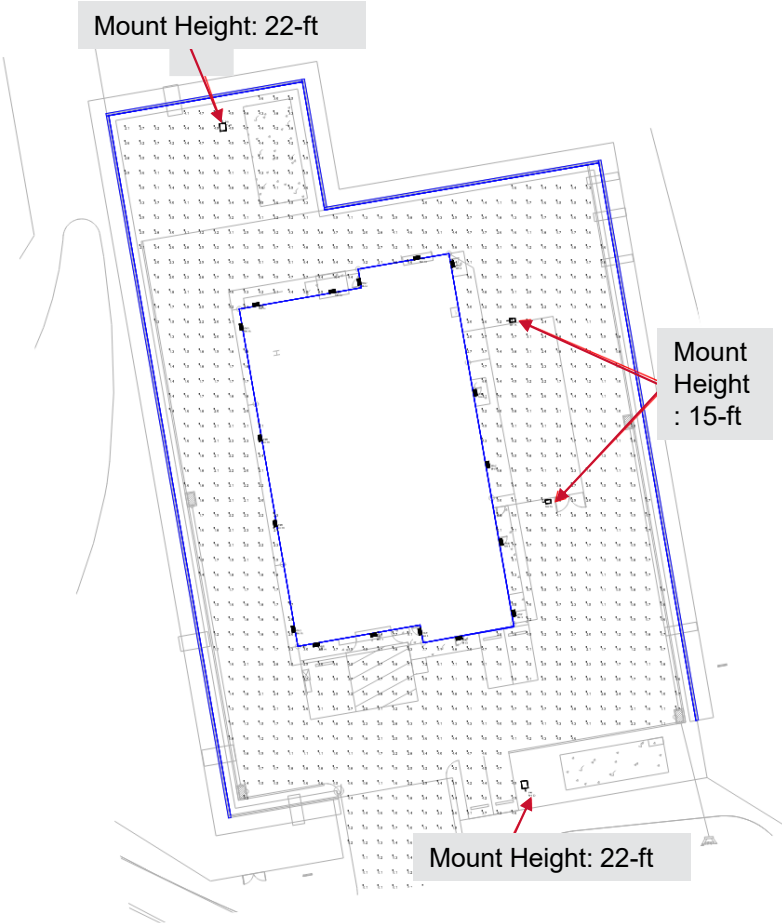
Housing: Aluminum

Color: Black

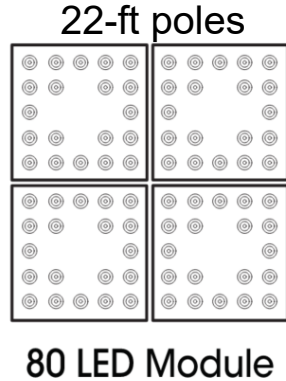
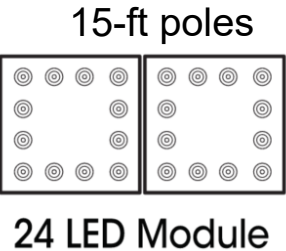
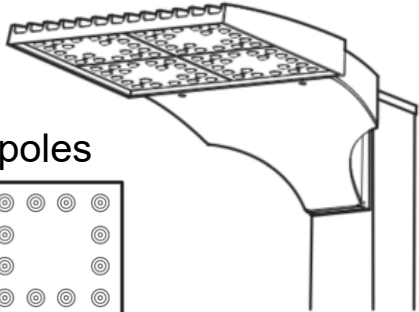
Temperature: 3000 K



Site Lighting – Light Poles



LED Pole Mounted Lights on Concrete Foundation
Material: Heavy Cast Low Copper Aluminum
Finish: Powder Coating
Temperature: 3000K





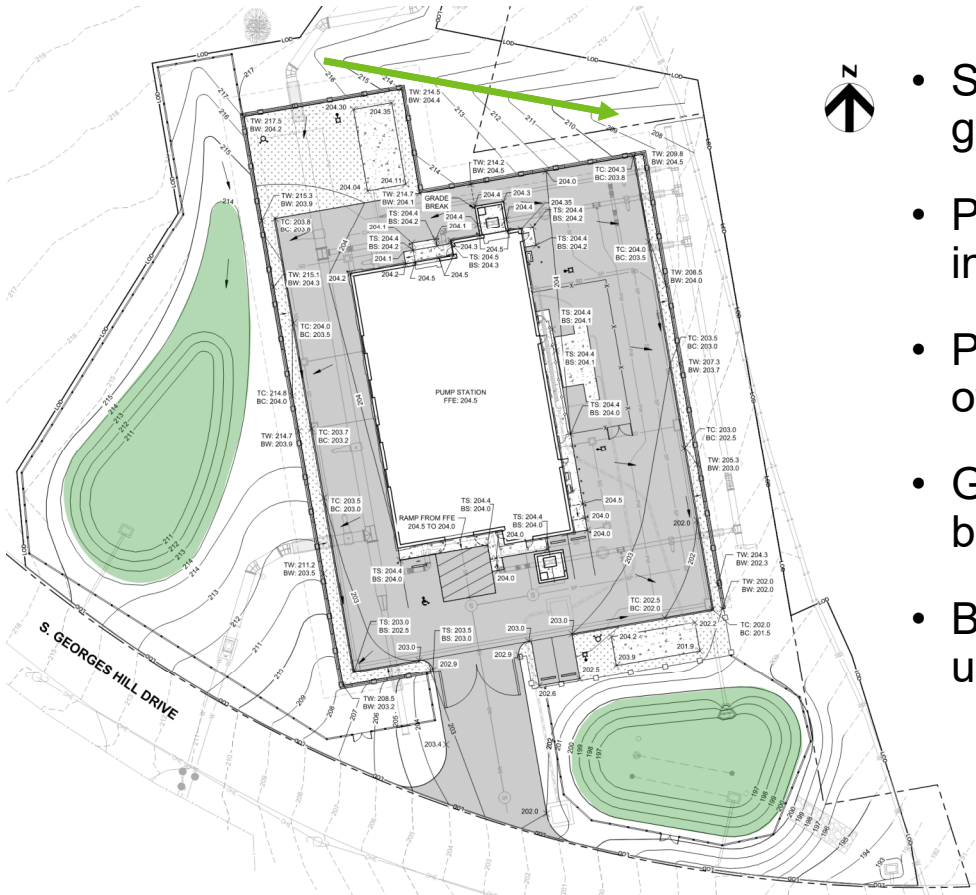






Green Infrastructure

Use of Additional Green Infrastructure

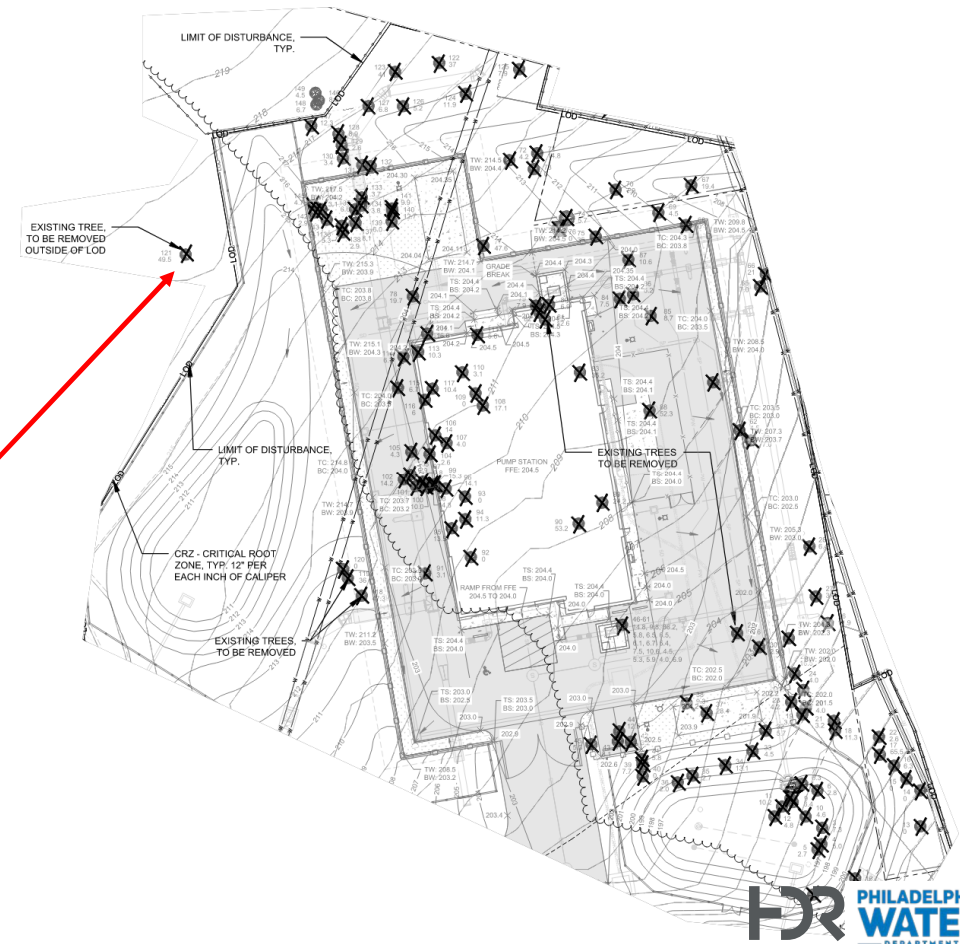


- Stormwater collected within two new rain gardens or graded to continue along current path.
- Permeable grasses maximized around site for increased permeation.
- Plan reviewed further with PWD GSI and overall intent of the management and infrastructure plan is approved.
- Green roofs and permeable pavers were considered, but ultimately not desired by PWD GSI for this project.
- Below grade stormwater storage not feasible due to utility conflicts.

Landscaping Design

Landscape Design

- Tree survey completed by ISA certified arborist.
- Additional Review held with Philadelphia Parks (PPR)
 - Concept Approved
- 120 Trees to be replaced (Assuming 2.5" Caliper each)
- Tree removal limited to project disturbance area.
- Tree outside LOD is affected by Emerald Ash Borer. Condition is worsening. PPR requested tree to be removed.



Landscape Design



Southern Arrowwood



Red-Twig Dogwood



- Maximized tree potential within new site:
 - 47 trees to be planted (2.5" Caliper Inches Each)
 - 73 trees still required.
- Per discussions with PPR, the best available alternative to re-establish the trees is to transfer funds to the Parks, allowing them to plant 73 new trees in areas of need throughout the community.
- All proposed plants will be native per PWD GSI guidelines.
- Vegetation and plantings designed to limit site visibility.

Tree Selection



River Birch



Sycamore



Willow Oak



Swamp White Oak

Sour Gum



Honey Locust



Sweet Gum



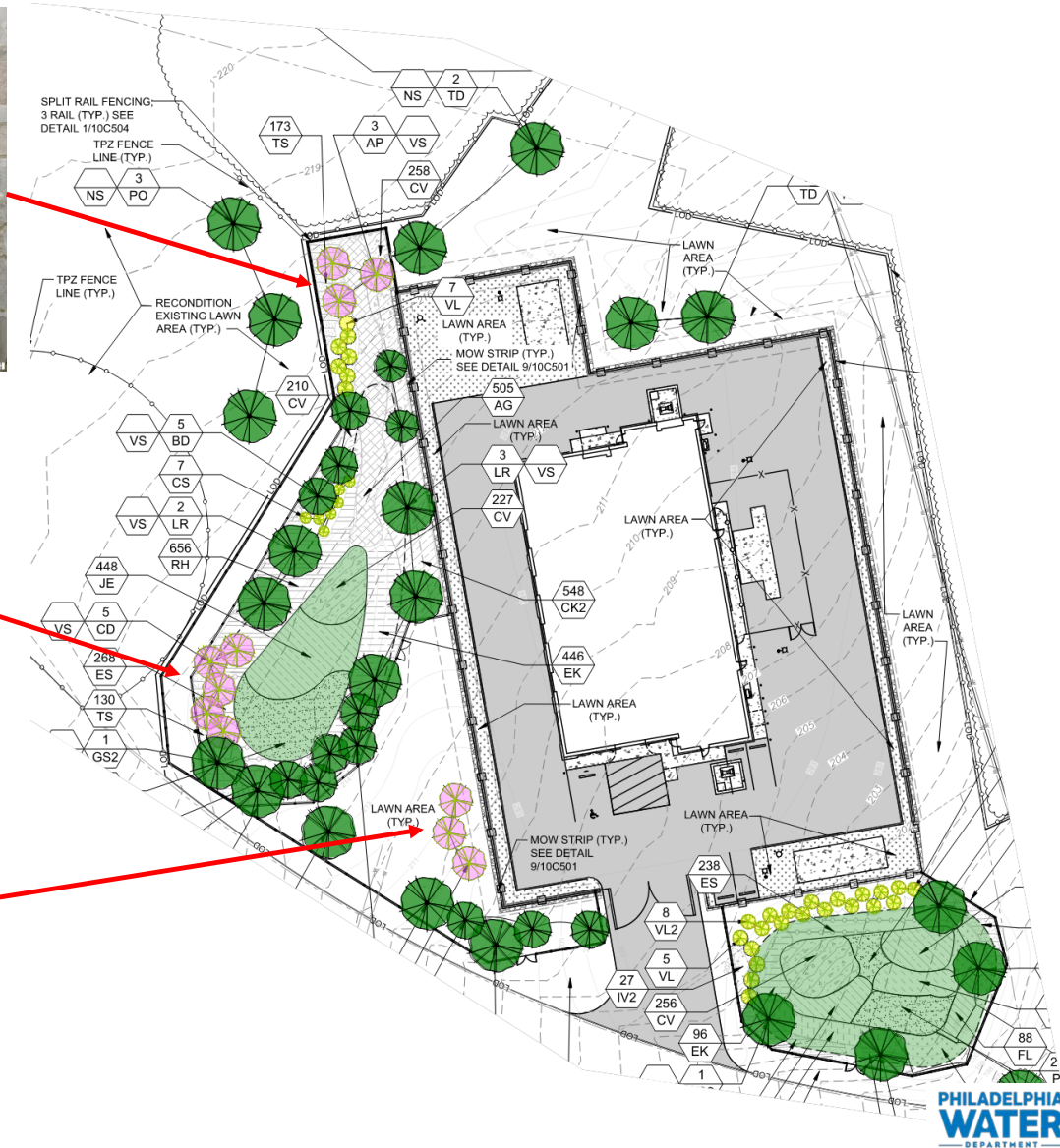
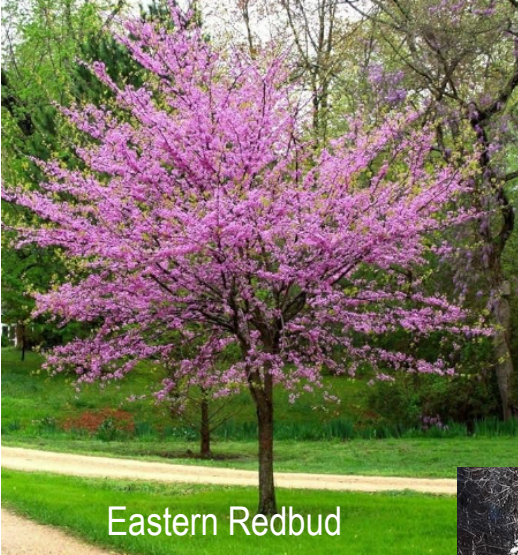
Red Oak



Bald Cypress



Flowering Trees



Site Rendering – West of Site Looking East



Site Rendering – West of Site Looking East



Thank you!

