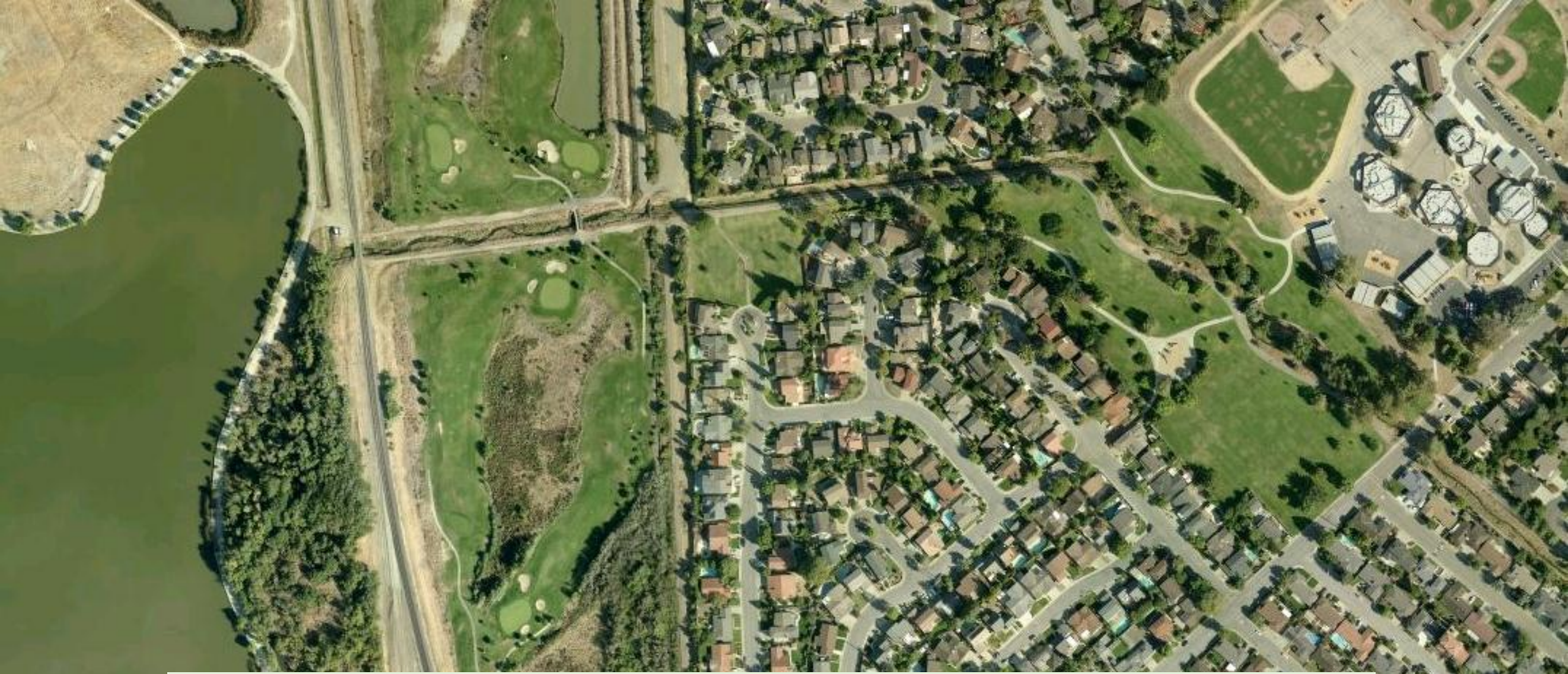


Mission Creek Flood Control & Restoration Project
Second Public Meeting - September 17, 2015

City of Fremont, Alameda County

Flood Control & Water Conservation DISTRICT

Mission Creek Flood Control & Restoration Project

The initial Public Meeting for the Mission Creek Restoration Project was held on December 9, 2014.

Comments provided by the participants at the initial public meeting have been considered and incorporated into the project design accordingly.

Flood Control & Water Conservation DISTRICT

City of Fremont, Alameda County

Agenda

- Brief Project Review
  - Existing Conditions
  - Why Improvements are necessary
  - Challenges
  - Project Components
    - Reach 1
    - Reach 2
    - Reach 3
- Anticipated Construction Schedule and Park Usage Restrictions
  - Pre-Construction Tree Removal
  - Creek Restoration Construction
- Questions and Contact Information

Existing Conditions/Project Reaches:

Mission Creek between Lemos Lane and Lake Elizabeth is inadequate to convey the FEMA 100-year (1% annual chance of occurrence) design peak flow.

- At Reach 1, the 50 foot wide channel overtops and flows on to the golf course; the abandoned San Francisco Public Utilities Commission 48” pipe obstructs flow.
- At Reach 2, the 31 foot wide v-shaped channel overtops.
- At Reach 3, flows exceed the capacity of the culverts at Lemos Lane, water flows on to the street and into Gomes Park and Gomes Elementary School.

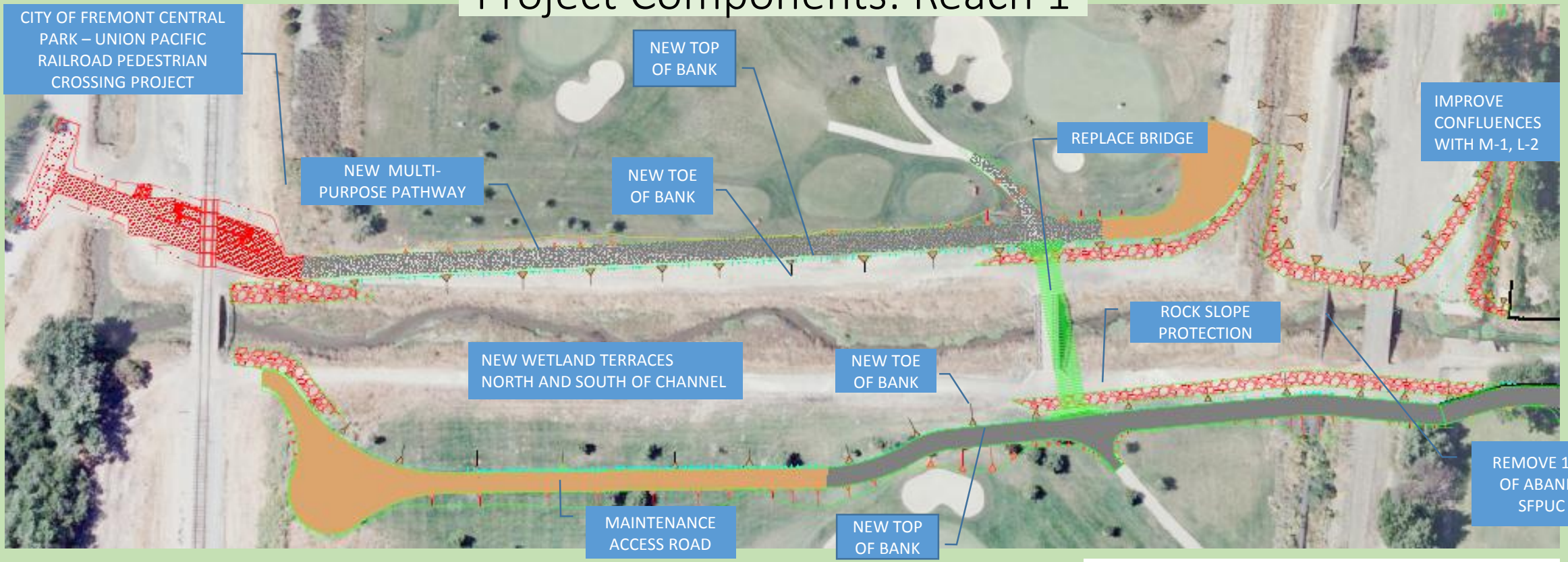
Why proposed improvements are necessary

- Increase flood conveyance in the creek to meet FEMA 100-year (one percent annual chance) design storm requirement and minimize future potential flooding.
- Construct the improvements before FEMA mapping and updates of the Flood Insurance Rate Map (FIRM).
- Stabilize eroded slopes using biotechnical bank stabilization control methods, to minimize sediment deposition downstream.
- Improve riparian habitat function, dissipating stream energy, reducing sedimentation and filtering surface runoff.
- Remove invasive non-native plants and re-planting native trees and vegetation.

Project Challenges

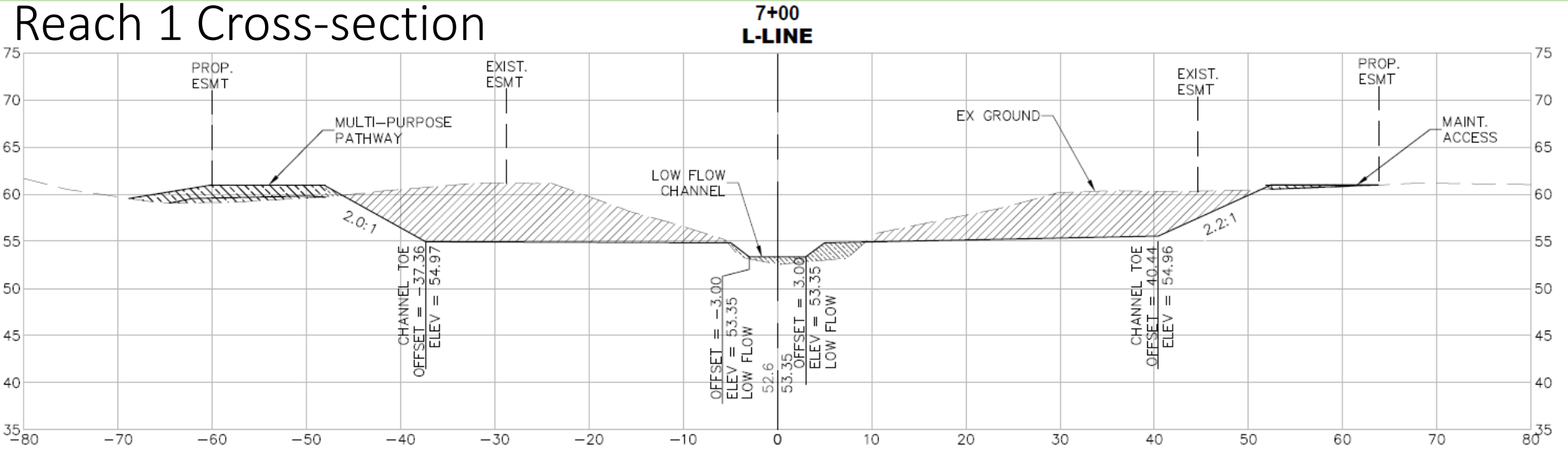
1. Limited construction period in the creek (June 1 to October 15 Regulatory permit requirement)
2. Lots of major construction activities within small constrained areas
    a. Constrained Right-of-Way
    b. Construction safety
    c. Limited construction site access
3. Adjacent to residential homes
4. Maintain golf course operations
5. Adjacent to Elementary School
6. Lead time for pre-fabricated bridges

Project Components: Reach 1



- Widen the channel—create low-flow terraces, set-back banks, and create new wetlands
- Retain golf course as floodplain
- Replace golf course pedestrian/vehicular bridge
- Remove 175 feet of abandoned 48” SFPUC water pipeline
- Improve the confluences at Lines L-2 and M-1
- Construct maintenance access roads and a multi use pathway in cooperation with the City of Fremont

Reach 1 Cross-section

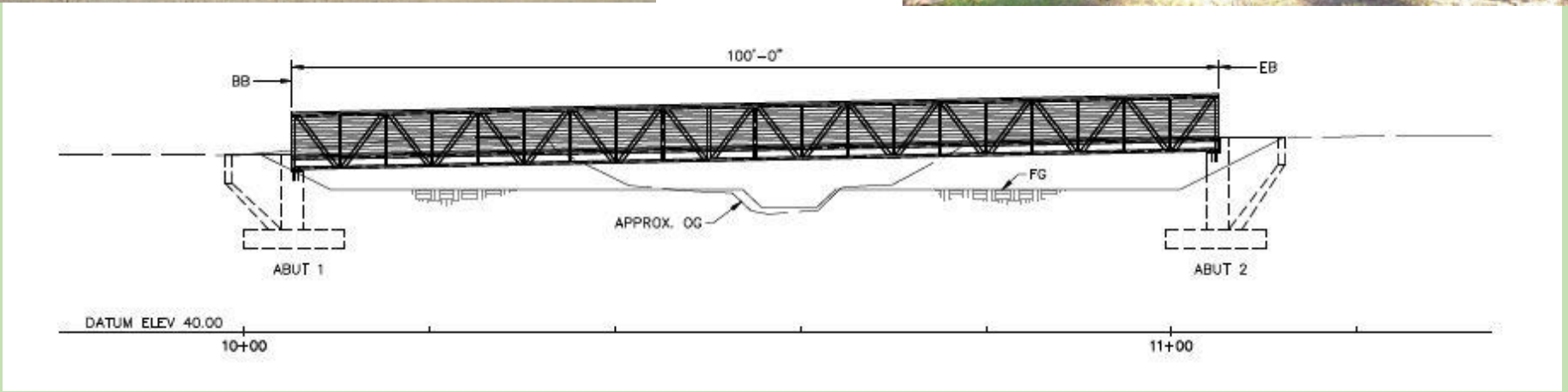


Looking downstream from Golf Course Bridge

Reach 1 New Features

- Existing Golf Course Bridge

Example of single-span Steel Bridge proposed for new Golf Course Bridge

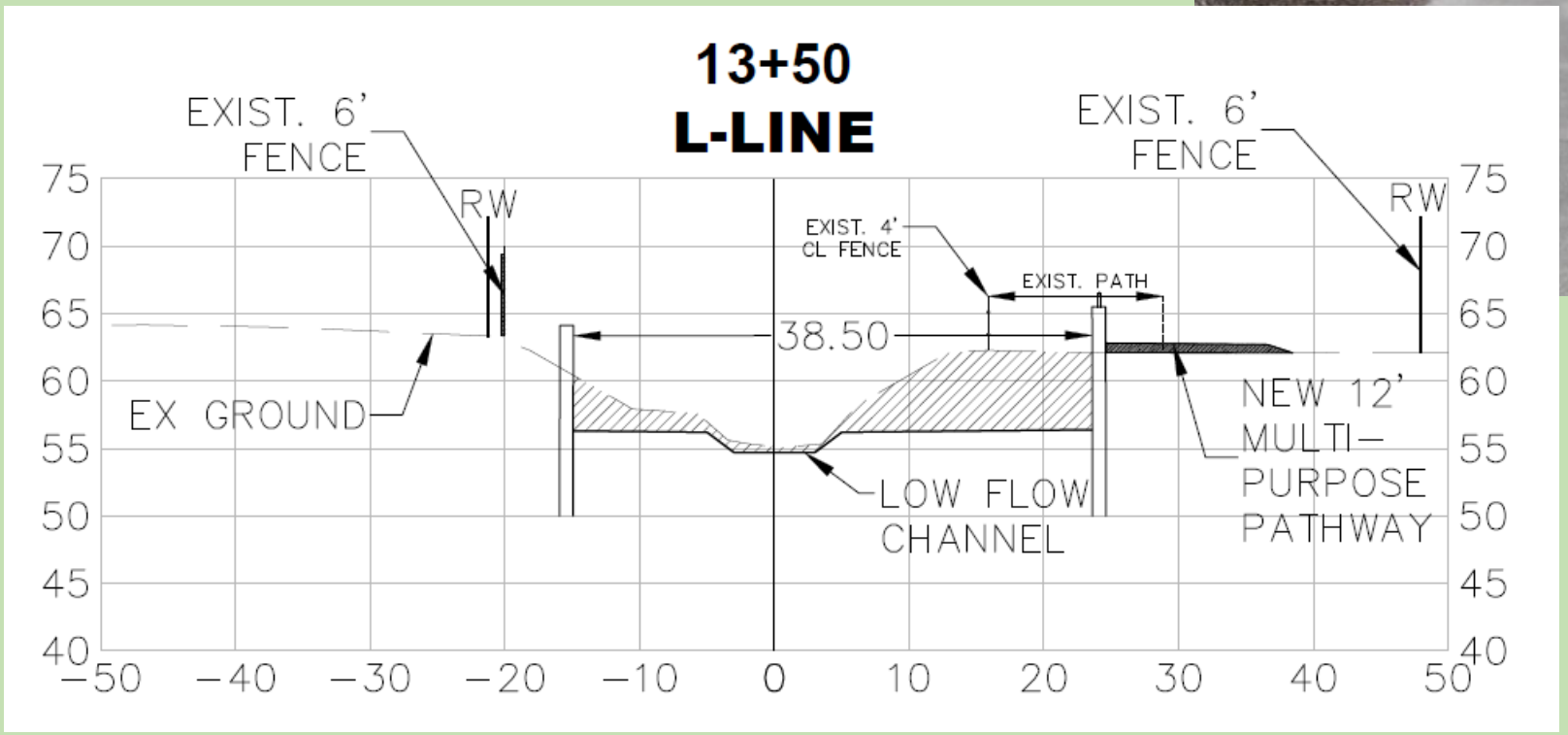


Project Components: Reach 2

- Remove existing V-shaped gabion mattress lined channel
- Construct new vertical channel walls with earthen creek bottom, meandering low flow channel and terraced floodplains within the channel
- Relocate and reconstruct asphalt concrete pathway

Reach 2 Typical Cross-section

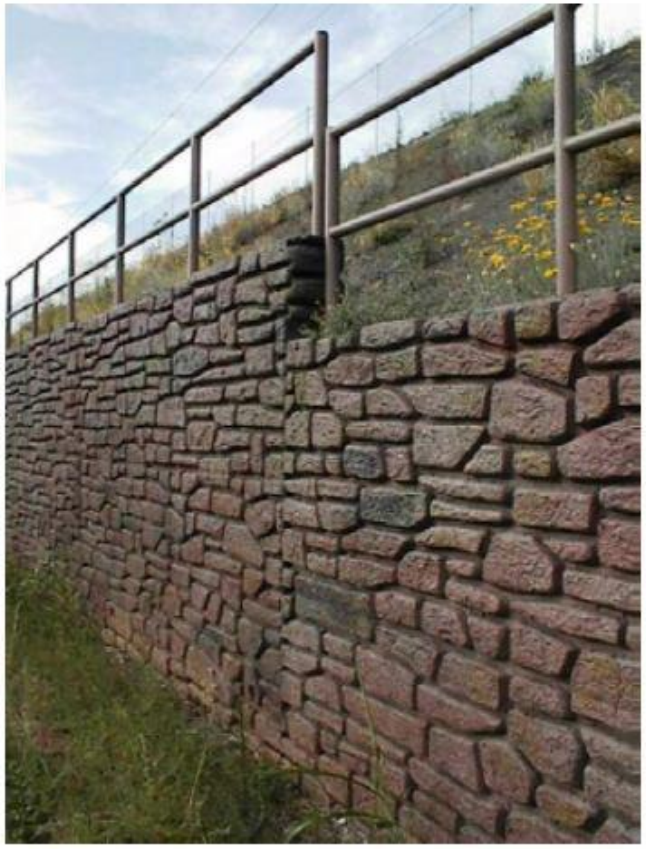
(Looking Upstream)



Reach 2 New Channel Retaining Wall

- Sample Vertical Channel Walls Finishes

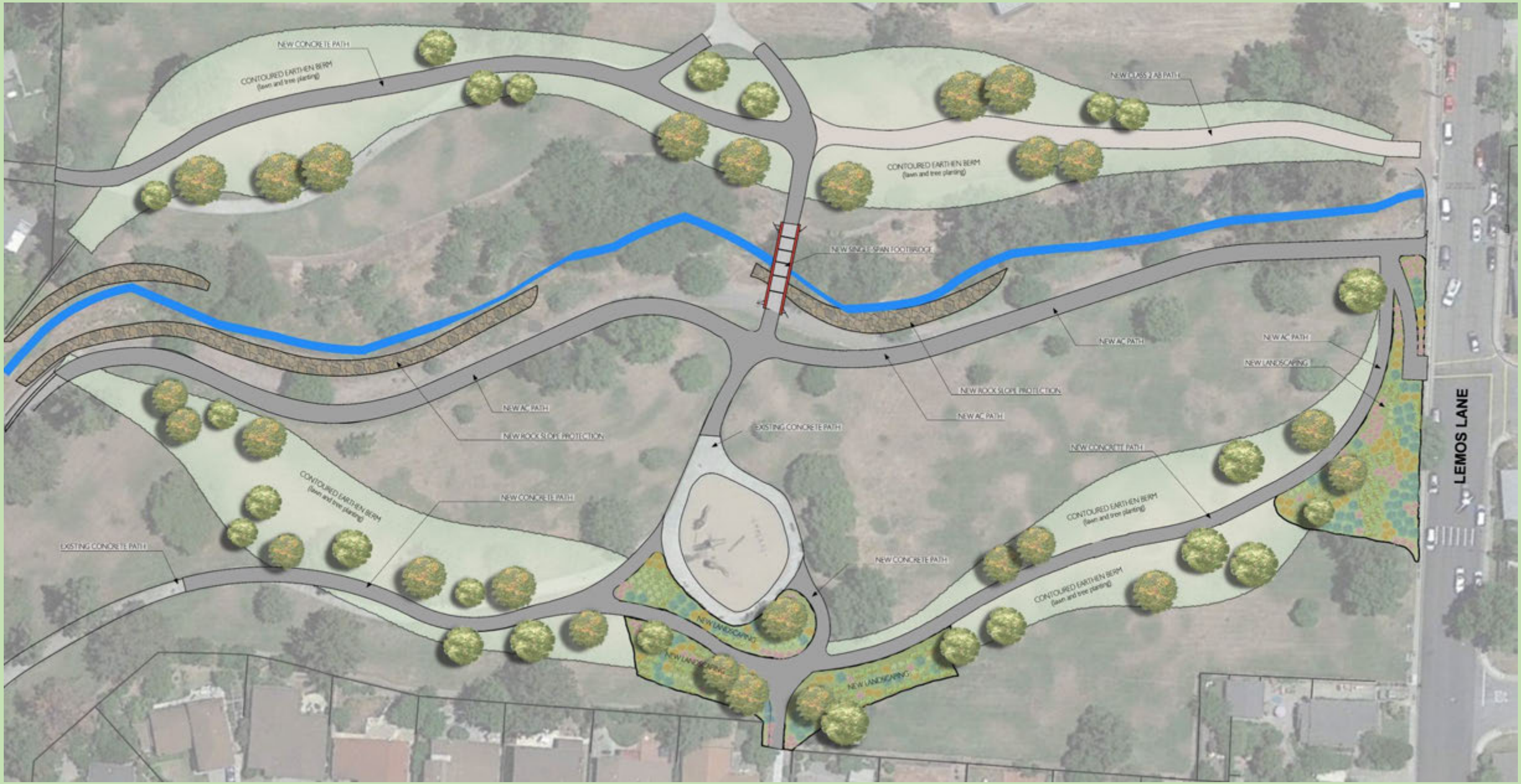
Colorado Split Slate



Antietam Drystack

Yosemite Rock

Reach 3 Concept



Project Components: Reach 3

Existing Creek (Looking Downstream)

Existing AC Pathway (Looking Downstream)

- Create low contoured earthen berms to contain the 100-year flow within the park
- Replace Gomes Park footbridge which obstructs high creek flows
- Repair eroded banks using biotechnical bank stabilization
- Prevent creek bed down cutting by creating rock gradient control weirs
- Create north creek maintenance access from Lemos Lane
- Begin Lemos Lane culvert improvements
- Replace affected pathways and create new pathway along the south berm

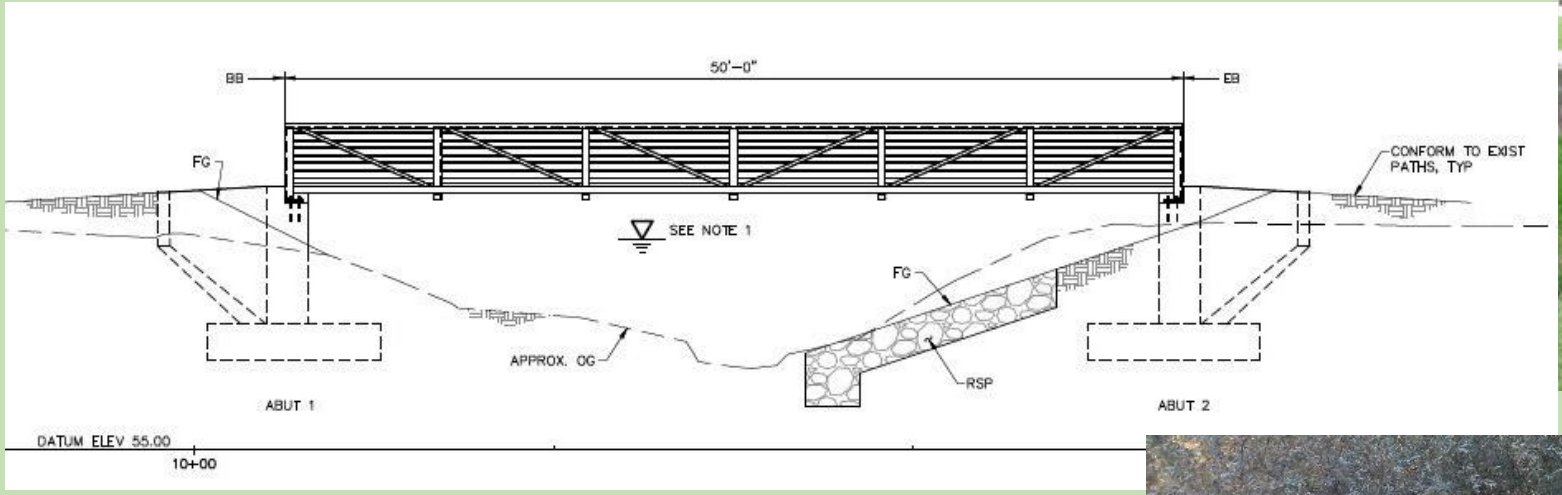
Reach 3 Cross-section

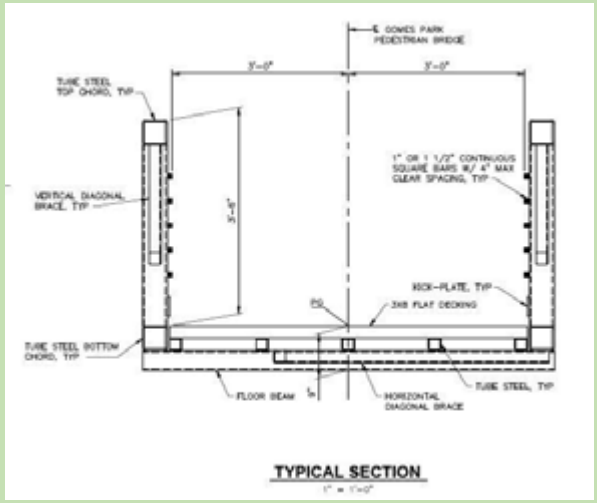
- Replace City park pathways where they intersect new berms and run new paths along the tops of the berms.

- Retain open space for sports practices in the park by locating South berm south of the playground.

Reach 3 Gomes Footbridge

- Existing footbridge will be replaced with single-span steel bridge





Example of Single Span Steel Bridge Proposed for new Gomes Park Bridge

Reach 3 Bank Stabilization

- Existing bank erosion will be stabilized by setting the top-of-bank back at two outside meander bends
- Biotechnical coir logs will be installed at bank toes and new banks replanted with native plants

Reach 3 Rock Weirs

- Rock weirs are proposed for gradient control between Reaches 2 and 3

Anticipated Construction Schedule and Park Usage Restrictions

- Creek Restoration Project Construction:
  - Construction will begin in **April 2016** and continue thru **December 2016**; 190 Working Days
  - Gomes Park will be completely closed during the entire construction period, including weekends and holidays.
  - Construction work days: **Mondays thru Fridays**; no work on weekends and holidays.
  - Construction work hours: between **8:00 AM and 5:30 PM**.
  - No work that interferes with public traffic on Lemos Lane will be allowed to begin before 9:00 AM or after 2:00 PM when school is in session
- Pre-construction Tree Removal:
  - **December 2015 thru January 31, 2016** (about 15 Working Days)
  - Gomes Park will be partially closed in the areas adjacent to tree removal work during working hours.
  - Tree removal work days: **Mondays thru Fridays**; no work on weekends and holidays.
  - Tree removal work hours: **8:00 AM and 5:30 PM**.
  - No work that interferes with vehicle or pedestrian traffic on Lemos Lane will be allowed before 9:00 AM or after 2:00 PM when school is in session.
- .

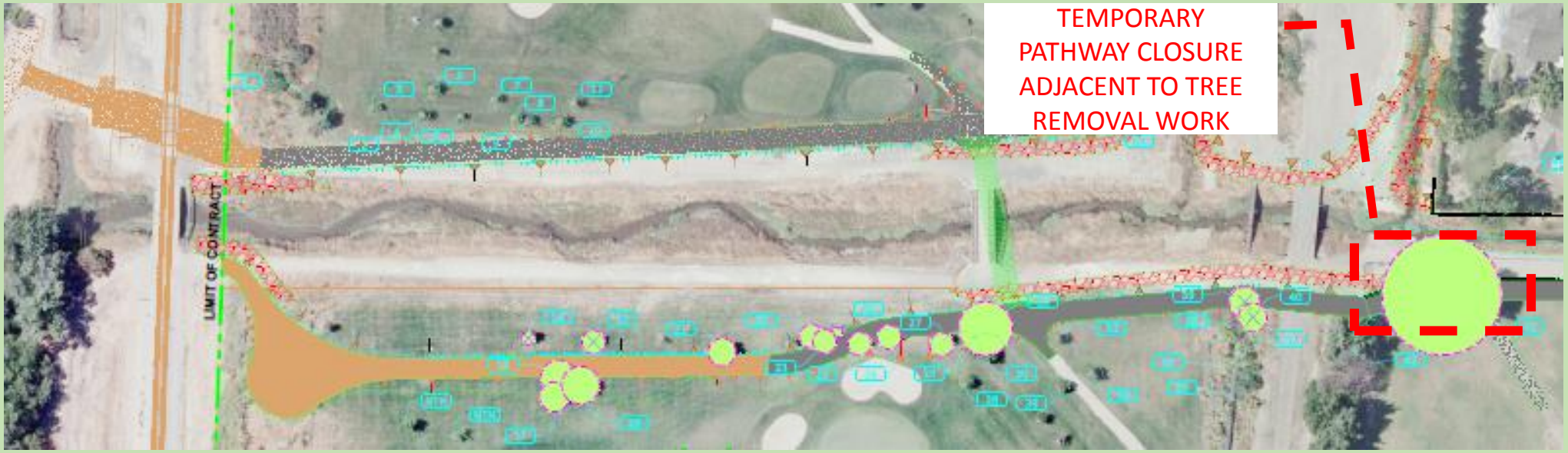
Pre-Construction Tree Removal

- To comply with State regulatory requirements and reduce the likelihood of delays during construction of the Creek Restoration project, the **Pre-Construction Tree Removal** work is scheduled to begin in early **December 2015 and be completed by January 31, 2016.**
  - The migratory bird nesting season is from **February 1 through August 30**.
  - During the bird nesting season no construction activity is allowed within 300 feet of active nests.
  - A State certified biologist is required to survey the trees for nesting birds prior to the start of tree removal work and daily during creek restoration construction.
- A total of 62 trees will be removed that are in conflict with proposed improvements
  - **26** trees are **less than 8”** in diameter
  - **25** trees are **between 8” and less than 18”** in diameter
  - **11** trees are **larger than 18”** diameter
- **112** native trees will be replanted as part of the Creek Restoration Project in 2016.

Pre-Construction Tree Removal

Reach 1

- 18 trees total
  - 13 tress < 8” diameter
  - 4 trees between 8” and < 18” diameter
  - 1 tree > 18” diameter



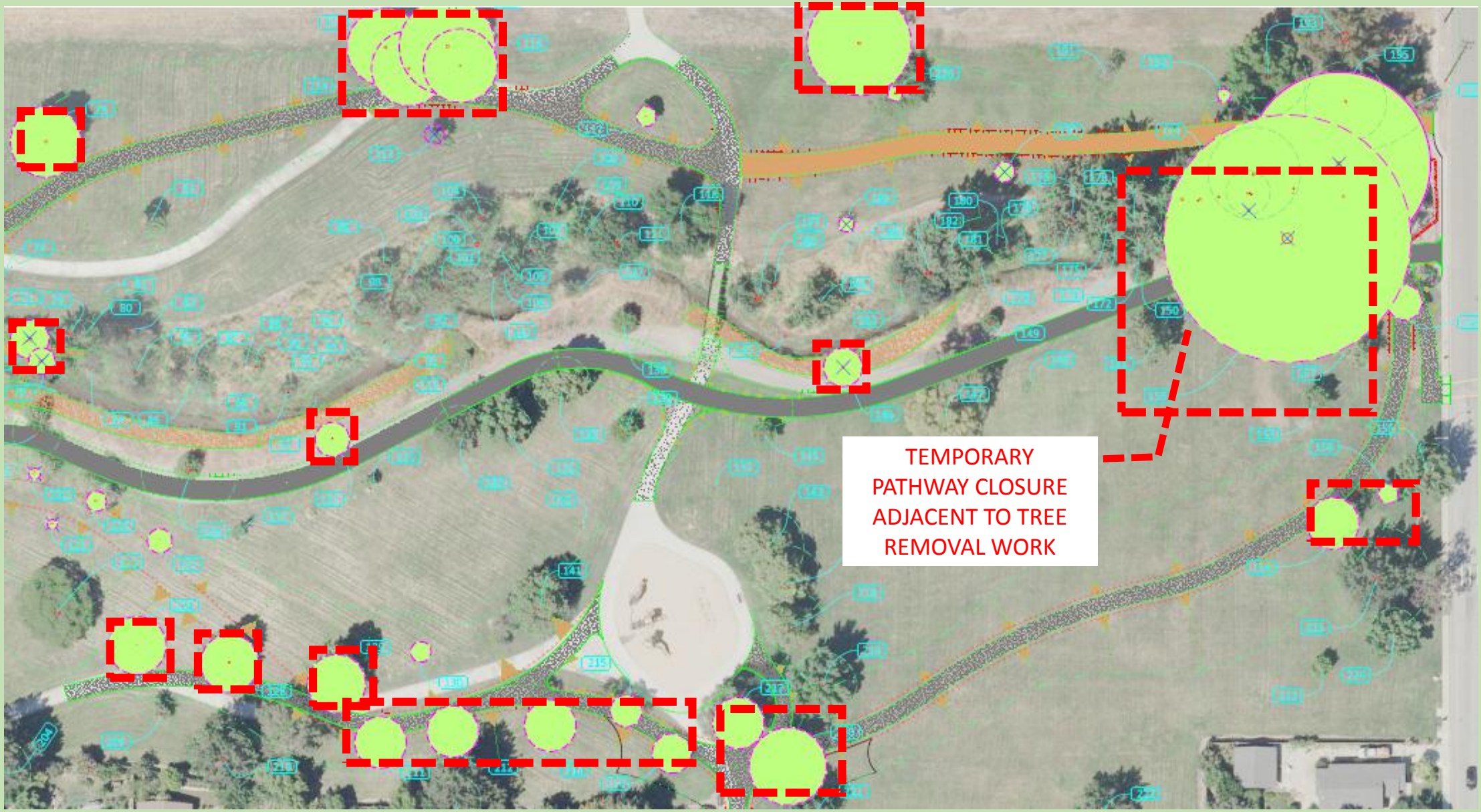
Reach 2

- 4 trees total
  - 4 > 18” diameter

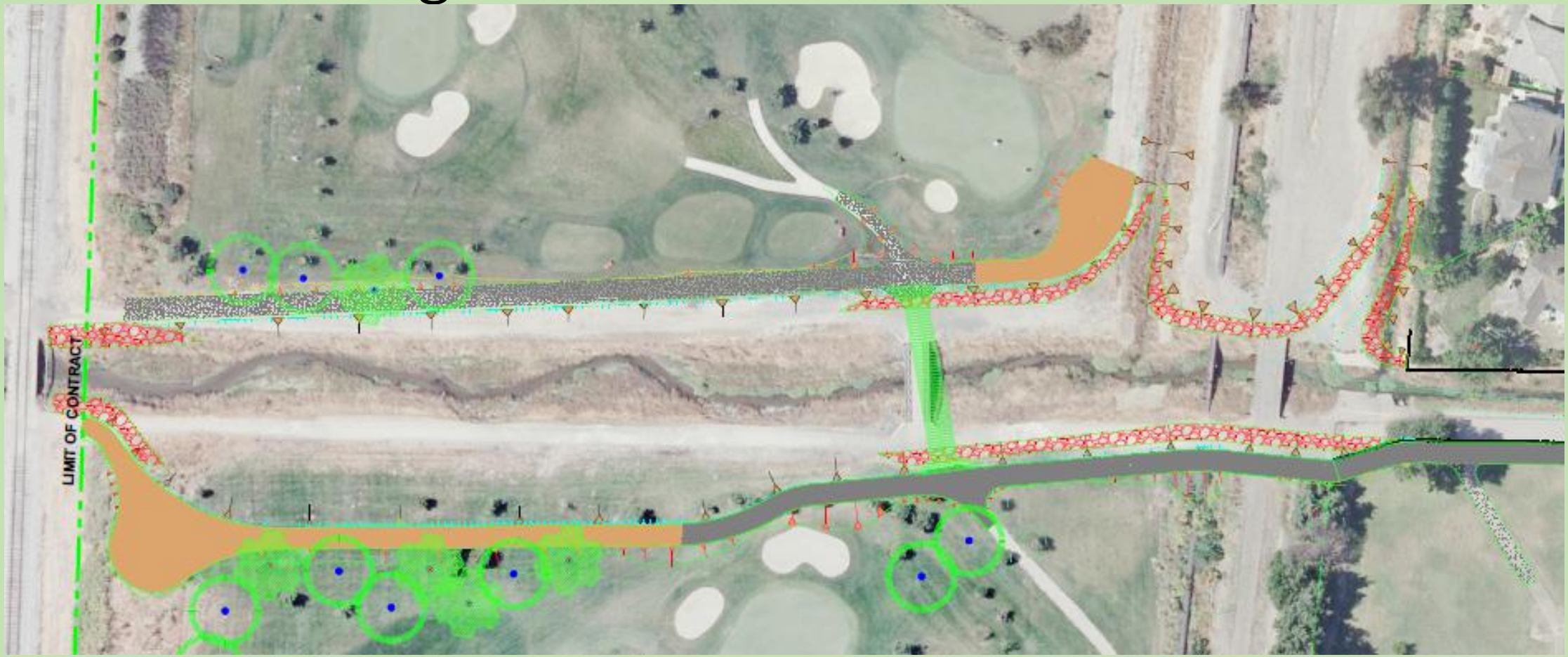
Pre-Construction Tree Removal

Reach 3

- 40 trees total
- 13 < 8” diameter
- 13 between 8” and < 18” diameter
- 14 > 18” diameter



Reach 1 – Creek Restoration Project
Tree Planting Plan – 14 trees to be replanted

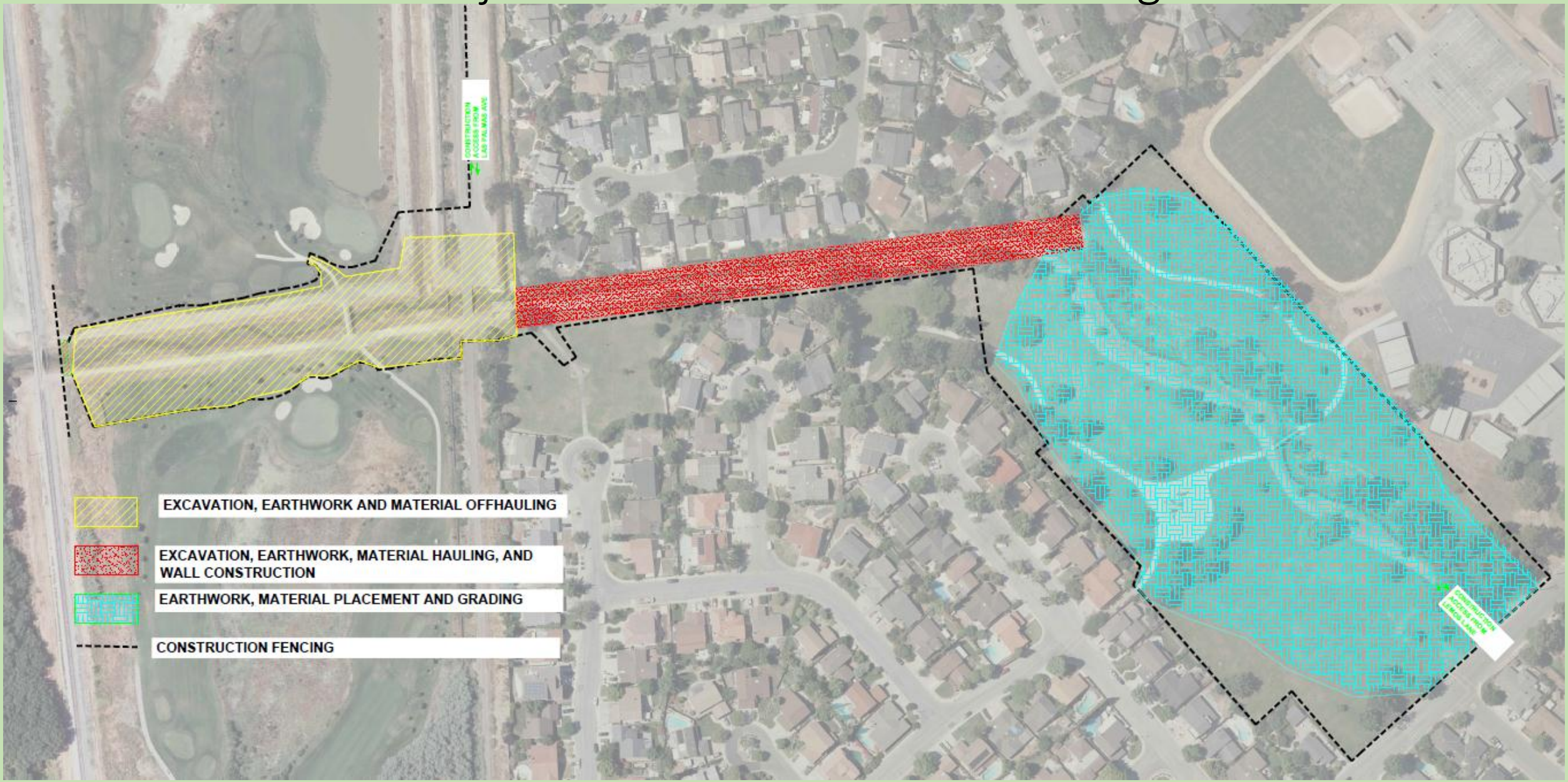


(Final tree placement and species will be determined by the golf course operator and City)

Reach 3 - Creek Restoration Project
Tree Planting Plan - 98 trees to be re-planted

(Final tree placement and species in the park will be approved by the City)

Creek Restoration Project Construction and Park Usage Restrictions

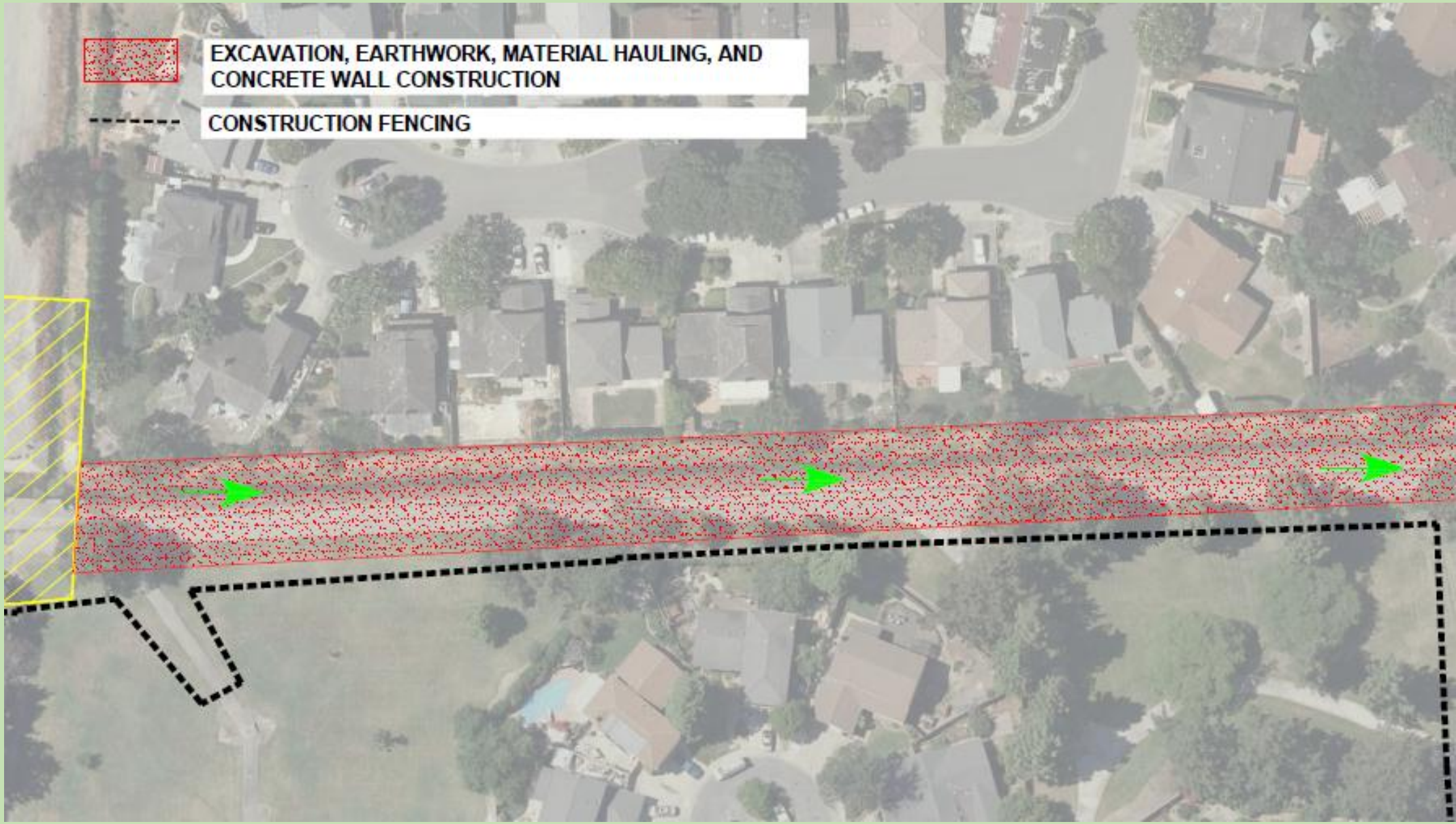


Creek Restoration Project Construction and Golf Course Closure

- 8700 Cubic Yards of earthwork
- Concrete removal work
- Temporary golf course access across creek
- Temporary construction access across creek
- Construction and installation of new golf course bridge and abutment
- Removal of 175’ of 48” pipe
- Asphalt and concrete pathway work

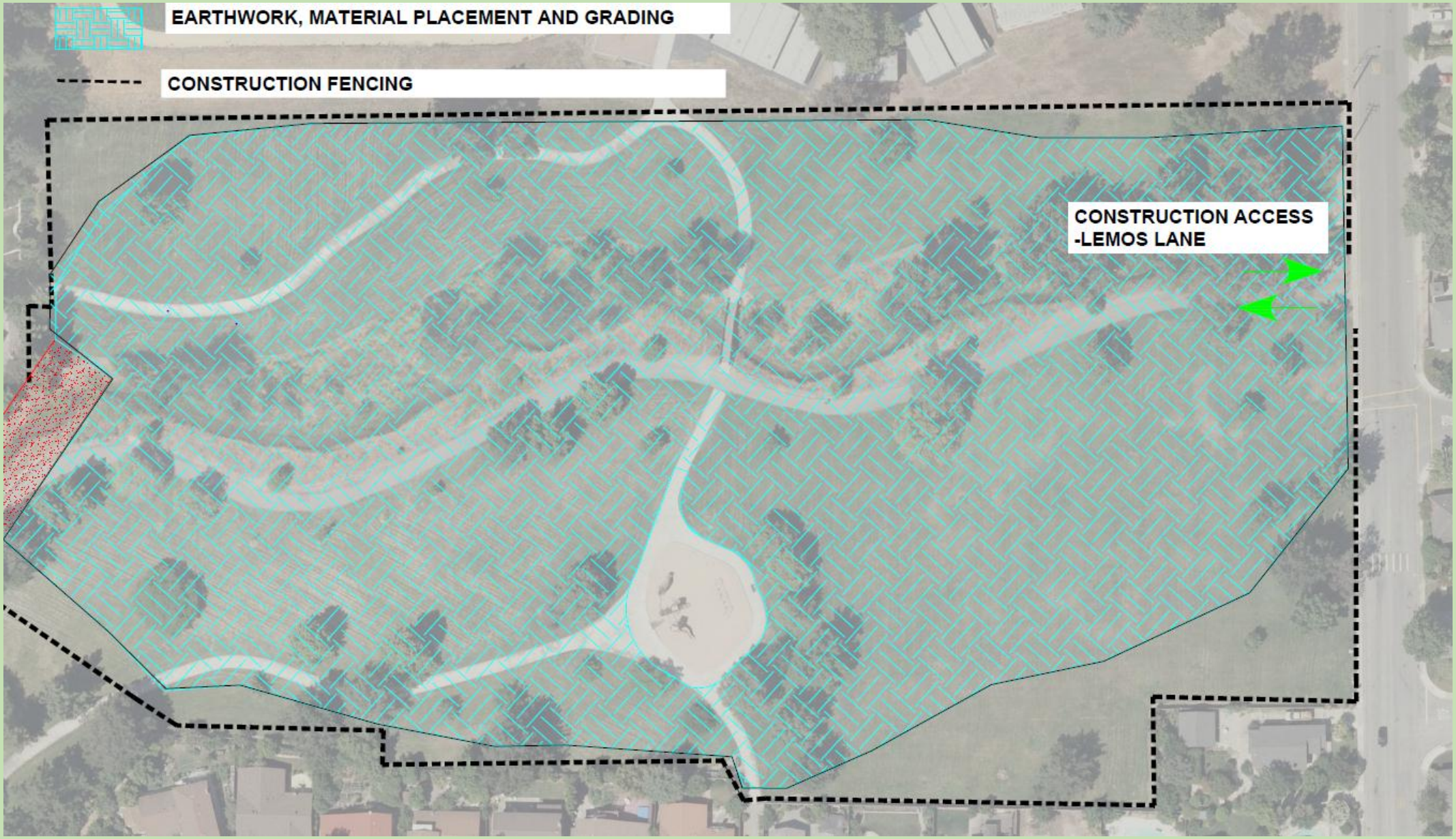
Creek Restoration Project Construction and Gomes Park Closure

- 3500 Cubic Yards of earth and rock removal
- Haul through of earth material from Reach 1 to Reach 3
- Construction of sheet pile foundations
- Construction of concrete channel walls
- Asphalt concrete pathway work



Creek Restoration Project Construction and Gomes Park Closure

- 6500 Cubic Yards of earth and rock placement
- Placement of earth material from Reach 1
- Construction and installation of new park bridge and abutments
- Asphalt and concrete pathway work



Anticipated Construction Machinery

Hydraulic Press Machinery to Install Steel Sheet Piles for Channel Walls

Asphalt Concrete Grinder for recycling existing asphalt concrete

Questions

Who to Contact:

- Before Creek Restoration Construction (April 2016):

Ilene Macintire, P.E.: (510) 670-5177
E-mail: ilene@acpwa.org
Alameda County Flood Control and
Water Conservation District

- During construction:

Project Inspector: (510) 670-5591;
E-mail: info@acpwa.org
Alameda County Public Work Agency's
Construction Department