

# Use of Linear Lakes in Amenitizing Floodplain Reclamation for Communities

Gabriel Novak, P.E., CFM  
ASFPM 2018 Annual Conference

Google Earth

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Land Planning

**DOWDEY, ANDERSON  
& ASSOCIATES, INC.**

Civil Engineering

Land Surveying





# Dallas-Fort Worth Metroplex



# • Planning • Civil Engineering • Surveying • Hydraulics & Hydrology

  
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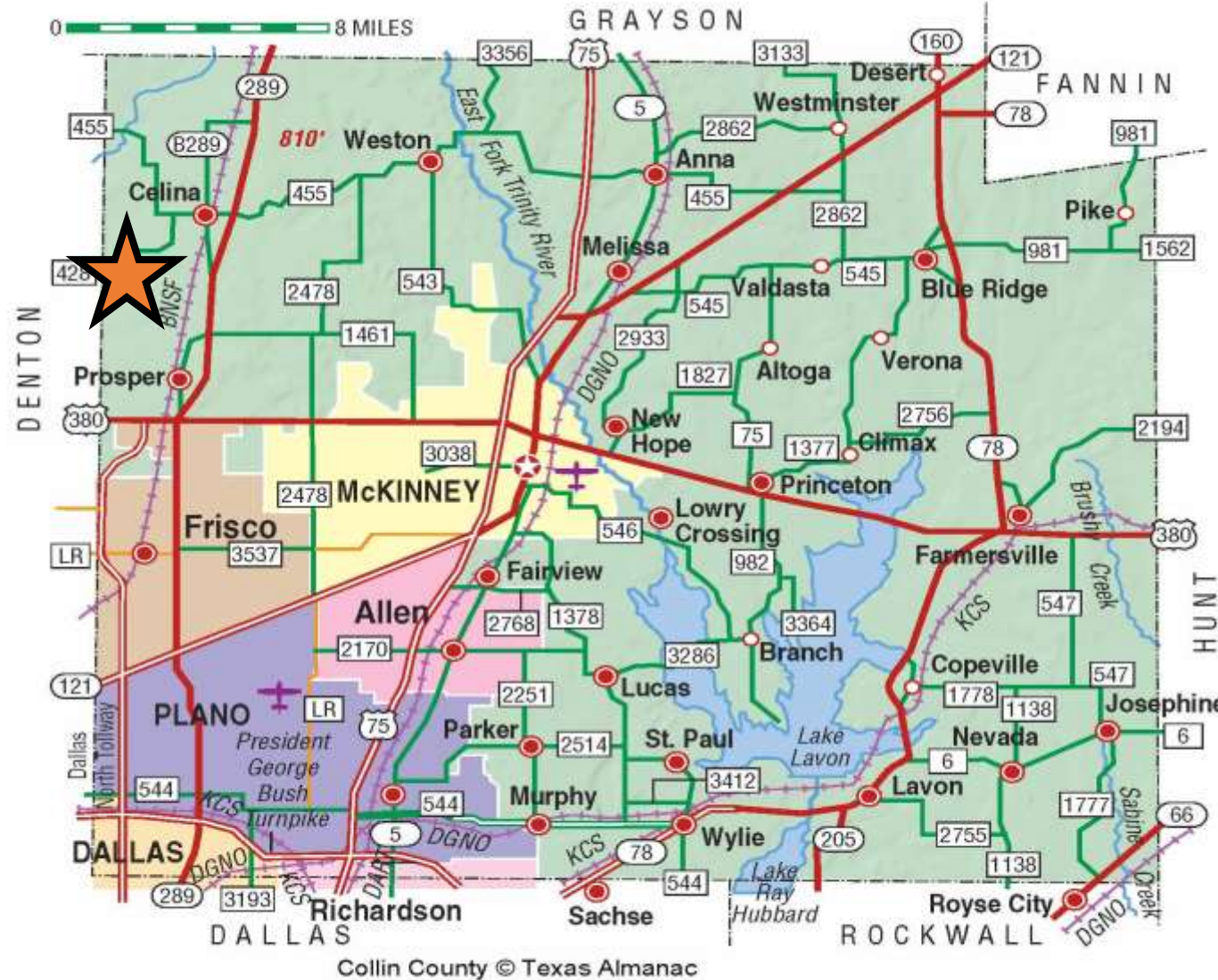
  
**LANDON HOMES**  
BETTER BUILT • BY DESIGN

PLANNER / ENGINEER / SURVEYOR  
**DOWDEY, ANDERSON & ASSOCIATES, INC.**  
5225 Village Creek Drive, Suite 200 Plano, Texas 75093 972-931-0694  
STATE REGISTRATION NUMBER: F-309



# Cambridge Crossing

Located in the  
City of Celina,  
Collin County,  
Texas





# Cambridge Crossing

600 acres total  
320 ac  
1200 single  
family lots

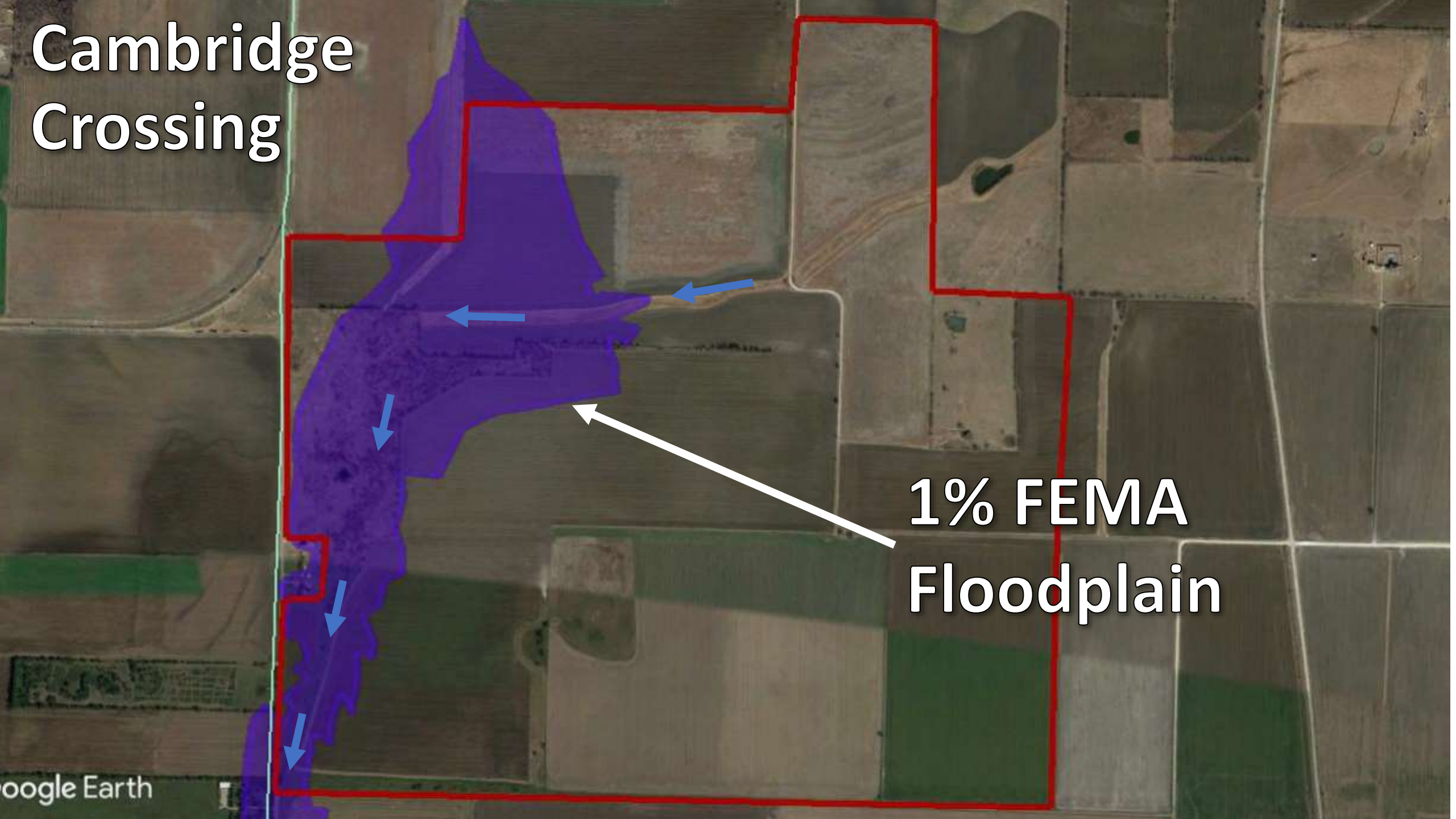






**Cambridge  
Crossing**

**1% FEMA  
Floodplain**



**Cambridge  
Crossing**

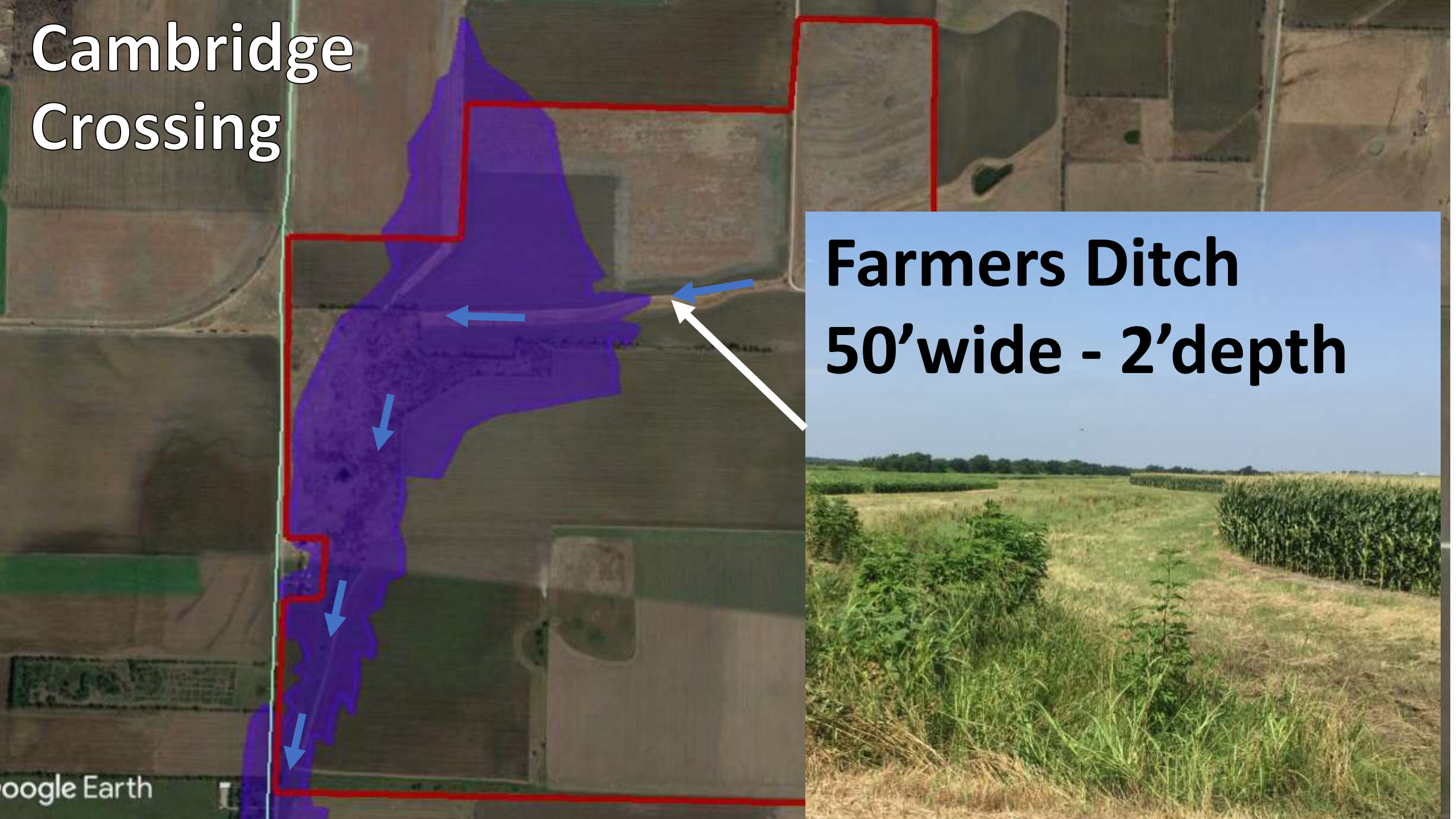
**1% Floodplain**

**Doe Branch Trib 'D'  
:Drainage Area of 1200 ac**



Cambridge  
Crossing

**Farmers Ditch**  
**50' wide - 2' depth**



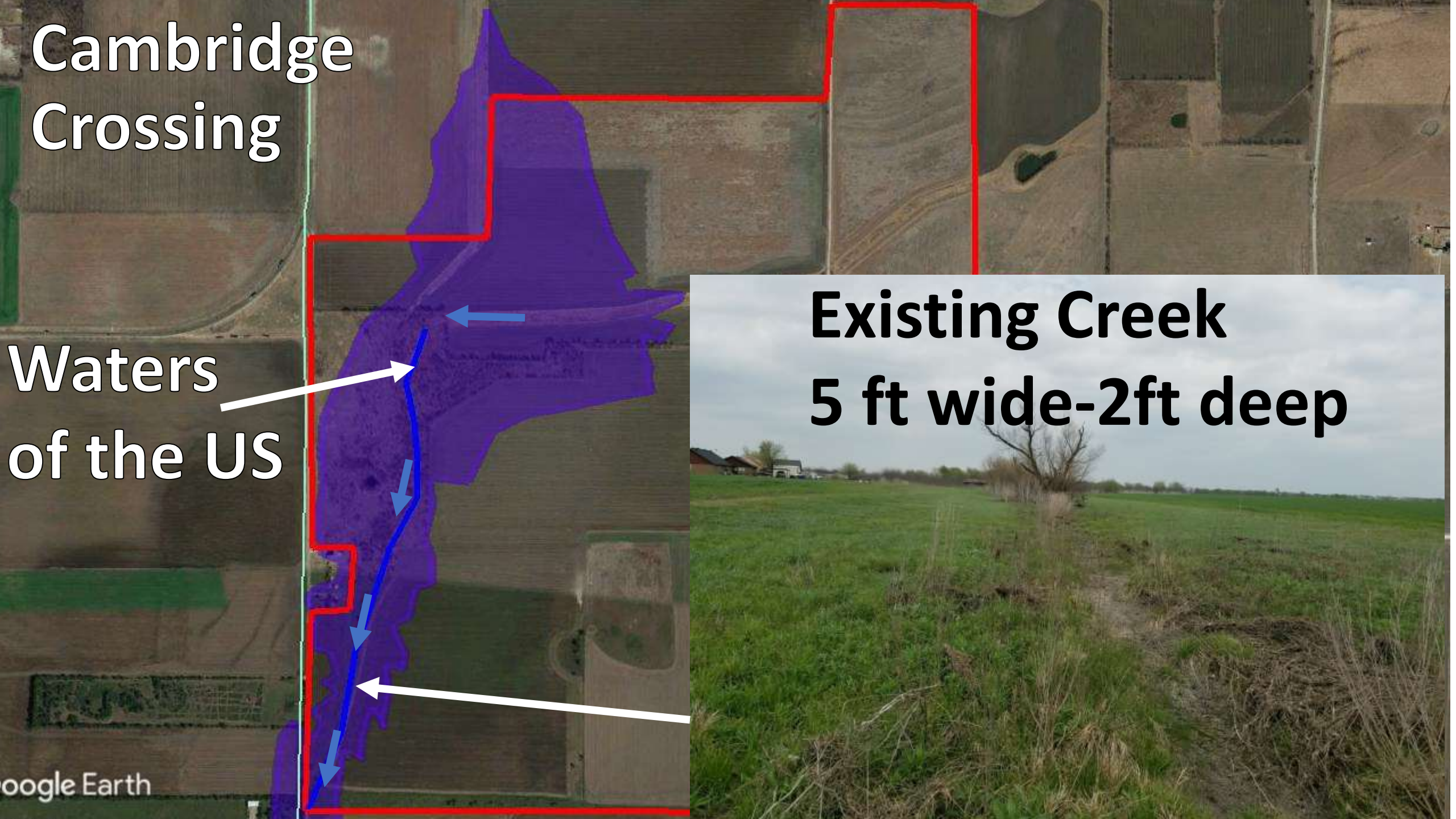


**Cambridge  
Crossing**

**Waters  
of the US**

Google Earth

**Existing Creek  
5 ft wide-2ft deep**

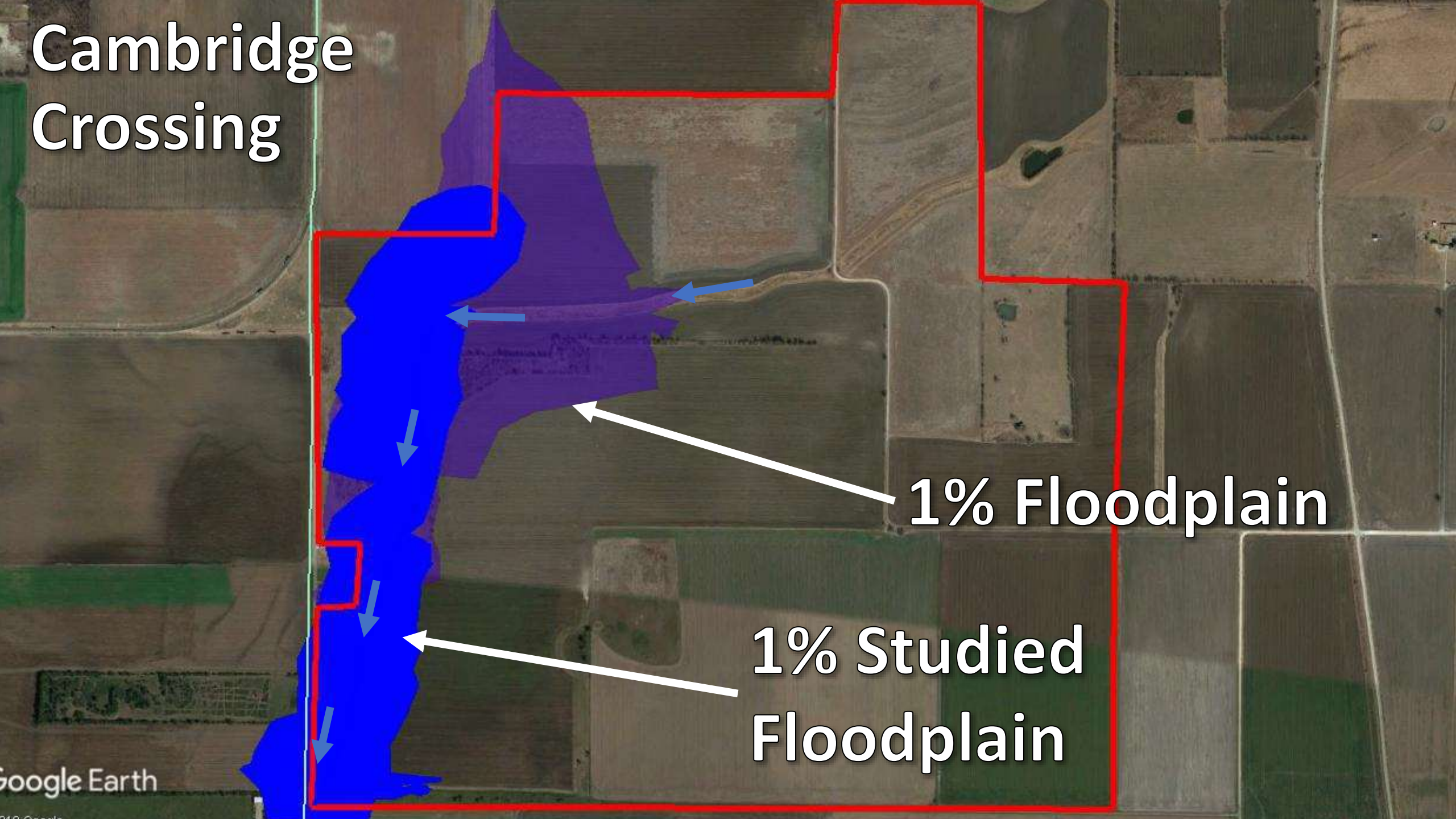




**Cambridge  
Crossing**

**1% Floodplain**

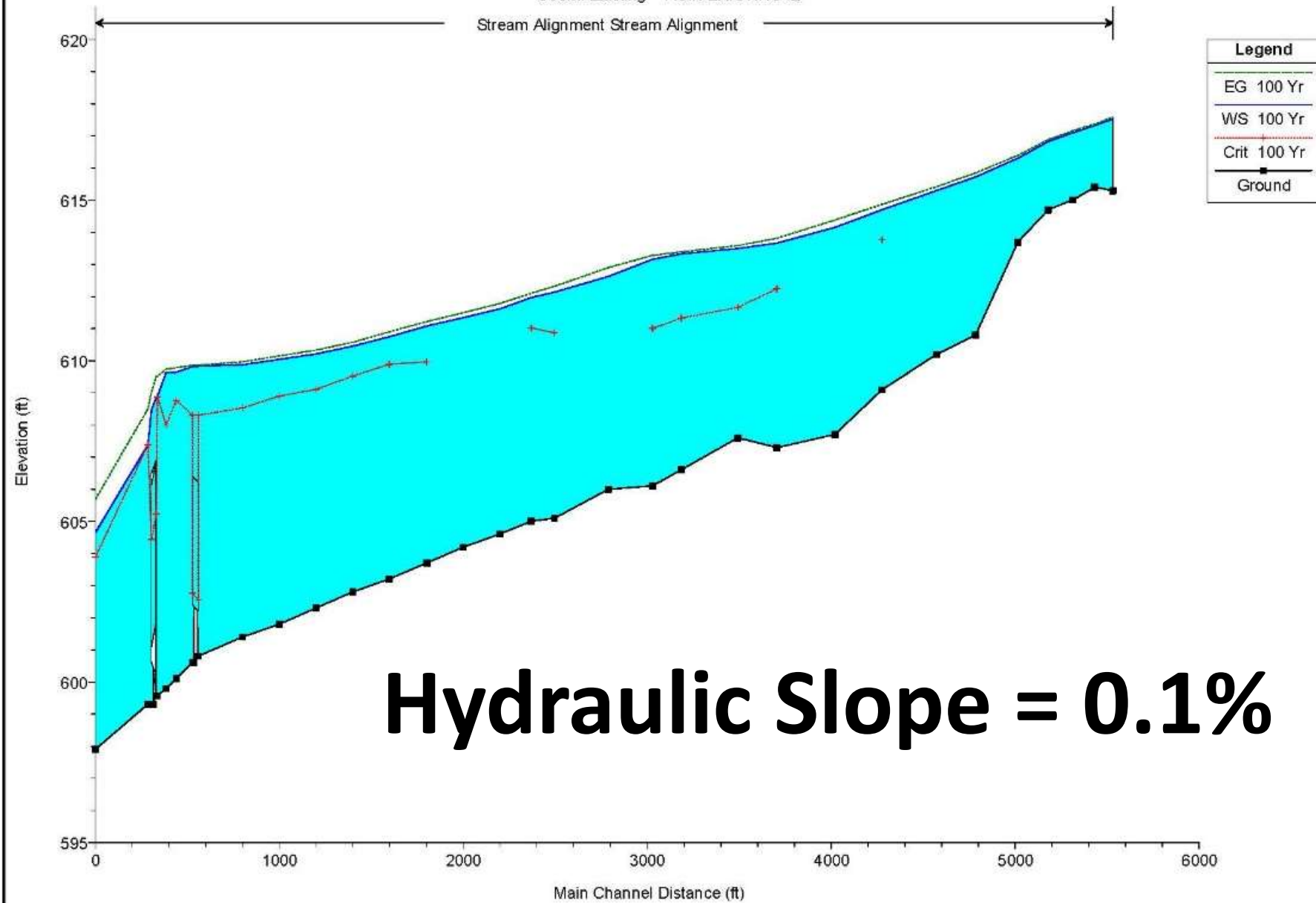
**1% Studied  
Floodplain**





Doe Branch Tributary 'D' Plan: Existing Conditions 5/31/2018

Geom: Existing Flow: EXISTING Q





# Storm Sewer Option

Cost \$9.1  
million



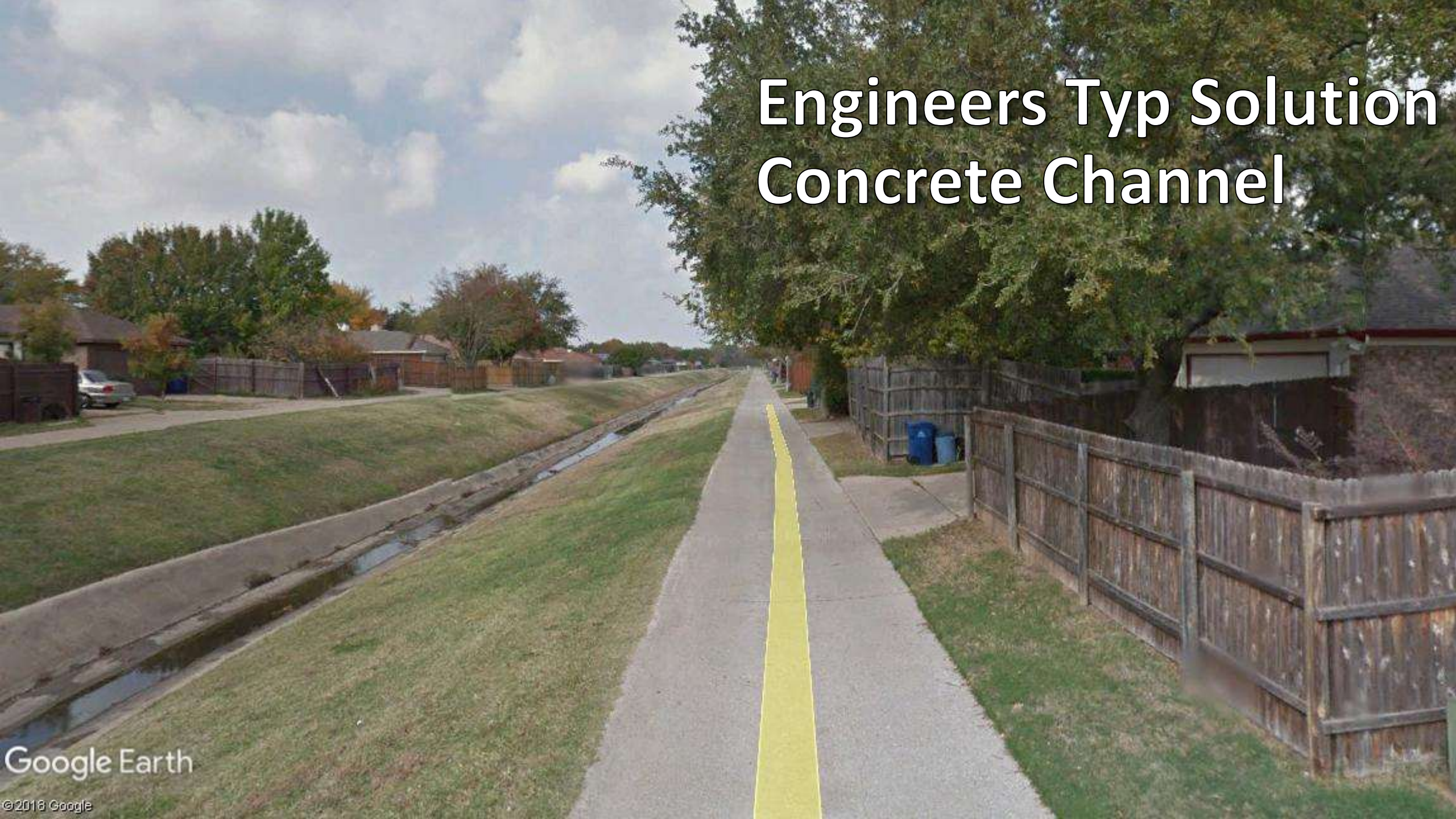


# Engineers Typ Solution Concrete Channel





# Engineers Typ Solution Concrete Channel





# How to efficiently convey the runoff & Add Value to the Project

- **3 Previous Projects  
As Inspiration**





# Magnolia Park





# Magnolia Park

1% Floodplain



# Wet Conveyance Channel-U/S End



Google Earth

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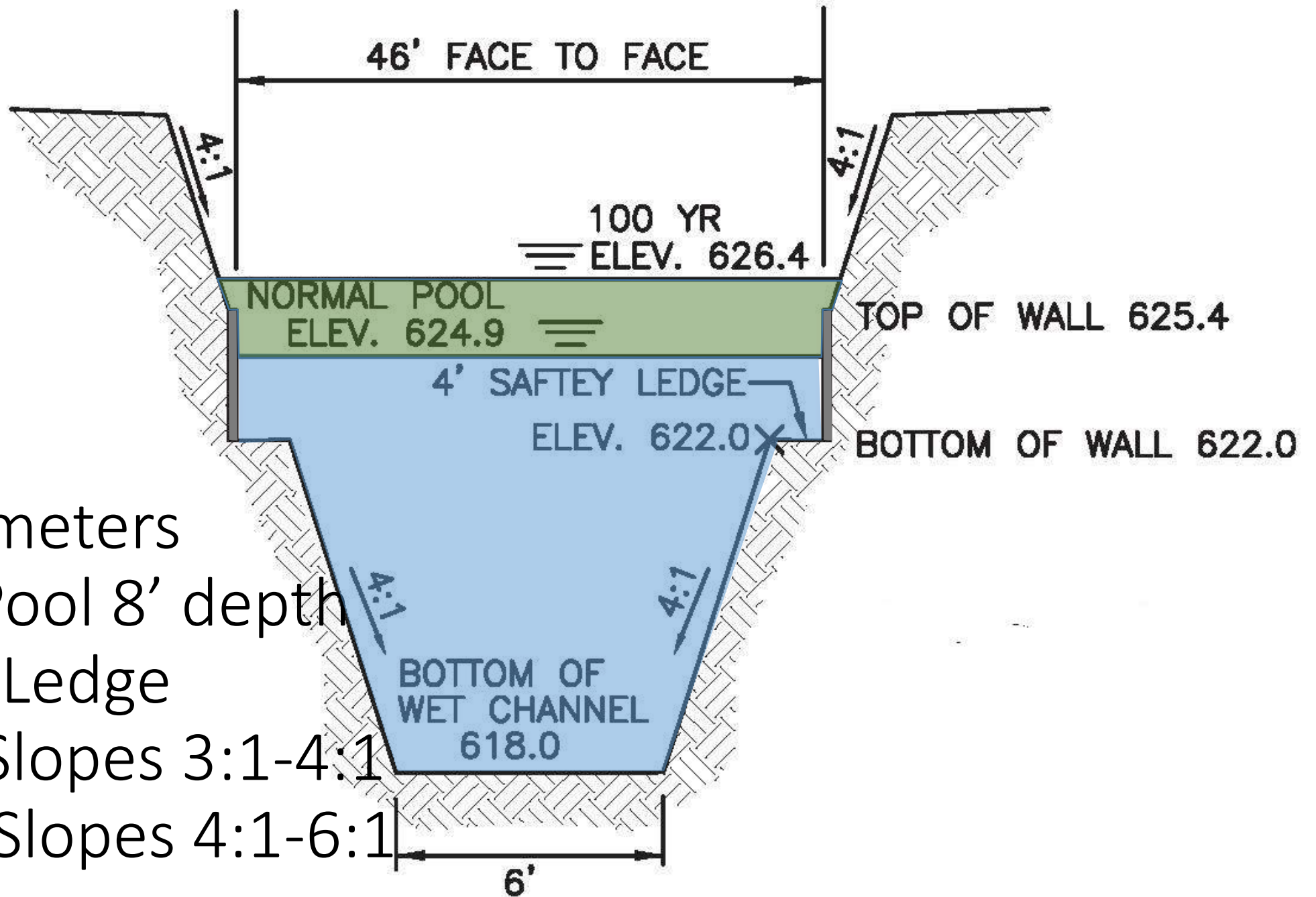
6.85 ft



# Wet Conveyance Channel D/S End







Typ Parameters

Normal Pool 8' depth

4' Safety Ledge

Internal Slopes 3:1-4:1

External Slopes 4:1-6:1



# Parks of Coppell





1% Floodplain

Parks of Coppell







# Entrance Over Channel



# Wet Conveyance Channel D/S





# Wet Conveyance Channel U/S

Google Earth

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An aerial photograph of a suburban area with a red boundary outline. The boundary encloses a central residential area with several streets and houses, a large green field to the west, and a road to the south. The text "Mustang Lakes" is overlaid in the center of the boundary.

# Mustang Lakes

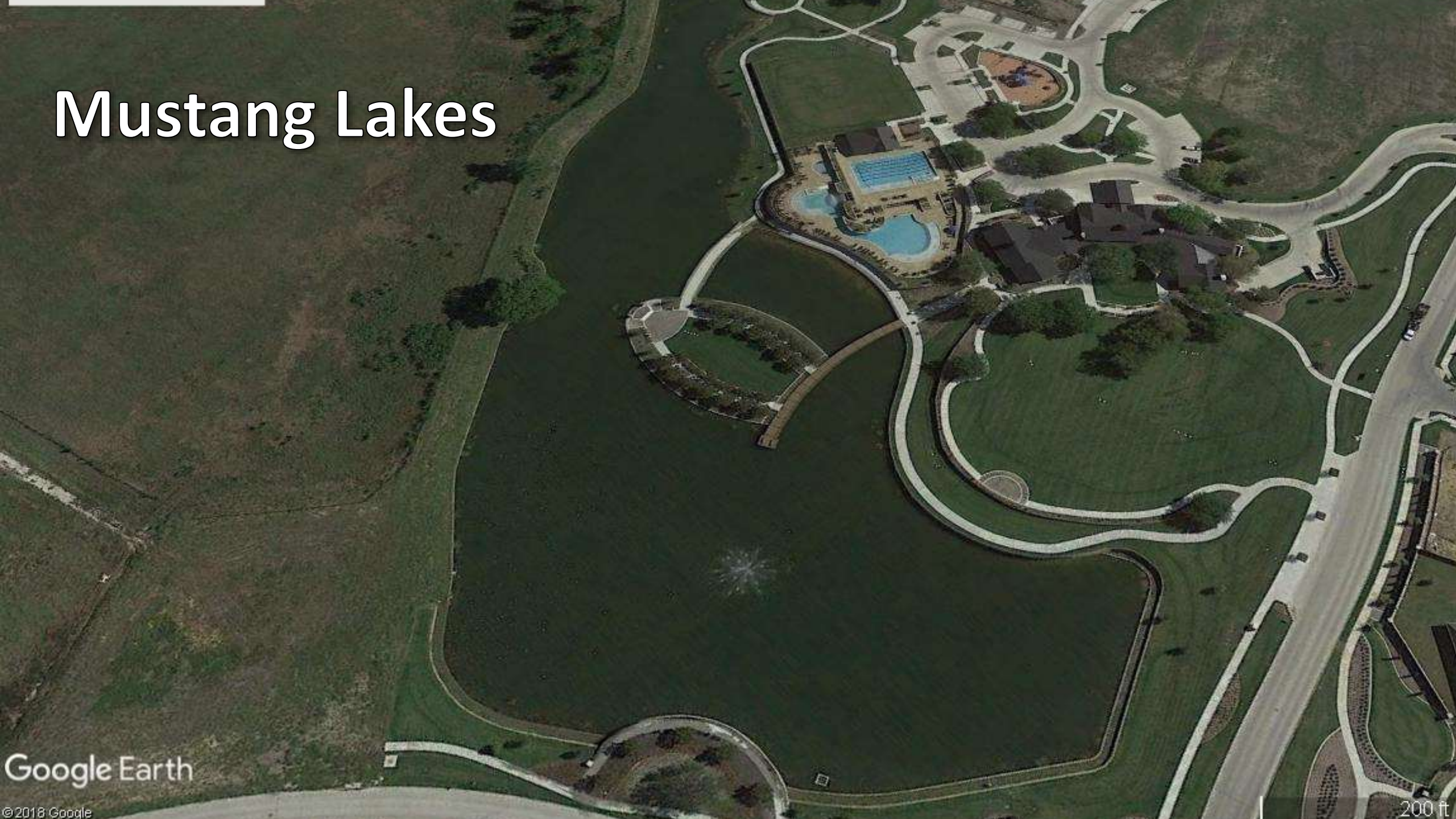


# Mustang Lakes

Google Earth

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200 ft





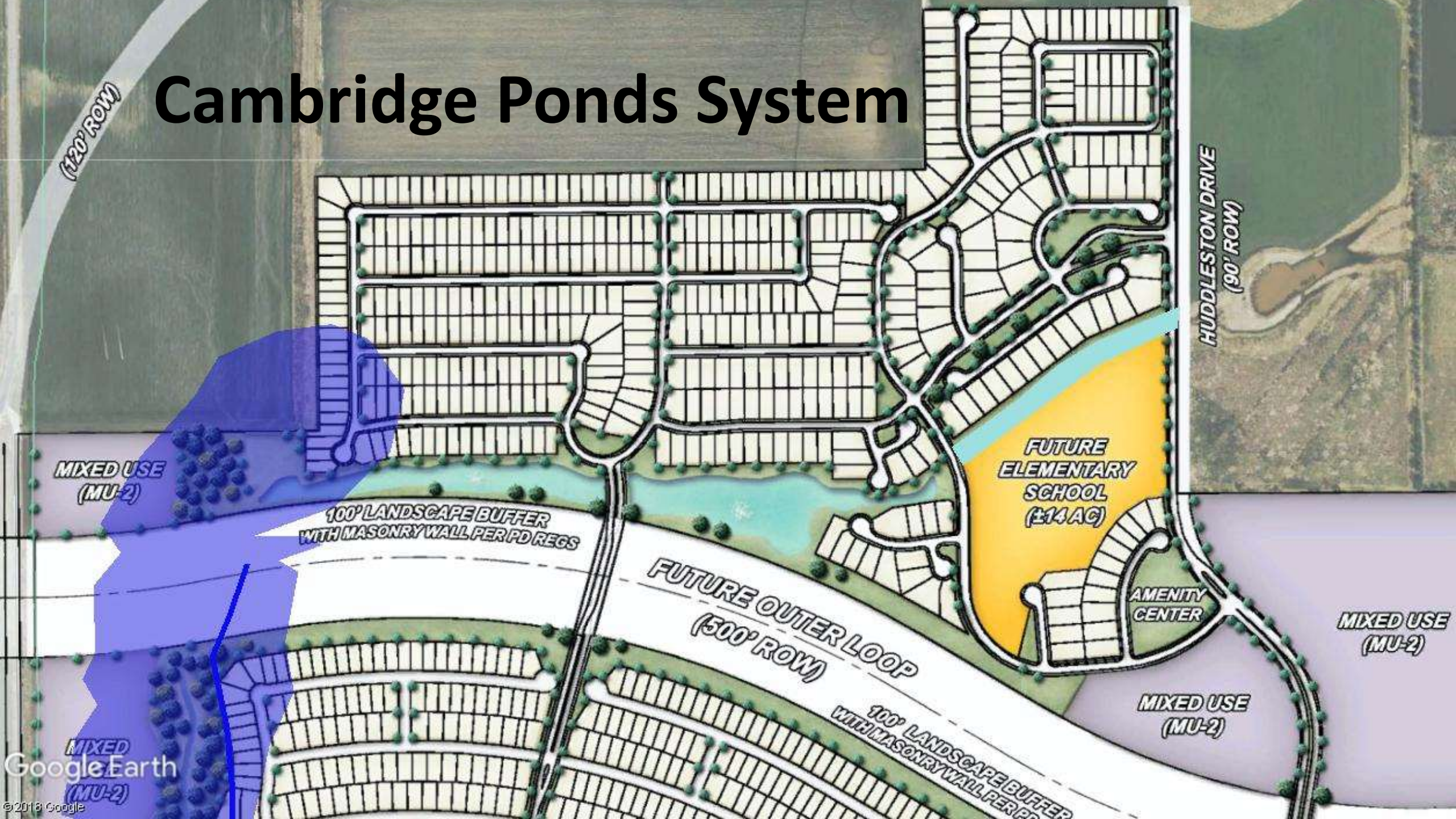








# Cambridge Ponds System





A scenic view of a golf course. In the foreground, there is a stone wall with a black metal railing. A large, rounded green bush is in the center foreground. Behind the wall is a large, calm pond that reflects the surrounding trees and sky. The pond is bordered by a path and more trees. In the background, there are more trees and a clear sky. The text "Thank You to the Dowdey, Anderson & Associates Inc. Team" is overlaid in the center of the image.

Thank You to the Dowdey, Anderson  
& Associates Inc. Team