CITY OF AUSTIN

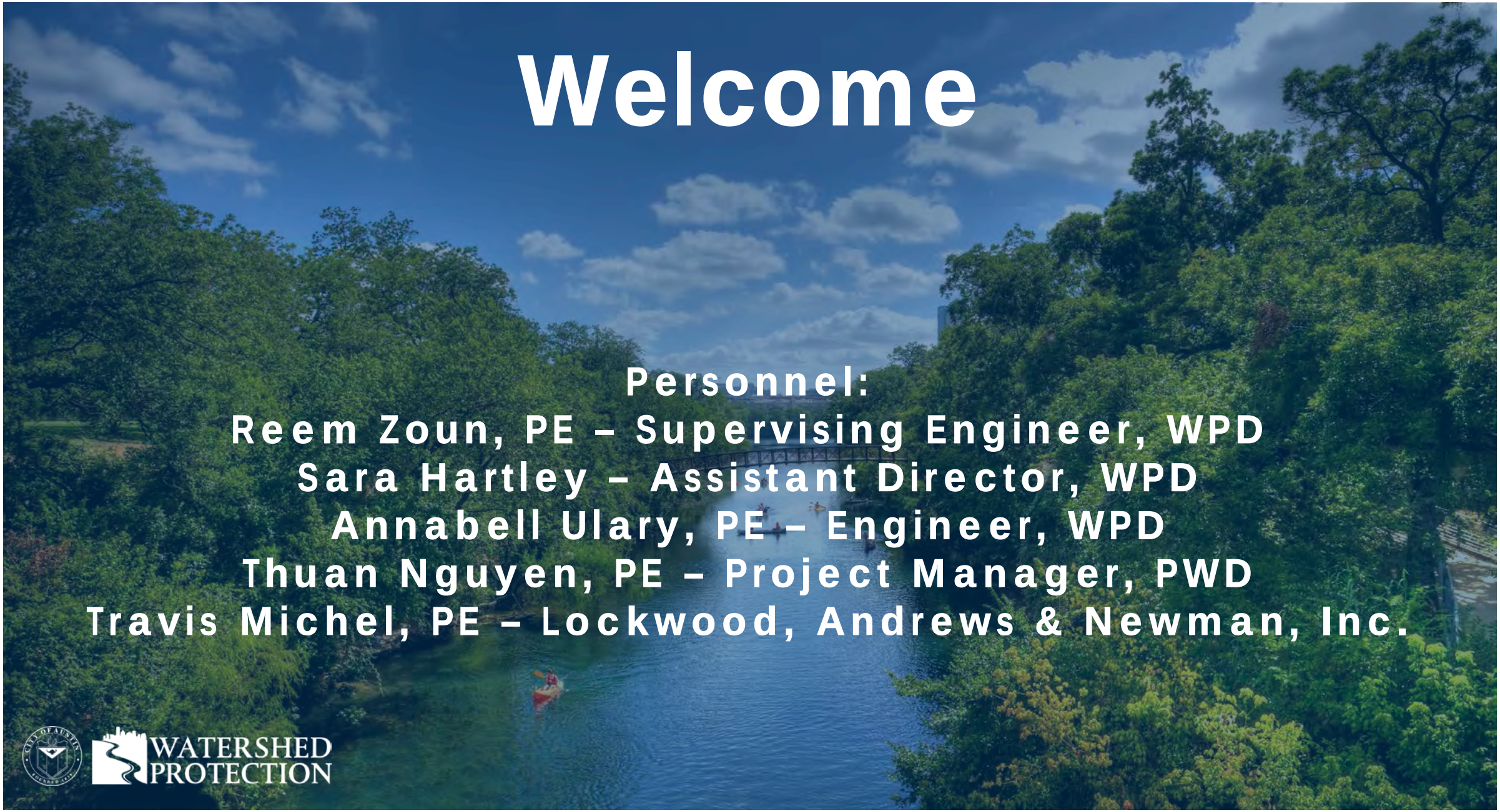
Oak Knoll Storm Drain Improvement Project

February 27, 2018

WATERSHED PROTECTION

WATERSHED PROTECTION DEPARTMENT

Welcome



Personnel:

Reem Zoun, PE – Supervising Engineer, WPD

Sara Hartley – Assistant Director, WPD

Annabell Ulary, PE – Engineer, WPD

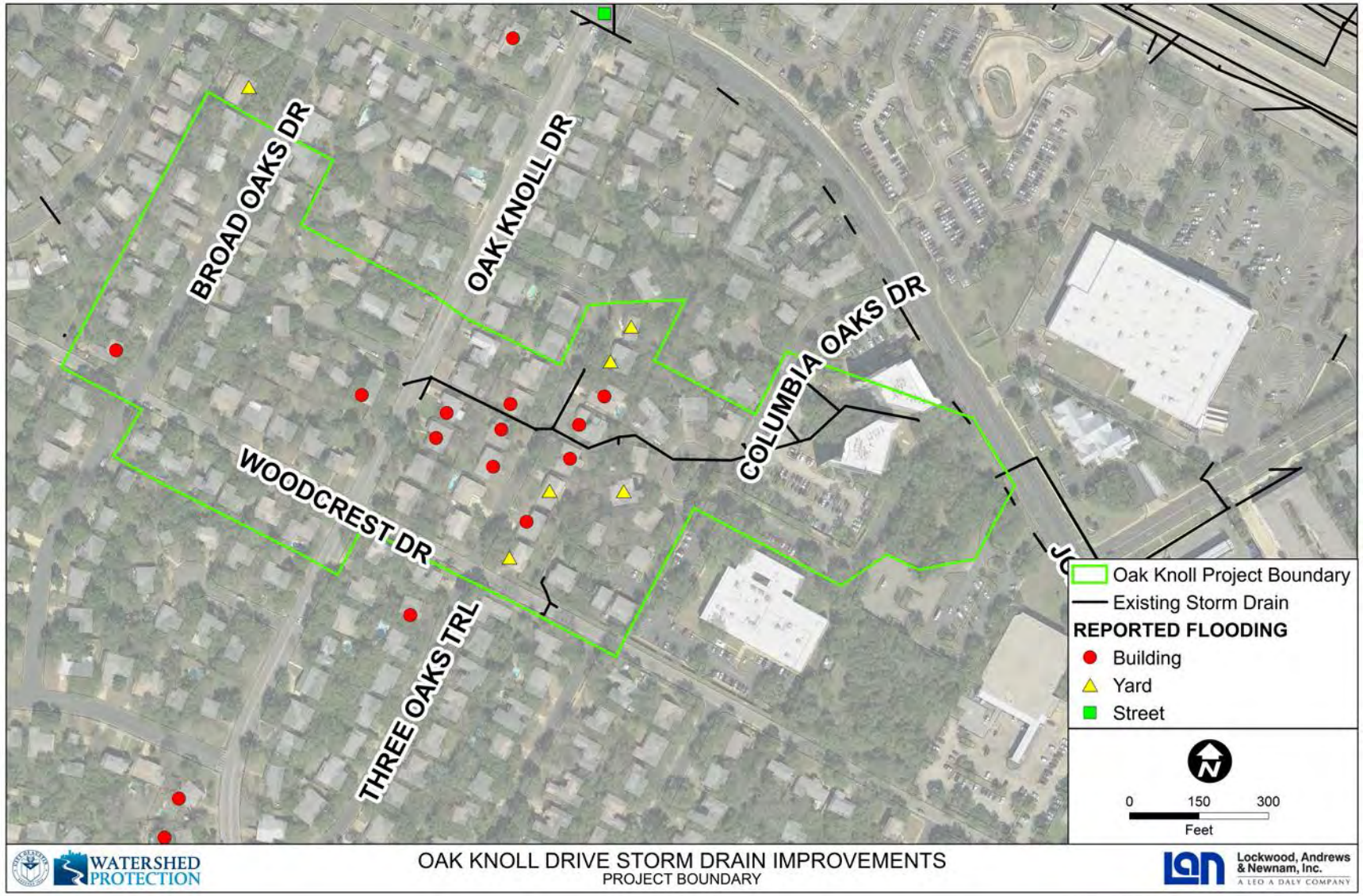
Thuan Nguyen, PE – Project Manager, PWD

Travis Michel, PE – Lockwood, Andrews & Newman, Inc.

WATERSHED PROTECTION

Introduction

- Oak Knoll Storm Drain Improvement Project
- Local Flood Risk Reduction High Priority
- Flooding Complaints (16):
  - 11 buildings
  - 5 Yards
- History
- Purpose of this meeting

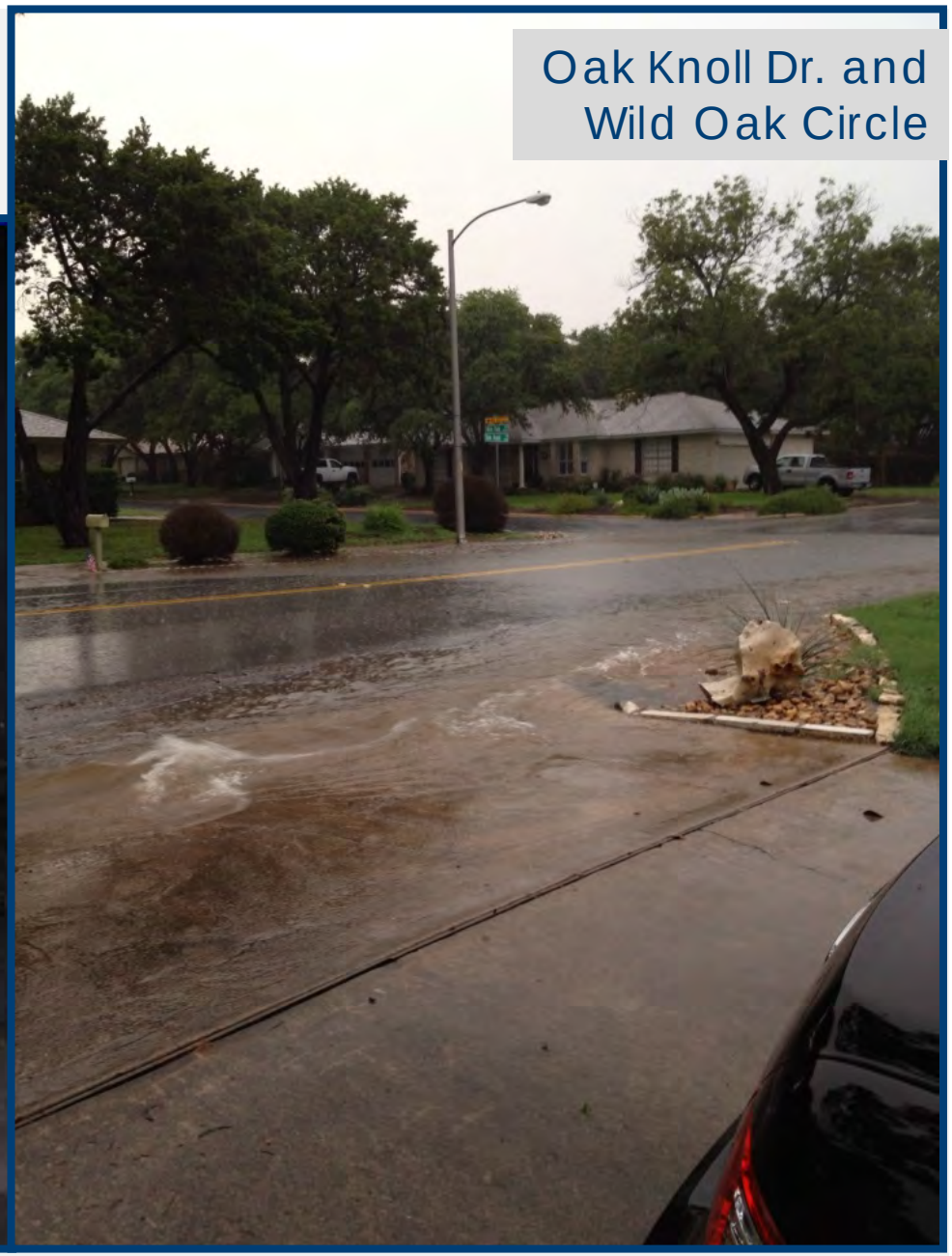


City of Austin WATERSHED PROTECTION

Introduction

Approximately **2900 ft** of new storm pipe (—)

Oak Knoll Storm Drain Improvements



Oak Knoll Storm Drain Improvements

Oak knoll Dr. and Woodcrest Dr.

Two Types of Flooding

Flooding happens due to a combination of intense rainfall and inadequate capacity of our drainage system

- **Creek Flooding:** Occurs when a creek rises over its banks.
- **Localized Flooding:** Occurs away from creeks.

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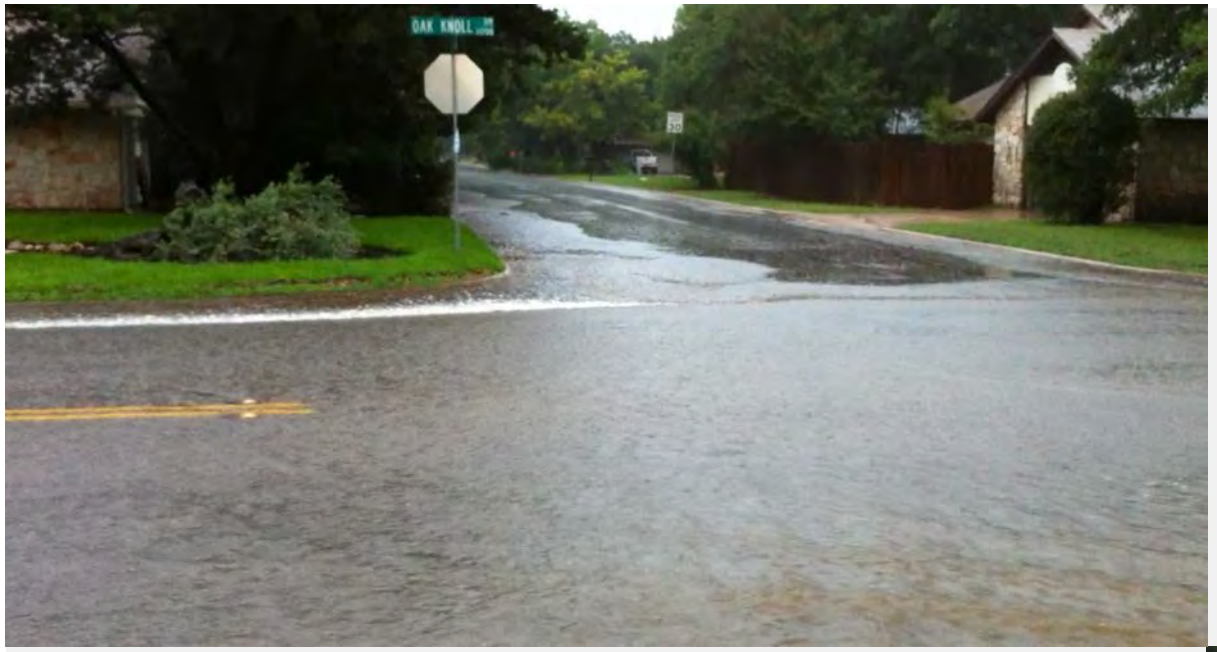

Localized Flooding

Occurs away from creeks.

Creek Flooding

Occurs when a creek rises over its banks.

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Localized Flooding Citywide

- **5,884 Total Complaints**
  - 1,995 Buildings
  - 2,409 Yards
  - 1,480 Streets
- Neighborhoods built before the 1980s tend to have more drainage problems
- No quick or easy solution
- Oak Knoll SDI is high priority

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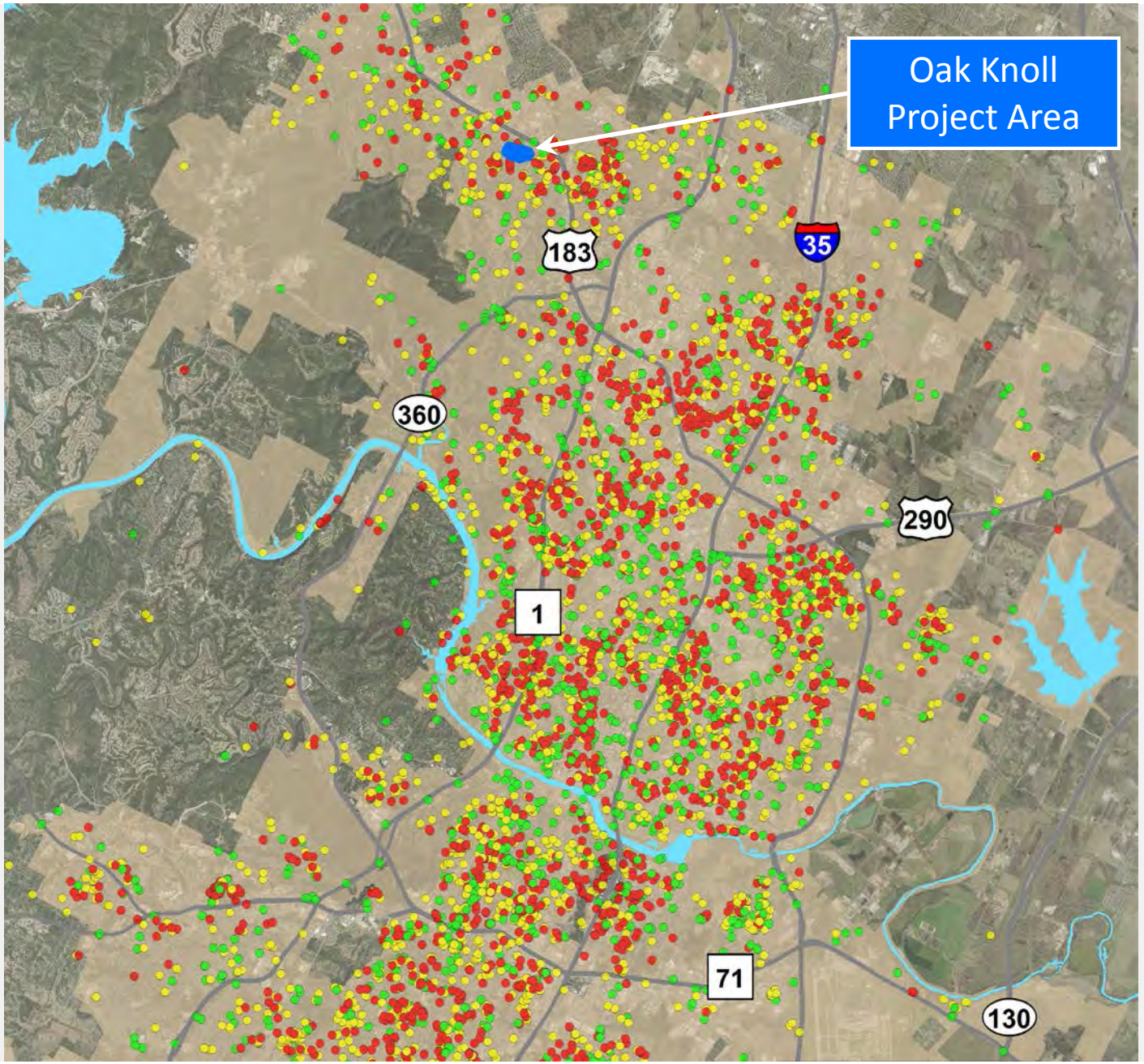

What is a Storm Drain System?

- System of streets, ditches, pipes and culverts
- Drains rainfall from streets to nearby creek
- Inlets are placed along curb to catch rainfall
- Streets should drain in most storms.

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Components of a Storm Drain System

1. Inlets and curbs capture rain water.

2. Underground pipes carry the water.

3. Rain water is released into a creek at the outfall. Sometimes it goes to a water quality or detention pond first.

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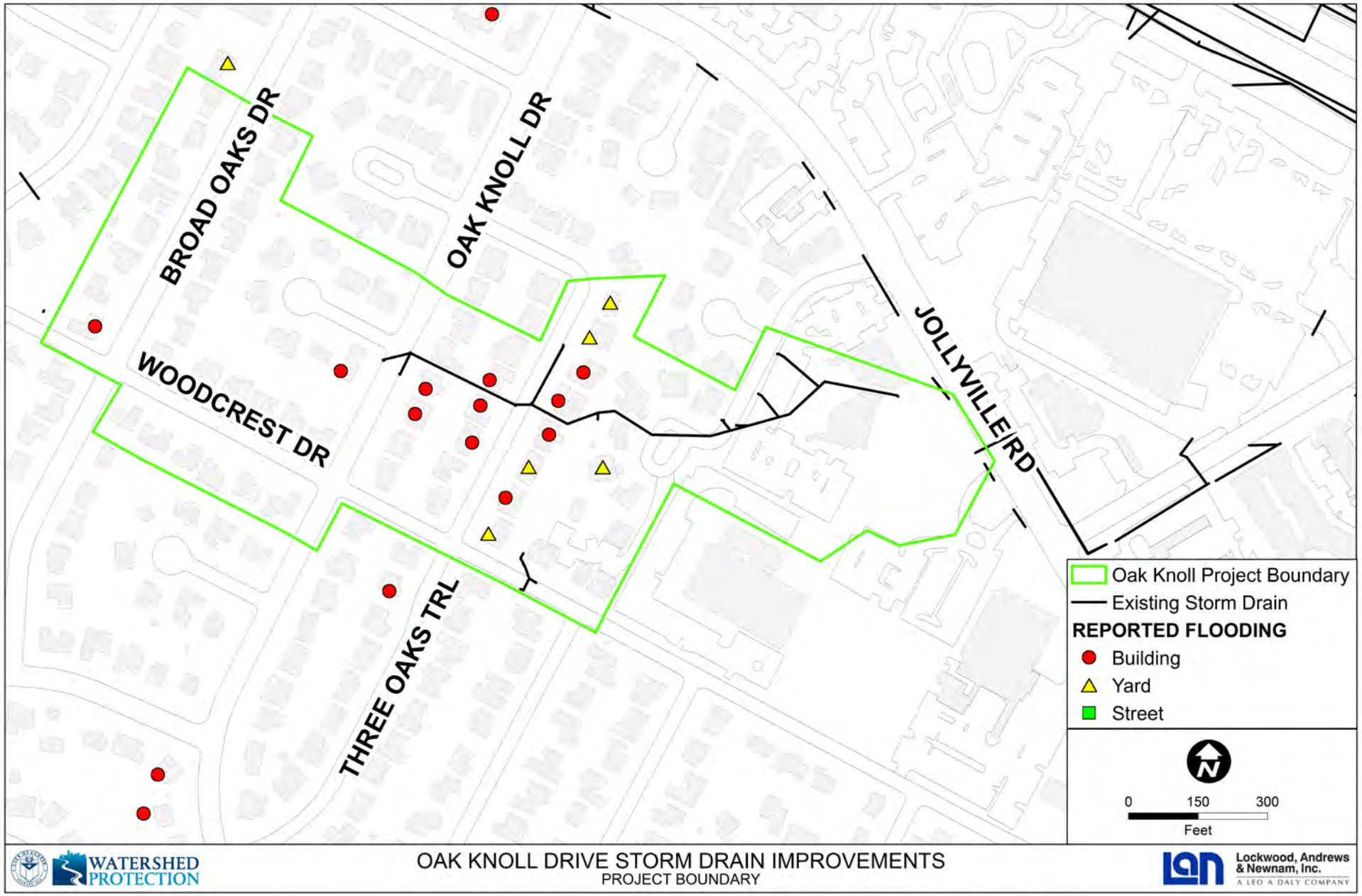
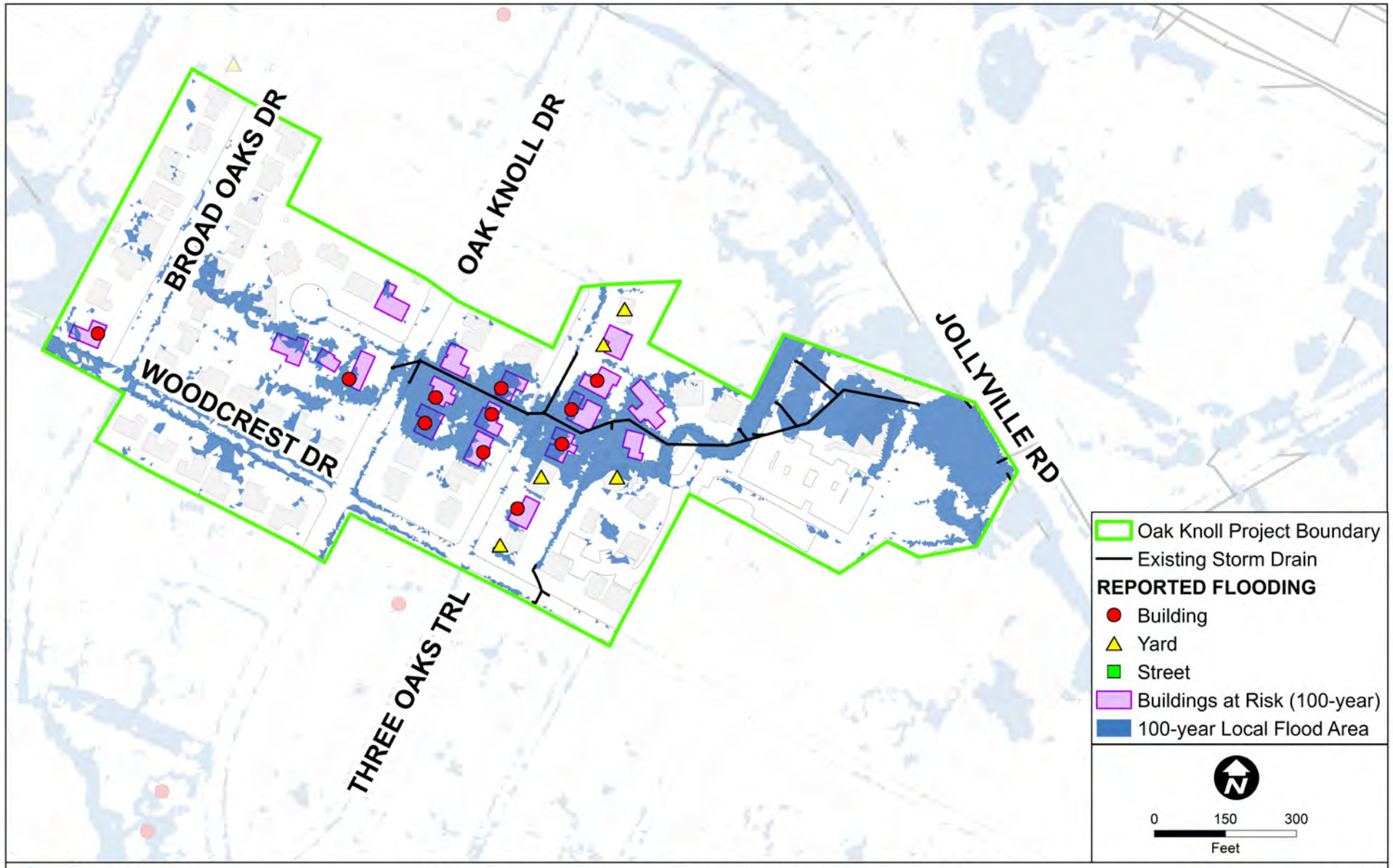

BROAD OAKS DR
OAK KNOLL DR
WOODCREST DR
JOLLYVILLE RD
THREE OAKS TRL
Oak Knoll Project Boundary
Existing Storm Drain
REPORTED FLOODING
Building
Yard
Street
N
0
150
300
Feet
WATERSHED PROTECTION
OAK KNOLL DRIVE STORM DRAIN IMPROVEMENTS
PROJECT BOUNDARY
Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY


BROAD OAKS DR
OAK KNOLL DR
WOODCREST DR
JOLLYVILLE RD
THREE OAKS TRL
Oak Knoll Project Boundary
Existing Storm Drain
REPORTED FLOODING
Building
Yard
Street
Buildings at Risk (100-year)
100-year Local Flood Area
0
150
300
Feet
WATERSHED PROTECTION
OAK KNOLL DRIVE STORM DRAIN IMPROVEMENTS
EXISTING 100-YEAR LOCAL FLOOD AREA
Lockwood, Andrews & Newnam, Inc.
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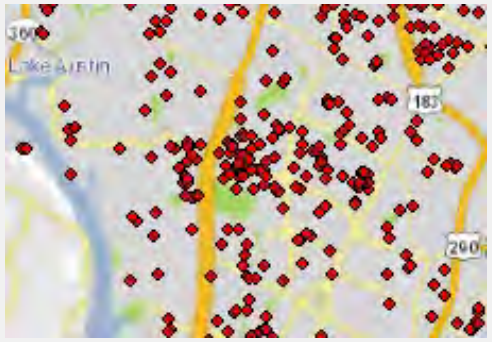
Project Process

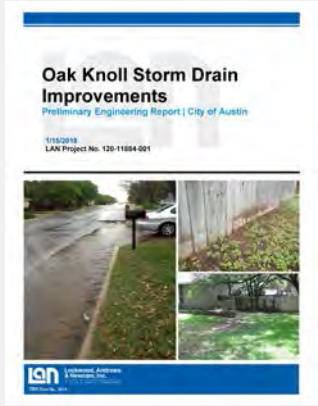
Flooding Complaint

Investigate

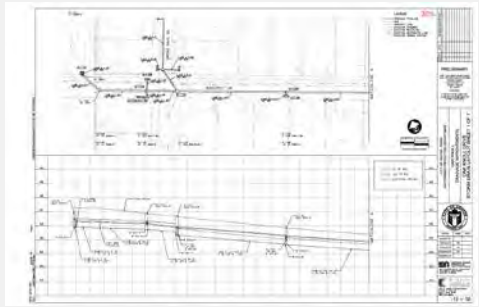


Prioritize

In-House Study



Preliminary Engineering



Design

Construction

Project History:

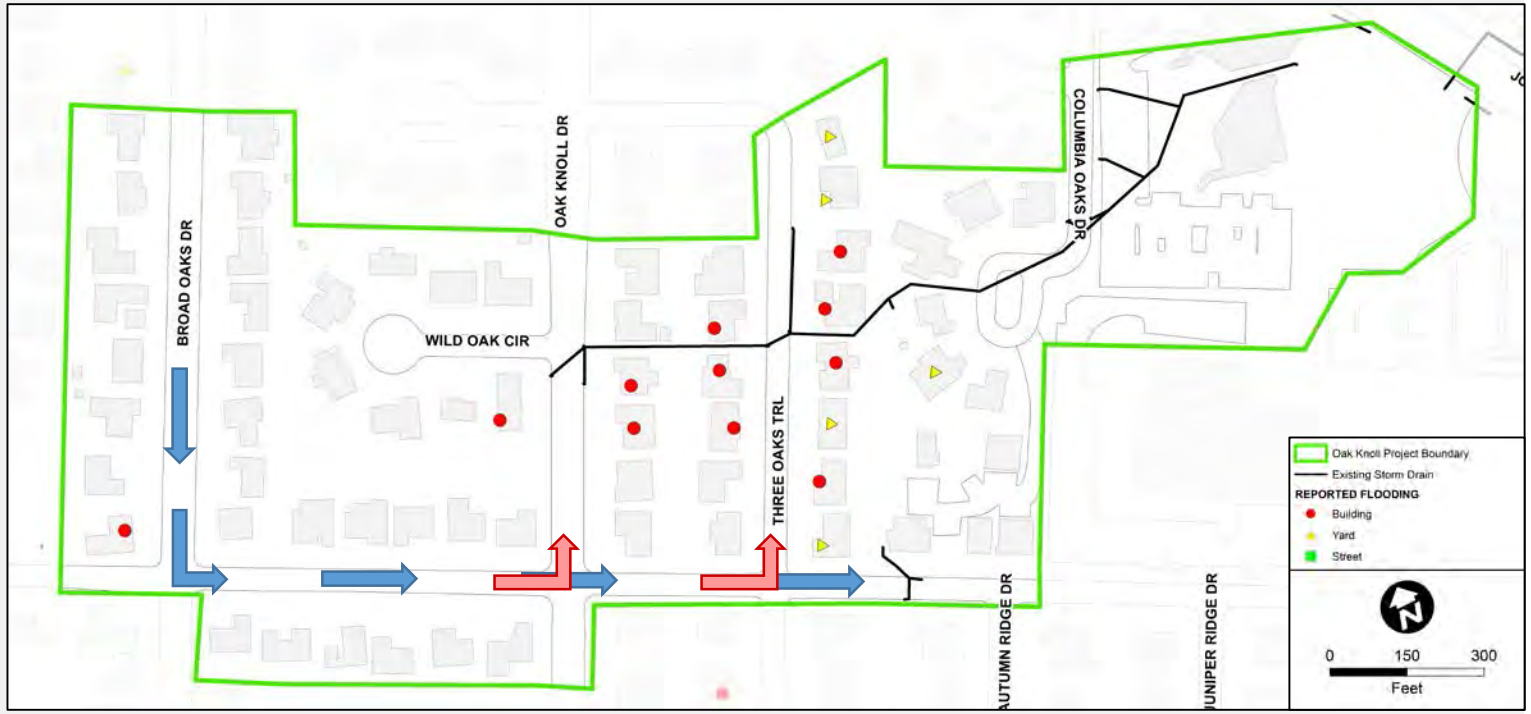
In-House Study

Findings

- Storm drain system does not meet current standards
- Flow patterns are not what was originally designed.

Recommendations

- Proposed 3 small projects.
- Suggested a larger study of the regional drainage issues in the Walnut Creek Watershed.



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Project History:

Small Scale Improvements

Valley Gutter

- January 2013
- Across Oak Knoll Dr. at Woodcrest Dr.
- Installed by Street and Bridge Division of Public Works

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Project History:

Small Scale Improvements

Oak Knoll Drive Improvements

- June 2014
- Expanded the existing inlet and added a new inlet
- Installed by Watershed Protection

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Project History:

Small Scale Improvements

Three Oak Trail Improvements

- June 2016
- Expanding the existing inlet and adding a new inlet
- Installed by Watershed Protection

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Preliminary Engineering Report

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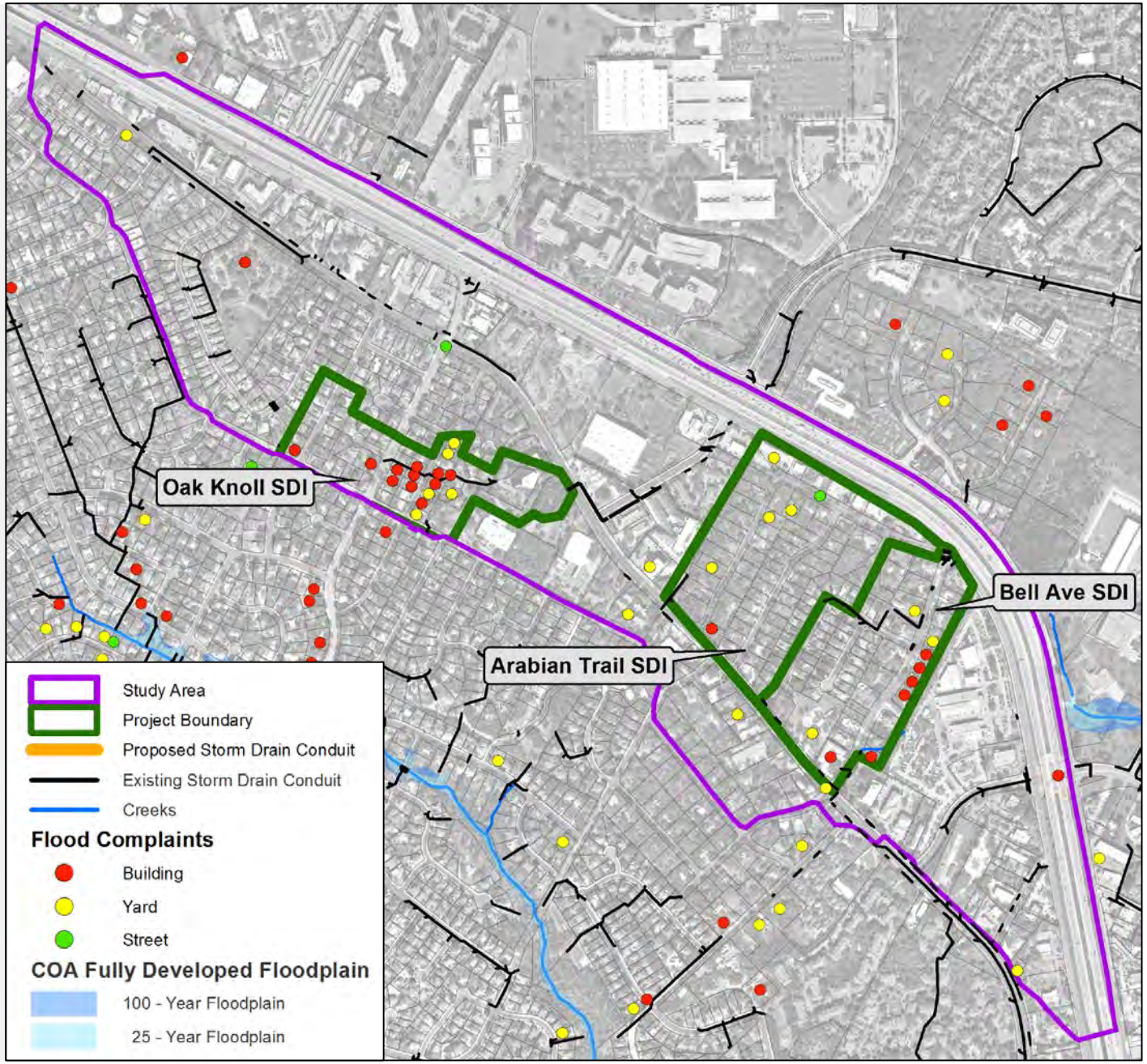
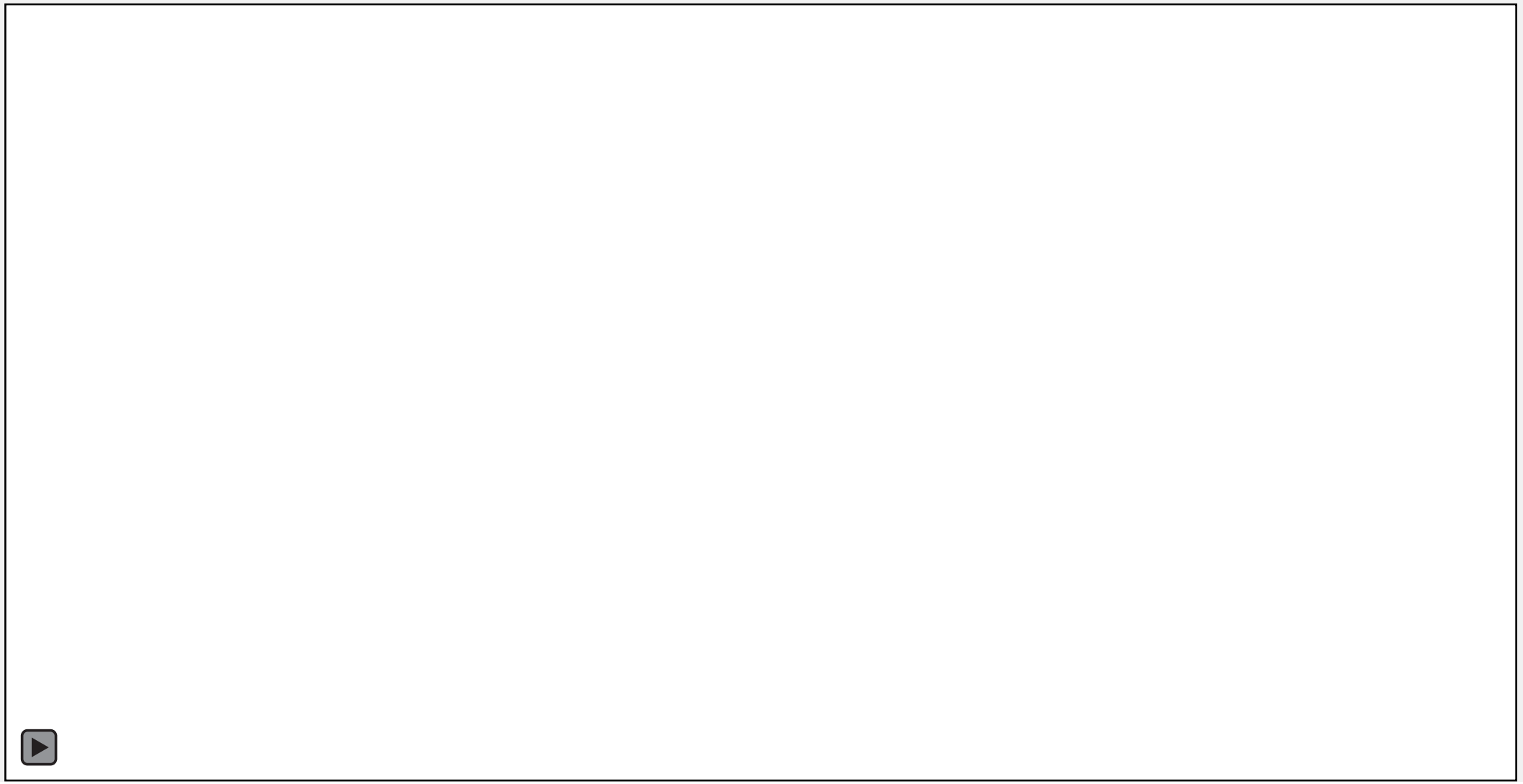


Evaluating the Existing Conditions



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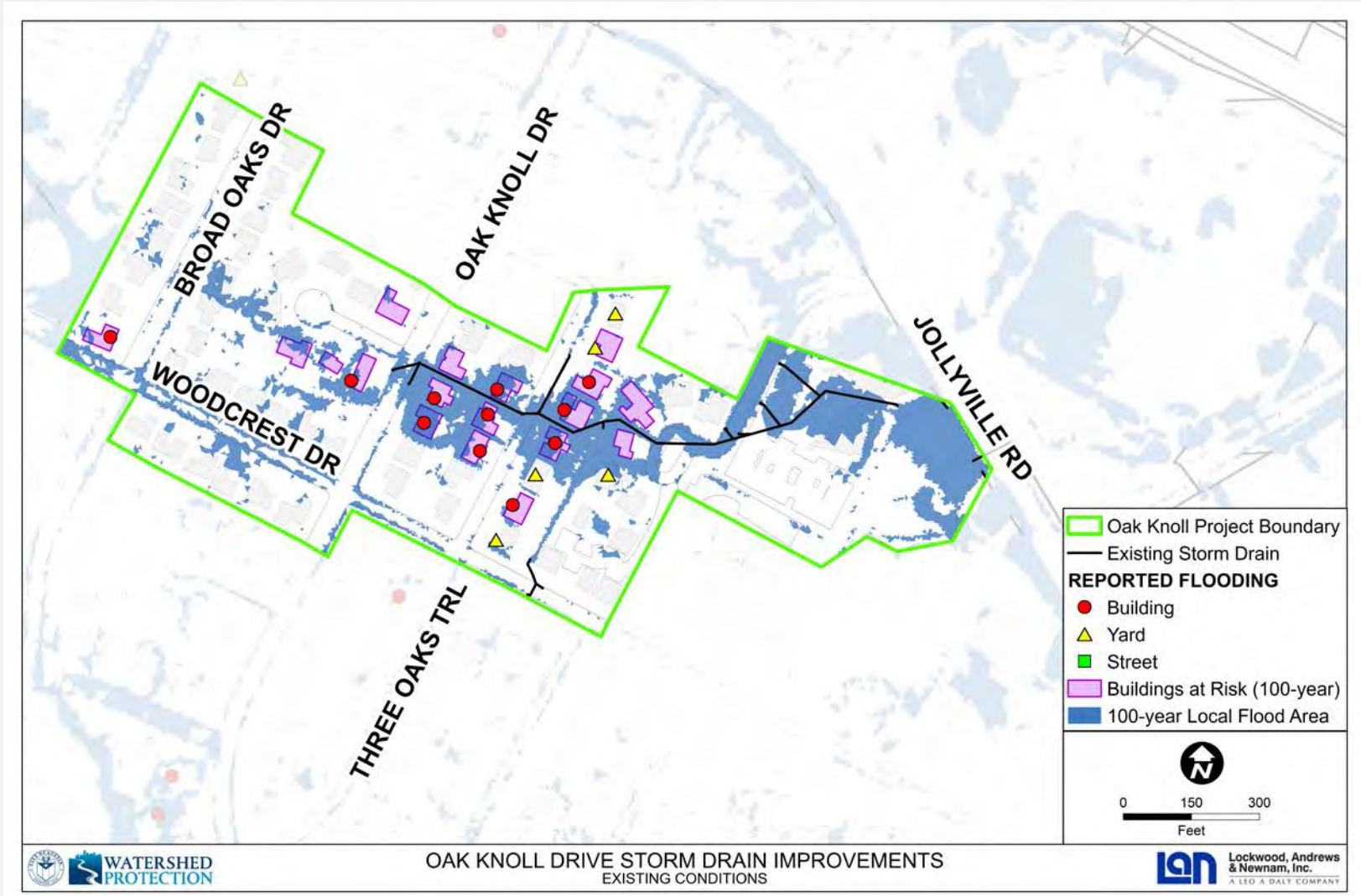
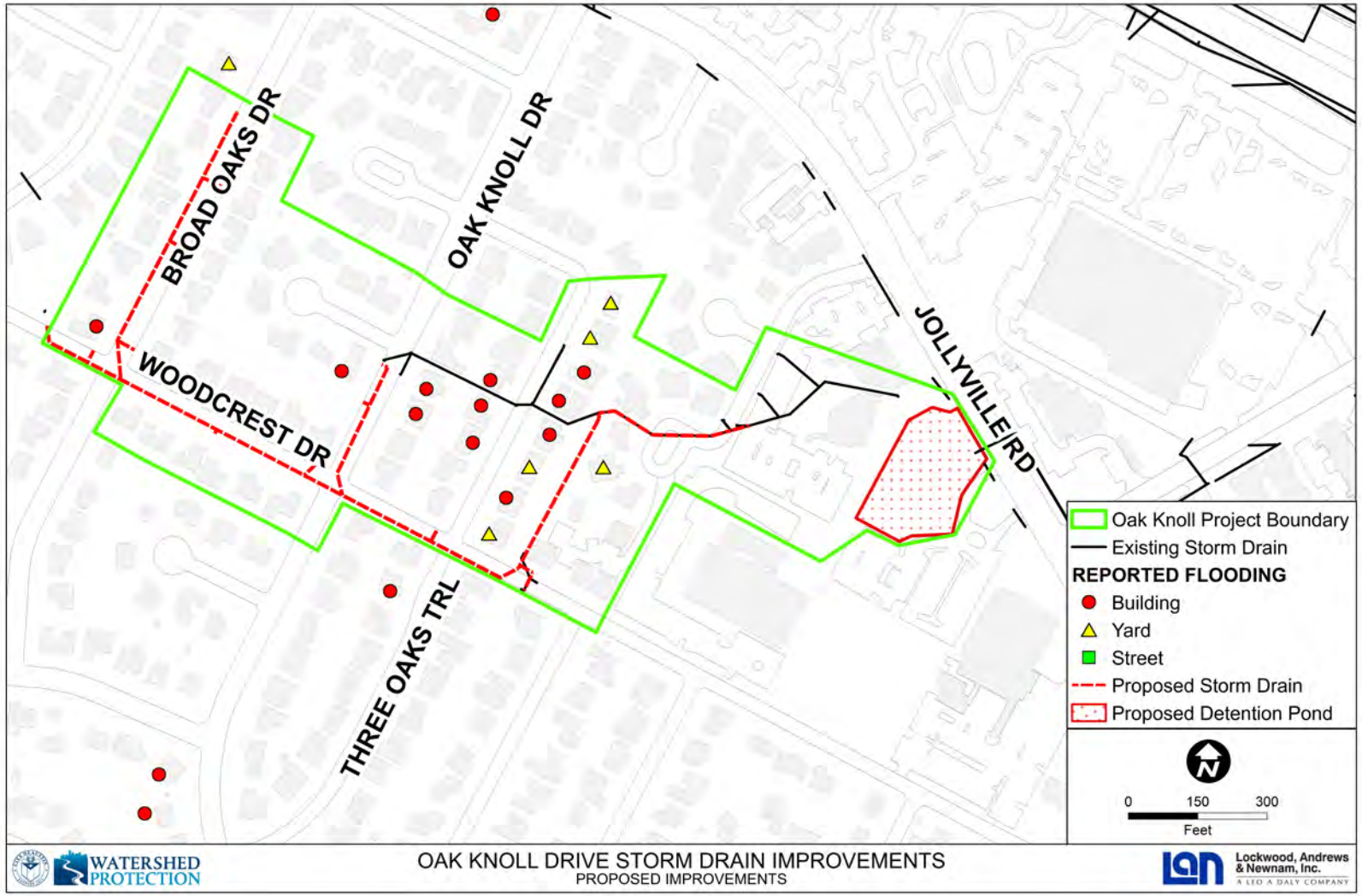


Proposed Improvements



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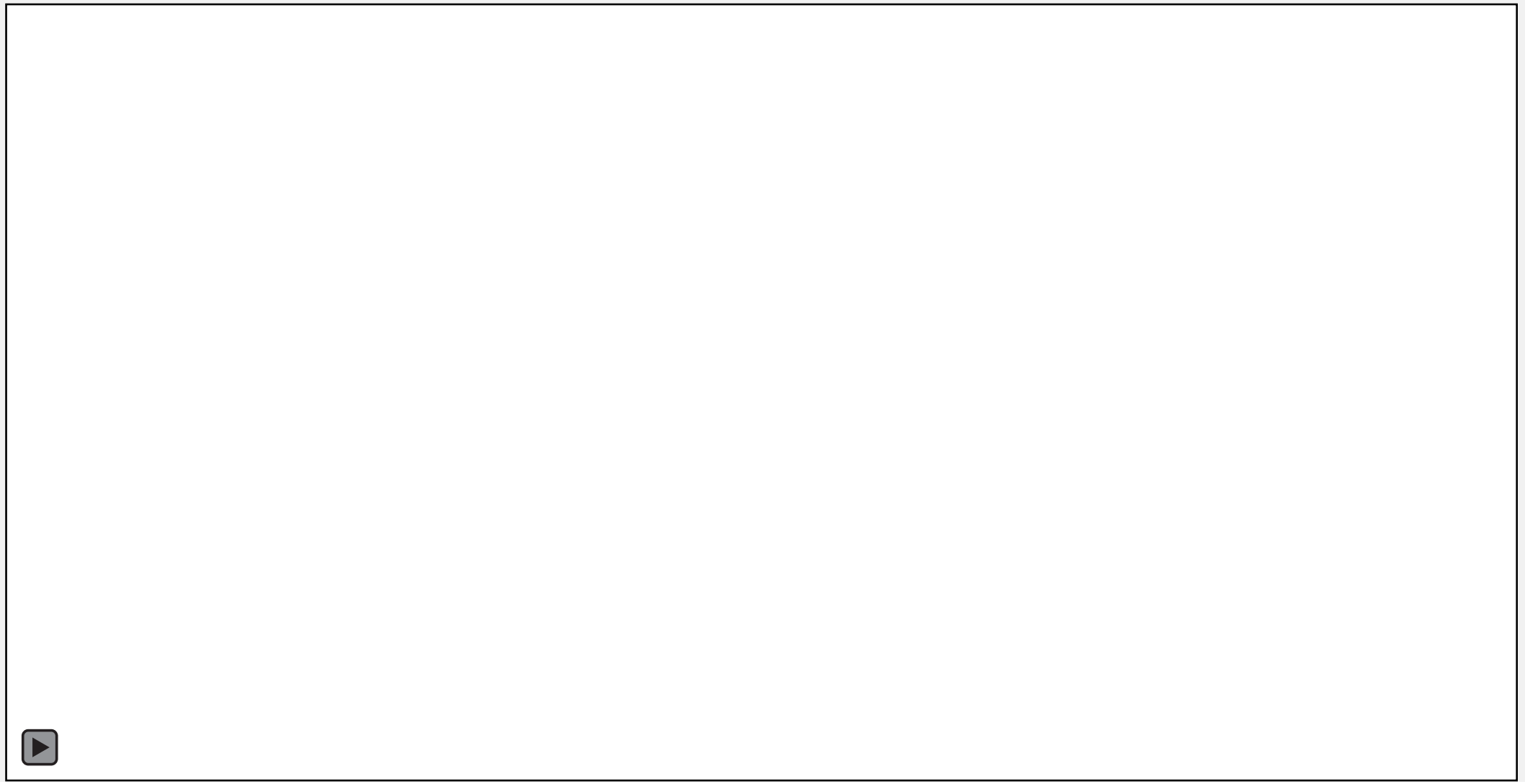

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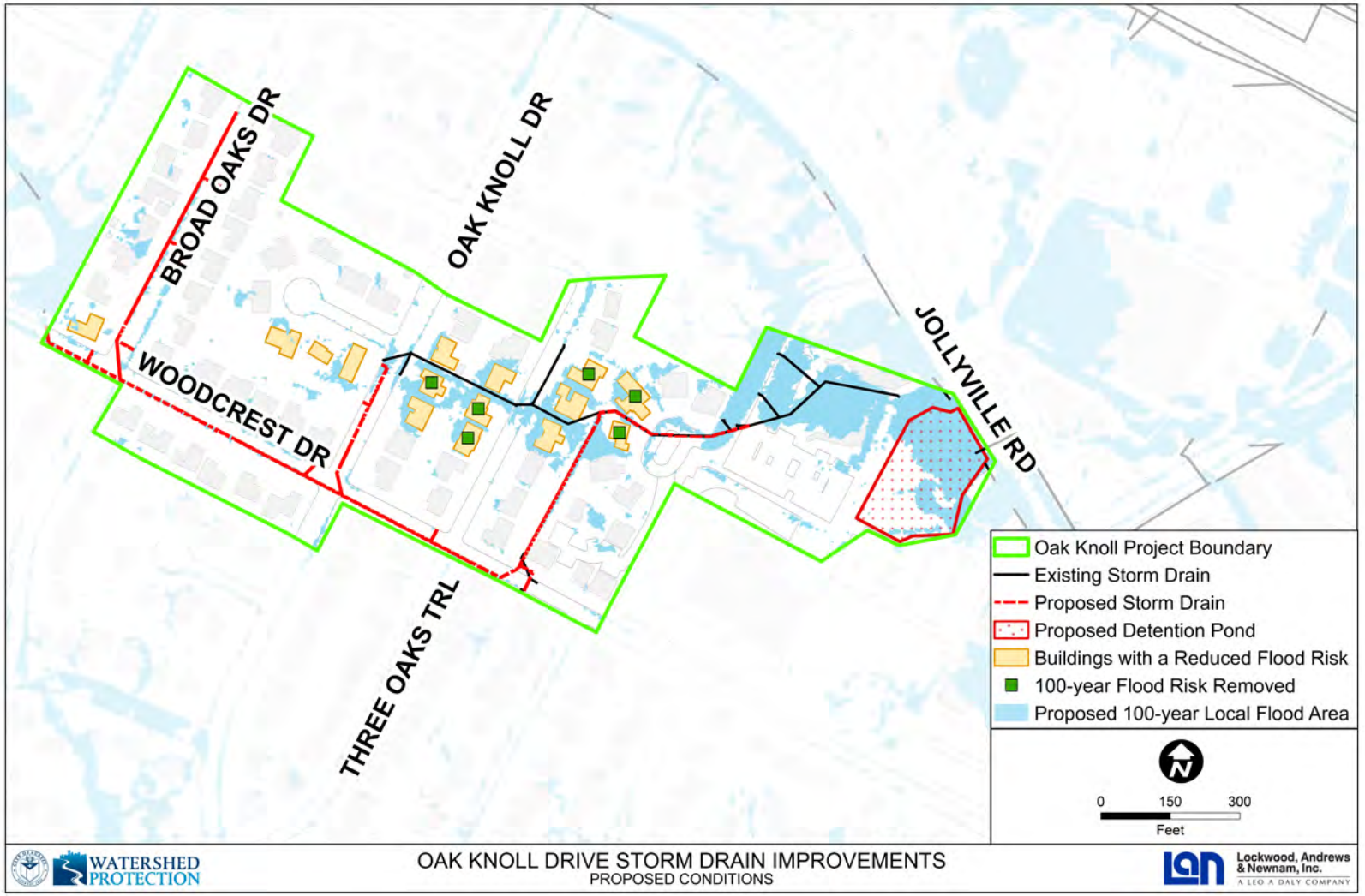

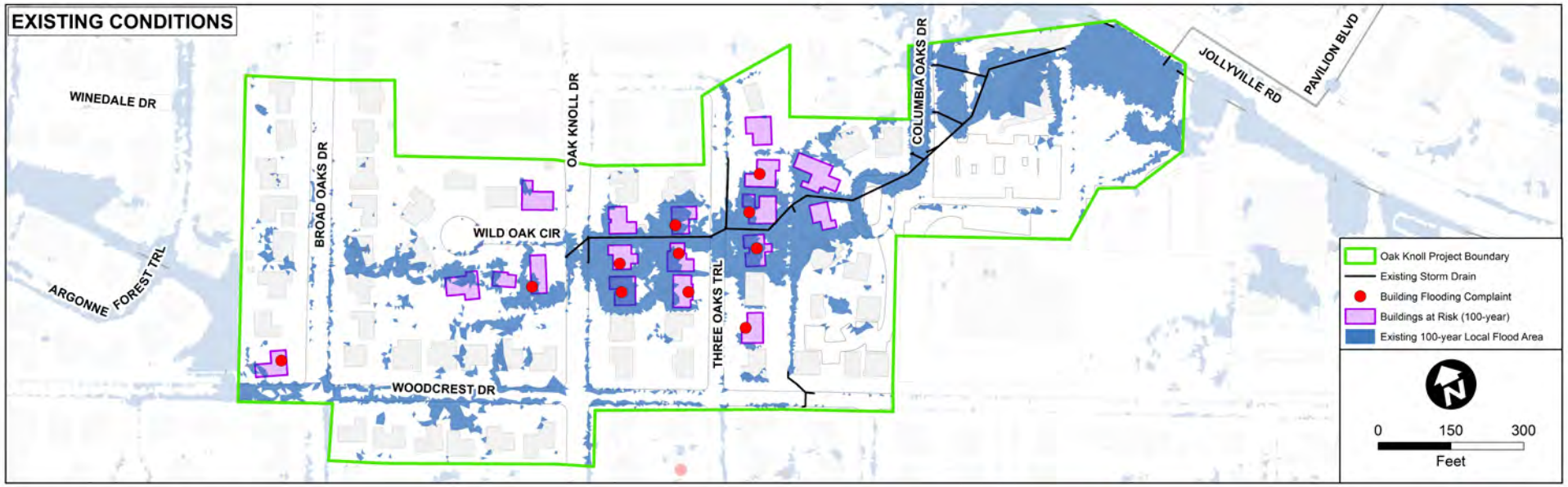

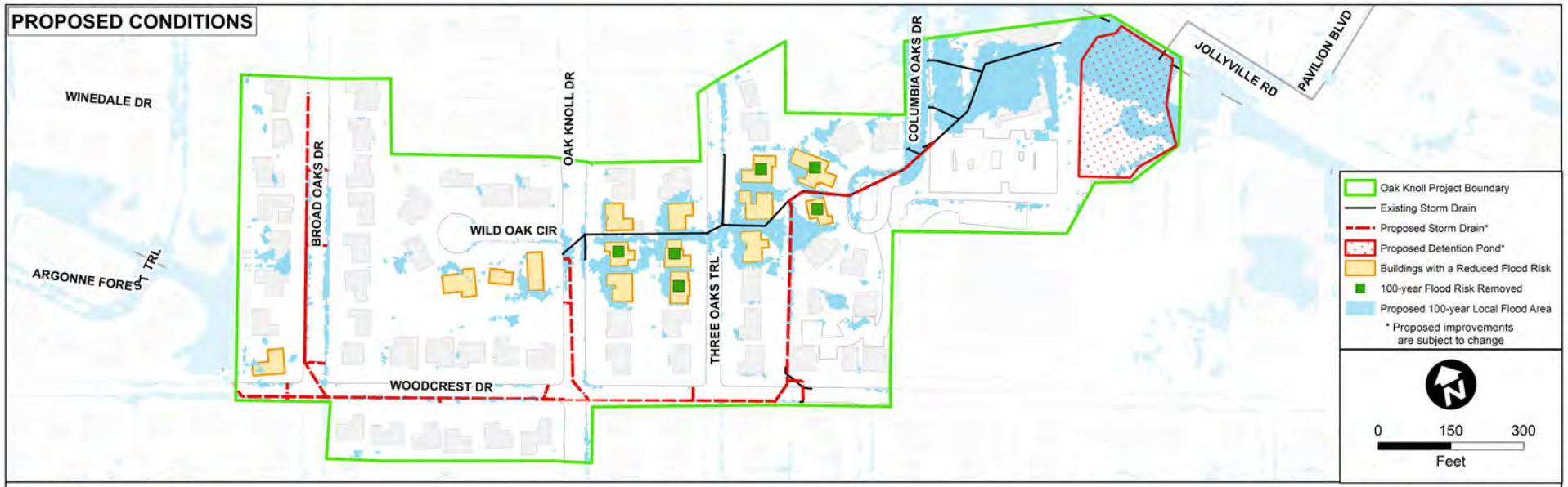

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OAK KNOLL DRIVE STORM DRAIN IMPROVEMENTS

Lockwood, Andrews & Newnam, Inc.
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Schedule

Currently in Design
- Fully funded in Late 2020
- Identified in Bond Recommendation

Public Meetings
- September 17, 2013
- February 27, 2018

Design and Permitting
- May 2018 to Early 2021

Easement Acquisition
- Late 2018 to Late 2020

Construction Begin
- Early 2021

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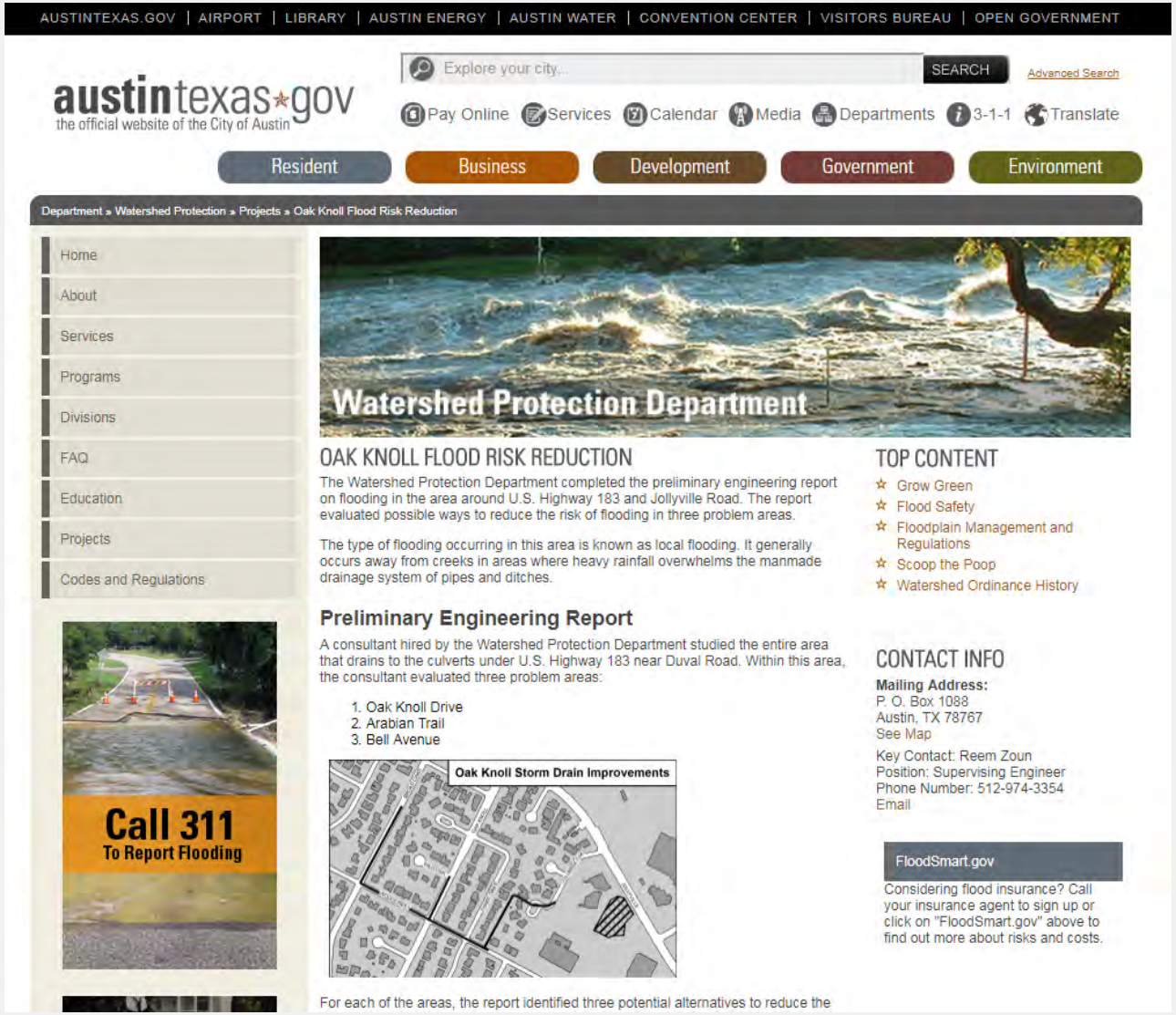
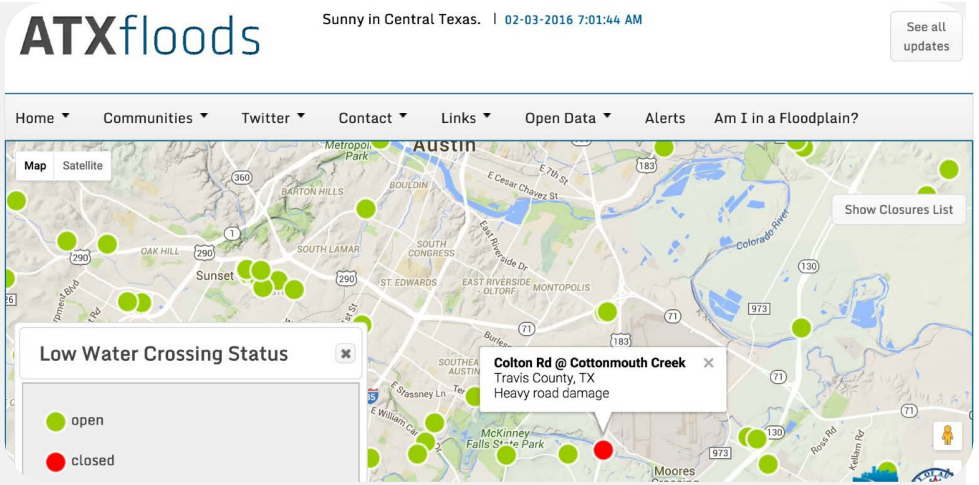


AustinTexas.gov/Stormdrains

Oak Knoll Storm Drain Improvements

Available Resources

- Check ATXfloods.com for road closures
- Sign up for WarnCentralTexas.org
- Report flooding and drainage concerns to 3-1-1
- Consider purchasing flood insurance
- Avoid building in drainage easements
- Email floodpro@austintexas.gov for information about flood-proofing



Questions

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