

# Existing Conditions Analysis Summary Meeting



## Yancey Road Storm Drainage Improvement Project

Woodlawn Baptist Church Gymnasium

March 27, 2014



# Introduction of Staff

- **Charlotte-Mecklenburg Storm Water Services (CMSWS) Staff**
  - Adrian Cardenas, PE – Project Manager
    - Phone - 704-336-4682
    - E-mail - [acardenas@charlottenc.gov](mailto:acardenas@charlottenc.gov)
  - Doug Lozner, PE – Watershed Area Manager
- **US Infrastructure of Carolina, Inc. Engineers & Consultants**
  - S. Lance Strawn, PE – Project Manager
  - Chris Monteleone, EI – Project Engineer

# Housekeeping Items

- Sign-In
- Agenda, and other handouts
- Customer Service Comment Cards
- Question and Answer period after presentation

# Meeting Purpose and Agenda

- Purpose
  - Provide a summary of the Existing Conditions analysis
  - Request input from property owners/residents on the Existing Conditions analysis results
  
- Agenda
  - Charlotte-Mecklenburg Storm Water Services Summary
  - Project Selection and Citizen Involvement
  - Existing Conditions Analysis Summary
  - Alternatives Analysis and future project milestones
  - General Questions and Comments
  - Small group break-out sessions



# Charlotte-Mecklenburg Storm Water Services

- 1911 – Mecklenburg County Drainage Commission created
- 1993 – Charlotte-Mecklenburg Storm Water Services is established

## *What Storm Water Services Does :*

- Improve the water quality of our creeks, lakes and ponds
- Reduce flood risks
  - Preventing or reducing the loss of life, disruption of services, and property damage caused by floods
  - Installing, upgrading and maintaining storm drains and pipes
  - Mapping floodplains and managing floodplain development
  - Preserving and restoring natural stream channels and the beneficial functions of floodplains
- Storm Water Services does not provide drinking water or sanitary sewer service. Water and sewer services are provided by the Charlotte-Mecklenburg Utility Department.

# Why the Yancey Storm Drainage Improvements Project (SDIP) was chosen as an Engineering project

- **Requests for Service from Property Owners (44 Calls to 311 within watershed)**
  - **Inadequate Infrastructure**
    - Road flooding
    - Structure flooding (House, buildings, sheds, etc.)
  - **Deteriorating Infrastructure**
    - Old culverts, pipes, inlets
    - Sink holes
    - Erosion, blockages in streams
- **CMSWS watershed ranking**
- **Larger watershed-wide issues that cannot be managed by spot repairs or without potentially impacting downstream properties**

## What we need from you

- **Feedback on our Existing Conditions modeled results**
- **Additional information on drainage related concerns**
- **Support for the project's future phases**

# Yancey Road Storm Drainage Improvement Project

## Existing Conditions Analysis Results

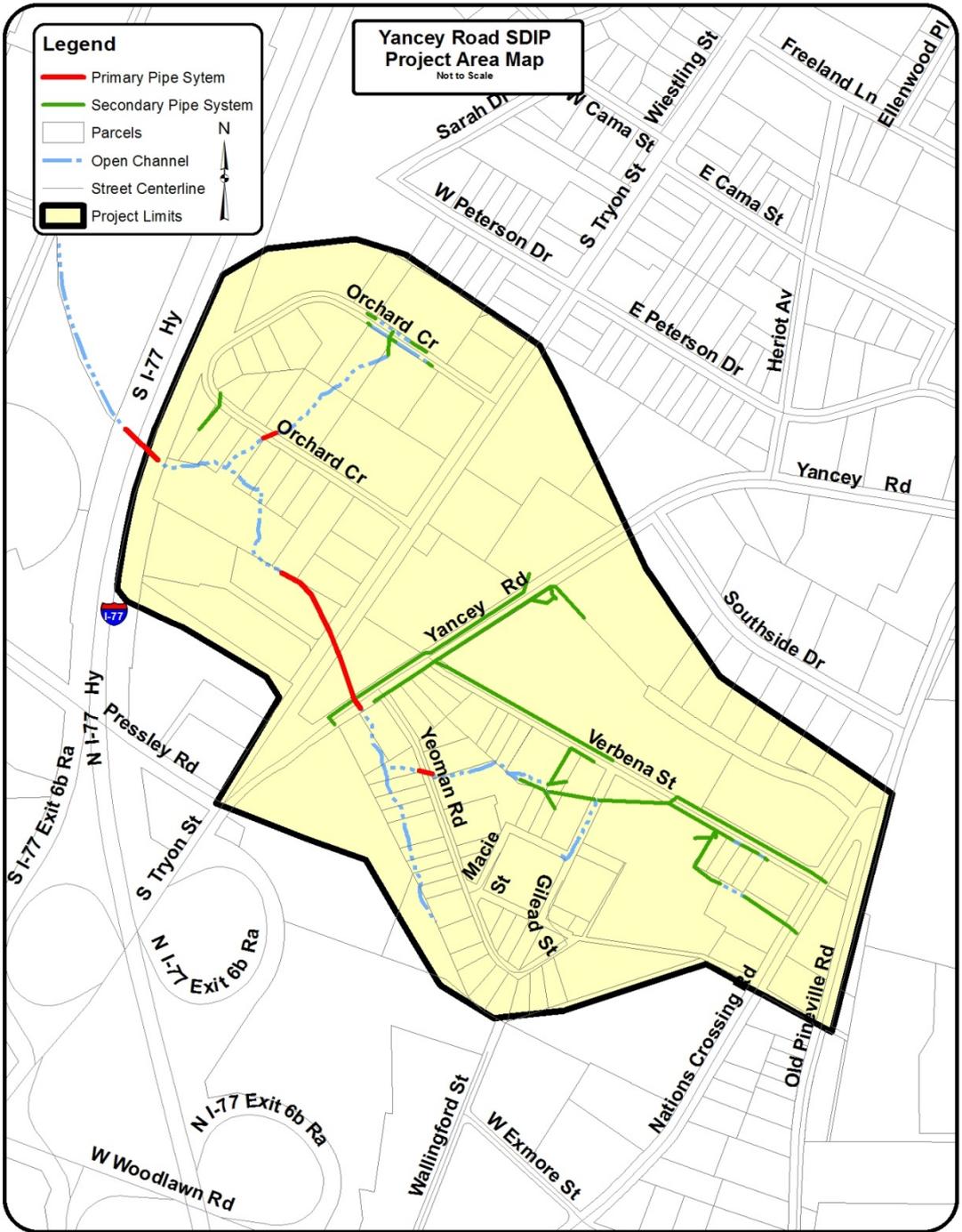


**Legend**

- Primary Pipe Sytem
- Secondary Pipe System
- Parcels
- - - Open Channel
- Street Centerline
- Project Limits

N

**Yancey Road SDIP  
Project Area Map**  
Not to Scale



# Existing Conditions Floodplain Map

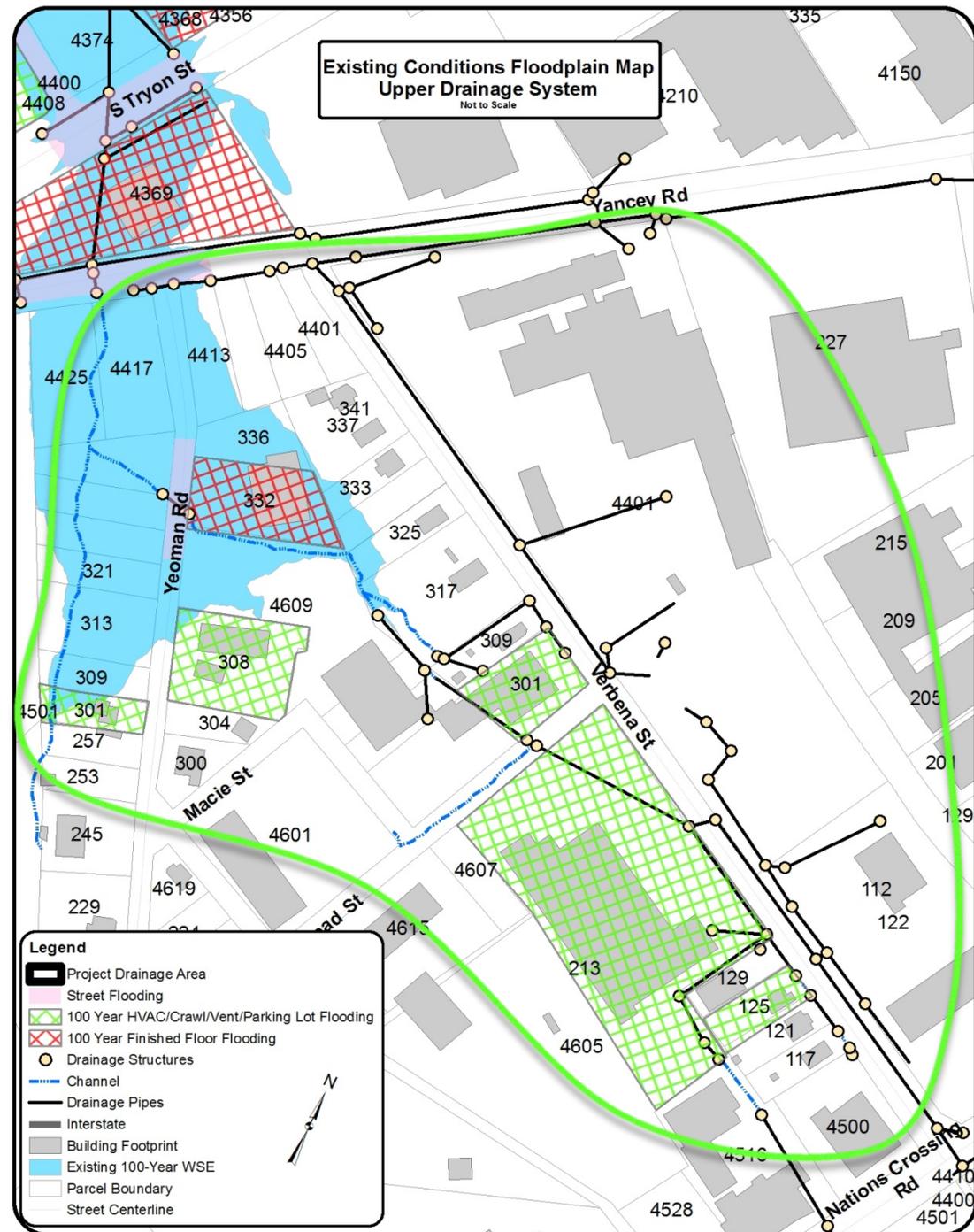
- Illustrates Predicted Extent of Flooding
- 100-Year Storm Event
  - 1 percent chance of storm occurring in any given year

## ***Existing Conditions Results:***

- Four (4) culverts are undersized causing road flooding. Roads included are Yeoman Road, Yancey Road, S. Tryon Street, and Orchard Circle (2 crossings).**
- Seven (7) properties experience HVAC, Crawl Space and/or parking lot flooding during the 100-Year Storm event or less.**
- Three (3) properties experience finished floor flooding during the 100-Year storm event or less.**

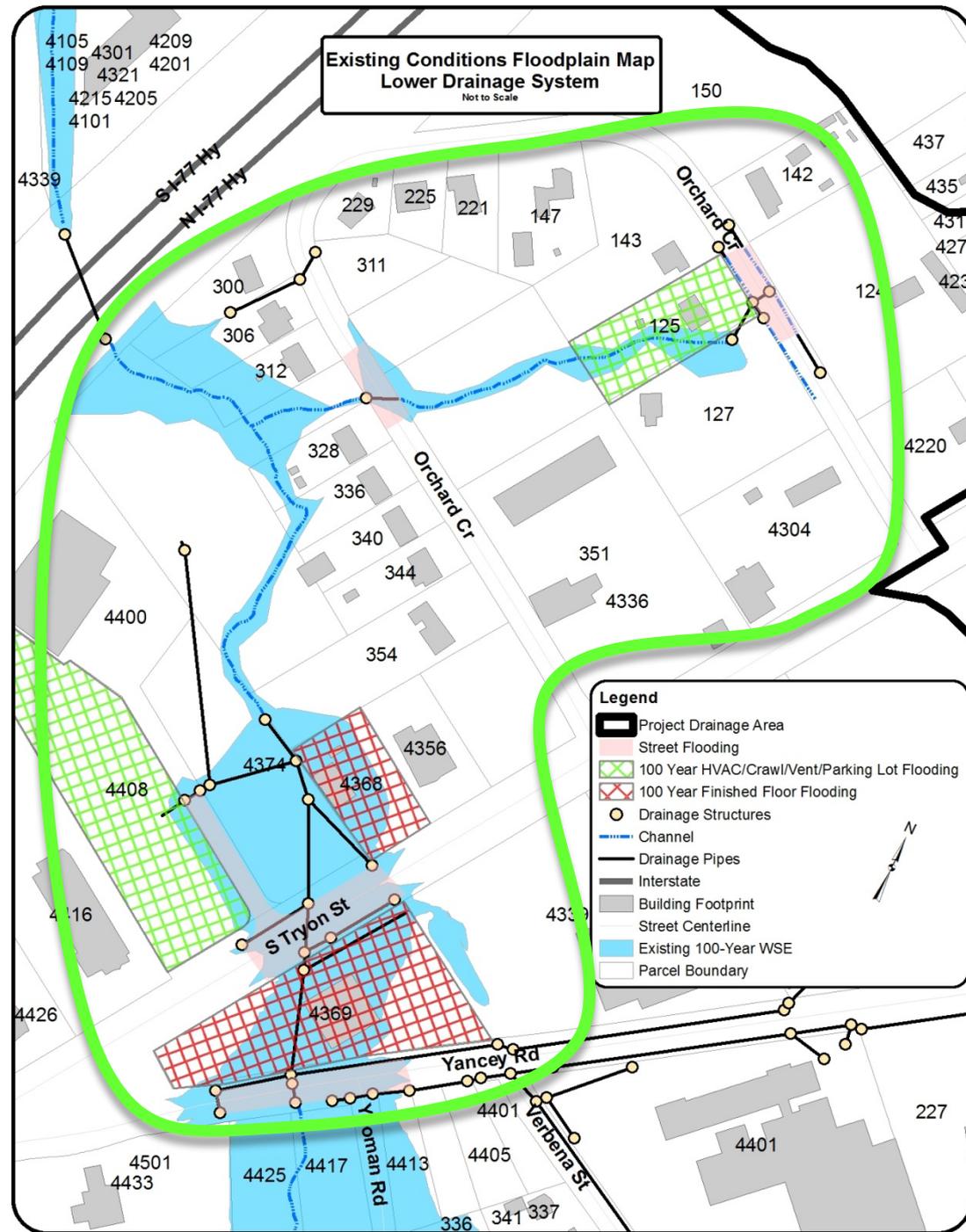
# Existing Conditions Results Upper Drainage System:

- Yeoman Road will flood in the 2-Year storm.
- Five (5) properties will experience HVAC, crawl space, and/or parking lot flooding in the 100-Year Storm or less.
- One (1) property will experience finished floor flooding in the 10-Year Storm.



# Existing Conditions Results Lower Drainage System:

- Yancey Road and S. Tryon Street will flood in the 10-Year Storm.
- Upper Orchard Circle will flood in the 25-Year Storm and Lower Orchard Circle will flood in the 10-Year Storm.
- Two (2) properties will experience HVAC, crawl space, and/or parking lot flooding in the 100-Year Storm or less.
- Two (2) properties will experience finished floor flooding in the 100-Year Storm or less.



# Storm Drainage Improvement Project Phases

## PLANNING (Typically 16 to 23 months)

- **Existing Conditions Analysis – Finding the Problems (Started July 2013)**
- **Alternative Analysis – Finding the Solutions**

## DESIGN (Typically 21 to 34 months)

– *Designing the Solutions*

## PERMITTING (Typically 3 to 9 months, but usually overlaps the design phase)

## EASEMENT ACQUISITION (Typically 12 months, overlaps with the design phase)

## BID (Typically 4 to 5 months)

## CONSTRUCTION (3 months to over 2 years)

# EVALUATING ALTERNATIVES

Coming up with the “BEST” solutions



1. Public Safety

2. Private Property  
Impact



3. Public Cost

# **EVALUATING ALTERNATIVES**

## **Types of Alternatives Considered**

- **Replacement of failing pipes**
- **Different culvert and pipe sizes**
- **Different culvert/pipe shapes and materials**
- **Additional pipes and inlets**
- **New Alignments**
- **Detaining Water to Reduce Flow**
- **Stream Stabilization**
- **Changing stream profiles**

# Path Forward

- Additional information obtained during this meeting will be considered and incorporated into the existing conditions analysis, where applicable.
- Alternatives will be evaluated, and a recommended alternative will be developed.
- CMSWS will then hold a second public meeting to present and obtain feedback on the recommended alternative.

# Wrapping Up

- Please remember to sign-in and fill out a customer service card
- The City and our consultant will stay here to answer any specific questions you may have
- General Discussion

**Thank you for coming to the meeting!**