Acknowledgement

• Design Partners
  – City
  – Callander and Assoc.

• Program Partners
  – Bay Area Clean Water Agencies
  – San Francisco Estuary Partnership
  – Santa Clara Valley Urban Runoff Pollution Prevention Program
Presentation Overview

• Background
• Lessons Learned
  • Utilities – How to Deal
  • Soil – Blessing and Curse
  • Public Outreach – When Is It Enough
• Questions & Comments
City of Campbell
Hacienda Avenue
• Excessively wide right of way
• Poorly defined travel lanes
• PCI’s ranged from 5 to 32
• Inconsistent pavement sections
• Severe potholes
• Lack of sidewalks
• Uneven walking surface
• Missing ADA ramps
• No defined bike lane
• Potholes, rough pavement
• Parked cars
• Inadequate storm drain facilities
• Areas of localized flooding
• Flat grate inlets at various low point
• Outdated bus stops
• Poorly located

• Inconsistent street lighting
• HPS street lights on wood poles
Please fix me!
## Source/Use of Funds

### Source of Funds:
- City Funds (60%) $4,023,525
- Grant Funds (40%) $2,634,000
**Total Source of Funds** $6,657,525

### Use of Funds:
- Design (6%) $429,000
- Construction Engineering (7%) $459,000
- Construction (87%) $5,769,525
**Total Use of Funds** $6,657,525
Schedule

• Original proposal to include Hacienda in CIP 2007-2008
• Grant applications and awards 2009-2012
• Approval of conceptual design Nov. 2012
• PS&E approval Oct. 2013
• Caltrans – authorization to proceed (E76) Feb. 2014
• Advertise for bids / Begin utility relocations March 2014
• Open bids April 2014
• Award construction contracts June 2014
• Begin construction July 2014
• End construction Fall 2015
Design Elements
**Condition:**
Pavement Failure

**Recommended Treatment:**
FDR - Full depth pavement reclamation

- **What is FDR?**
  - Recycling Process
  - Cement Mixing

- **Why use FDR?**
  - Environmentally Friendly
  - Cost Effective
**Condition:**
Poor Driveability

**Recommended Treatment:**
Provide well defined vehicle and parking lanes

- Reduce street width
- Install consistent 11’ vehicle lanes
- Install defined 8’ parking lanes
- Eliminate ability for cars to pass on the right
**Condition:**
Poor Walkability

**Recommended Treatment:**
Improve pedestrian safety

- Continuous sidewalks
- Corner bulb-outs
- ADA accessibility ramps
- Separate sidewalks from roadway
- Address storm drainage
**Condition:**
Poor Bikeability

**Recommended Treatment:**
Install consistent, well defined bike lanes

- Continuous striped bike lane
- Smooth pavement surface
- Connects to other bike facilities
**Condition:**
Not transit friendly

**Recommended Treatment:**
Consistent bus stop treatments

- Easy to find
- Inviting atmosphere
- Landscaping / shade
**Condition:** Poor night vision

**Recommended Treatment:** Install a consistent and efficient street lighting system

- Remove existing HPS street lights
- Install City standard street lighting with uniform coverage
- Use LED street lights for maximum efficiency
**Condition:**
Major puddles, inadequate storm drainage

**Recommended Treatment:**
Redesign street, treat stormwater in bio-infiltration basins

- Move curb line toward street - install bio-infiltration
- No-mow sod and diverse plantings
- Basins designed for 80% capture
- Street trees in parking lane
Storm Water Treatment

• Treatment Details
  – Sized Using SCVURPPP Methodology
  – Combination Flow and Volume Approach
  – Total Project Drainage Area = 18 acres
  – 63 Individual Drainage Areas
  – Capturing 0.95 ac-ft of runoff
    (Greater than 80% of the average annual rainfall-
     project wide)
Storm Water Treatment (cont’d)

- Bio-Infiltration Areas
  - 3 ft Deep Section
  - 3:1 Side Slopes
  - Overflow Pipes
  - Perc. at 4 in/hr
Before
(No Bio-Infiltration)

After
(Bio-Infiltration)
Healthy Street (90% Complete)
Lessons Learned

• Utilities – How to Deal
• Soil – Blessing and Curse
• Public Outreach – When Is It Enough
Utility – How to Deal

Approval of conceptual design  Nov. 2012
Utility Design Coordination
PS&E approval  Oct. 2013
Utility Relocation  Mar. 2014
City Construction Contract Awarded  Jun. 2014
Utility – How to Deal (Cont’d)
Soils - Blessing and Curse

The Good Stuff
• Percolation Holes - 8
• 2-ft Deep – 0.5 in/hr
• 3-ft Deep – 4 in/hr
Blessing and Curse (Cont’d)

The Bad Stuff

• Inconsistent size and amount of cobblestones
• Added rock crushing process
• Additional two weeks of roadway closure
• $300,000
Blessing and Curse (Cont’d)

- Slow progress
- Construction sequence
Public Outreach

– Initial property owners meetings – September 2012
– Neighborhood mailings/meeting – November 2012
– Neighborhood 50% final design meeting – June 2013
– Neighborhood update mailing – April 2014
– Presentations at local schools – June 2014
– Quarterly construction meetings – Summer 2014 - Summer of 2015
– Next Door, Facebook, hand delivered flyers
– Website Updates – Project plans, FAQ’s, Road Closure/Driveway Closure Charts
Public Outreach – Notifications

- Road closed to thru traffic for one month
- Advance notice on arterials via changeable message signs
- Detours and signage allowed local traffic only on Hacienda
- Driveways completely closed at four different times during project
- Residents notified by City’s website – updated daily
- Some closures removed by residents
Property Access – Public Notifications

- Even When You are Done

You Are Not!
Lessons Learned

• Utilities – How to Deal
  • Early, Consistent, Persistent

• Soil – Blessing and Curse
  • Testing As Much As Possible

• Public Outreach – When Is It Enough
  • It’s Never Enough
Questions - Comments