

**Town of Los Altos Hills
Sanitary Sewer Collection System Progress Report
Contract Year 2015**

**Reporting Month: August 2015
Report Date: October 2, 2015**

I. INTRODUCTION

Figure 1 shows the Town of Los Altos Hills sewer system.

- Area served: 8.4 sq miles
- Miles of sewer pipelines: 56
- Number of residential parcels: 1,750
- Number of non-residential connections: 8

Figure 1. Town of Los Altos Hills Sewer System



II. PUBLIC WORKS DIRECTOR/CITY ENGINEER HIGHLIGHTS

a. SEWER SYSTEM MAINTENANCE HIGHLIGHTS

During the month of August 2015, the Town’s sewer maintenance contractor, West Bay Sanitary District (West Bay), completed all contract tasks on schedule. This month, West Bay began the first year of a new 3-year contract with the Town. No significant issues were noted during cleaning, CCTV inspection, or pump station inspections. Also, there were no recorded overflows in the system during this period.

A summary of completed tasks is provided in Table 1, below. More detailed information is provided later in this report, and is also shown in the attached maps.

Table 1. Summary of Completed Tasks (Contract Year August 2015 – July 2016)

Task	Month of August 2015	Contract Year to Date	Compare to One Year Goal
Sewer Cleaning <ul style="list-style-type: none"> • Biennial (24-month) and Annual (12-month) Schedule • High Frequency (< 12-month) • Other, Unscheduled Cleaning 	<ul style="list-style-type: none"> • 1.9 miles • 0 miles • 0 miles 	<ul style="list-style-type: none"> • 1.9 miles • 0 miles • 0 miles 	7.5% of Goal (8.3% of Time Elapsed)
Pump Station <ul style="list-style-type: none"> • Preventive Maintenance • Unscheduled repairs 	<ul style="list-style-type: none"> • 4X • 0 	<ul style="list-style-type: none"> • 4X • 0 	8.3% of Goal
CCTV Inspection <ul style="list-style-type: none"> • Routine Schedule (30 mos) • Other Unscheduled CCTV 	<ul style="list-style-type: none"> • 1.1 mile • 0.8 mile 	<ul style="list-style-type: none"> • 1.1 mile • 0.8 mile 	10.5% of Goal
SSO Response <ul style="list-style-type: none"> • No. of SSOs – Sewer Mains 	<ul style="list-style-type: none"> • 0 	<ul style="list-style-type: none"> • 0 	N/A

Figure 2a shows previous contract year (PREV) cleaning results and current contract year (CURR) cleaning progress for the Town's pipes. Since August 2014, 35.5 percent of the pipes within the Town's collection system have been cleaned. Cleaning results from the previous contract year are shown in this chart. The two primary maintenance issues found in the pipes within the system from the previous year have been debris and roots. Debris found in pipes comprised of gravel, rock, paper, rags, egg shells, ground, grit, mud, and other solids. During the previous year, 18.9 percent of the cleaned pipes had debris, 8.6 percent had roots, and 6 percent had clear results.

Figure 2a. Cleaning Progress as of August 31, 2015

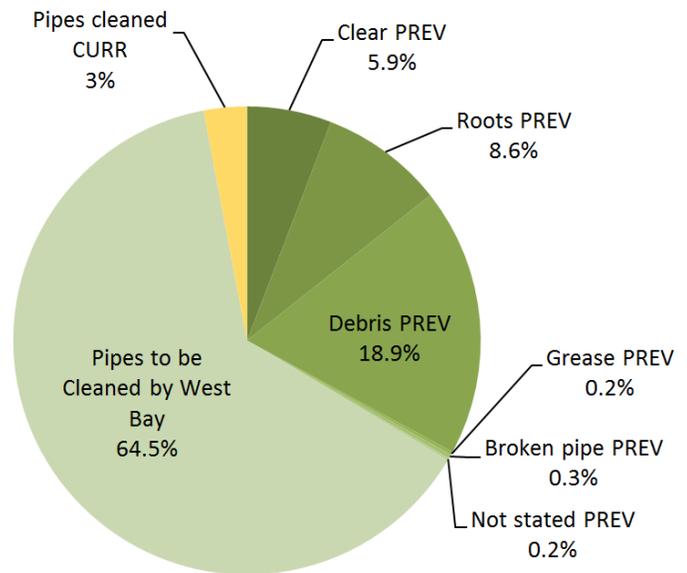


Figure 2b shows cleaning results for the Town's pipes for the current contract year only. Figure 2b expands the wedge shown in yellow in Figure 2a. In August 2015, 22.2 percent of the cleaned pipes had debris, 18.5 percent had roots, and 18.5 percent had clear results. There was no mention of grease or broken pipe debris found during the August cleaning period.

Figure 2b. Cleaning Results for the Current Year to Date. (Chart represents 3% of system).

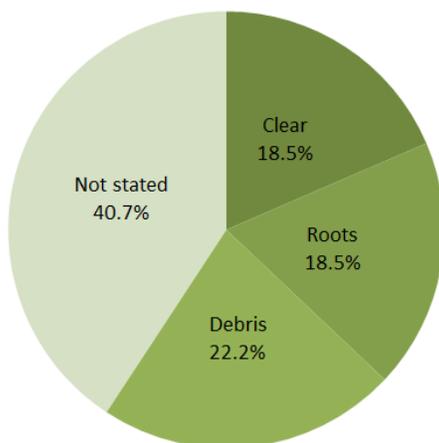
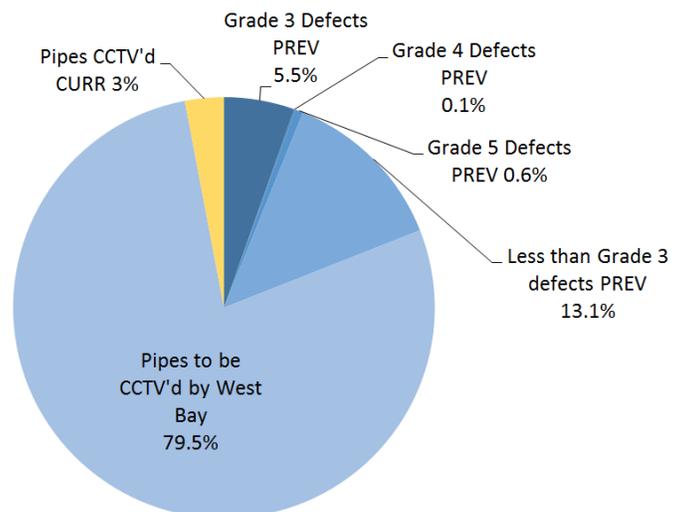


Figure 3a. CCTV Inspection Results as of August 31, 2015 (Structural Defects)



Figures 3a and 3b show CCTV inspection results for structural and O&M defects, respectively. As of August 2015, 20.5 percent of the system has been inspected. Of the 20.5 percent, 3 percent was inspected during the current year. During the previous year, 18.6 percent of the pipes that were inspected had National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) Structural Grade 3 defects or less. NASSCO PACP characterizes

Structural Grade 3 defects as requiring action in 10 or more years. The remaining 0.7 percent of pipes inspected in the prior year had structural Grade 4 or 5 defects, which are characterized by NASSCO as being likely to require action within 5 to 10 years.

Less than three percent of the inspected pipes have NASSCO PACP Operations and Maintenance (O&M) Grade 4 or 5 defects. These pipes have been or will be placed on the hot spot list until the O&M issues are resolved. The remaining 19 percent of inspected pipes have O&M defects of 3 or below. The remaining 79.5 percent of pipes in the system require inspection by West Bay.

Figures 4a and 4b show structural and O&M defects found during August 2015 inspections. These charts reflect results for 3 percent of the system. During this period, 34.5 percent of inspected pipes had no structural defects, 72.7 percent had Grade 3 defects or less, and 7.3 percent had Grade 4 or 5 defects.

Less than 2 percent of the pipes that were inspected this new contract year have NASSCO PACP O&M Grade 5 defects and 45.5 percent have been recorded to have less than Grade 3 defects. In addition, there were no recorded O&M Grade 4 defects in the pipes during this reporting period.

Figure 3b. CCTV Inspection Progress as of August 31, 2015 (O&M)

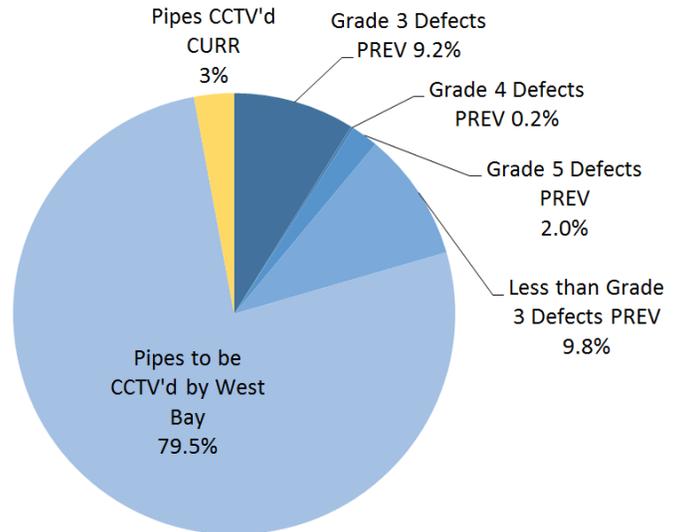


Figure 4a. CCTV Inspection Results CURR August 2015 – July 2016 (Structural). (Chart represents 3% of system).

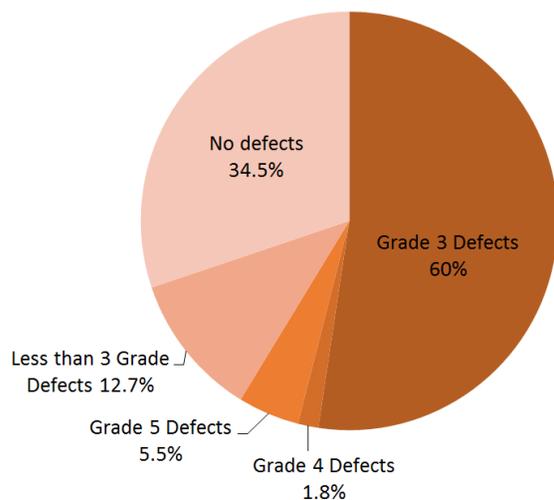


Figure 4b. CCTV Inspection Results CURR August 2015 – July 2016 (O&M). (Chart represents 3% of system).

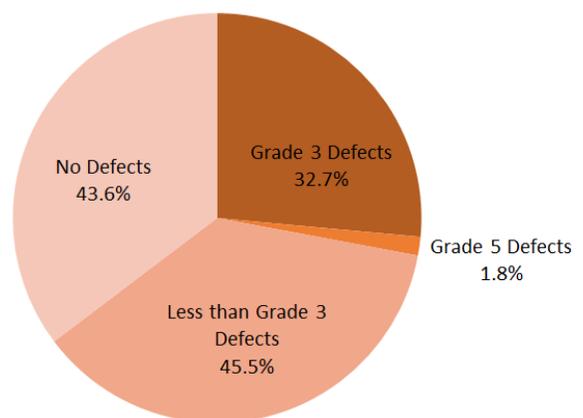


Table 2 on the following page shows SSOs to date by cause. Over the past 5 years, the predominant cause of SSOs has been roots. However, as indicated by the reduced number of SSOs in 2015, the use of chemical root control, combined with improved sewer maintenance methods in place by West Bay, have reduced root-related issues within the Town’s sewer system. During this reporting month, there were no recorded overflows that occurred in the Town’s system.

Table 2. 2015 SSOs to August 31, by Cause

Cause of SSOs	2015	2014	2013	2012	2011
Root Intrusion	2	16	9	10	18
Debris	0	1	2	0	1
Grease	0	0	0	0	0
Structural	0	1	0	1	1
Pump Station Failure	0	0	0	1	0
Other	1	0	1	2	1
Total SSOs/yr	3	18	12	14	21

Attachment I includes maps providing additional information on cleaning and CCTV inspection results.

b. Summary of Meetings Held during Reporting Month

There were no meetings held during this reporting month.

c. Computerized Maintenance Management System (CMMS) Updates

During the reporting month, aside from routine input of cleaning and CCTV inspection progress to date, there were no further changes made to the CMMS.

d. Geographic Information System (GIS) and Progress on Manhole Data Collection

During the reporting month, West Bay made no changes to the Town’s sewer GIS maps. West Bay collected GIS map changes during work completed in the first year of the contract, and will incorporate these changes into the current maps by December 2015.

VWHA is compiling manholes that will be important for development of the hydraulic model, and will provide a map and list of manholes to West Bay needed for data collection by October 2015.

e. Maintenance Planning

During the reporting month, no issues were identified to warrant changes to the Town’s cleaning or CCTV inspection program. West Bay will continue to clean basins that have the highest risk for maintenance-related SSOs, including Branch 5 and the remainder of Branch 2, as defined by the Town’s GIS maps. VWHA is currently reviewing other branches in the system as

part of maintenance planning, and will provide recommendations to the Town and West Bay by October 2015.

f. Other

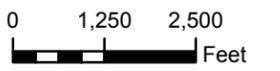
This section provides updates on the Town’s sewer system management activities that are completed in addition to operations, maintenance, and SSO response.

Staff Support Activities	Progress	Comments
2015 Sewer Capital Improvements <ul style="list-style-type: none"> • Percent Completion • Line replacement • Spot repairs 	<ul style="list-style-type: none"> • 100% • 2,735 LF • 192 LF 	<ul style="list-style-type: none"> • The 2015 Sewer Capital Improvement Project is substantially complete.
SSMP 3 rd Party Review	<ul style="list-style-type: none"> • Town has entered into a contract with Humphrey Consulting for 3rd party review of the Town’s SSMP. • Audit began on July 2015 	<ul style="list-style-type: none"> • Expected completion date is December 2015
2016 Sewer CIP	<ul style="list-style-type: none"> • VWHA collecting data through July 31, 2015 for development of program 	<ul style="list-style-type: none"> • The program will be developed using data collected through July 31, 2015 • A draft pipeline and pump station CIP will be provided to Town staff for discussion by December 2015.
Cleaning program	<ul style="list-style-type: none"> • VWHA reviewing current cleaning program to prioritize basins to receive cleaning in the latter part of 2016. 	<ul style="list-style-type: none"> • Recommendations will be developed in collaboration with West Bay and included in the 2015-16 West Bay sewer maintenance program. • Preliminary results will be presented to Town staff for discussion by October 31, 2015.
2015-16 Hot Spot program	<ul style="list-style-type: none"> • VWHA reviewing current hot-spot 	<ul style="list-style-type: none"> • Recommendations for the ongoing program will be

Town of Los Altos Hills
 Sewer Collection System Maintenance Progress Report
 August 2015

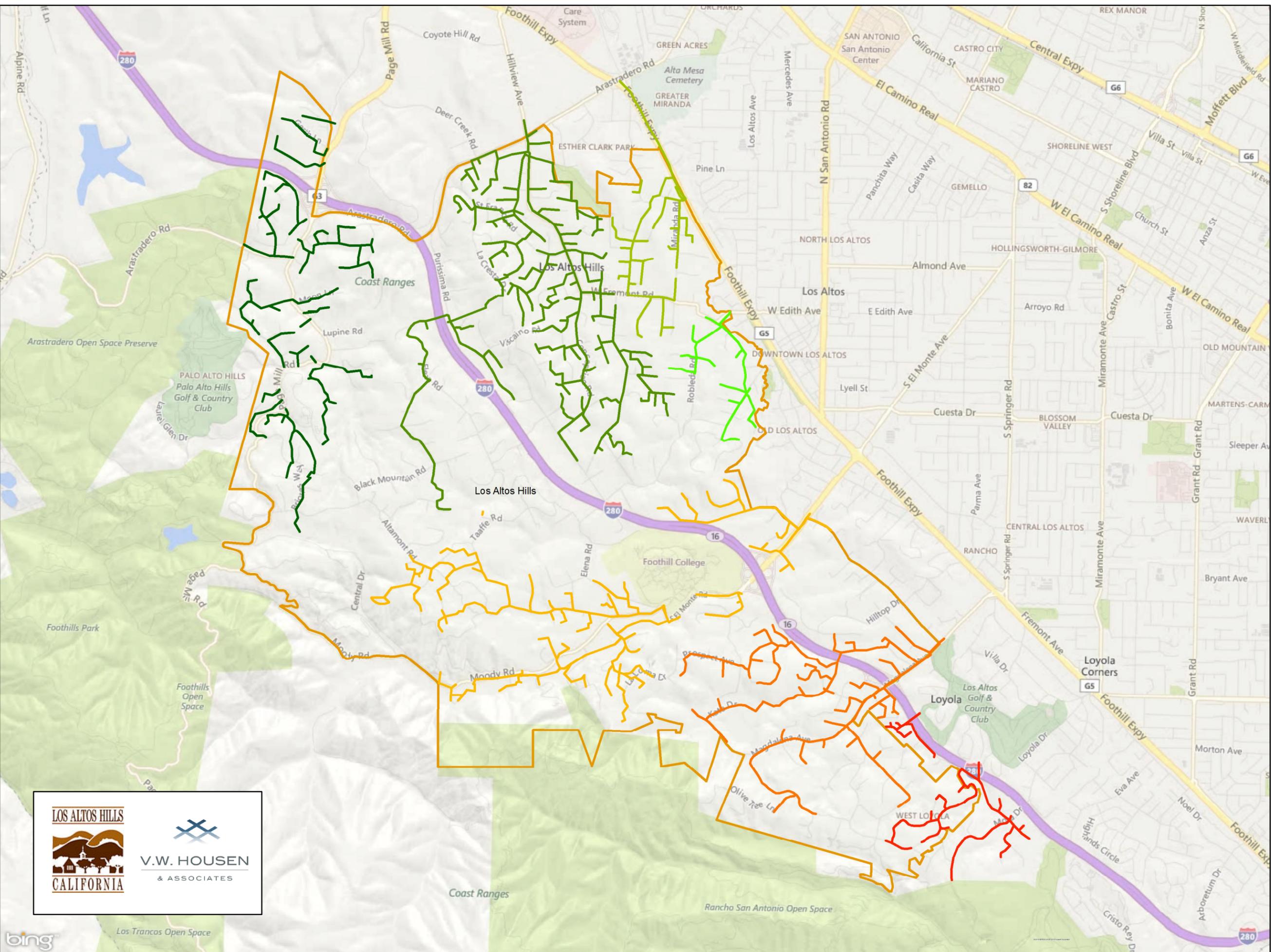
Staff Support Activities	Progress	Comments
	cleaning program	developed in conjunction with cleaning program review. <ul style="list-style-type: none"> • Preliminary results will be presented to Town staff for discussion by October 31, 2015.
CCTV inspection program	<ul style="list-style-type: none"> • VWHA reviewing current CCTV inspection program 	<ul style="list-style-type: none"> • Recommendations for ongoing program will be developed in collaboration with West Bay and included in the annual 2015-16 West Bay sewer maintenance program. • Preliminary results will be presented to Town staff for discussion by October 31, 2015.
Sanitary Sewer Master Plan <ul style="list-style-type: none"> • Manhole data collection • 2015-16 wet weather flow data 	<ul style="list-style-type: none"> • Task have not been initiated • Town has contracted with V&A Consulting to obtain system flow data 	<ul style="list-style-type: none"> • Beginning of Fall 2015, WBSD will collect manhole rim elevations, as well as depth-to-invert measurements for all pipes entering/leaving each manhole that is identified as needed for development of the sewer hydraulic model. • If sufficient rainfall occurs and the required data is collected, Town staff will move forward with consultant procurement for the Sewer System Master Plan update.

Town of Los Altos Hills Sanitary Sewer Collection System Map Sewer Basins (Branches)

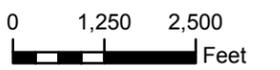


Legend

- Branch 1
- Branch 2
- Branch 3
- Branch 4
- Branch 5
- Branch 6
- Branch 7
- LAH Boundary



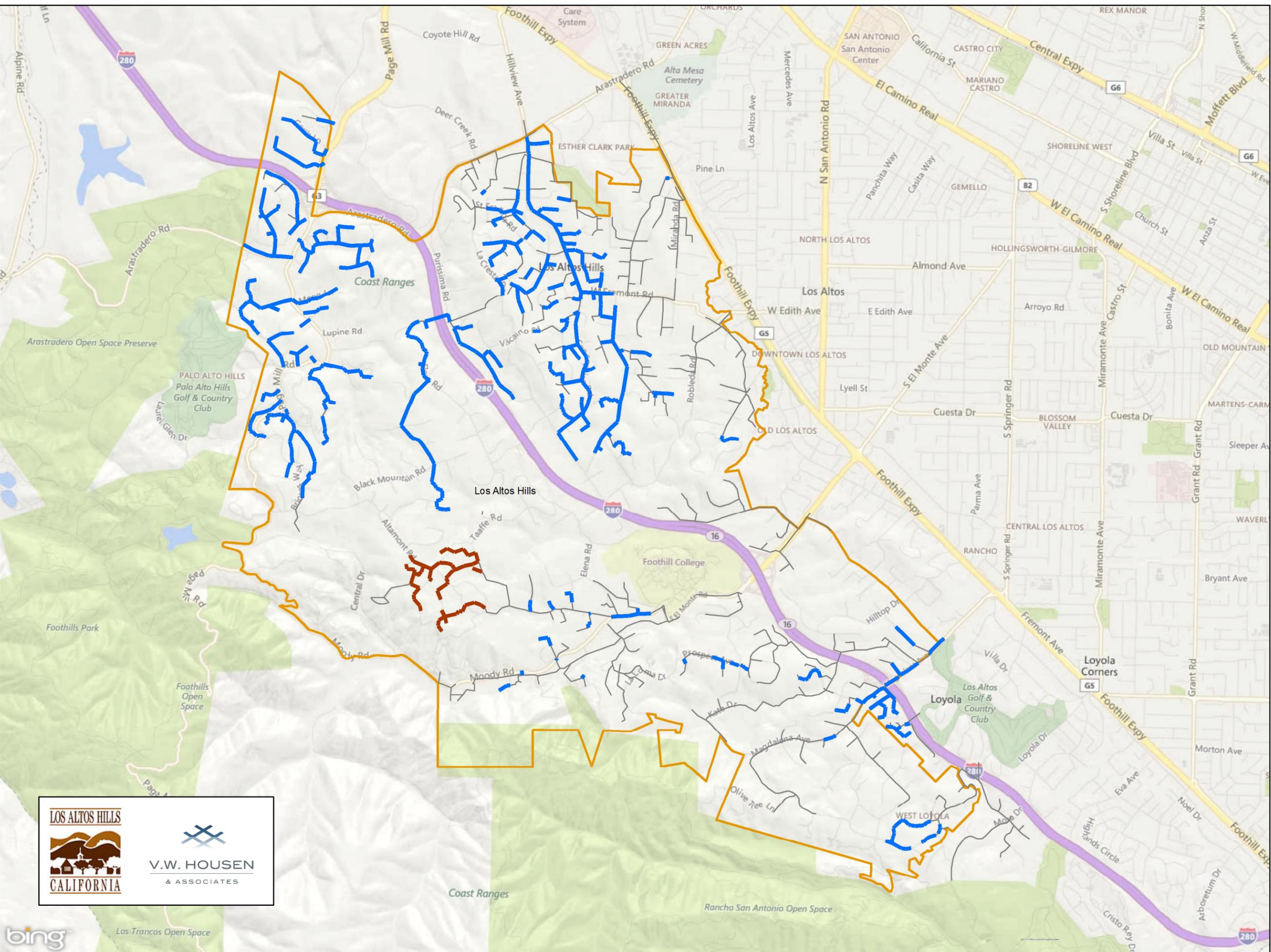
Town of Los Altos Hills
 Sanitary Sewer Collection System Map
 Pipes Cleaned from Aug 2014 - Aug 2015



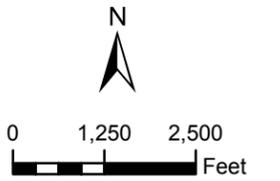
Legend

-  Qtr 1 (Aug 15 - Jul 16)
-  Prev Yr (Aug 14 - Jul 15)
-  Town of Los Altos Hills
-  LAH Boundary



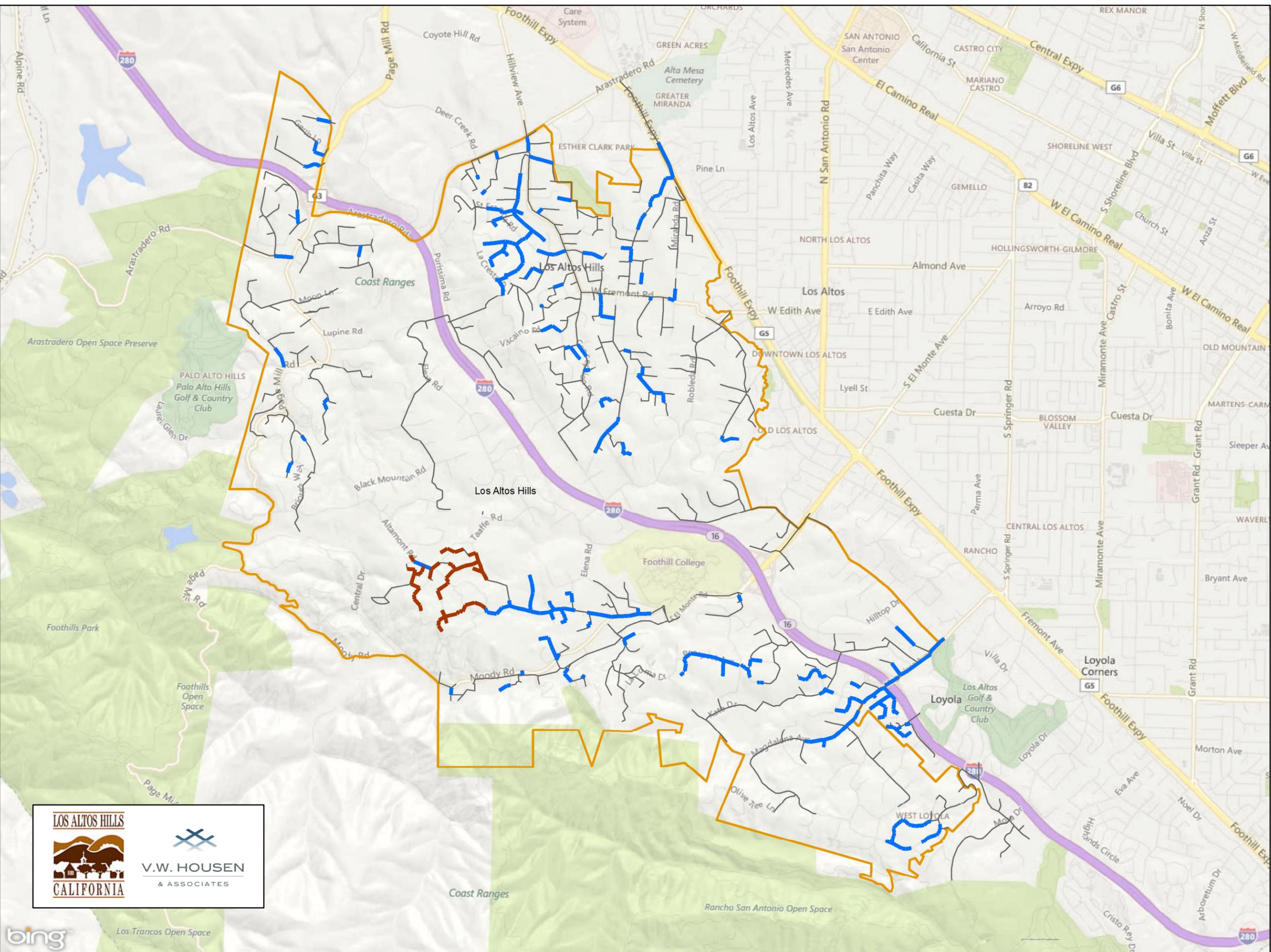


Town of Los Altos Hills Sanitary Sewer Collection System Map Pipes CCTV'd from Aug 2014 - Aug 2015



Legend

- Qtr 1 (Aug 15 - Jul 16)
- Prev Yr (Aug 14 - Jul 15)
- Town of Los Altos Hills
- LAH Boundary



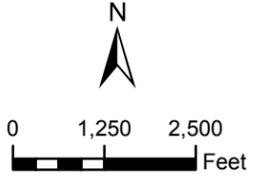
LOS ALTOS HILLS

V.W. HOUSEN
 & ASSOCIATES



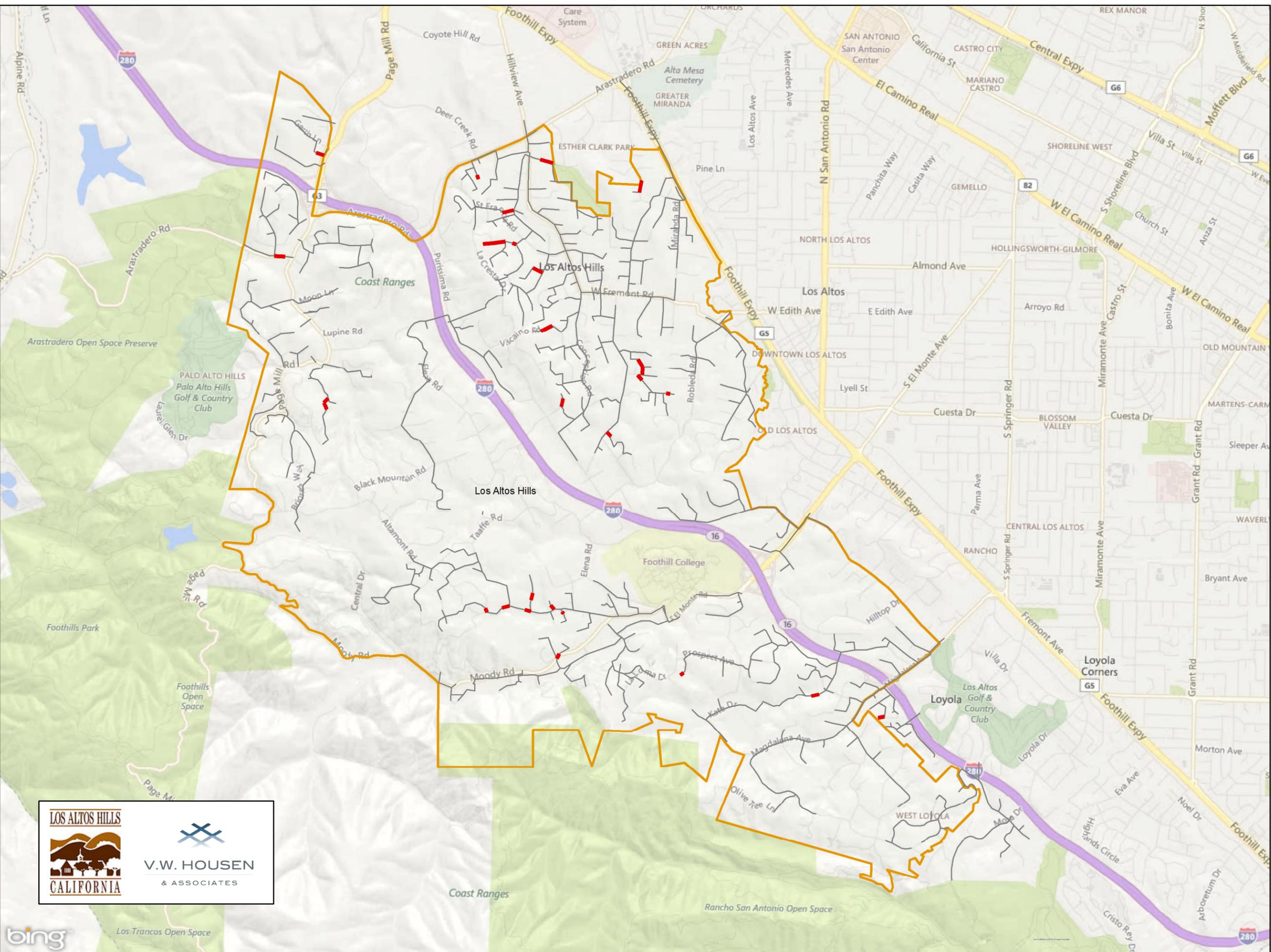
Los Trancos Open Space

Town of Los Altos Hills Sanitary Sewer Collection System Map Pipes Repaired and Rehabilitated (R&R) in 2015



Legend

- 2015 CIP Pipes
- Town of Los Altos Hills
- LAH Service Area



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