



October 2, 2023

Eileen White, Executive Director  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Subject: Annual Report of Stormwater Program Implementation for FY 2022/2023

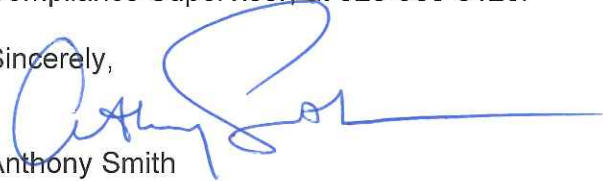
Dear Ms. White:

Enclosed is the City of Livermore's Annual Report of Stormwater Program Implementation for the FY 2022-2023.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing of violations.

If you have questions regarding this report, please contact Steven Aguiar, Environmental Compliance Supervisor, at 925-960-8126.

Sincerely,



Anthony Smith  
City of Livermore  
Water Resources Division Manager  
Public Works  
Phone number: 925-960-8100

cc: Judy Erlandson, Acting Public Works Director  
Paul Spence, Community Development Director

Member Agencies:

Alameda

Albany

Berkeley

Dublin

Emeryville

Fremont

Hayward

Livermore

Newark

Oakland

Piedmont

Pleasanton

San Leandro

Union City

Alameda County

Alameda County

Flood Control and

Water Conservation

District (District)

Zone 7 of the District



**Fiscal Year 2022-2023**  
**Annual Report of Stormwater**  
**Program Implementation**

**Submitted to:**  
**California Regional Water Quality**  
**Control Board**  
**San Francisco Bay Region**

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Note that Provisions C.14 Bacteria Control for Impaired Water Bodies, C.18 Control of Sediment Discharges from Coastal San Mateo County Roads, and C.19 Cities of Antioch, Brentwood, and Oakley, Unincorporated Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District Requirements are not relevant to Permittees in Alameda County and are not included in this report.

Section 1 – Permittee Information

Background Information				
<b>Permittee Name:</b>	City of Livermore			
<b>Population:</b>	87,955 (According 2020 U.S. Census)			
<b>NPDES Permit No.:</b>	CAS612008			
<b>Order Number:</b>	R2-2022-0018			
<b>Reporting Time Period (month/year):</b>	July 2022 through June 2023			
<b>Name of the Responsible Authority:</b>	Anthony Smith	<b>Title:</b>	Water Resources Division Manager	
<b>Mailing Address:</b>	101 W. Jack London Blvd			
<b>City:</b>	Livermore	<b>Zip Code:</b>	94551	<b>County:</b> Alameda
<b>Telephone Number:</b>	925-960-8100	<b>Fax Number:</b>	925-960-8105	
<b>E-mail Address:</b>	<a href="mailto:awsmith@livermoreca.gov">awsmith@livermoreca.gov</a>			
<b>Name of the Designated Stormwater Management Program Contact (if different from above):</b>	Steven Aguiar	<b>Title:</b>	Environmental Compliance Supervisor	
<b>Department:</b>	Public Works/Water Resources Division			
<b>Mailing Address:</b>	101 W. Jack London Blvd.			
<b>City:</b>	Livermore	<b>Zip Code:</b>	94551	<b>County:</b> Alameda
<b>Telephone Number:</b>	925-960-8126	<b>Fax Number:</b>	925-960-8105	
<b>E-mail Address:</b>	<a href="mailto:smaguiar@livermoreca.gov">smaguiar@livermoreca.gov</a>			

**Section 2 – Provision C.2 Reporting Municipal Operations**

**Program Highlights**  
 Highlight/summarize activities for reporting year:

Summary:  
 The City of Livermore actively participates in the countywide program's Municipal Operations Committee/Work Group. During this reporting period, Mike Wells (Collections Systems Supervisor) continued to serve as the chair of this committee. Refer to the C.2 Municipal Operations section of the countywide Program's FY 22-23 Annual Report for a description of activities implemented at the countywide and/or regional level.

**C.2.a. ► Street and Road Repair and Maintenance**

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

Y	Control of debris and waste materials during road and parking lot installation, repaving, repair, or maintenance activities from polluting stormwater
Y	Control of concrete slurry and wastewater, asphalt, pavement cutting, and other street and road maintenance materials and wastewater from discharging to storm drains from work sites
Y	Sweeping, vacuuming, and/or other dry methods to remove debris, concrete, or sediment residues, and spills or leaks, from work sites upon completion of work

Comments: No additional comments.

**C.2.b. ► Sidewalk/Plaza Maintenance and Pavement Washing**

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

Y	Control of polluted wash water and non-stormwater from pavement, sidewalk and plaza cleaning, mobile cleaning, outdoor pressure washing operations, and washing down of trash areas and gas station or mobile fueling service areas from discharging to storm drains
Y	BMPs for washing down outside areas of human habitation include sanitizing procedures
Y	Implementation of the BASMAA Mobile Surface Cleaner and California Stormwater BMP Handbook (or similar) Program BMPs

Comments: No additional comments.

**C.2.c. ► Bridge and Structure Maintenance and Graffiti Removal**

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

Y	Control of discharges from bridge and structural maintenance activities directly into surface waters or storm drains
Y	Control of non-stormwater and wash water discharges from graffiti removal activities
Y	Proper disposal for wastes generated from bridge and structure maintenance and graffiti removal activities
Y	Employee training on proper capture and disposal methods for wastes generated from bridge and structural maintenance and graffiti removal activities
Y	Contract specifications requiring proper capture and disposal methods for wastes generated from bridge and structural maintenance and graffiti removal activities

Comments:  
 No additional comments.

C.2.e. ► Rural Public Works Construction and Maintenance	
Does your municipality own/maintain rural <sup>1</sup> roads? <input checked="" type="checkbox"/> <b>Y</b> <b>Yes</b> <input type="checkbox"/> <b>No</b>	
If your answer is <b>No</b> , then skip to <b>C.2.f.</b>	
Place a <b>Y</b> in the boxes next to activities where applicable BMPs were implemented. If not applicable, type <b>NA</b> in the box and provide an explanation in the comments section below. Place an <b>N</b> in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.	
Y	Control of road-related erosion and sediment transport from road design, construction, maintenance, and repairs in rural areas
NA	Identification and prioritization of rural road maintenance based on soil erosion potential, slope steepness, and stream habitat resources
NA	Constructing roads and culverts that do not impact creek functions, including migratory fish passage
Y	Inspection of rural roads for structural integrity and prevention of impact on water quality
NA	Maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts, and address excessive erosion
NA	Re-grading of unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate
NA	Inclusion of measures to reduce erosion, provide fish passage, and maintain natural stream geomorphology when replacing culverts or designing new culverts or bridge crossings
Comments (including listing increased maintenance in priority areas): The City of Livermore has one paved rural road in its jurisdiction. This is a 1.5-kilometer section of Wetmore Road that is surrounded by vineyards on both sides. It is not located near any creeks or riparian habitats.	

<sup>1</sup>Rural means any watershed or portion thereof that is developed with large lot home-sites, such as one acre or larger, or with primarily agricultural, grazing or open space uses.

C.2.f. ► Corporation Yard BMP Implementation	
Place an <b>X</b> in the boxes below that apply to your corporation yard(s):	
<input type="checkbox"/>	We do not have a corporation yard.
<input type="checkbox"/>	Our corporation yard is a filed NOI facility and regulated by the California State Industrial Stormwater NPDES General Permit.
<input checked="" type="checkbox"/>	We have a <b>Stormwater Pollution Prevention Plan (SWPPP)</b> for the Corporation Yard(s).
<i>(For FY 22-23 Annual Report only)</i> Provide links to the Corporation Yard SWPP or include it in the FY 22-23 Annual Report.	
Place an <b>X</b> in the boxes below next to implemented SWPPP BMPs to indicate that these BMPs were implemented in applicable instances. If not applicable, type <b>NA</b> in the box. If one or more of the BMPs were not adequately implemented during the reporting fiscal year then indicate so and explain in the comments section below:	
<input checked="" type="checkbox"/>	Control of pollutant discharges in stormwater such as wash water
<input checked="" type="checkbox"/>	Routine inspection of corporation yard(s) in August or September to ensure non-stormwater discharges have not entered the storm drain system and pollutant discharges are prevented to the maximum extent practicable
<input checked="" type="checkbox"/>	Containment of all vehicle and equipment wash areas through plumbing to sanitary sewer or other collection method
<input checked="" type="checkbox"/>	Use of dry cleanup methods when cleaning debris and spills from corporation yard(s) or collection and disposal of all wash water to sanitary sewer or other location where it does not impact surface or groundwater if wet cleanup methods are used
<input checked="" type="checkbox"/>	Require private companies/contractors to use dry cleanup methods when cleaning debris and spills from corporation yard(s) or collect and dispose of all wash water to sanitary sewer or other location where it does not impact surface or groundwater if wet cleanup methods are used
<input checked="" type="checkbox"/>	Cover and/or berm outdoor storage areas containing pollutants
Comments: No additional comments.	



If you have a corporation yard(s) that is not an NOI facility, for inspection results for your corporation yard(s), complete the following table, provide a narrative above, or attach a summary including the following information:

<b>Corporation Yard Name</b>	<b>Corp Yard Activities w/ site-specific SWPPP BMPs</b>	<b>Inspection Date<sup>2</sup></b>	<b>Inspection Findings/Results</b>	<b>Date and Description of Follow-up and/or Corrective Actions</b>
Livermore Maintenance Service Center	Covered vehicle/equipment wash rack plumbed to sanitary sewer via sand-oil interceptor; Area drains in dumpster area plumbed to sanitary sewer via sand-oil interceptor; Equipment maintenance performed indoors; Majority of vehicles/equipment stored in area covered by a roofed structure; general housekeeping/lot sweeping performed routinely; Liquid wastes stored in locked, covered, and double-containment.	9/26/2022	BMPs are effectively implemented. Facility in compliance with stormwater requirements.	NA

<sup>2</sup> Minimum inspection frequency is once a year between August 1 and September 30.

<b>C.2.h. ► Staff Training</b>				
<b>Dates of Training</b>	<b>Training Topics Covered</b>	<b>Total number of Permittee maintenance staff</b>	<b>Permittee maintenance staff who attended training</b>	
			<b>Number</b>	<b>Percent</b>
5/11/2023	Sewer and Spill Emergency Response Plan training (instructor - Sam Rose): Source Control Staff, Water Staff, and Collection System Staff	25	25	100
Comments: No additional comments.				

Section 3 – Provision C.3 Reporting New Development and Redevelopment

**C.3.a.ii. ► New Development and Redevelopment Performance  
Standard Implementation Summary Report**

*(For FY 22-23 Annual Report only) Provide a brief summary of the methods of implementation of Provisions C.3.a.i.(1)-(8)).*

Summary:

- (1) The City of Livermore has the legal authority to implement all requirements of Provision C.3 under our Stormwater Management Control Program ordinance under municipal code section 13.45.
- (2) During entitlement review new projects are thoroughly reviewed for C.3 compliance. City requires that all eligible projects provide a completed Stormwater Requirements Checklist and preliminary plans showing how the project meets C.3 requirements in order for the project application to be deemed complete. Conditions of approval for all eligible projects include requirements to meet all aspects of the Municipal Regional Permit including the C.3 provisions.
- (3) During CEQA review all projects are thoroughly reviewed for potential water quality effects and appropriate mitigation measures are addressed through demonstration of compliance with the Municipal Regional Permit including the C.3 provisions.
- (4) & (5) ACCWP provided training on May 16, 2023, on the updated C.3 requirements and reviewed the updated ACCWP C.3 Technical Guidance Manual. In March 2023, the Countywide Program released version 8 of the C.3 Technical Guidance Manual. The manual is posted on the Clean Water Program website, <https://cleanwaterprogram.org/development/>, for use by agency staff, developers, contractors, construction site operators, and owner/builders. See Section C.3 of the ACCWP FY 22-23 Annual Report for additional information
- (6) & (7) For unregulated projects Livermore staff encourage the use of site design measures and source control measures during both Planning review and Building permit review by requesting stormwater treatment to the maximum extent practicable. Through conditions of approval Livermore encourages runoff be directed to vegetation wherever possible and that applicants provide a Clean Water Site Measures Declaration worksheet for small unregulated projects. This worksheet includes suggestions for the direction of runoff and the use of permeable surfaces where possible.
- (8) Livermore's General Plan currently integrates water quality/watershed protection with water supply, flood protection, habitat protection, groundwater recharge, and other sustainable development principles and policies.

**C.3.b.iv.(1) ► Regulated Projects Approved with No Provision C.3 Stormwater Treatment Requirements**

(For FY 22-23 Annual Report only) Provide a complete list of development projects that were approved with no Provision C.3 stormwater treatment requirements under a previous MS4 permit and have not begun construction by July 1, 2022. Fill in attached table **C.3.b.iv.(1)** or attach your own table including the same information. **No projects**

**C.3.b.iv.(2) ► Regulated Projects Reporting**

Fill in attached table **C.3.b.iv.(2)** or attach your own table including the same information. **No projects**

**C.3.e.iv. ► Alternative or In-Lieu Compliance with Provision C.3.c.**

Is your agency choosing to require 100% LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e.?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
Comments (optional):				

**C.3.e.v ► Special Projects Reporting**

1. In FY 2022-23, has your agency received, but not yet granted final discretionary approval of, a development permit application for a project that has been identified as a potential Special Project based on criteria listed in MRP Provision C.3.e.ii(2) for any of the three categories of Special Projects (Categories A, B or C)?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
2. In FY 2022-23, has your agency granted final discretionary approval to a Special Project? If yes, include the project in both the <b>C.3.b.iv.(2)</b> Table, and the <b>C.3.e.v.</b> Table.	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
If you answered "Yes" to either question, 1) Complete Table C.3.e.v. 2) Attach narrative discussion of 100% LID Feasibility or Infeasibility for each project.				

**C.3.g.vi.(1) ► Hydromodification Management (HM) Applicability Maps (CCCWP Permittees only)**

(For FY 22-23 Annual Report only) Has your agency prepared new HM Applicability Maps or equivalent information?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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This question is not applicable to permittees in Alameda County.

**C.3.g.vi.(2) ► Hydromodification Management (For CCCWP Permittees only)**

(For FY 22-23 Annual Report only) Submit a Technical Report consisting of a HM Management Plan describing how the CCCWP Permittees will implement the HM Standard specified in Provision C.3.g.iii.

This question is not applicable to permittees in Alameda County.

**C.3.h.v.(2). ► List of Newly Installed<sup>1</sup> Stormwater Treatment Systems and HM Controls**

On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) stormwater treatment systems and HM controls to the local mosquito and vector control agency and include a copy of that information in the Annual Report. The list shall include the facility locations and a description of the stormwater treatment measures and HM controls installed.  
 (Optional) Also complete Table C.3.h.v.(2) ► Reporting Newly Installed Stormwater Treatment Systems and HM Controls

Did your agency provide the list of newly installed Stormwater Treatment Systems and HM Controls to the Vector Control agency, either individually or through the Countywide Program? (If no, provide an explanation.)	X	Yes		No
1. Is a copy of the communication, including the list of newly installed treatment/HM measures, included in your Annual Report?	X	Yes, See Appendix 3-1		

**C.3.h.v.(3)(a) – (c) and (f) ► Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting**

Site Inspections Data	Number/Percentage
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<sup>1</sup>“Newly Installed” includes those facilities for which the final installation inspection was performed during this reporting year.

Total number of Regulated Projects (including offsite projects, and Regional Projects) in your agency's database or tabular format at the end of the previous fiscal year (FY 21-22)	<b>212</b>
Total number of Regulated Projects (including offsite projects, and Regional Projects) in your agency's database or tabular format at the end of the reporting period (FY 22-23)	<b>216</b>
Total number of Regulated Projects (including offsite projects, and Regional Projects) for which O&M verification inspections were conducted during the reporting period (FY 22-23). Include only stormwater related inspections.	<b>22</b>
Percentage of the total number of Regulated Projects (including offsite projects, and Regional Projects) inspected during the reporting period (FY 22-23). Include only stormwater related inspections.	<b>10.3%<sup>2</sup></b>

**C.3.h.v.(3)(d)-(e) ► Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting**

Provide a discussion of the inspection findings for the year and any common problems encountered with various types of treatment systems and/or HM controls. This discussion should include a general comparison to the inspection findings from the previous year.

Summary:  
 The City of Livermore conducted 22 operation and maintenance verification inspections of facilities with stormwater treatment measures during the FY2021-2022 reporting period. Additionally, the City performed 4 initial inspections of newly installed stormwater treatment measures during this reporting period. The most encountered problems discovered during these routine operation and maintenance inspection were the following:

- Accumulation of sediment and/or debris
- Unhealthy/Poor vegetation
- Accumulation of trash
- Complete removal of vegetation
- Presence of invasive weeds
- Failure to routinely service installed mechanical devices (CDS, Vortex, etc.)

<sup>2</sup> Based on the number of Regulated Projects in the database or tabular format at the end of the previous fiscal year, per MRP Provision C.3.h.ii.(6)(b).

Provide a discussion of the effectiveness of the O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness program).

Summary:

The City maintains a database of the completed C.3 projects. This ensures that the City staff performs an operation maintenance inspection of all stormwater treatment measure once every five years per permit requirements. City is also incorporating newly constructed stormwater treatment measures into the ACCWP GIS database.

**C.3.i. ► Required Site Design Measures for Small Projects and Smaller Detached Single Family Home Projects**

On an annual basis, discuss the implementation of the requirements of Provision C.3.i, including ordinance revisions, permit conditions, development of standard specifications and/or guidance materials, and staff training.

Summary:

Two engineering staff attended quarterly meetings with other agency staff to discuss implementation issues and receive direction and training. Training included the implementation of C.3 permit provisions for small projects and detached single family homes as well as the other C.3 provisions.

BASMAA prepared standard specifications in four fact sheets regarding the site design measures listed in Provision C.3.i, as a resource for Permittees. We have modified local ordinances/policies/procedures and forms/checklists to require all applicable projects approved after December 1, 2012 to implement at least one of the site design measures listed in Provision C.3.i. We are using the following Program and BASMAA products for C.3.i implementation:

- BASMAA's site design fact sheets
- ACCWP's C.3 Technical Guidance Manual, Appendix L.

The ACCWP training provided on May 16, 2023, addressed changes to the small project requirements and reviewed the updated ACCWP C.3 Technical Guidance Manual. See Section C.3 of ACCWP FY 22-23 Annual Report for more information.

**C.3.j.iii. ► No Missed Opportunities**

On an annual basis, submit a list of green infrastructure projects, public and private, that are planned for implementation during the permit term and infrastructure projects planned for implementation during the permit term that have potential for green infrastructure measures. Include the following information:

- A summary of planning or implementation status for each public and private green infrastructure project that is not also a Regulated Project as defined in Provision C.3.b.ii. (see C.3.j.iii.(2) Table B - Planned Green Infrastructure Projects).
- A summary of how each public infrastructure project with green infrastructure potential will include green infrastructure measures to the maximum extent practicable during the permit term. For any public infrastructure project where implementation of green infrastructure measures is not practicable, submit a brief description of the project and the reasons green infrastructure measures were impracticable to implement (see C.3.j.iii.(2) Table A - Public Projects Reviewed for Green Infrastructure).

Summary of Planning or Implementation Status of Identified Projects:

See attached Tables C.3.j.iii.(2)-A and C.3.j.iii.(2)-B for the required information, and any additional notes provided there

**C.3.j.iv.(2) ▶ Participate in Processes to Promote Green Infrastructure**

On an annual basis, report on the goals and outcomes during the reporting year of work undertaken to participate in processes to promote green infrastructure.

Please refer to Countywide Program's FY 22-23 Annual Report for a summary of efforts conducted to help regional, state, and federal agencies plan, design and fund incorporation of green infrastructure measures into local infrastructure projects, including transportation projects.

**C.3.j.v.(1)(a) ▶ Non-Regulated (Green Infrastructure) Projects Reporting**

Fill in attached table **C.3.j.v.(1)(a)** with information on non-regulated GI projects that have completed construction during the reporting period, or attach your own table including the same information. **No projects**

**C.3.j.v.(1)(c) and (d) ▶ Tracking and Mapping Tools**

Certify in the 2023 Annual Reports that the tracking and mapping tools have been completed and are being implemented. In each Annual Report, provide summary reports on the implementation of the tracking and mapping tools and provide a link to the component which is available to the public.

Has your agency completed developing Green Infrastructure tracking and mapping tools, and are they being implemented?  **Yes**  **No**

Summary Reports:

Please refer to the Countywide Program's FY 22-23 Annual Report for a summary of implementation of the tracking and reporting tools, and a link to the component which is available to the public.



**C.3.j.v.(3) ► Numeric Retrofit Requirements**

In each Annual Report, report on progress made towards the retrofit requirements described in Provision C.3.j.ii.(2).

Livermore had no projects that count towards the retrofit program.

Please refer to the Countywide Program's FY 22-23 Annual Report for a summary of progress made towards the retrofit requirements described in Provision C.3.j.ii.(2) at the countywide level.

**C.3.j.v.(5) ► Alternative Green Infrastructure Techniques for Rural Communities**

Permittees whose jurisdictions are dominated by rural areas may collectively submit a proposal, subject to the Executive Officer's approval, for the use of alternative green infrastructure techniques.

Is your jurisdiction a rural community that is participating in a program to develop a proposal to use alternative green infrastructure techniques?

<input type="checkbox"/>	<b>Yes</b>	<input checked="" type="checkbox"/>	<b>No</b>
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If yes, include a copy of the proposal in the FY 22-23 Annual Report.

**C.3.j.v.(6) ► One-time Offset of Numeric Implementation Retrofit Requirements**

Permittees with ordinances that require Regulated Projects to treat significantly more impervious surface than the minimum required by Provision C.3.c-d, may offset their Numeric Implementation retrofit requirements by a one-time credit of up to 25 percent, and by no greater than one acre.

Is your jurisdiction submitting a report to offset numeric implementation retrofit requirements by a one-time credit of up to 25 percent?

<input type="checkbox"/>	<b>Yes</b>	<input checked="" type="checkbox"/>	<b>No</b>
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If yes, include a copy of the report in the FY 22-23 Annual Report. Permittees may not use the offset prior to Executive Officer approval of the report.

**C.3.b.iv.(1) ► Regulated Projects Approved with No Provision C.3 Reporting Table**

*(For FY 22-23 Annual Report only) Fill in table below or attach your own table including the same information.*

Project Name Project No.	Project Location <sup>3</sup> , Street Address	Type of Stormwater Treatment System Required	Specific Exemption Granted <sup>4</sup>
None			
Comments:			

<sup>3</sup> Include cross streets

<sup>4</sup> Pursuant to Provision C.3.b.i.(2)(a) and (b) (i.e., any Regulated Project that was previously approved with a vesting tentative map approved or conditionally approved, as allowed by State law; any Regulated Projects for which the Permittee has no legal authority to require changes to previously granted approvals; and any Regulated Project exempted from the LID requirements of Provision C.3.c as is provided with a stormwater treatment with media filters that comply with the hydraulic sizing requirements of Provision C.3.d.

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period**

Project Name Project No.	Project Location <sup>5</sup> , Street Address	Name of Developer	Project Phase No. <sup>6</sup>	Project Type & Description <sup>7</sup>	Project Watershed <sup>8</sup>	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft <sup>2</sup> ) <sup>9</sup>	Total Replaced Impervious Surface Area (ft <sup>2</sup> ) <sup>10</sup>	Total Pre-Project Impervious Surface Area <sup>11</sup> (ft <sup>2</sup> )	Total Post-Project Impervious Surface Area <sup>12</sup> (ft <sup>2</sup> )
<b>Private Projects</b>	<b>Entitlements</b>										
Tract 8094 Garaventa Hillis	West of Bear Creek Drive	Lafferty	None	47 Units of Single-Family Dwellings	H – Arroyo Las Positas	31.7	14.4	627,264	0	0	627,264
Bettis Terrace PM10500 SUB16-001	2458 Portola @ North Livermore Avenue	Bettis	None	3-Single Family Dwellings	H – Arroyo Las Positas	1	1	12,874	5,364	14,452	18,238
SPDR 17-004 Mission Boutique Hotel	5835 Southfront Road	Hakaim Mission	None	3-story Hotel	H – Arroyo las Positas	2.13	2.13	83,505	0	0	83,505
DDR18-015 Downtown Hotel	2205 Railroad Avenue	Presidio	None	Downtown Hotel	G – Arroyo Mocho	1.2	1.2	26,613	19,799	38,519	65,132
SUB17-004 VTTM8424 SPDR17-018 Rincon Mixed Use	783 Rincon Avneue	True Life Co.	None	91 Single Family Dwellings, 182 Multi Family Dwellings, Commercial	H – Arroyo Las Positas	5.7	5.7	7,406	223,462	223,462	230,868
SUB18-001 VTTM8454 Lassen Townhouses	Lassen Road	Westgate Ventures	None	193 Townhomes	H – Arroyo Las Positas	35	31.5	1,372,140	0	0	1,372,140
CUPM16-002 CUP19-007	1000 Airway Boulevard	Hyatt	None	Hotel with 176 rooms, and	H – Arroyo Las Positas	3	3	0	120,195	120,195	120,195

<sup>5</sup> Include cross streets

<sup>6</sup> If a project is being constructed in phases, indicate the phase number and use a separate row entry for each phase. If not, enter "NA".

<sup>7</sup> Project Type is the type of development (i.e., new and/or redevelopment). Example descriptions of development are: 5-story office building, residential with 160 single-family homes with five 4-story buildings to contain 200 condominiums, 100 unit 2-story shopping mall, mixed use retail and residential development (apartments), industrial warehouse.

<sup>8</sup> State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.

<sup>9</sup> All impervious surfaces added to any area of the site that was previously existing pervious surface.

<sup>10</sup> All impervious surfaces added to any area of the site that was previously existing impervious surface.

<sup>11</sup> For redevelopment projects, state the pre-project impervious surface area.

<sup>12</sup> For redevelopment projects, state the post-project impervious surface area.

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period**

Project Name Project No.	Project Location <sup>5</sup> , Street Address	Name of Developer	Project Phase No. <sup>6</sup>	Project Type & Description <sup>7</sup>	Project Watershed <sup>8</sup>	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft <sup>2</sup> ) <sup>9</sup>	Total Replaced Impervious Surface Area (ft <sup>2</sup> ) <sup>10</sup>	Total Pre- Project Impervious Surface Area <sup>11</sup> (ft <sup>2</sup> )	Total Post- Project Impervious Surface Area <sup>12</sup> (ft <sup>2</sup> )
SPDRM19-037 Hyatt House				underground garage							
SPDR19-013 PM19-002 Pine Street Apartments	Elm and Pine Street	Multi-Family Apartment	None	Pine Street apartments (6 Units)	H – Arroyo Las Positas	0.3	0.3	7,914	0	0	7,914
SUB20-004 Abboud Townhomes	3541 East Avenue	Micheli John	None	9 Units Townhomes	G – Arroyo Mocho	0.625	0.25	10,828	2,000	2,000	12,828
DDR20-014 Church St. Apartments	218 Church Street	Fallon Enterprise, Inc.	None	Three 12-unit Apartment Building	G – Arroyo Mocho	1.62	1.5	53,960	0	0	53,960
DDR20-019 Eden Housing	2139 Railroad Avenue	Downtown Workforce Housing	None	130 Affordable Housing Units	G – Arroyo Mocho	2.15	2.11	2500	44,700	44,700	44,700
SPDRM 20-043 PG&E Storage	3797 First Street	PG&E	None	2 New Structures 5,500 SF Storage	G – Arroyo Mocho	3.59	0.15	6,500	0	0	6,500
SPDR21-002	Catalina Court	Karkalemis Constantino's	None	Re-zone 2 parcels to multi-family development 6 3- story apartments * 2 Junior ADU's	G – Arroyo Mocho	0.34	0.34	14,800	0	0	14,800
SPDRM 21-003	2402 Research Drive	Kuperstein Allan Sr & Zatkan Associates	None	Grain Silo	H – Arroyo Las Positas	1.66	0.1	0	4,400	4,400	4,400
SUB21-007 VTM 8612	Tranquility Circle	Shea Homes, Inc.	None	124 Units of Condominium	H – Arroyo Las Positas	14.73	14.73	385,000	0	0	385,000
SMP 39 & 40 APZ21-003 & SUB21-008	South of Atlantis and Challenger and West of Oaks Business Park	Overton Moor Properties	None	2 Industrial Bldgs  5 Industrial Bldgs	H – Arroyo Las Positas	79	79	,60	0	0	60 acres

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period**

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Casino 580 Parking Lot Expansion MUNI19-004	964 North Canyons Parkway	Monument Properties	None	Parking lot expansion	H – Arroyo Las Positas	4.7	4.7	118,506	0	0	118,506
Vineyard Apt Expansion SPDRM21-018	5107 Norma Way	Red Bear	None	Apartment addition and parking lot	H - Arroyo Las Positas	2.78	1.11	14,800	0	33,985	48,785
LAVTA Administration Bldg SPDRM-22-017	875 Atlantis Ct	LAVTA	None	Administration Bldg	H – Arroyo Las Positas	9.0	3.42	54,929	76,334	94,391	149,320
SPDR 21-009	750 Vineyard Ave	Robert Fink	None	Single Family Dwelling	G – Arroyo Mocho	2.17	0.44	19,273	0	0	19,273
Livermore Auto Body Shop SPDR22-001	5905 Northfront Rd	Livermore Auto Body Shop	None	Auto Body Shop	H- Arroyo Las Positas	.94	0.71	28,774	0	2,141	30,885
SPDR22-002	303 East Vineyard Ave	Adam Gardner	None	Single Family Dwelling	G – Arroyo Mocho	19.5	2	87,120	0	0	87,120
SPDRM23-001	Freisman Rd. & Wolf House Dr.	4G Development	None	Chick-Fil-A	H – Arroyo Las Positas	2.1	1.5	65,644	0	4,766	70,410
SUB22-006 INSP 2D	2620 & 2768 Collier Canyon Road	Pacific West Communities	None	250 Units of Multifamily Apartments and 139 units of Townhomes	H – Arroyo Las Positas	13.4	13.4	283986	0	0	283,986
SUB22-008 VTTM 8659	359 Portola Avenue	Harridge	None		H – Arroyo Las Positas	7.9	6.55	285376	0	0	285,376
SUB23-004	2930 Pacific Avenue	Swenson Builders	None	Rezone commercial center to 115 Residential Units	G – Arroyo Mocho	6.54	6.54	217,552	217,552	255,432	255,432
SUB22-011	440 N K Street	Judge	None	3 townhomes	G – Arroyo Mocho	0.17	0.17	6,007	1,118	1,118	7,125

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period**

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SPDR23-004	151 Greenville Rd	Forum Mobility	None	Electric Charging Depot	H – Arroyo Las Positas	3.87	3.87	117,001	0	0	117,001
SUB23-002	1151 Central Ave	Viraj Mutha	None	4 lot subdivision	H – Arroyo Las Positas	2.07	2.07	10,147	7,1891	7,191	10,647
SPDRM23-019	3800 Pacific Ave	LARPD	None	Skatepark Expansion	G – Arroyo Mocho	0.48	0.48	21,000	0	0	21,000
SUB22-005	Triad Place East	DeNova Homes	None	172 townhomes	H – Arroyo las Positas	5.27	5.27	148,104	0	0	148,104
SPDR21-007	4528 Contractors Place	WE Lyons Construction	None	RV + Boat Storage	H – Arroyo Las Positas	3.96	3.96	172,621	0	0	172,621
<b>Private Projects</b>	<b>Final Map</b>										
CB22005 CB22004 Greenville Plaza	1580 Greenville Road	Al Amidy	None	Car Wash, Gas Station, Retail Building Drive through Fast Food	H- Arroyo Las Positas	2.15	2.15	96,363	0	0	96,363
PMW 10858 SUB20-001 PD18-004	Pacific Avenue	Pacific Avenue Senior Homes (Stockmen's	Phase 1 of 2	76 One-bedroom Units and 3 two-bedroom units	G – Arroyo Mocho	3.6	3.6	107,813	0	0	107,813
SUB21-005 VTTM 8609	North Canyons Parkway & Triad Drive	SDLT Investment VII, LLC	None	Triad Condos (De Nova Homes) - 112 Units: 12 3-story buildings; 22 units for qualifying median to moderate income; & 12 accessible units	G – Arroyo Mocho	4.93	4.93	156,614	0	0	156,614
PMW11301 Blacksmith Square	21 & 25 S. Livermore Avenue	Bear Maroon LP	None	Addition to 1-story building; new 1-story building along Railroad Avenue & 20story building at the corner of S. Livermore Avenue & Veterans Way	G – Arroyo Mocho	0.26 & 6.75	6.5	295,000	0	0	295,000

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period**

Project Name Project No.	Project Location <sup>5</sup> , Street Address	Name of Developer	Project Phase No. <sup>6</sup>	Project Type & Description <sup>7</sup>	Project Watershed <sup>8</sup>	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft <sup>2</sup> ) <sup>9</sup>	Total Replaced Impervious Surface Area (ft <sup>2</sup> ) <sup>10</sup>	Total Pre-Project Impervious Surface Area <sup>11</sup> (ft <sup>2</sup> )	Total Post-Project Impervious Surface Area <sup>12</sup> (ft <sup>2</sup> )
VTTM 8613 Serenity 1	Collier Canyon Road/Portola Avenue	Shea Homes, Inc.	None	89 Units Townhomes & 210 Units of Multifamily Apartments	H – Arroyo Las Positas	12.93	12.93	393,843	0	0	393,843
SPDR 19-013 PM19-002 Pine Street Apartments	Elm and Pine Street	Multi-Family Apartment	None	Pine Street Apartments (6 Units)	H – Arroyo Las Positas	0.3	0.3	7,914	0	0	7,914
SUB18-008 VTTM 8388 Cherry Way	1080 Central Avenue	Kelly Michael	None	4 Single Family Dwellings	H – Arroyo Las Positas	1.0	0.7	19,123	0	2,445	21,568
Arroyo Vista West Tract 8379	4536 Las Positas Rd	Trumark	Phase 1 of 2	86 SFD 109 Townhomes	H – Arroyo Las Positas	15.62	15.62	360,156	2178	2178	362,334
Arroyo Vista East Tract 8689	4634 Las Positas Rd	Trumark	Phase 2 of 2	132 Townhomes 108 Flats	H – Arroyo Las Positas	13.12	13.12	413,157	0	0	413,157
Triad East Tract 8657	Triad Place East	DeNova Homes	None	172 Townhomes	H – Arroyo las Positas	5.27	5.27	148,104	0	0	148,104
Lassen Townhomes Tract 8454	Lassen Road	Westgate Ventures	None	193 Townhomes	H – Arroyo Las Positas	35	31.5	1,372,140	0	0	1,372,140
<b>Private Projects Building Permit</b>											
CB22005 CB22004 Greenville Plaza	1580 Greenville Road	Al Amidy	None	Car Wash, Gas Station, Retail Building Drive through Fast Food	H- Arroyo Las Positas	2.15	2.15	96,363	0	0	96,363

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period**

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CB220001 Aqua Gunite	S. Naylor Road	Aqua Gunite	None	5,704 SF – Office/Showroom Building	H – Arroyo Las Positas	0.96	0.96	41,817	0	0	41,817
CB210012 Subaru Dealership	4100 Las Positas Road	Subaru Dealership	None	New Subaru Dealership Site Improvements	H – Arroyo Las Positas	3.3	3.3	122,005	0	0	122,005
CB21009 WBT Trucking	6776 Patterson Pass Road	WBT, LLC	None	25,000 SF Warehouse Building	H – Arroyo Las Positas	2.8	0.6	25,000	0	0	25,000
D220485	1258 Concannon Blvd.	Livermore Assisted Living & Memory Care (The Wells)	None	2-Story, 128 units of senior assisted living and memory care health facility	G – Arroyo Mocho	8.7	8.7	24,449	121,303	155,780	145,752
CB210011 Starbucks @ Home Depot	2500 Las Positas Road	Home Depot, Inc HD Development of Maryland	None	2,200 SF for Starbucks	H – Arroyo Las Positas	0.63	0.6	16,443	0	0	16,443
SPDRM 20-041 Form Factor	501 Lawrence Drive	Foam Factory NLA II, LLC	None	Installation of outdoor clean energy servers	H – Arroyo Las Positas	2.46	2.46	10,000	0	0	10,000
TI210036	6951 Southfront Road	Mission Hakam & Simrat K TRS	None	New 3,000 SF of Wine Storage Area	H – Arroyo Las Positas	4.15	0.09	1,400	2,500	2,500	3,900
SUB21-005 VTTM 8609	North Canyons Parkway & Triad Drive	SDLT Investment VII, LLC	None	Triad Condos (De Nova Homes) - 112 Units: 12 3-story buildings; 22 units for qualifying median to moderate income; & 12 accessible units	G – Arroyo Mocho	4.93	4.93	156,614	0	0	156,614
D220746	7 <sup>th</sup> Street	HCD Studio	None	Single Family Dwelling	G – Arroyo Mocho	0.11	0.11	3,750	0	0	3,750



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TJ Rose Warehouse CB230003	Armstrong St	TJ Rose	None	Warehouse	H – Arroyo Las Positas	2.87	2.59	112,820	0	0	112,820
Tract 8471 Vineyard Collection II (Larry's Place)	1648 Lomas Avenue	Ponderosa	None	9 Single Family Dwellings	G – Arroyo Mocho	4.2	3.8	166,190	0	0	166,109
CB190003 D190234 Legacy Livermore	1934 First Street	Livermore Multi-Family Owner, LLC	None	Mixed Use with 221 apartment units	G – Arroyo Mocho	4.03	4.03	0	186,257	186,257	157,443
TI90061	2950 Collier Canyon Road	Sutter Health	None	9,351 SF – Office Addition	H- Arroyo Las Positas	2.07	.07	0	3,117	81,243	81,243
CB200002	730 Terminal Circle	Centrex (Five Rivers)	None	42,000 SF – Aircraft hangar	H- Arroyo Las Positas	3	3	0	122,909	122,909	122,909
D191724 Avance	4260 First Street	Mid Pen Housing	None	6 Residential Buildings	G – Arroyo Mocho	2.13	2.13	37,818	7,910	7,910	45,919
D191897	203 Vallecitos Road	Wang/Huang Residence	None	8085 SF Single Family Dwelling	G – Arroyo Mocho	22	0.18	8,085	0	0	8,085
D191587	1626 Fourth Street	Golden Oaks Construction, Inc.	None	2050 SF Single Family Dwelling	G – Arroyo Mocho	0.11	0.07	3,156	0	0	3,156
D190972	1745 Sterling Court	Krislami Mulia	None	5,347 SF Single Family Dwelling	G – Arroyo Mocho	0.34	0.12	5,347	0	0	5,347
G190007	7000 National Road	Livermore Sanitation, LLC	None	Installation of bioretention facility	H- Arroyo Las Positas	10.9	0.45	19,965	0	0	19,965
CB190020	200 N. Greenville Road	Fairfield Inn	None	4-Story Hotel (111 Rooms)	H- Arroyo Las Positas	2.4	2.4	94,000	0	0	94,000

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CB230005	3459 Arroyo Drive	Livermore Valley Wine Country Inn	None	2-story Inn (30 rooms) with 1- Caretaker Unit	G – Arroyo Mocho	3.2	1.9	84,000	0	0	84,000
D200403	613 North N Street	Street Lori	None	3,877 Single Family Dwelling	G – Arroyo Mocho	0.17	0.17	3,877	1,500	1,500	5,377
D210270 SPDR20-004	247 E. Vallecitos Road	TD Vineyard, LLC	None	7,914 SF Single Family Dwelling with Garage, 755 SF Porches, 1339 Cabana, 937 Pavers	G – Arroyo Mocho	19.47	4.87	148,000	0	0	148,000
CB210001 PM 10720	1754 N. Livermore Avenue	4G Development	None	Chick-Fil-A	H – Arroyo Las Positas	1.5	1.5	58,806	0	0	58,806
CB210002	1 Kittyhawk Road	Caltrans	None	Material Lab	H – Arroyo Las Positas	0.5	0.5	21,000	0	0	21,000
CB210003	460 N Livermore Avenue	Open Heart Vineyard 2.0	None	Mixed Use Building 24 Units of Affordable Housing	H – Arroyo Las Positas	4.2	4.2	0	182,952	182,952	182,952
CB210005	527 Waxlax Way	Lemmons Paige & Thomas M	None	15,277 SF Commercial Building & Site Improvements	H – Arroyo Las Positas	0.6	0.6	26,000	0	0	26,000
CB210007	255 E. Vallecitos Road	TD Vineyard	None	New Winery Building	G – Arroyo Mocho	19.47	4.87	50,000	0	0	50,000
DDR18-020	2108 3 <sup>rd</sup> Street	Bang Seung	None	14,608 SF – 3-story mixed use building	G – Arroyo Mocho	0.11	0.11	5,000	0	0	5,000
SPDR18-004 ZUP19-004	7576 Southfront Road	Holiday Inn	None	Holiday Inn Express 72 Rooms	H – Arroyo Las Positas	1.3	1.3	50,340	0	0	50,340
CM210050	7480 Las Positas Road	RTM Properties	None	Enlarge existing parking area	H – Arroyo Las Positas	1.10	1.10	20,470	0	0	20,470

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period**

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SPDRM19-023 Porsche Dealership	3100 Las Positas Road	Paul Jensen	None	9,900 SF Porsche dealership expansion	H- Arroyo Las Positas	4.8	0.25	11,000	6,000	6,000	17,000
DDR20-014 Church St Apartments	218 Church Street	Fallon Enterprise, Inc.	None	Three 12-units Apartment Building	G – Arroyo Mocho	1.62	1.5	53,960	0	0	53,960
Blacksmith Square Retail & Brewery CB230001 CB220002	21 & 25 S. Livermore Avenue	Bear Maroon LP	None	Addition to 1-story building; new 1-story building along Railroad Avenue & 20story building at the corner of S. Livermore Avenue & Veterans Way	G – Arroyo Mocho	0.26 & 6.75	6.5	295,000	0	0	295,000
Brighton Tract 8173	2855 Old First St	Concentric (Serpa)	None	17 Townhomes	G – Arroyo Mocho	1.02	1.02	31,049	31,049	36,943	31,049
D220830	2352 Gamay Cm	Nigg	None	SFD		.53	.53	7,230	0	0	7,230
CB230007	4528 Contractors Pl		None	RV & Boat storage	H – Arroyo Las Positas	3.96	3.96	172,621	0	0	172,621
D220145	227 Holmes St	Qaper	None	New SFD	G – Arroyo Mocho	2.0	2.0	3,629	0	0	3,629
D210855	2750 Eighth St	O'Keefe	None	New SFD	G – Arroyo Mocho	0.11	0.11	3,323	0	0	3,323
<b>Public Projects</b>											
Downtown Hotel	Railroad Avenue	City	None	Downtown Hotel	G – Arroyo Mocho	1.2	1.2	7,893	19,799	38,519	46,412
CIP201715 I Street Garage	I Street	City	None	Parking Garage	G – Arroyo Mocho	0.78	0.78	21,076	16,791	16,791	37,867
CIP583018 Livermore Village Veteran's Way	Downtown Livermore	City	Phase 2	Public Infrastructure and Parking Garage	G – Arroyo Mocho	6.6	.04	6,718	68,262	76,264	74,980

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L St Garage	Veterans Way and L St.	City	None	Downtown Parking Garage	G – Arroyo Mocho	1.81	1.81	11,375	41,861	76,584	53,236
Comments:											

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 2) –  
 Projects Approved During the Fiscal Year Reporting Period  
 (private projects)**

Project Name Project No.	Project Status <sup>13</sup>	Estimated or Actual Completion Date	Source Control Measures <sup>14</sup>	Site Design Measures <sup>15</sup>	Treatment Systems Approved <sup>16</sup>	Type of Operation & Maintenance Responsibility Mechanism <sup>17</sup>	Hydraulic Sizing Criteria <sup>18</sup>	Alternative Compliance Measures <sup>19/20</sup>	Alternative Certification <sup>21</sup>	HM Controls <sup>22/23</sup>
<b>Private Projects Entitlements</b>										
Tract 8094 Garaventa Hills	Not yet	Not Yet	A, D, & G	b, c d	Bioretention	O & M Agreement	Volume	NA	NA	Bioretention
Bettis Terrace PM10500 SUB16-001	March 29,2016	Not Yet	A, D & G	b, c d	Bioretention	Not Yet	Not Yet	NA	NA	Bioretention
SPDR17-004 Mission Boutique Hotel	Not Yet	Not Yet	A, D & G	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
DDR18-015 Downtown Hotel	October 29, 2018 Revision in Progress	Not Yet	A, B, C, D, G, N & O	B, c, d	Bio-swales & CDS Units	Bio-swales maintained by the Hotel, CDS Units	Volume	NA	NA	None Yet

<sup>13</sup> Provide status of project (e.g., application date, application deemed complete date, project approval date).

<sup>14</sup> List source control measures approved for the project. Examples include: properly designed trash storage areas; storm drain stenciling or signage; efficient landscape irrigation systems; etc.

<sup>15</sup> List site design measures approved for the project. Examples include: minimize impervious surfaces; conserve natural areas, including existing trees or other vegetation, and soils; construct sidewalks, walkways, and/or patios with permeable surfaces, etc.

<sup>16</sup> List all approved stormwater treatment system(s) to be installed onsite or at a joint stormwater treatment facility (e.g., flow through planter, bioretention facility, infiltration basin, etc.).

<sup>17</sup> List the legal mechanism(s) (e.g., O&M agreement with private landowner; O&M agreement with homeowners' association; O&M by public entity, etc...) that have been or will be used to assign responsibility for the maintenance of the post-construction stormwater treatment systems.

<sup>18</sup> See Provision C.3.d.i. "Numeric Sizing Criteria for Stormwater Treatment Systems" for list of hydraulic sizing design criteria. Enter the corresponding provision number of the appropriate criterion (i.e., 1.a., 1.b., 2.a., 2.b., 2.c., or 3).

<sup>19</sup> For Alternative Compliance at an offsite location in accordance with Provision C.3.e.i.(1), on a separate page, give a discussion of the alternative compliance site including the information specified in Provision C.3.b.iv.(2)(m)(i) for the offsite project.

<sup>20</sup> For Alternative Compliance by paying in-lieu fees in accordance with Provision C.3.e.i.(2), on a separate page, provide the information specified in Provision C.3.b.iv.(2)(m)(ii) for the Regional Project.

<sup>21</sup> Note whether a third party was used to certify the project design complies with Provision C.3.d.

<sup>22</sup> If HM control is not required, state why not.

<sup>23</sup> If HM control is required, state control method used (e.g., method to design and size device(s) or method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control).

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 2) –  
 Projects Approved During the Fiscal Year Reporting Period  
 (private projects)**

Project Name Project No.	Project Status <sup>13</sup>	Estimated or Actual Completion Date	Source Control Measures <sup>14</sup>	Site Design Measures <sup>15</sup>	Treatment Systems Approved <sup>16</sup>	Type of Operation & Maintenance Responsibility Mechanism <sup>17</sup>	Hydraulic Sizing Criteria <sup>18</sup>	Alternative Compliance Measures <sup>19/20</sup>	Alternative Certification <sup>21</sup>	HM Controls <sup>22/23</sup>
						maintained by the City				
SPDR17-018 VTM8424 SUB17-004 Rincon Mixed Use	Not Yet	Not Yet	A, B, C, D, F, G, N & O	B, c ,d	None Yet	None Yet	None Yet	NA	NA	None Yet
VTM 8454 SUB18-001 Lassen Townhouses	August 29,2019	Not Yet	A, D, G, N & O	B, c ,d	None Yet	None Yet	None Yet	NA	NA	None Yet
SPDRM19-037 CUPM16-002 CUP19-007 Hyatt House	June 3, 2020	Not yet	A, D, & G	B, c, d	Bioretention	O & M Agreement	2.c	NA	NA	Bioretention
SPDR19-013 Pine Street Apartment	December 30, 2019	Not yet	A, B, C, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB20-004 Abboud Townhomes	Not Yet	Not yet	A, D, G, N &	B, c, d,	None	None Yet	None Yet	NA	NA	None Yet
DDR20-014 Church St Apartments	July 27, 2021	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
DDR20-019 Eden Housing	December, 28, 2020	Not Yet	A, D, G, N, O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SPDRM20-043 PG&E Storage	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet

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SPDR21-002 Catalina Ct	February 3, 2021	Not Yet	A, D & G	B, c, d,	None Yet	None Yet	None Yet	NA	NA	None Yet
SPDRM21-003 Grain Silo	Not Yet	Not Yet	A, D & G	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB21-007 VTTM 8612 Shea Homes Tranquility	June 2022	Not Yet	A, D, G, N & O	B, c, d	None yet	None Yet	None Yet	NA	NA	None Yet
SMP 39 & 40 APZ21-003 SUB21-008	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
Casino 580 Parking Lot Expansion MUNI19-004	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
Vineyard Apt Expansion SPDRM21-018	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
LAVTA Administration Bldg SPDRM-22-017	May 19, 2023	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SPDR 21-009 750 Vineyard Ave	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
Livermore Auto Body Shop SPDR22-001	September 5, 2023	Not Yet	A, D, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet

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SPDR22-002 303 East Vineyard Ave	August 15, 2023	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	2.c	NA	NA	Bioretention
SPDRM23-001 Republic Chik-fil-A	June 27, 2023	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB22-006 INSP 2D - Cornerstone	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB22-008 VTTM 86 Harridge	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB23-004 Pacific Ave Residential	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB22-011 N K St Townhomes	Not Yet	Not Yet	None Yet	None Yet	None Yet	None Yet	None Yet	NA	NA	None Yet
SPDR23-004 Forum Mobility	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB23-002 1151 Central PM	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SPDRM23-019 Pacific Ave Skatepark Expansion	Not Yet	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB22-005 Triad east	May 22, 2023	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet



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Townhomes										
D220145 Holmes St SFD	May 12, 2023	Not Yet	A & D	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
D210855 Eight St SFD	March 28, 23	Not Yet	A & D	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SPDR21-007 RV & Boat Storage	Not Yet	Not Yet	A, D, G, N & O	B, c, d	Infiltration trench	None Yet	Non yet	NA	NA	Non yet
<b>Private Projects Final Map</b>										
PMW 10858 Pacific Ave Senior Housing	June 8, 2020	Not Yet	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
SUB21-005 VTTM 8609 Triad West	May 9, 2022	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O&M	Volume	NA	NA	Bioretention
PMW 11301  Blacksmith Square	Not Yet	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O&M	Volume	NA	NA	Bioretention
SPDR19-013 PM19-002 Pine Street Apartment	December 30, 2019	Not Yet	A, B, C, D, G, N & O	B, c, d	Not Yet	None Yet	None Yet	NA	NA	None Yet
SUB18-008 VTTM 8388 Cherry Way	January 7, 2020	November 9, 2020	A, D, N & O	B, c, d	Bio-treatment & Pervious Pavers	O & M Agreement	2.c	NA	NA	Biotreatment & Pervious Pavers

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 2) –  
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SUB21-006 VTTM 8613 Shea Homes Serenity 1	February 4, 2022	July 25, 2022	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
<b>Private Projects Building Permits</b>										
CB22005 CB22004 Greenville Plaza	October 4, 2018	No Yet	A, D, G, N & O	B, c, d	Bioswales and CDS units	O & M Agreement	2.c	NA	NA	None Yet
CB220001 Aqua Gunite	October 25, 2022	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	Volume	NA	NA	Bioretention
CB210012 Subaru Dealership	October 27, 2022	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	Volume	NA	NA	Bioretention
CB21009 WBT Trucking	November 16, 2021	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	Volume	NA	NA	Bioretention
D220485 Assisted living & Memory Care (The Wells)	Not Yet	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	Volume	NA	NA	Bioretention
CB210011 Starbucks @ Home Depot	April 29, 2022	May 4, 2023	A, D & G	b, c d	Bioswale	Bio-swales maintained by the owner	Volume	NA	NA	NA
TI220094 Form Factor	July 17, 2023	Not Yet	A, D & G	b, c d	Bioswale	Bio-swales maintained by the owner	Volume	NA	NA	NA

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 2) –  
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TI210036 Wine Storage Bldg	June 16, 2022	Not Yet	A, D & G	b, c, d	Bioswale	Bio-swales maintained by the owner	Volume	NA	NA	NA
SUB21-005 VTTM 8609 Triad West	May 9, 2022	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O&M	Volume	NA	NA	Bioretention
PMW 11301 CB230001 CB220002 TI230011  Blacksmith Square	Not Yet	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O&M	Volume	NA	NA	Bioretention
D220746 7 <sup>th</sup> St SFD	April 10, 2023	Not Yet	A, D & G	b, c, d	Bioswale	Bio-swales maintained by the owner	Volume	NA	NA	NA
TJ Rose Warehouse CB230003	April 18, 2023	Not Yet	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	Volume	NA	NA	Bioretention
Tract 8471 Vineyard Collection II (Larry's Place)	August 16, 2019	November 2023	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	Volume	NA	NA	Bioretention
CB190003 D190234 Legacy Livermore	March 5, 2018	June 25, 2018	A, D & G	B, c, d	Bioretention	O & M Agreement	2.c	NA	NA	Bioretention
TI190061	February 11, 2019	March 11, 2019	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	2.c	NA	NA	Bioretention

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 2) –  
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 (private projects)**

Project Name Project No.	Project Status <sup>13</sup>	Estimated or Actual Completion Date	Source Control Measures <sup>14</sup>	Site Design Measures <sup>15</sup>	Treatment Systems Approved <sup>16</sup>	Type of Operation & Maintenance Responsibility Mechanism <sup>17</sup>	Hydraulic Sizing Criteria <sup>18</sup>	Alternative Compliance Measures <sup>19/20</sup>	Alternative Certification <sup>21</sup>	HM Controls <sup>22/23</sup>
CB200002	August 5, 2020	Not Yet	A, D, G, N & O	B, c, d	Bioretention	None Yet	Volume	NA	NA	Bioretention
D191724 Avance	November 19, 2019	January 26, 2021	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	2.c	NA	NA	Bioretention
D191897	May 14, 2020	May 14, 2020	A, D & G	B, c, d	Self-treating Landscape Areas	None Yet	Volume	NA	NA	Self-treating Landscape Areas
D191587	April 30, 2020	May 25, 2020	A, D & G	B, c, d	Self-treating Landscape Areas	None Yet	Volume	NA	NA	Self-treating Landscape Areas
D190972	October 1, 2020	February 18, 2021	A, D & G	B, c, d	Bio-swales	None Yet	Volume	NA	NA	Bio-swales
G190007	September 6, 2019	June 10, 2022	A, D & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
CB190020	April 9, 2021	April 30, 2021	A, D, G, N & O	B, c, d	Bioretention	O & M Agreement	2.c	NA	NA	Bioretention
CB230005 Wine Country Inn										
D200403	Not Yet	September 3, 2020	A, D & G	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
D210270	April 27, 2021	September 27, 2021	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet
CB210001 PM10720	June 3, 2021	July 15, 2021	A, D, E, F, G, N & O	B, c, d	Bioretention	O & M Agreement	2.c	NA	NA	Bioretention
CB210002	February 23, 2021	Not Yet	A, D & G	Bioretention	None Yet	None Yet	None Yet	NA	NA	None Yet
CB210003	February 25, 2021	March 8, 2022	A, D, G, N & O	None Yet	None Yet	None Yet	None Yet	NA	NA	None Yet
CB210005	May 19, 2021	July 28, 2022	A, D, G, N & O	None Yet	None Yet	None Yet	None Yet	NA	NA	None Yet
CB210007	July 8, 2021	Not Yet	A, D, G, N & O	None Yet	None Yet	None Yet	None Yet	NA	NA	None Yet

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 2) –  
 Projects Approved During the Fiscal Year Reporting Period  
 (private projects)**

Project Name Project No.	Project Status <sup>13</sup>	Estimated or Actual Completion Date	Source Control Measures <sup>14</sup>	Site Design Measures <sup>15</sup>	Treatment Systems Approved <sup>16</sup>	Type of Operation & Maintenance Responsibility Mechanism <sup>17</sup>	Hydraulic Sizing Criteria <sup>18</sup>	Alternative Compliance Measures <sup>19/20</sup>	Alternative Certification <sup>21</sup>	HM Controls <sup>22/23</sup>
DDR18-020	November 25, 2019	March 14, 2020	A, D, G, N & O	None Yet	Media Filter	O & M Agreement	Volume	NA	NA	Media Filter
SPDR18-004 ZUP19-004	April 10, 2019	March 14, 2020	A, D, G, N & O	None Yet	Bioretention	O & M Agreement	2.c	NA	NA	Bioretentio n
CM210050	July 27, 2021	July 30, 2021	A, D, G, N & O	None Yet	Bioretention	O & M Agreement	2.c	NA	NA	Bioretentio n
SPDRM19-023 Porsche Dealership	October 8 2019	May 4, 2021	A, D, N, & O	B, c, d,	None Yet	None Yet	None Yet	NA	NA	None Yet
Church St Apartments	July 27, 2021	September 17, 2021	A, D, G, N & O	B, c, d	None Yet	None Yet	None Yet	NA	NA	None Yet

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 2) – Projects Approved During the Fiscal Year Reporting Period (public projects)**

Project Name Project No.	Approval Date <sup>24</sup>	Date Construction Scheduled to Begin or Date of Completion	Source Control Measures <sup>25</sup>	Site Design Measures <sup>26</sup>	Treatment Systems Approved <sup>27</sup>	Operation & Maintenance Responsibility Mechanism <sup>28</sup>	Hydraulic Sizing Criteria <sup>29</sup>	Alternative Compliance Measures <sup>30/31</sup>	Alternative Certification <sup>32</sup>	HM Controls <sup>33/34</sup>
<b>Public Projects</b>										
Downtown Hotel	Not Yet	Not Yet	A, B, C, D, E, F, G, J & O	B, c, d, k	Bio-swales & CDS Units	Bio-swales maintained by the Hotel; CDS Units by the City	Volume	NA	NA	None Yet
CIP201715 I Street Garage	Not Yet	Not Yet	A, B, C, D & G	B, c, d	Bio-swales	Bio-swales maintained by the City	Volume	NA	NA	None
CIP583018 Veterans Way	August 23, 2018	November 2018	A, D, E & G	B, c, d, e	Bio-swales & CDS Units	Maintained by the City	Volume	NA	NA	None
L St Garage	September 26, 2022	Not Yet	A, B, C, D, E, F, G, J & O	B, c, d, h, k, l	Flow through planter & media filter	Maintained by the City	2c	NA	NA	None
Comments:										

<sup>24</sup> For public projects, enter the plans and specifications approval date.

<sup>25</sup> List source control measures approved for the project. Examples include: properly designed trash storage areas; storm drain stenciling or signage; efficient landscape irrigation systems; etc.

<sup>26</sup> List site design measures approved for the project. Examples include: minimize impervious surfaces; conserve natural areas, including existing trees or other vegetation, and soils; construct sidewalks, walkways, and/or patios with permeable surfaces, etc.

<sup>27</sup> List all approved stormwater treatment system(s) to be installed onsite or at a joint stormwater treatment facility (e.g., flow through planter, bioretention facility, infiltration basin, etc.).

<sup>28</sup> List the legal mechanism(s) (e.g., maintenance plan for O&M by public entity, etc.) that have been or will be used to assign responsibility for the maintenance of the post-construction stormwater treatment systems.

<sup>29</sup> See Provision C.3.d.i. "Numeric Sizing Criteria for Stormwater Treatment Systems" for list of hydraulic sizing design criteria. Enter the corresponding provision number of the appropriate criterion (i.e., 1.a., 1.b., 2.a., 2.b., 2.c., or 3).

<sup>30</sup> For Alternative Compliance at an offsite location in accordance with Provision C.3.e.i.(1), on a separate page, give a discussion of the alternative compliance site including the information specified in Provision C.3.b.iv.(2)(m)(i) for the offsite project.

<sup>31</sup> For Alternative Compliance by paying in-lieu fees in accordance with Provision C.3.e.i.(2), on a separate page, provide the information specified in Provision C.3.b.iv.(2)(m)(ii) for the Regional Project.

<sup>32</sup> Note whether a third party was used to certify the project design complies with Provision C.3.d.

<sup>33</sup> If HM control is not required, state why not.

<sup>34</sup> If HM control is required, state control method used (e.g., method to design and size device(s) or method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control).

**C.3.h.v.(2). ► Table of Newly Installed<sup>35</sup> Stormwater Treatment Systems and Hydromodification Management (HM) Controls (Optional)**

Fill in table below or attach your own table including the same information.

Name of Facility	Address of Facility	Party Responsible <sup>36</sup> For Maintenance	Type of Treatment/HM Control(s)
Avance	4260 First St	MidPen Housing	Bioretention
Lemmons Bldg	527 Waxlax Way	Lemmons	Bioretention
First St Streetscape South	First St south between L and M	City of Livermore	Bioretention
Brighton Tract 8173	2855 Old First St	Brighton HOA	Bioretention

<sup>35</sup> "Newly Installed" includes those facilities for which the final installation inspection was performed during this reporting year.  
<sup>36</sup> State the responsible operator for installed stormwater treatment systems and HM controls.

C.3.e.v.Special Projects Reporting Table														
Reporting Period – July 1 2022 - June 30, 2023														
Project Name & No.	Permittee	Address	Application Submittal Date <sup>37</sup>	Status <sup>38</sup>	Description <sup>39</sup>	Site Total Acreage	Total Impervious Surface Created / Replaced <sup>40</sup> (ft <sup>2</sup> )	Gross Density DU/Acre	Density FAR	Special Project Category <sup>41</sup>	# of DUs in each AMI Category for Category C	LID Treatment Reduction Credit Available <sup>42</sup>	List of LID Stormwater Treatment Systems <sup>43</sup>	List of Non-LID Stormwater Treatment Systems <sup>44</sup>
Church St Apartments  DDR20-014	Fallon Enterprise	218 Church	7-27-21	Approved	Three 12-unit apartment buildings	1.62	----	22.2	N/A	C	----	50%	Biotreatment area	Media filters
L St Garage	City of Livermore	L Street	9-26-22	Approved	4 story parking structure	1.81	11,375/41,861	NA	NA	C	NA	25%	Biotreatment area	Media filters

<sup>37</sup> Date that a planning application for the Special Project was submitted. If a planning application has not been submitted, include a projected application submittal date.

<sup>38</sup> Indicate whether final discretionary approval is still pending or has been granted, and provide the date or version of the project plans upon which reporting is based.

<sup>39</sup> Type of project (commercial, mixed-use, residential), number of floors, number of units, type of parking, and other relevant information.

<sup>40</sup> The total impervious surface in acres created or replaced by the project, which is subject to the treatment requirements listed in Provision C.3.e.ii.(1).

<sup>41</sup> For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.

<sup>42</sup> For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit available. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits available.

<sup>43</sup> List all LID stormwater treatment systems proposed. For each type, indicate the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area.

<sup>44</sup> List all non-LID stormwater treatment systems proposed. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification.



Special Projects Narrative

**Church Street Apartments**

**Narrative Discussion of Low Impact Development Feasibility/Infeasibility**

This report provides a narrative discussion of the feasibility or infeasibility of providing 100 percent low impact development (LID) treatment for Church Street Apartments which has been identified as a potential Special Project, based on Special Project criteria provided in Provision C.3.e.ii of the Municipal Regional Stormwater Permit (MRP). This report is prepared in accordance with the requirement in MRP Provision C.3.e.vi.(2), to include in Special Projects reporting a narrative discussion of the feasibility or infeasibility of 100 percent LID treatment onsite or offsite.

**1. Feasibility/Infeasibility of Onsite LID Treatment**

The project site was reviewed with regard to the feasibility and infeasibility of onsite LID treatment. The results of this review showed that it was infeasible to treat 100% of the C.3.d amount of runoff with LID treatment. The findings of this review are presented below.

**a. On-site Drainage Conditions.**

The Site Drains from Northeast to the Southwest. The project has physical constraints and is eligible to qualify as a special project, which allows the developer to treat a portion of the site with mechanical means. Two media filters will be used to capture runoff from 41.2% of the site. The remainder of the site is considered 'infeasible' to treat by standard LID measure and will need to implement biotreatment. The site has been divided into 8 separate watershed DMA areas. DMA 1, DMA 5, and DMA 7 combined tributary area of 27,842 sq ft, will require the use of a media filter.

**b. Self-treating and Self-Retaining Areas and LID Treatment Measures.**

All LID treatment measure will be biotreatment areas, with the exception of two media filters. Other LID measures are considered infeasible.

**c. Maximizing Flow to LID Features and Facilities.**

Flow has been maximized to all LID features & facilities by following the natural slope in the site. Optimizing gutter flow, as well as landscape flow to onsite bioretention and media filters will allow for 100% capture of all runoff areas. Roof area run-off from DMA 1, DMA 5, and DMA 7 will be captured into a subdrain system, and be flowed through a media filter.

**d. Constraints to Providing On-site LID.**

The drainage management areas that are proposed to drain to tree-box type high flow rate biofilters and/or vault-based high flow rate media filters include some areas that are not covered by buildings. These are mostly pervious landscape and impervious areas/concrete walks, sandwiched between the right of way and building face. In these areas, conditions and technical constraints are present that preclude the use of LID features and facilities, as described below.

- i. Impervious paved areas: Impervious areas/concrete walks, do not have the needed slope to reach around the buildings to designated biotreatment areas, and are very small in square foot size to be required to flow through biofiltration.
- ii. Landscaped areas: Pervious areas and landscape areas are small, cookie cutter, strips which are inadequate to accommodate bio treatment sizes needed for this area.
  - Inadequate size to accommodate biotreatment facilities that meet sizing requirements for the tributary area.
  - Lack of head or routing path to move collected runoff to the landscaped area or from the landscaped area to a disposal point;

**2. Feasibility/Infeasibility of Off-Site LID Treatment.** The possibility of providing off-site LID treatment was found to be infeasible for the following reasons.

- i. The site is bound by three city streets, and private property. This does not allow for offsite treatment as there is no room to expand for biotreatment of adequate size.
- ii. As the site is 100% existing landscape there is no “in-lieu” treatment available to the site.

## **L Street Garage**

### **Narrative Discussion of Low Impact Development Feasibility/Infeasibility**

This report provides a narrative discussion of the feasibility or infeasibility of providing 100 percent low impact development (LID) treatment for the ‘L’ Street Garage, which has been identified as Special Project Category “C”, based on Special Project criteria provided in Provision C.3.e.ii of the Municipal Regional Stormwater Permit (MRP). This project qualifies for a 25% LID treatment reduction credit. In efforts to maximize the use of LID treatment, the project successfully treats 85% of the project via LID treatment. The remaining 15% of the project is treated by use of media filtration. This report is prepared in accordance with the requirement in MRP Provision C.3.e.vi.(2), to include in Special Projects reporting a narrative discussion of the feasibility or infeasibility of 100 percent LID treatment onsite.

#### **1. Feasibility/Infeasibility of Onsite LID Treatment**

The project site was reviewed with regard to the feasibility and infeasibility of onsite LID treatment. The results of this review showed that it was infeasible to treat one hundred percent 100% of the C.3.d amount of runoff with LID treatment. The findings of this review are presented below.

a. **On-site Drainage Conditions.** The site is located in the heart of downtown Livermore, south of Veteran's Way and east of L Street. The site is relatively flat with slope around 0.7% South to North, 0.5% slope East to West, and a resultant slope of 0.9% SE to NW. The stormwater runoff from the garage structure routes to two bioretention planters within the light wells, located in the center of the garage. The one-way access road, south of the garage will be treated by a mechanical treatment filter.

b. **Self-treating and Self-Retaining Areas and LID Treatment Measures.** The pedestrian paseo connecting to First Street is considered a self-retaining area. All landscape areas on site are considered self-treating. There are no green roofs onsite. There is no pervious pavement onsite.

c. **Maximizing Flow to LID Features and Facilities.** The stormwater runoff from the garage structure routes to two bioretention planters within the light wells, located in the center of the garage.

d. **Constraints to Providing On-site LID.** The drainage management area that is proposed to drain to a media filter includes the southern access road. In this area, conditions and technical constraints are present that preclude the use of LID features and facilities, as described below.

i. **Impervious paved areas:** The width from the face of the garage to the property line south of the garage is approximately 22'. There are multiple existing businesses along First Street adjacent to the garage. The businesses' back entries overlap with City property. The project proposes to install a one-way access road to allow trucks to make deliveries. This results in a lack of available space to place a LID treatment such as bioorientation areas or flow-through planters.

ii. **Landscaped areas:** • There is a small landscape strip north of the access road, approximately 1.5' wide. The footings from the garage also limit the space within the landscape to accommodate biotreatment facilities that meet sizing requirements for the tributary area. • Conflict with subsurface utilities; fire water, communications, sanitary sewer lines and structures are spread around the whole site making it extremely difficult to place bioretention treatment areas

**2. Feasibility/Infeasibility of Off-Site LID Treatment.** The possibility of providing off-site LID treatment was found to be infeasible for the following reasons.

i. The site is bound by three city streets, and private property. This does not allow for offsite treatment as there is no room to expand for biotreatment of adequate size.

ii. As the site is 100% existing landscape there is no "in-lieu" treatment available to the site.

**C.3.j.iii.(2) ► Table A - Public Projects Reviewed for Green Infrastructure**

Project Name and Location <sup>45</sup>	Project Description	Status <sup>46</sup>	GI Included? <sup>47</sup>	Description of GI Measures Considered and/or Proposed or Why GI is Impracticable to Implement <sup>48</sup>
Airport Water Quality and HMP Basin CIP2016-15	Installation of water quality and HMP basins to treat new impervious surfaces	Design phase	Yes	Bio-treatment and HMP Basin(s)
L St Garage – Livermore Village Parking - CIP586003	Downtown parking garage	In construction	Yes	Bioretention
Las Positas Road Widening CIP1998-38	Las Positas @ Hilliker	Design	Yes	Bioretention
Foley Road CIP 2010-28	Foley Road	Design	Yes	Bioretention
Vasco Road Widening @ Dalton CIP2008-13	Vasco @ Dalton	Design	Yes	Bioretention

**C.3.j.iii.(2) ► Table B - Planned Green Infrastructure Projects During the Permit Term**

Project Name and Location <sup>49</sup>	Project Description	Planning or Implementation Status	Green Infrastructure Measures Included
Airport Water Quality and HMP Basin CIP2016-15	Installation of water quality and HMP basins to treat new impervious surfaces	Design phase	Bio-treatment and HMP Basin(s)
Livermore High School Improvements	Athletics & Aquatics Complex	Completed	Self treatment area
Legacy South CIP2008-27	First St Streetscape	Completed	Vegetative Swale

<sup>45</sup> List each public project that is going through your agency’s process for identifying projects with green infrastructure potential.

<sup>46</sup> Indicate status of project, such as: beginning design, under design (or X% design), projected completion date, completed final design date, etc.

<sup>47</sup> Enter “Yes” if project will include GI measures, “No” if GI measures are impracticable to implement, or “TBD” if this has not yet been determined.

<sup>48</sup> Provide a summary of how each public infrastructure project with green infrastructure potential will include green infrastructure measures to the maximum extent practicable during the permit term. If review of the project indicates that implementation of green infrastructure measures is not practicable, provide the reasons why green infrastructure measures are impracticable to implement.

<sup>49</sup> List each planned (and expected to be funded) public and private green infrastructure project that is not also a Regulated Project as defined in Provision C.3.b.ii. Note that funding for green infrastructure components may be anticipated but is not guaranteed to be available or sufficient.

C.3.j.v.(1)(a)► Non-Regulated (Green Infrastructure) Projects Reporting Table – Projects Constructed During the Fiscal Year Reporting Period									
Project Location, Street Address	Name of Owner	Project Description	Construction Completion Date	Treatment Measures	Party Responsible for O&M	Hydraulic Sizing Criteria <sup>50</sup>	Total Area Draining to Treatment Measures (ft <sup>2</sup> )	Impervious Area Treated (ft <sup>2</sup> )	Pervious Area Treated (ft <sup>2</sup> )
None									
Comments:									

<sup>50</sup> See Provision C.3.d.i. “Numeric Sizing Criteria for Stormwater Treatment Systems” for list of hydraulic sizing design criteria. Enter the corresponding provision number of the appropriate criterion (i.e., 1.a., 1.b., 2.a., 2.b., 2.c., or 3).

**Section 4 – Provision C.4 Industrial and Commercial Site Controls**

**Program Highlights and Evaluation**

Highlight/summarize activities for reporting year:

Summary:

The City of Livermore conducted a total of 119 industrial and commercial inspections during the reporting year. The City also reviewed its Five-Year Inspection Plan. See, "Stormwater Industrial and Commercial Inspection Plan FY2022/2023 through FY2027/2028" in Section 4.0 Attachments. Additionally, City staff regular attends and participates in the ACCWP Industrial and Illicit Discharge Subcommittee.

**C.4.b.iii.(1) ► Business License Applications**

Provide a brief description below of which Permittee entity or entities are responsible for reviewing and approving business license applications, or provide a link to your website for business license applications.

The City of Livermore Finance Department/Business Support Center is responsible for approving business licenses. The City of Livermore contract with HDL Companies to receive and process business license. City of Livermore Finance Staff and Water Resources Source Control staff coordinate with HDL on issues involving NOI verification in the issuing and renewing of business license. The following is the link to the City's business license application process : <https://livermore.hdlgov.com/Apply/Apply1/BusinessLicense>

**C.4.d.iii.(1)(a) & (c) ► Facility Inspections**

Fill out the following table or attach a summary of the following information. Indicate your reporting methodology below.

<input checked="" type="checkbox"/>	Permittee reports multiple, discrete, potential and actual discharges at a site as one enforcement action.
<input type="checkbox"/>	Permittee reports the total number of discrete potential and actual discharges at each site.

	Number
Total number of inspections conducted (C.4.d.iii.(1)(a))	119
Total number of enforcement actions, or discrete number of potential and actual discharges resolved within 10 working days or otherwise deemed resolved in a longer but still timely manner (C.4.d.iii.(1)(c))	16

Comments:

One enforcement action involving a paint manufacturer took approximately 12 months to be resolved. The enforcement involved the storage of wastewater outside in sealed carboys. While there was no immediate threat of discharge, the City was not in approval of the storage of these materials outside. The City consistently monitored the site until all wastes had been properly removed.

**C.4.d.iii.(1)(b) ► Number of Each Type of Enforcement Conducted**

Fill out the following table or attach a summary of the following information.

	<b>Enforcement Action</b> (As listed in ERP) <sup>1</sup>	<b>Number of Enforcement Actions Taken</b>
Level 1	Verbal Warning	12
Level 2	Warning Notice	5
Level 3	Notice of Violation	0
Level 4	Notice of Violation w/Administrative Citation	0
<b>Total</b>		17

**C.4.d.iii.(1)(d) ► Frequency of Potential and Actual Non-Stormwater Discharges by Business Category**

Fill out the following table or attach a summary of the following information.

<b>Business Category<sup>2</sup></b>	<b>Number of Actual Discharges</b>	<b>Number of Potential Discharges</b>
Auto Supply	1	0
Auto Tune-Repair	0	1
Carwash- detail center	0	1
Commercial printer	0	1
Construction, Concrete Work	1	0
Dietary supplements	0	1
Equipment Rental	0	1
Fire Protection	0	1
Machine Shop	0	1
Metal Scrap Wholesale	0	1
Misc. repair shop	0	1

<sup>1</sup>Agencies to list specific enforcement actions as defined in their ERPs.

<sup>2</sup>List your Program's standard business categories.

New car sales	0	1
Paint Manufacturer	0	1
Truck leasing	1	0
Other/Misc	0	6



<b>C.4.e.iii ► Staff Training Summary</b>						
<b>Training Name</b>	<b>Training Dates</b>	<b>Topics Covered</b>	<b>No. of Industrial/ Commercial Site Inspectors in Attendance</b>	<b>Percent of Industrial/ Commercial Site Inspectors in Attendance</b>	<b>No. of IDDE Inspectors in Attendance</b>	<b>Percent of IDDE Inspectors in Attendance</b>
ACCWP IIDC Stormwater Inspector Training Workshop: Collaboration and Resources	2/23/2023	Alameda County District Attorney's office mobile business enforcement strategy and case studies; U.S. Fish & Wildlife inspector on case studies of illicit discharges to creeks; Inspector resources for implementing MRP 3.0 requirements	2	66%	2	66%
CWEA Annual Conference	April 18-21, 2023	Various Stormwater, Laboratory, Water, and Sanitary Sewer topics. Conference brochure link: <a href="https://www.eventscribe.net">Full Schedule (eventscribe.net)</a>	1	33%	1	33%
CWEA P3S Conference	January 30-February 1, 2023	Various Stormwater and Pretreatment topics covered.	2	66%	2	66%
Sewer and Spill Emergency Response Plan training (instructor - Sam Rose):	5/11/2023	Internal training for Source Control Staff	3	100%	3	100%
Comments: No additional comments.						

**Section 5 – Provision C.5 Illicit Discharge Detection and Elimination**

**Program Highlights and Evaluation**  
**Highlight/summarize activities for reporting year:**

Provide background information, highlights, trends, etc.

Summary:  
 The City of Livermore actively participates in the ACCWP Industrial and Illicit Discharge Committee. Jennifer Peet, Source Control Inspector, was the City's representative on this committee during this reporting period. Refer to the C.5 Illicit Discharge Detection and Elimination section of the ACCWP FY 22-23 Annual Report for description of activities implemented at the countywide and/or regional level.

**C.5.d.iii.(1) ► Spill and Discharge Complaint Tracking**

Spill and Discharge Complaint Tracking (fill out the following table or include an attachment of the following information)

	<b>Number</b>
Discharges reported (C.5.d.iii.(1)(a))	15
Discharges reaching storm drains and/or receiving waters (C.5.d.iii.(1)(b))	8
Discharges resolved in a timely manner (C.5.d.iii.(1)(c))	12

Comments:  
 Reports of illicit discharge are received via the City's spill reporting line, referrals from other municipal departments/agencies, and/or identified by Source Control staff through routine inspections and surveys of industrial and commercial business parks. The City of Livermore documents and tracks all reports received for illicit discharges utilizing the ACCWP Illicit Discharge Report form and this inspection data is maintained in the City's Illicit Discharge Report database. If the City receives a report of an illicit discharge, but the subsequent investigation does not substantiate the alleged violations stated by the reporting party, the information is noted on the report form.

**C.5.e.iii.(2)(a)&(c) ▶ Mobile Sources Inspections and Enforcement**

Fill out the following table or attach a summary of the following information.

	Number
Mobile business inspections conducted (C.5.e.iii.(2)(a))	1

Summary of the enforcement actions taken against mobile businesses during the reporting year (C.5.e.iii.(2)(c)).

Summary:  
 The City of Livermore actively participated with BASMAA in the development and implementation of the BASMAA Certified Mobile Cleaner/Recognized Surface Cleaner program in past permit periods. During those permit years, the City of Livermore conducted significant off-hour inspections of various types of mobile cleaner to verify BMP implementation. The City continues to actively participate and coordinate with BASMAA. The City also shares and receives information regarding mobile businesses with ACCWP Industrial and Illicit discharge subcommittee. During its routine stormwater business inspections, inspection staff reviews mobile business BMPS and requirements with business/property owners who utilize the services of mobile cleaners. Additional, through its Pretreatment Program, the City of Livermore permits mobile business cleaner that occupy a facility in which they bring collected wastewater back to for disposal and where they maintain pressure washing equipment. Currently, the City permits one such facility. As part of this permit, a facility inspection is performed and BMPs are reviewed during these annual inspections.

**C.5.e.iii.(2)(b) ▶ Frequency of Mobile Sources Inspections by Business Type**

Fill out the following table or attach a summary of the following information.

Mobile Business Type <sup>1</sup>	Number Inspected <sup>2</sup>
Power Washing (Buildings, Sidewalks, Parking Lot- Surface Cleaner	1

<sup>1</sup> Including, but not limited to, automobile washing, vehicle fueling, power washing, steam cleaning, graffiti removal, and carpet cleaning.

<sup>2</sup> The number of each type of mobile business inspected



Section 6 – Provision C.6 Construction Site Controls

<b>C.6.e.iii.(3)(a), (b), (c), (d) ▶ Site/Inspection Totals</b>				
Total number of construction sites requiring inspections during at least part of the Permit year; (C.6.e.iii.1.a)	Total number of active hillside sites disturbing <1 acre of soil requiring inspection (C.6.e.iii.1.b)	Number of High Priority Sites (sites disturbing < 1 acre of soil requiring storm water runoff quality inspection) (C.6.e.iii. 1.d)	Number of sites disturbing ≥ 1 acre of soil (C.6.e.iii.1.c)	Total number of storm water runoff quality inspections conducted (include only Hillside Sites, High Priority Sites and sites disturbing 1 acre or more) (C.6.e.iii. 1.e)
14	0	3	11	108
Comments: No additional comments				
Provide the number of inspections that are conducted at sites not within the above categories as part of your agency's inspection program and a general description of those sites, if available or applicable.  Does not apply				

<b>C.6.e.iii.(1)(f) ▶ Construction Related Storm Water Enforcement Actions</b>		
	Enforcement Action (as listed in ERP) <sup>1</sup>	Number Enforcement Actions Issued
Level 1 <sup>2</sup>	Verbal Warning	1
Level 2	Written Warning	1
Level 3	Administrative Action	0
Level 4	Stop Work Order	0
<b>Total</b>		<b>2</b>

<sup>1</sup>Agencies should list the specific enforcement actions as defined in their ERPs.  
<sup>2</sup>For example, Enforcement Level 1 may be Verbal Warning.

C.6.e.iii.(1)(g), ► Illicit Discharges	
	Number
Number of illicit discharges, actual and potential, of sediment or other construction-related materials	2

C.6.e.iii.(1)(h) ► Corrective Actions	
Indicate your reporting methodology below.	
<input type="checkbox"/>	Permittee reports multiple discrete potential and actual discharges at a site as one enforcement action.
<input checked="" type="checkbox"/>	Permittee reports the total number of discrete potential and actual discharges on each site.
	Number
<b>Enforcement actions or discrete potential and actual discharges fully corrected within 10 business days after violations are discovered</b> or otherwise considered corrected in a timely period (C.6.e.iii.1.h)	2
<b>Comments:</b> Corrective actions taken by written and verbal warning. Problems were corrected within ten days.	

C.6.f.iii ► Staff Training Summary							
Training Name	Training Dates			Topics Covered	Total Number of Inspectors (both municipal and non-municipal staff)		No. of Inspectors in Attendance (both municipal and non-municipal staff)
Beaver Dam Stream Restoration	12/26/2022			Beaver Dam Stream Restoration	1		1
Stormwater Compliance	12/27/2022			Stormwater Compliance	1		1
Riparian Area	12/28/2022			Riparian Area	1		1

**FY 22-23 Annual Report**  
**Permittee Name: City of Livermore**

**C.6 – Construction Site Controls**

BMP Performance	12/29/2022			Best Management Practices	1		1
August 26th- CalTrans/CalRecycle, Roadside Revegetation and Stormwater Quality with Compost BMPs	7/2/22			Roadside Revegetation and Stormwater Quality with Compost BMPs	1		1
Stormwater Pollution Prevention Plans (SWPPP)	7/2/22			Stormwater Pollution Prevention Plans (SWPPP)	1		1
Life, Erosion, and the Enjoyment of Beneficial Uses	7/25/22			Life, Erosion, and the Enjoyment of Beneficial Uses	1		1
Updated Development Stormwater Requirements for MRP 3.0	5/16/23			Updated Development Stormwater Requirements for MRP 3.0	11		11
		<p>Comments:  <b>C.6 training was not provided in FY 22-23, although the ACCWP C.3 workshop on May 16, 2023, included a presentation on the Construction Site Stormwater Program enhancements required by C.12.g.ii (3) and (4). See the Section C.3 of the ACCWP FY 22-23 Annual Report for more information.</b></p>					

Section 7 – Provision C.7. Public Information and Outreach

**C.7.g.iii.(1) ► Reporting**

In addition to the outreach efforts listed below, refer to Section C.7 Public Information and Outreach of the ACCWP FY 2022-23 Annual Report for a description of Alameda countywide outreach campaigns.

During FY 2022-23, the City of Livermore promoted stormwater messaging through events, webinars, various websites, billing inserts/messages, newsletters, and social media. Messaging focused on fats, oils, and grease (FOG), household hazardous waste disposal, integrated pest management, and litter's impact on creeks.

**FY 2022-23 Outreach Highlights**

**Outreach Campaigns:** The City of Livermore continued to promote stormwater related messaging through community installations, email newsletters, bill inserts, social media, and websites.

**Public Outreach and Citizen Involvement Events:** The City of Livermore hosted or participated in 30 events/webinars during FY 2022-23, including farmers markets, street festivals, parades, Livermore Water Reclamation Plant tours, and Drug Take Back events.

**Watershed Stewardship Collaboration:** The City of Livermore continued its long-time participation in the Living Arroyos, Adopt a Creek Spot, and acwForum programs.

**School-Age Children Outreach:** The City of Livermore hosted five Livermore Water Reclamation Plant tours for students, presented water resources awards at two science fairs, and participated in two youth career development days.

**Outreach to Municipal Officials:** The City of Livermore proclaimed September 18 – 24, 2022 as Pollution Prevention Week. Staff shared stormwater related updates in weekly Council emails as needed.



Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>C.7.a. Outreach Campaigns</b>	<b>Describe the outreach campaign(s) implemented, including target audience, pollution prevention message(s), and media type</b>	<b>Sum the total countywide and local C.7.a campaigns</b>				
ACCWP Social Media Campaigns - See the Countywide Program Annual Report for details.	<ul style="list-style-type: none"> <li>• Stormwater/Storm Drain Awareness</li> <li>• Watershed Awareness</li> <li>• Litter</li> <li>• Hire Certified Less Toxic Pest Contractors</li> <li>• OWOW Resources</li> <li>• Pick-up Pest Waste</li> <li>• Coastal Cleanup</li> <li>• HHW Mercury Bulbs</li> <li>• Fishing Advisories</li> <li>• Car Washing</li> <li>• Health Gardening</li> </ul>	12				
Installations	<p>Installed educational displays throughout the community that taught residents about water pollution prevention, healthy gardening, and less-toxic pest control methods.</p> <ol style="list-style-type: none"> <li>1. National Water Quality Month Display at Livermore Civic Center Library (Month of August 2022)</li> <li>2. Livermore Water Conservation Art Contest Display at Livermore Chamber of Commerce (Month of May 2023)</li> <li>3. OWOW posters with QR codes displayed in kiosks throughout downtown Livermore (Month of June 2023)</li> </ol>	3				
Email Campaigns	The City of Livermore sends a community email newsletter to its subscribers every Friday. Stormwater focused articles are included in this newsletter as needed.	As needed				
Livermore Sanitation Bill Inserts	The City of Livermore's solid waste services provider is Livermore Sanitation. The City adds inserts and newsletters to Livermore Sanitation bills multiple times a year. Stormwater-focused articles	8				

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
	<p>appeared in eight Livermore Sanitation bill inserts or newsletters during FY 2022-23.</p> <ol style="list-style-type: none"> <li><a href="#">Residential Bill Insert July 2022</a></li> <li><a href="#">Residential Bill Insert October 2022</a></li> <li><a href="#">Residential Bill Insert January 2023</a></li> <li><a href="#">Residential Newsletter January 2023</a></li> <li><a href="#">Residential Bill Insert March 2023</a></li> <li><a href="#">Residential Newsletter April 2023</a></li> <li><a href="#">Multi-Family Bill Insert May 2023</a></li> <li><a href="#">Commercial Newsletter May 2023</a></li> </ol>					
Commercial Sewer Customer Bill Messages	The City of Livermore issues monthly bills to its non-residential sewer service customers. These billing messages regularly feature messages focused on properly disposing of hazardous waste and reporting storm drain pollution.	10				
Social Media Campaigns	<p>Below is a summary of the social media accounts the City of Livermore uses to promote stormwater awareness.</p> <ol style="list-style-type: none"> <li>City of Livermore Facebook (@CityofLivermore)</li> <li>Livermore Recycles Facebook (@LivermoreRecycles)</li> <li>Adopt a Creek Spot Facebook (@trivalleycreeks)</li> <li>Living Arroyos Facebook (@LivingArroyos)</li> <li>City of Livermore Twitter (@CityofLivermore)</li> <li>Livermore Public Works Twitter (@LivermorePW)</li> <li>Living Arroyos Twitter (@LivingArroyos)</li> <li>City of Livermore Instagram (@CityofLivermore)</li> <li>City of Livermore Nextdoor</li> </ol>	9				
Websites	<p>Below is a summary of the websites the City of Livermore uses to promote stormwater awareness.</p> <ol style="list-style-type: none"> <li><a href="http://www.livermoreca.gov">www.livermoreca.gov</a></li> <li><a href="http://www.livermoresanitation.com">www.livermoresanitation.com</a></li> </ol>	7				

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
	3. <a href="http://www.livermorerecycles.com">www.livermorerecycles.com</a> 4. <a href="http://www.livermoreassets.net">www.livermoreassets.net</a> 5. <a href="http://www.livingarroyos.org">www.livingarroyos.org</a> 6. <a href="http://www.trivalleywaterwise.com">www.trivalleywaterwise.com</a> 7. <a href="http://www.acwforum.com">www.acwforum.com</a>					
<b>C.7.b Public Outreach and Citizen Involvement Events</b>	<b>Describe public outreach and citizen involvement events conducted</b>	<b>Sum the total countywide and local C.7.b event days</b>				
ACCWP Outreach - Events	Alameda County Fair	24				
ACCWP Outreach – Integrated Pest Management Webinars	Hosted countywide webinars with OWOW on integrated pest management topics.  1. Fall is for Planting (10/13/22) 2. Fall Pest Prevention (11/10/22) 3. How to Manage Weeds Safely & Effectively (2/16/23) 4. Setting your Garden up for Success (3/16/23) 5. Gardening for the Good Bugs (4/13/23) 6. Spring Pest Management (5/11/23)	6				
Local Events – Stormwater Awareness	Hosted educational booths focused on stormwater, storm drain, and watershed awareness at the following local special events.  1. Livermore Farmers Market (8/18/22) 2. Livermore Chamber of Commerce's Multi-Chamber Mixer Event (8/18/22) 3. Livermore Farmers Market (9/15/22) 4. Livermore Library's Family Science Day (3/4/23) 5. Livermore Valley Joint Unified School District's Science Odyssey Event (3/9/23)	15				

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
	6. Livermore Library & LARPD's Nature Storytime at Sycamore Grove Park (4/15/23) 7. City of Livermore's Climate & Environment Expo (4/19/23) 8. Livermore Downtown Street Fest (5/20-21/23) 9. City of Livermore's Career & Volunteer Expo (6/6/23)  Additionally, the Water Resources Division provided Clean Water Program activity books, FOG scrapers, and Pest or Pal activity books to be given out at all City of Livermore weekly Farmers Market booths throughout July and August 2022.					
Local Events – IPM & Runoff Reduction	Hosted in-person events and webinars in collaboration with local water agencies focused on runoff reduction, integrated pest management, and sustainable landscaping practices.  1. Smart Controllers for Residential Properties Webinar (7/14/22) 2. Smart Controllers for Commercial Properties Webinar (9/4/22) 3. Lawn to Garden Party Event (9/25/22) 4. Caring for Trees During Droughts Webinar (9/27/22) 5. Irrigation Tune-Up Webinar (4/12/23)	5				
Local Events - FOG	Decorated vehicles to participate in local parades and a Trunk or Treat event to teach residents about Fats, Oils, and Grease (FOG) impacts.  1. Livermore Police's Trunk or Treat Event (10/26/22) 2. Livermore Holiday Sights & Sounds Parade (12/3/22) 3. Livermore Rodeo Parade (6/10/23)	3				
Local Events – Drug Take Backs	The Livermore Police Department hosted the following Drug Take Back events to accept expired or unwanted medications.	2				

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
	<ol style="list-style-type: none"> <li>1. Drug Take Back Event (10/29/22)</li> <li>2. Drug Take Back Event (4/22/23)</li> </ol>					
Local Events - Wastewater Treatment Plant Tours	Hosted in-person tours of the Livermore Water Reclamation Plant for residents and businesses. <ol style="list-style-type: none"> <li>1. General Public Tour (4/8/23)</li> <li>2. Tour for Frank Olsen Company Employees (5/24/23)</li> <li>3. General Public Tour (6/28/23)</li> </ol>	3				
<b>C.7.c Watershed Stewardship Collaboration</b>	<b>Describe watershed stewardship efforts</b>	<b>Sum the total countywide and local C.7.c collaboration</b>				
ACCWP Collaboration	Bringing Back the Natives Online and In-Person Garden Tours sponsored content: Rain gardens, rainwater catchment, less toxic gardening	2				
Bringing Back the Natives Garden Tour	The City of Livermore was a standalone sponsor of the 2022 Bringing Back the Natives online and in-person garden tours.	4				
Living Arroyos	Living Arroyos hosted creek clean-up and invasive plant removal events at arroyos throughout Livermore. <ol style="list-style-type: none"> <li>1. Creeks to Bay Day (9/17/22)</li> <li>2. Stanley Reach Volunteer Workday (10/1/22)</li> <li>3. Stanley Reach Volunteer Workday (10/15/22)</li> <li>4. Stanley Reach Volunteer Workday (12/3/22)</li> <li>5. Stanley Reach Volunteer Workday (12/17/22)</li> <li>6. Stanley Reach Creek Cleanup (1/7/23)</li> <li>7. Stanley Reach Creek Cleanup (1/21/23)</li> <li>8. Bluebell Drive Creek Cleanup (2/4/23)</li> <li>9. Springtown Preserve Cleanup (2/18/23)</li> </ol>	14				

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
	10. Bluebell Drive Weeding (2/18/23) 11. Bluebell Drive Weeding (3/4/23) 12. Stanley Reach Creek Cleanup (4/1/23) 13. Arroyo Mocho Creek Cleanup (4/15/23) 14. Livermore Community Service Day (5/6/23)					
Adopt a Creek	The City of Livermore leads the Tri-Valley Adopt a Creek program. In FY 2022-23, 160 volunteers worked on 30 days to remove 2,315 pounds of litter from Livermore's waterways.	30				
acwForum	The Alameda Creek Watershed Forum (acwForum) is a voluntary, non-regulatory stakeholder group that supports the community's interest in protecting and achieving a healthy and sustainable Alameda Creek watershed. In FY 2022-23, the group issued nine email newsletters, sponsored the Alameda Watershed Photography Contest, and hosted its annual State of the Watershed Conference.	1				
<b>C.7.e. School-Age Children Outreach</b>	<b>Describe school outreach activities conducted</b>	<b>Sum the total countywide and local C.7.e classroom presentations, school assemblies, etc.</b>				
ACCWP Outreach	Caterpillar Puppets K-3 <sup>rd</sup> grade education	50				
ACCWP Outreach	Kids for Bay 3 <sup>rd</sup> -5 <sup>th</sup> grade education Storm Drain Rangers	85				
ACCWP Outreach	Livermore Area Recreation and Parks District Watershed Jr. Ranger 4 <sup>th</sup> -5 <sup>th</sup> grade education	40				
Career Fair Events	Attended or hosted events focused on teaching students about careers in the water industry.	2				

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
	<ol style="list-style-type: none"> <li>1. Hosted booth at Livermore High School Career Fair (4/11/23)</li> <li>2. City of Livermore hosted Youth in Government Day (4/19/23)</li> </ol>					
Student Awards	<p>Presented awards to the best water-related projects at science fairs.</p> <ol style="list-style-type: none"> <li>1. Livermore Valley Joint Unified School District Science Odyssey Event (3/9/23)</li> <li>2. Alameda County Science and Engineering Fair (3/25/23)</li> </ol>	2				
Plant Tours	<p>Hosted in-person or virtual tours of the Livermore Water Reclamation Plant for local students.</p> <ol style="list-style-type: none"> <li>1. San Ramon Valley High School AP Environmental Science Students (8/31/22)</li> <li>2. San Ramon Valley High School AP Environmental Science Students (9/7/22)</li> <li>3. Granada High School AP Environmental Science Students (1/19/23)</li> <li>4. Livermore High School Green Engineering Students (4/19/23)</li> <li>5. Livermore Teen Academy Students (6/13/23)</li> </ol>	5				
<b>C.7.f. Outreach to Municipal Officials</b>	<b>Describe outreach conducted to municipal officials</b>	<b>If applicable, provide the total the number of presentations</b>				

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Proclamations	Pollution Prevention Week Proclamation September 18 – 24, 2022	1				
Council Updates	Stormwater information provided to City Council in their weekly email update as needed.	As needed				

**C.7.g.iii.(2) ► Reporting - Stormwater Pollution Prevention Education**

Is your agency maintaining a website (or referring to a regional website) to provide information on stormwater issues, watershed characteristics, and stormwater pollution prevention approaches?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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If no, explain:

Local stormwater point of contact phone number(s)	(925) 960-8100
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Local/Regional stormwater website(s)	<a href="https://cleanwaterprogram.org/">https://cleanwaterprogram.org/</a>
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In addition to the outreach efforts listed below, refer to Section C.7 Public Information and Outreach of the ACCWP FY 2022-23 Annual Report for a description of Alameda countywide outreach campaigns.

The local stormwater point of contact is (925) 960-8100. Residents can find this number on the City of Livermore's homepage by using the drop-down options in the "Service Finder". The phone number can also be found by going to How Do I > Report > Illegal Storm Drain Dumping in the website's main navigation.

The City of Livermore maintains numerous webpages to provide information on stormwater issues, watershed characteristics, and stormwater pollution prevention approaches. The main landing page is [www.livermoreca.gov/stormwater](http://www.livermoreca.gov/stormwater).



Section 9 – Provision C.9 Pesticides Toxicity Controls

C.9.a. ► Implement IPM Policy or Ordinance					
Is your municipality implementing its IPM Policy/Ordinance and Standard Operating Procedures?		X	Yes		No
If no, explain:					
<i>(For FY 22-23 Annual Report only)</i> Provide links to IPM policies or ordinances and IPM standard operating procedures:					
Report implementation of IPM BMPs by showing trends in quantities and types of pesticides used, and <b>suggest reasons for increases in use of pesticides that threaten water quality</b> , specifically organophosphates, pyrethroids, carbamates, fipronil, indoxacarb, diuron, and diamides. A separate report can be attached as evidence of your implementation. <b>Guidance: List only quantities of organophosphates, pyrethroids, carbamates, fipronil, indoxacarb, diuron, neonicotinoids, and diamides that are used in a manner that could potentially impact water quality.</b>					
Trends in Quantities and Types of Pesticide Active Ingredients Used <sup>1</sup>					
Pesticide Category and Specific Pesticide Active Ingredient Used	Amount <sup>2</sup> of Active Ingredient				
	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Organophosphates</b>					
Active Ingredient Chlorpyrifos	0				
Active Ingredient Diazinon	0				
Active Ingredient Malathion	0				
<b>Pyrethroids (see footnote #2 for list of active ingredients)</b>	0				
Active Ingredient Bifenthrin (7.9%)	0				
Active Ingredient Bifenthrin (0.2%)	1.5 lbs				
Active Ingredient Cyfluthrin (6%)	0				
Active Ingredient ( beta-Cyfluthrin (11.8%)	1.0 oz				
Active Ingredient Esfenvalerate (6.4%)					

<sup>1</sup> Includes all municipal structural and landscape pesticide usage by employees and contractors.

<sup>2</sup> Weight or volume of the active ingredient, using same units for the product each year. Please specify units used. The active ingredients in any pesticide are listed on the label. The list of active ingredients that need to be reported in the pyrethroids class includes: metofluthrin, bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, and permethrin.

<b>Carbamates</b>					
Active Ingredient Carbaryl	0				
Active Ingredient Aldicarb	0				
<b>Pesticide Category and Specific Pesticide Active Ingredient Used</b>	<b>Amount</b>				
	<b>FY 22-23</b>	<b>FY 23-24</b>	<b>FY 24-25</b>	<b>FY 25-26</b>	<b>FY 26-27</b>
<b>Indoxacarb</b>	0				
<b>Diuron</b>	0				
<b>Diamides</b>	0				
Active Ingredient Chlorantraniliprole	0				
Active Ingredient Cyantraniliprole	0				
<b>Neonicotinoids</b>					
Active Ingredient Imidacloprid	0				
Active Ingredient Acetamiprid	0				
Active Ingredient Dinotefuran (40%)	227 oz				
<b>Fipronil</b>	0				
<b>Reasons for increases in use of pesticides that threaten water quality:</b>					
<p>The assumption that pesticide use will decrease over time due to the implementation of IPM principles is overly simplistic and likely false. The very nature of IPM dictates that pesticide usage will fluctuate over time, in response to different, pest-specific or site-specific factors, or as non-pesticide approaches are exhausted. Therefore, the assumption that usage will decrease and the requirement to explain any increase seems overly simplistic. The City has no definitive explanation regarding the increase in certain pesticides use, nor does it have a definitive explanation for the decrease in certain pesticide use.</p>					
<b>IPM Tactics and Strategies Used:</b>					
<p>Two examples of IPM strategies utilized by the City's pest control contractors at City facilities were the following:</p> <ol style="list-style-type: none"> <li>1. Utilization of glue traps to profile pests entering facilities in entrance area doorways to assess specific pest entering facilities and to provided target pest management practices.</li> <li>2. Utilization of mechanical/bait traps to manage rodents.</li> </ol>					

**C.9.b ▶ Train Municipal Employees**

Enter the number of employees that apply or use pesticides (including herbicides) within the scope of their duties.	2
Enter the number of these employees who received training on your IPM policy and IPM standard operating procedures within this reporting year.	2
Enter the percentage of municipal employees who apply pesticides who have received training in the IPM policy and IPM standard operating procedures within this reporting year.	100%
Type of Training: Internal staff training/tailgates.	

**C.9.c ▶ Require Contractors to Implement IPM**

Did your municipality contract with any pesticide service provider in the reporting year, for either landscaping or structural pest control?	X	Yes		No
If yes, did your municipality evaluate the contractor's list of pesticides and amounts of active ingredients used?	X	Yes		No
If your municipality contracted with any pesticide service provider, briefly describe how contractor compliance with IPM Policy/Ordinance and SOPs was monitored The City of Livermore has a professional services agreement with its pest control contractor requiring the use of IPM. Additionally, the contract requires Orkin to provide Quarterly and Annual Reports to the City summarizing pesticide usage. This report requires Orkin to provide the total quantities and types of pesticide used.				

**C.9.d ▶ Interface with County Agricultural Commissioners**

How did your municipality communicate with the County Agricultural Commissioner to: (a) get input and assistance on urban pest management practices and use of pesticides or (b) inform them of water quality issues related to pesticides?  The City of Livermore did not have any need necessitating communication with the County Agricultural Commissioner during this reporting period." Please refer to Section C.9 Pesticides Toxicity Control section of the ACCWP FY 22-23 Annual Report.
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<p>Did your municipality report any observed or citizen-reported violations of pesticide regulations (e.g., illegal handling and applications of pesticides) associated with stormwater management, particularly the California Department of Pesticide Regulation (DPR) surface water protection regulations for outdoor, nonagricultural use of pyrethroid pesticides by any person performing pest control for hire.</p>		<p><b>Yes</b></p>	<p>X</p>	<p><b>No</b></p>
<p>If yes, provide a summary of improper pesticide usage reported to the County Agricultural Commissioner and follow-up actions taken to correct any violations. A separate report can be attached as your summary.</p>				

**C.9.e.ii (1) ► Public Outreach: Point of Purchase**

Provide a summary of public outreach at point of purchase, and any measurable awareness and behavior changes resulting from outreach (here or in a separate report); **OR** reference a report of a regional effort for public outreach in which your agency participates.

Summary:  
 See the C.9 Pesticides Toxicity Control section of the ACCWP FY 22-23 Annual Report for information on point of purchase public outreach conducted countywide and regionally.

**C.9.e.ii (2) ► Public Outreach: Pest Control Contracting Outreach**

Provide a summary of outreach to residents who use or contract for structural pest control and landscape professionals); **AND/OR** reference a report of a regional effort for outreach to residents who hire pest control and landscape professionals in which your agency participates.

Summary:  
 See the C.9 Pesticides Toxicity Control section of the ACCWP FY 22-23 Annual Report for information on point of purchase public outreach conducted countywide and regionally.

**C.9.e.ii.(3) ► Public Outreach: Pest Control Operators**

Provide a summary of public outreach to pest control operators and landscapers and reduced pesticide use (here or in a separate report); **AND/OR** reference a report of a regional effort for outreach to pest control operators and landscapers in which your agency participates.

Summary:  
 See the C.9 Pesticides Toxicity Control section of the ACCWP FY 22-23 Annual Report for a summary of our participation in and contributions towards countywide and regional public outreach to pest control operators and landscapers to reduce pesticide use.

**C.9.f ▶ Track and Participate in Relevant Regulatory Processes**

Summarize participation efforts, information submitted, and how regulatory actions were affected; **AND/OR** reference a regional report that summarizes regional participation efforts, information submitted, and how regulatory actions were affected.

Summary:

During FY 22-23, we participated in regulatory processes related to pesticides through contributions to ACCWP and the California Stormwater Quality Association (CASQA). For additional information, see the Regional Report prepared by CASQA, which is included as a supplement to the ACCWP FY 22-23 Annual Report.

**Section 10 – Provision C.10 Trash Load Reduction**

**C.10.a.i ► Trash Load Reduction Summary**

For population-based Permittees, provide the overall trash reduction percentage achieved to-date within the jurisdictional area of your municipality that generates problematic trash levels (i.e., Very High, High, or Moderate trash generation). Base the reduction percentage on the information presented in C.10.b i-v and C.10.f.i-ii. Provide a discussion of the calculation used to produce the reduction percentage

**Trash Load Reductions**

Percent Trash Reduction in All Trash Management Areas (TMAs) due to <b>Full Trash Capture Systems</b> (as reported C.10.b.i)	45%
Percent Trash Reduction in all TMAs due to <b>Control Measures Other than Full Trash Capture Systems</b> (as reported in C.10.b.iii) <sup>1</sup>	13%
Percent Trash Reduction due to <b>Jurisdiction-wide Source Control Actions</b> <sup>2</sup> (as reported in C.10.b.v)	0%
<b>Subtotal for Above Actions</b>	<b>58%</b>
<b>Trash Offsets (Optional)</b>	
Offset Associated with Additional Creek and Shoreline Cleanups (as reported in C.10.f.i)	10%
Offset Associated with Direct Trash Discharges (as reported in C.10.f.ii)	0%
<b>Total (Jurisdiction-wide) % Trash Load Reduction through FY 2022-23</b>	<b>68%</b>

**Discussion of Permittee Trash Load Reduction and the Load Reduction Calculation:**

The City attained and reported 82% trash load reduction (including trash offsets) in its FY 21-22 Annual Report. During FY 22-23, the City continued to implement a robust trash control measure program including trash full capture systems and an On-land Visual Trash Assessment (OLVTA) program designed to evaluate improvements in trash levels. The total (jurisdiction-wide) percent trash load reduction in FY 22-23 is 68% (including trash offsets but excluding trash reduction credits for source controls that are no longer creditable under MRP 3.0). OLVTA results are available upon request. The City's Baseline Trash Generation Map can be found in the City's FY 19-20 Annual Report.

<sup>1</sup> See Appendix 10-1 for changes between 2009 and FY 22-23 in trash generation by TMA as a result of Full Capture Systems and Other Measures.

<sup>2</sup> To claim a load percentage reduction value, Permittees must provide substantive and credible evidence that new source control actions are being implemented jurisdiction-wide and reduce trash by the claimed value. Permittees may no longer claim source control actions implemented under previous Permits (i.e., foam foodware and single-use plastic bags).

**C.10.a.i ► Trash Load Reduction Summary**

For population-based Permittees, provide the overall trash reduction percentage achieved to-date within the jurisdictional area of your municipality that generates problematic trash levels (i.e., Very High, High, or Moderate trash generation). Base the reduction percentage on the information presented in C.10.b i-v and C.10.f.i-ii. Provide a discussion of the calculation used to produce the reduction percentage

While the City did not report a measured trash reduction of 90% for this reporting period, it is interesting to note, the reductions reported for the past 5 fiscal years;

**5-Year Total Trash Reduction History**

<b>FY2017-2018:</b>	<b>81.5 %</b>
<b>FY2018-2019:</b>	<b>90.1 %</b>
<b>FY 2019-2020:</b>	<b>86.1 %</b>
<b>FY 2020-2021</b>	<b>85.0 %</b>
<b>FY 2021-2022</b>	<b>82.0 %</b>

***(See attachment C.10 for Trash Load Reduction Table for FY2017/18- FY2021/22)***

Since the adoption of MRP 1.0 in 2010, compliance with Provision C.10 has continued to be a "moving target" with the SFRWQCB consistently making critical changes to the compliance requirements of Provision C.10. Ironically, in 2010 permittees were required to develop a Long-Term Trash Reduction Plan. These plans were developed in accordance with the requirements specified in the 2010 MRP 1.0 version, Provision C.10 requirements. Since this time, there have been two additional iterations of the MRP (MRP 2.0 and MRP 3.0) with a change in compliance requirements for Provision C.10 on each occasion. It is difficult to implement a long-term compliance plan, which entails significant financial costs (trash capture construction and installation costs), when such significant changes to the way compliance is achieved are continually made. The City of Livermore revised its Long-Term Trash Reduction Plan during this reporting period. See attachment C.10 for a copy of the revised plan.

In a comparison of the City of Livermore's current FY report (FY 2022-2023) to the last FY Report (FY2021-2022), the following changes result in a decline in the Total Trash Load Reduction:

1. "Control Measures Other than Trash Full Capture Systems" measured by On-Land Visual Assessments (OLVTAs) went down from 27% to 13%.
2. "Jurisdictional-wide Source Control Actions" (Styro-Foam Ban and Single Use Plastic Bag Ban) went down from 10% to 0%, as the credit for these programs was removed with the adoption of MRP 3. This is another example of how compliance with C.10 has been somewhat of a moving target.

Had the City not seen a 14% decline in the results of OLVTAs and been able to continue to take a 10% credit for our Styro-foam (5%) and Single Use Plastic Bans (5%), the City would have had a measured trash reduction of **92%** for this reporting period. OLVTAs, if performed consistently and honestly, will likely vary from year to year based on actual documented visual observation of litter conditions. These variations can and will have an impact on compliance. For instance, the City was able to comply with a 90% reduction in FY 2018-2019, ahead of the June 30, 2023, deadline, due to more favorable results from OLVTAs, coupled with the Jurisdictional-wide Source Control Measures (Single Use Plastic Bag and Styrofoam product bans).

**C.10.a.i ► Trash Load Reduction Summary**

For population-based Permittees, provide the overall trash reduction percentage achieved to-date within the jurisdictional area of your municipality that generates problematic trash levels (i.e., Very High, High, or Moderate trash generation). Base the reduction percentage on the information presented in C.10.b i-v and C.10.f.i-ii. Provide a discussion of the calculation used to produce the reduction percentage

While falling short of the 90% goal during this reporting period, the City continues its dedicated efforts towards compliance with Provision C.10. The City of Livermore is currently in progress with **City Project NO. 2021-12- 2023 Stormwater Trash Capture Project** which includes the installation of a total of 60 trash capture devices (Connector Pipe Screens and Hanging Basket Devices). This project will be completed by December 31, 2023, and yield an additional net **trash reductions of 6.2%**. The specific details and plans of this project are included in the C.10 Attachments to this report.

**C.10.a.ii(a) ► Full Trash Capture Systems – Population-based Permittees**  
**C.10.c ► Full Trash Capture Systems – Flood Management Agencies**

Provide the following:

- 1) Total number and types of full capture systems (publicly and privately-owned) installed during FY 22-23, and prior to FY 22-23, including inlet-based and large flow-through or end-of-pipe systems, and qualifying low impact development (LID) required by permit provision C.3.
- 2) Total land area (acres) treated by full capture systems for population-based Permittees and total number of systems for flood management agencies compared to the total required by the permit.

Type of System	# of Systems	Areas Treated (Acres)
<b>Installed in FY 22-23</b>		
None	--	--
<b>Installed Prior to FY 22-23</b>		
Inlet-based Devices (Public)	325	1,456.1
Inlet-based Devices (Private)	49	79.4
Hydrodynamic Separator (Public)	2	382.4
Hydrodynamic Separator (Private)	20	40.8
Net Device (Public)	1	433.6
Low Impact Development (Private)	9	62.5



<b>Total for all Devices or Systems Installed To-date</b>	<b>406</b>	<b>2,454.8</b>
<b>Treatment Acreage Required by Permit (Population-based Permittees)</b>		<b>127</b>
<b>Total # of Systems Required by Permit (Flood Management Agencies)</b>		<b>N/A</b>

**C.10.a.ii(b) ► Trash Generation Area Management - Private Lands**

Provide a summary of implementation actions and progress towards meeting the July 1, 2025 requirement for all private lands that are moderate, high, or very high trash generating, and that drain to storm drain inlets that Permittees do not own or operate (private), but that are plumbed to Permittees' storm drain systems. Include any trash control measures implemented or caused to be implemented, including full trash capture systems and/or trash discharge control actions equivalent to or better than full trash capture systems.


**Summary of Implementation Actions and Progress:**

The City of Livermore, with the assistance of EOA, Inc., has identified and mapped its Private Lands trash generation areas. These PLDAs represent a somewhat small and insignificant area. The City is still adopting a strategy to deal with these areas.

**C.10.b.i and ii ► Trash Reduction - Full Capture Systems**

Provide the following:

- 1) Jurisdiction-wide trash reduction in FY 22-23 attributable to full capture systems implemented in each TMA;
- 2) The total number of full capture systems installed to-date in your jurisdiction;
- 3) The percentage of systems in FY 22-23 that exhibited significant plugged/blinded screens or were  $\geq 50\%$  full when inspected or maintained;
- 4) A narrative summary of any maintenance issues and the corrective actions taken to avoid future performance issues; and
- 5) A certification that each full capture system is operated and maintained to meet full capture system requirements in the permit.

	Jurisdiction-wide Reduction (%)	Total # of Full Capture Systems	% of Systems Exhibiting Plugged/Blinded Screens or $\geq 50\%$ full in FY 22-23	Summary of Maintenance Issues and Corrective Actions
1	6.0%	407	9%	The City of Livermore Collections maintained Public trash capture devices. This included Connector Pipe Screen (CPS), Hanging Basket devices, hydrodynamic separators, and one outfall net-type device.  All inspection records are currently in the Collector Application. All CPS and hanging basket devices are inspected twice annually. The hydrodynamic separators and outfall net-type devices are inspected quarterly and serviced as needed.
2	2.8%			
3	4.4%			
4	10.9%			
5	0.0%			
6	0.1%			
7	0.2%			
8A	2.0%			
8B	5.2%			
9	4.4%			
10	0.0%			
11	2.9%			
12	3.0%			
13	0.3%			
14	1.3%			
15	1.1%			

16	0.0%			
<b>Total</b>	<b>44.8%</b>			

**Certification Statement:**

The City of Livermore certifies that a full capture system maintenance and operation program is consistently being implemented to maintain all its full capture devices (connector pipe screens) in a manner that meets the full capture system requirements included in the Permit.

**Did your agency provide the names and locations of new and existing full trash capture systems to the County vector control agency for FY 2022-23?**

<input checked="" type="checkbox"/>	<b>Yes</b>	<input type="checkbox"/>	<b>No</b>	<input type="checkbox"/>	<b>N/A</b>
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**C.10.b.iii(a) ► Trash Reduction – Other Trash Management Actions**  
**C.10.c ► Requirements for Flood Control Agencies**

Provide a summary of trash control actions other than full capture systems or jurisdictional source controls that were implemented within each TMA, including the types of actions, levels, timing, frequency, and areal extent of implementation, whether actions are new, including initiation date, and information relevant to effective implementation of the action or combination of actions.

The Environmental Programs Specialist reviews building and planning permit applications to screen for opportunities and for compliance with municipal code and City policies related to stormwater pollution prevention. The following are required for many projects reviewed and are as follows:

- 1) Food facilities that do not have an existing trash enclosure or do not have a roof on an existing trash enclosure must construct new covered trash enclosures or construct a roof over an existing trash enclosure that does not already have one;
- 2) Installation of trash full capture systems in storm drain systems/inlets for properties in medium, high, and very high TMAs;
- 3) Installation of storm drain inlet medallions reading “No Dumping Drains to Bay” on each storm drain inlet;
- 4) Installation of at least one waste trio station which is a receptacle set (trash/recycling/compost) situated adjacent to the public right-of-way for pedestrian and community use. Trios are required to be maintained by the property owner in perpetuity under staff’s authority to enforce the City’s Litter Prevention ordinance; and
- 5) Installation of at least one cigarette filter urn situated adjacent to the public right-of-way for public and employee use. The urns are frequently connected to the trio, but in some instances they are located elsewhere along the sidewalk or private property to comply with the City’s smoking ordinance.

It should be noted that based on the scope of work for a building or planning permit application, not all of the above requirements may be applied based on the permit project scope of work or overall project valuation.

TMA	Summary of Trash Control Actions Other than Full Capture Systems
1	Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas without existing full trash capture devices. Enforcement includes inspection of retail areas’ waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.
2	Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas without existing full trash capture devices. Enforcement includes inspection of retail areas’ waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.
3	Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas without existing full trash capture devices. Enforcement includes inspection of retail areas’ waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.

4	<p>Anti-littering and Illegal Dumping Enforcement Activities –          Perform enforcement of high trash generating retail areas without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device</p>
5	<p>Anti-littering and Illegal Dumping Enforcement Activities –Perform enforcement of high trash generating retail areas (TMA 5R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.</p>
6	<p>Multi-family Dwelling Litter Reduction Pilot –          City worked with ACCWP to develop a litter reduction pilot targeting multi-family (condominium and apartment) complexes known to be sites with significant litter issues. City chose Livermore Garden Apartments (located at 5720 East Avenue) as the "Control Site" for this Pilot. This successful Pilot is in the process of being replicated at neighboring multi-family complexes located throughout the TMA.</p>
7	<p>Anti-littering and Illegal Dumping Enforcement Activities –          Perform enforcement of high trash generating retail areas (TMA 7R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.</p>
8A	<p>Anti-littering and Illegal Dumping Enforcement Activities –          Perform enforcement of high trash generating retail areas (TMA 8AR) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.</p>
8B	<p>Anti-littering and Illegal Dumping Enforcement Activities –          Perform enforcement of high trash generating retail areas without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.</p> <p>Multi-family Dwelling Litter Reduction Pilot-          City worked with ACCWP to develop a litter reduction pilot targeting multi-family (condominium and apartment) complexes known to be sites with significant litter issues. City chose Castilleja del Arroyo Condos (located at 1001 &amp; 1009 Murrieta Boulevard) as the "Outreach Site", and La Castilleja Condominiums (located at 975 Murrieta Boulevard) as the "Norming Site" for this Pilot. This successful Pilot is in the process of being replicated at neighboring multi-family complexes located throughout the TMA.</p> <p>Improved Trash Bin/Container Management-          City worked with Livermore Sanitation to service three, City litter cans located along Murrieta Boulevard between Hot Spots #3 and #1 more frequently.</p>
9	<p>Anti-littering and Illegal Dumping Enforcement Activities –          Perform enforcement of high trash generating retail areas (TMA 9R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.</p>

10	Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 10R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.
11	Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 11R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.
12	Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 12R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.
13	No control measures implemented in this TMA since MRP adoption.
14	No control measures implemented in this TMA since MRP adoption.
15	No control measures implemented in this TMA since MRP adoption.
16	No control measures implemented in this TMA since MRP adoption.

**C.10.b.iii(b) ► Trash Reduction – Other Trash Management Actions**

Provide the following:

- 1) A summary of the on-land visual assessments in each TMA (or control measure area), including the street miles or acres available for assessment (i.e., those associated with VH, H, or M trash generation areas not treated by full capture systems), the street miles or acres assessed, the % of available street miles or acres assessed, and the average number of assessments conducted per site within the TMA; and
- 2) Percent jurisdictional-wide trash reduction in FY 22-23 attributable to trash management actions other than full capture systems implemented in each TMA; OR
- 3) Indicate that no on-land visual assessments were performed.

If no on-land visual assessments were performed, check here and state why:

X

**Explanation:** OVTAs were not conducted in TMAs 2, 6, 8B, and 12 due to limited street miles available for assessment due to the installation of full trash capture systems in FY 18-19. OVTAs were not conducted in TMA 16 since all areas are low trash generating.

TMA ID or (as applicable) Control Measure Area	Total Street Miles <sup>3</sup> or Acres Available for Assessment	Summary of On-land Visual Assessments			Jurisdictional-wide Reduction (%)
		Street Miles or Acres Assessed	% of Available Street Miles or Acres Assessed	Avg. # of Assessments Conducted at Each Site	
1	1.2	0.4	31%	5.0	0.7%
2	0.2	0.0	0%	0.0	0.0%
3	0.2	0.1	28%	6.0	2.3%
4	7.4	1.6	22%	5.8	1.7%
5	0.5	0.3	67%	7.0	0.0%
6	0.1	0.0	0%	0.0	0.0%
7	4.1	1.1	26%	5.6	3.9%
8A	0.4	0.4	98%	6.7	0.3%
8B	0.3	0.0	0%	0.0	0.0%
9	3.6	0.8	23%	6.2	2.1%
10	0.9	0.3	31%	6.5	0.1%

<sup>3</sup> Street miles are defined as the street length and do not include street median curbs.



**FY 22-23 Annual Report**  
**Permittee Name: City of Livermore**

**C.10 – Trash Load Reduction**

11	2.2	1.2	52%	6.6	0.7%
12	0.3	0.0	0%	0.0	0.0%
13	0.6	0.4	64%	6.0	0.2%
14	1.9	0.7	36%	5.7	0.5%
15	0.8	0.5	62%	5.0	1.1%
16	0.0	NA	NA	NA	NA
<b>Total</b>		<b>7.8</b>	<b>--</b>	<b>--</b>	<b>13.4%</b>

C.10.b.v ▶ Trash Reduction – Source Controls				
Provide a description of each jurisdiction-wide trash source control action implemented to-date other than those addressed under previous Permits (i.e., foam foodware and single-use plastic bags). For each new control action, identify the trash reduction evaluation method(s) used to demonstrate on-going reductions, summarize the results of the evaluation(s), and estimate the associated reduction of trash within your jurisdictional area. Note: There is a maximum of 10% total credit for source controls.				
Source Control Action	Summary Description & Dominant Trash Sources and Types Targeted	Evaluation/Enforcement Method(s)	Summary of Evaluation/Enforcement Results To-date	% Reduction
N/A	N/A	N/A	N/A	N/A

C.10.d ▶ Long-Term Trash Load Reduction Plan						
State (Y/N) if your agency met the 90% compliance benchmark and submit an updated Long-term Trash Load Reduction Plan in accordance with Permit Provision C.10.d.ii.						
Did your agency <b>meet the 90% compliance benchmark</b> as of June 30, 2023 without the use of source control credits or creek/shoreline cleanup and direct discharge control offsets?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	N/A
If your agency <b>checked "No" above</b> , did your agency develop an updated Trash Load Reduction Plan and submit it as an attachment to this Annual Report?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A
If your agency <b>checked "Yes" above AND significantly revised your Trash Load Reduction Plan</b> , include a summary of the significant revisions below. Significant revisions include any changes made to primary or secondary trash management areas (TMAs), baseline trash generation maps, control measures, or time schedules identified in your Plan. Indicate whether your trash generation map was revised and, if so, what information was collected to support the revision. If your map was revised, attach it to your Annual Report or provide a link to the map.						
Summary Descriptions of Significant Revisions Made to 2014 Trash Load Reduction Plan					Associated TMA	
N/A					N/A	

**C.10.f.i ▶ Trash Reduction Offsets –Creek and Shoreline Cleanups (Optional)**

Provide a summary description of creek and shoreline cleanups conducted at a minimum frequency of twice per year, and sufficient to demonstrate sustained improvement of the creek or shoreline area, the volume of trash removed, and the offset claimed in FY 22-23. Provide the number and frequency of cleanups conducted, locations and cleanup dates.

Offset Program	Summary Description of Actions and Assessment Results	Volume of Trash (CY) Removed/Controlled in FY 22-23	Offset (% Jurisdiction-wide Reduction)
Additional Creek and Shoreline Cleanups (Max 10% Offset)	In FY 22-23, the City's contractor (i.e., Block by Block California) removed 7,587: 55-gallon sized bags of trash from various homeless encampments and calls for service throughout the City. This equates to a trash removal of 417,285 gallons (2,066 CY). Additionally, City-led volunteers removed trash from local creeks. In total, 2,314 lbs. of trash were removed from these efforts and reported and recorded using the Clean Swell mobile application.	2,078 CY	10%

**C.10.f.ii ▶ Trash Reduction Offsets – Direct Trash Discharge Controls**

For those Permittees with a Direct (Trash) Discharge Control (offset) Program (DDCP) approved by the Water Board Executive Officer, provide a summary description of the trash controls implemented, the volume of trash removed via the DDCP, and the offset claimed in FY 22-23. Attach a report that includes the following:

- For Permittees whose DDCPs address significant discharges from **unsheltered homeless populations**, include a narrative description and quantitative information for the following for the current year and for each prior year of the permit term:
  - The estimated number of people experiencing unsheltered homelessness in their jurisdiction;
  - the estimated number of people experiencing unsheltered homelessness living within approximately 500 feet of receiving waters;
  - the estimated portion of those populations provided housing as described in Provision C.10.f.ii.b.(i);
  - the estimated portion of those populations served with the services described in Provision C.10.f.ii.b.(i);
  - the number and scope of sanitation controls and services provided to homeless encampments;
  - the number and scope of trash controls and services provided to homeless encampments; and
  - the number and scope of sanitary cleanouts and other services provided to RVs.
  
- For Permittees whose DDCPs address significant discharges from **illegal dumping sites**, include a narrative description and quantitative information for the following for the current year and for each prior year of the permit term:
  - The total number of active illegal dumping sites;
  - the number of active illegal dumping sites within approximately 500 feet of receiving waters;

**C.10.f.ii ► Trash Reduction Offsets – Direct Trash Discharge Controls**

- the number of illegal dumping sites where trash was collected and the amount of material collected;
- dumping vouchers (or equivalent) provided (and who they are provided to);
- dumping vouchers (or equivalent) used; and
- outreach and education provided to the public regarding illegal dumping and the availability of dumping vouchers (or equivalent).

- For Permittees whose DDCPs address significant discharges from **both unsheltered homeless populations and illegal dumping sites**, include a narrative description and quantitative information for all of the elements listed above for the current year and for each prior year of the permit term.

Offset Program	Summary Description of Actions and Assessment Results	Volume of Trash (CY) Removed/Controlled in FY 22-23	Offset (% Jurisdiction-wide Reduction)
Direct Trash Discharge Controls (Max 15% Offset)	N/A	N/A	N/A

Appendix 10-1. Baseline trash generation and areas addressed by full capture systems and other control measures in Fiscal Year 22-23<sup>1</sup>.

TMA	2009 Baseline Trash Generation (Acres)					Trash Generation (Acres) in FY 22-23 After Accounting for Full Capture Systems					Jurisdiction-wide Reduction via Full Capture Systems (%)	Trash Generation (Acres) in FY 22-23 After Accounting for Full Capture Systems and Other Control Measures					Jurisdiction-wide Reduction via Other Control Measures (%)	Jurisdiction-wide Reduction via Full Capture AND Other Control Measures (%)
	L	M	H	VH	Total	L	M	H	VH	Total		L	M	H	VH	Total		
1	1	324	3	0	328	206	120	3	0	328	6.0%	221	107	0	0	328	0.7%	6.7%
2	4	68	34	0	105	49	40	16	0	105	2.8%	49	40	16	0	105	0.0%	2.8%
3	0	29	50	0	79	40	26	13	0	79	4.4%	79	0	0	0	79	2.3%	6.7%
4	527	994	20	0	1541	882	644	14	0	1541	10.9%	1018	482	41	0	1541	1.7%	12.6%
5	0	51	0	0	51	0	51	0	0	51	0.0%	14	32	5	0	51	0.0%	0.0%
6	35	6	0	0	41	40	1	0	0	41	0.1%	40	1	0	0	41	0.0%	0.1%
7	66	154	19	0	239	74	146	19	0	239	0.2%	150	89	0	0	239	3.9%	4.1%
8A	4	73	3	0	81	67	12	2	0	81	2.0%	73	8	0	0	81	0.3%	2.2%
8B	63	144	15	0	222	210	7	5	0	222	5.2%	210	7	5	0	222	0.0%	5.2%
9	33	182	37	0	251	152	73	26	0	251	4.4%	170	73	8	0	251	2.1%	6.5%
10	86	33	0	0	119	86	33	0	0	119	0.0%	89	30	0	0	119	0.1%	0.1%
11	0	172	12	0	184	69	113	2	0	184	2.9%	104	73	7	0	184	0.7%	3.5%
12	21	78	13	0	113	88	22	2	0	113	3.0%	88	22	2	0	113	0.0%	3.0%
13	3	45	2	0	50	14	34	2	0	50	0.3%	23	24	3	0	50	0.2%	0.5%
14	1	110	0	0	111	47	65	0	0	111	1.3%	64	47	0	0	111	0.5%	1.9%
15	230	113	0	0	343	267	75	0	0	343	1.1%	305	38	0	0	343	1.1%	2.2%
16	11088	0	0	0	11088	11088	0	0	0	11088	NA	11088	0	0	0	11088	NA	NA <sup>2</sup>
<b>Totals</b>	<b>12163</b>	<b>2575</b>	<b>207</b>	<b>0</b>	<b>14945</b>	<b>13378</b>	<b>1463</b>	<b>104</b>	<b>0</b>	<b>14945</b>	<b>44.8%</b>	<b>13784</b>	<b>1074</b>	<b>88</b>	<b>0</b>	<b>14945</b>	<b>13.4%</b>	<b>58.2%</b>

<sup>1</sup> Due to rounding, total acres and percentages presented in this table may be slightly different than the sum of the acres/percentages in the corresponding rows/columns (e.g., differ by 1 acre or 0.1%).

<sup>2</sup> "NA" indicates that the TMA has no moderate, high, or very high trash generating areas (i.e., all low trash generation and/or non-jurisdictional) and therefore no additional trash control measures are needed.

Section 11 – Provision C.11 Mercury Controls

**C.11.a ► Assess Mercury Load Reductions from Stormwater**

Submit documentation confirming that all control measures effectuated during the previous Permit term for which load reduction credit was recognized continue to be implemented at an intensity sufficient to maintain the credited load reduction.

Summary:

Refer to the ACCWP Mercury and PCBs Control Measures Update Report attached to the ACCWP FY 22-23 Annual Report.

**C.11.b.iii (1), (2) ► Program for Source Property Identification and Abatement**

Report progress on the acreage of land areas investigated, including progress toward investigation of 100 percent of old industrial land uses. The reporting shall indicate what action was taken for the parcels investigated (e.g., abatement, referral, enforcement, etc.). Permittees shall submit all supporting data and information including referral reports.

Summary:

Refer to the ACCWP Mercury and PCBs Control Measures Update Report attached to the ACCWP FY 22-23 Annual Report.

Report on ongoing O&M activities associated with all past contaminated property referrals. Prior to all new referrals, Permittees shall submit, for staff review and comment, a detailed description of the enhanced O&M plan for the referred properties.

Summary:

Refer to the ACCWP Mercury and PCBs Control Measure Update Report attached to the ACCWP FY 22-23 Annual Report.

**C.11.c.iii (2) ► Program for Control Measure Implementation in Old Industrial Areas**

Submit an account of control measure and stormwater diversion implementation consistent with the plan submitted in March 2023 and any modifications thereto. Include maps of the areas treated, the acreage of catchments addressed, and a description of all control measures, installed treatment devices and routing facilities for each treated catchment.

Summary:

Refer to the ACCWP Mercury and PCBs Control Measure Update Report attached to the ACCWP FY 22-23 Annual Report.

**C.11.d.iii (1) ► Mercury Collection and Recycling Implemented throughout the Region**

Report on efforts to promote recycling of mercury-containing products and efforts to increase effectiveness of those recycling efforts. Report on the mass of mercury-containing material collected throughout the region along with an estimate of the mass of mercury contained in recycled material using the methodology contained in load reduction accounting system described and cited in the Fact Sheet.

Summary:

Refer to the ACCWP Mercury and PCBs Control Measures Update Report attached to the ACCWP FY 22-23 Annual Report.

**C.11.g ► Fate and Transport Study of Mercury: Urban Runoff Impact on San Francisco Bay Margins**

Submit a workplan describing how information needs for the mercury discharge from urban runoff studies will be obtained and describe the studies to be performed with a preliminary schedule. Report on the status of the studies in the FY 22-23 Annual Report.

Summary:

See the C.11 Mercury Controls section of the ACCWP FY 22-23 Annual Report.

**C.11.h ► Implement a Risk Reduction Program**

Report on the status of the risk reduction program, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish.

A summary of Program and regional accomplishments for this sub-provision, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish are included in the C.11 Mercury Controls section of the ACCWP FY 22-23 Annual Report.



Section 12 – Provision C.12 PCBs Controls

**C.12.a ▶ Assess PCBs Load Reductions from Stormwater**

Submit documentation confirming that all control measures effectuated during the previous Permit term for which load reduction credit was recognized continue to be implemented at an intensity sufficient to maintain the credited load reduction.

Summary:

Refer to the ACCWP Mercury and PCBs Control Measures Update Report attached to the ACCWP FY 22-23 Annual Report.

**C.12.b.iii (1), (2) ▶ Program for Source Property Identification and Abatement**

Report progress on the acreage of land areas investigated, including progress toward investigation of 100 percent of old industrial land uses. The reporting shall indicate what action was taken for the parcels investigated (e.g., abatement, referral, enforcement, etc.). Permittees shall submit all supporting data and information including referral reports.

Refer to the ACCWP Mercury and PCBs Control Measures Update Report attached to the ACCWP FY 22-23 Annual Report.

Report on ongoing O&M activities associated with all past contaminated property referrals. Prior to all new referrals, Permittees shall submit, for staff review and comment, a detailed description of the enhanced O&M plan for the referred properties.

Summary:

Refer to the ACCWP Mercury and PCBs Control Measure Update Report attached to the ACCWP FY 22-23 Annual Report.

**C.12.c ▶ Program for Control Measure Implementation in Old Industrial Areas**

Submit an account of control measures and stormwater diversion implementation consistent with the plan submitted in March 2023 and any modifications thereto. Include maps of the areas treated, the acreage of catchments addressed, and a description of all control measures, installed treatment devices and routing facilities for each treated catchment.

Summary:

Refer to the ACCWP Mercury and PCBs Control Measure Update Report attached to the ACCWP FY 22-23 Annual Report.

**C.12.d.iii (1), (2), (3) ► Program for Controlling PCBs from Bridges and Overpasses**

In the 2022 Annual Report or the Annual Report immediately following availability of the specification, include a description of the Caltrans specification for managing PCBs-containing materials in bridge or roadway expansion joints during roadway replacement or repair.
Summary: See the C.12 PCBs Controls section of ACCWP FY 22-23 Annual Report for a description of the Caltrans specification.
Submit an inventory of bridges in the program area that includes bridge ownership and the bridge roadway replacement schedule.
See Attachment C12 for an inventory list of City of Livermore road and pedestrian Bridges.
Submit documentation confirming the use of the Caltrans specification (once it is available) during all instances of bridge roadway replacement or repair in their jurisdiction during the reporting year and provide an estimate of the volume of material managed and total PCBs mass load reduced resulting from implementation of the specification.
Summary: The Caltrans specification was not available to be implemented during FY 22-23.

**C.12.e.iii (1), (2), (4) ► Program for Controlling PCBs from Electrical Utilities**

Does your municipality own an electrical utility? If yes, follow the directions below.	<input type="checkbox"/>	<b>Yes</b>	<input checked="" type="checkbox"/>	<b>No</b>
Submit the estimated PCBs loads avoided (along with supporting documentation) resulting from the removal of municipally owned PCBs-containing oil-filled electrical equipment (OFEE) through maintenance programs and system upgrades for the period 2002 to the beginning of this permit term (2023).				
Summary: The City of Livermore does not own oil-filled electrical equipment (OFEE).				
Submit a description of the improved spill response and reporting practices implemented by municipally owned electrical utilities.				
Summary: The City of Livermore does not own oil-filled electrical equipment (OFEE).				

Submit a summary of the actions undertaken during the FY 22-23 that remove municipally owned PCBs-containing OFEE along with loads avoided and the details of the calculations and assumptions used to estimate the load reduced.

Summary:

The City of Livermore does not own oil-filled electrical equipment (OFEE).

**C.12.g ► Manage PCB-Containing Materials and Wastes During Building Demolition Activities**

Permittees seeking exemption from Provision C.12.g requirements based on lack of application structures must submit documentation, such as historic maps or other historic records, that clearly demonstrates that the only structures that existed pre-1980 were single-family residential and/or wood-frame structures.

Did your agency obtain an exemption from Provision C.12.g requirements?

	<b>Yes</b>	<b>X</b>	<b>No</b>
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Discuss enhancements to construction site control programs to minimize migration of PCBs from demolition activities into the MS4.

Summary:

The City of Livermore did not have any qualifying/reportable demolition projects during the FY2022-2023.

See the ACCWP FY 22-23 Annual Report for:

- Documentation of the number of applicable structures in each Permittee's jurisdiction for which a demolition permit was applied for during the reporting year;
- A running list of the applicable structures that applied for a demolition permit since July 1, 2019, the number of samples each structure collected, and the concentration of PCBs in each sample;
- The project address, the demolition date, and a brief description of the PCBs-containing materials for each applicable structure with a PCBs concentration 50 mg/kg or greater; and
- The address, date building was constructed, and date of demolition for each structure that was constructed or remodeled between the years 1950 and 1980 and requires emergency demolition to protect public health and/or safety.

**C.12.i ► Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins**

Submit a workplan describing how information needs for the PCBs discharge from urban runoff studies will be obtained and describe the studies to be performed with a preliminary schedule. Report on the status of the studies in the FY 22-23 Annual Report.

Summary:

See C.12 PCBs Controls section of ACCWP FY 22-23 Annual Report.

**C.12.j ► Implement a Risk Reduction Program**

Report on the status of the risk reduction program, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish.

A summary of Program and regional accomplishments for this sub-provision, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish are included in the C.12 PCBs Controls section of ACCWP FY22-23 Annual Report.

Section 13 – Provision C.13 Copper Controls

**C.13.a.iii (1), (2), (3) ► Manage Waste Generated from Cleaning and Treating of Copper Architectural Features**

Do you have adequate legal authority to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of copper architectural features, including copper roofs?

<b>X</b>	<b>Yes</b>		<b>No</b>
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Summary:

The City of Livermore has adequate authority to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating and washing of copper architectural features, including copper roofs under Livermore Municipal Code Chapter 13.45, Stormwater Management And Control Program. Authority is established via the following specific codes:

13.45.030 Discharge of pollutants.

No person shall cause a discharge of nonstormwater discharges to the city storm sewer system, except the following:

A. Any discharge regulated under a national pollutant discharge elimination system (NPDES) permit issued to the discharger and administered by the state of California under authority of the United States Environmental Protection Agency; provided, that the discharger is in full compliance with all requirements of the permit and other applicable laws or regulations;

B. Discharges from the following activities when properly managed in a manner satisfactory to the water resources manager: water line flushing, landscape irrigation, diverted stream flows, rising groundwaters, uncontaminated groundwater infiltration to separate storm sewers, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washings, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges or flows from fire fighting. (Ord. 1379 § 1, 1992)

13.45.040 Discharge in violation of permit.

No person shall cause a discharge that would result in or contribute to a violation of the most currently-issued and effective NPDES permit, a copy of which is in the office of the city clerk, either separately considered or when combined with other discharges. Liability for any such discharge shall be the responsibility of the person(s) causing or responsible for the discharge, and such persons shall defend, indemnify and hold harmless the City in any administrative or judicial enforcement action relating to such discharge. (Ord. 2065 § 1(A), 2018; Ord. 2045 § 1(K), 2016; Ord. 1379 § 1, 1992)

13.45.050 Illicit discharge and illicit connections.

No person shall establish, use, maintain or continue illicit drainage connections to the city storm sewer system, or commence or continue any illicit discharges to the city storm sewer system. This prohibition is expressly retroactive and applies to connections made in the past, regardless of whether made under a permit or other authorization or whether permissible under the law or practices applicable or prevailing at the time of the connection. (Ord. 1379 § 1, 1992)

13.45.060 Reduction of pollutants in stormwater.  
 Any person engaged in activities which will or may result in pollutants entering the city storm sewer system shall undertake all practicable measures to reduce such pollutants. (Ord. 1379 § 1, 1992)

13.45.110 Best management practices.  
 Where best management practice guidelines or requirements have been adopted by any federal, state of California, regional and/or city agency for any activity, operation or facility which may cause or contribute to stormwater pollution or contamination, illicit discharges, and/or discharge of nonstormwater to the stormwater system, every person undertaking such activity or operation, or owning or operating such facility shall comply with such guidelines or requirements as may be identified by the Director of Public Works. (Ord. 2065 § 1(A), 2018; Ord. 1379 § 1, 1992)

The City provides information on Best Management Practices for installation of copper architectural features to applicable building permits applicants as needed.

Summary:  
 Implementation and enforcement of this requirement is carried out via the City's C.6 Construction Inspection program.

**C.13.b.iii (1), (2), (3) ► Manage Discharges from Pools, Spas, and Fountains that Contain Copper-Based Chemicals**

Do you have adequate legal authority to prohibit the discharge to storm drains of water containing copper-based chemicals from pools, spas, and fountains?	<b>X</b>	<b>Yes</b>		<b>No</b>
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Summary:  
 The City of Livermore has adequate authority to prohibit the discharge of wastewater to storm drains containing copper-based chemicals from pools, spas, and fountains under Livermore Municipal Code Chapter 13.45, Stormwater Management And Control Program. Authority is established via the following specific codes:  
13.45.030 Discharge of pollutants.  
 No person shall cause a discharge of nonstormwater discharges to the city storm sewer system, except the following:  
 A. Any discharge regulated under a national pollutant discharge elimination system (NPDES) permit issued to the discharger and administered by the state of California under authority of the United States Environmental Protection Agency; provided, that the discharger is in full compliance with all requirements of the permit and other applicable laws or regulations;

B. Discharges from the following activities when properly managed in a manner satisfactory to the water resources manager: water line flushing, landscape irrigation, diverted stream flows, rising groundwaters, uncontaminated groundwater infiltration to separate storm sewers, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washings, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges or flows from fire fighting. (Ord. 1379 § 1, 1992)

13.45.040 Discharge in violation of permit.

No person shall cause a discharge that would result in or contribute to a violation of the most currently-issued and effective NPDES permit, a copy of which is in the office of the city clerk, either separately considered or when combined with other discharges. Liability for any such discharge shall be the responsibility of the person(s) causing or responsible for the discharge, and such persons shall defend, indemnify and hold harmless the City in any administrative or judicial enforcement action relating to such discharge. (Ord. 2065 § 1(A), 2018; Ord. 2045 § 1(K), 2016; Ord. 1379 § 1, 1992)

13.45.050 Illicit discharge and illicit connections.

No person shall establish, use, maintain or continue illicit drainage connections to the city storm sewer system, or commence or continue any illicit discharges to the city storm sewer system. This prohibition is expressly retroactive and applies to connections made in the past, regardless of whether made under a permit or other authorization or whether permissible under the law or practices applicable or prevailing at the time of the connection. (Ord. 1379 § 1, 1992)

13.45.060 Reduction of pollutants in stormwater.

Any person engaged in activities which will or may result in pollutants entering the city storm sewer system shall undertake all practicable measures to reduce such pollutants. (Ord. 1379 § 1, 1992)

13.45.110 Best management practices.

Where best management practice guidelines or requirements have been adopted by any federal, state of California, regional and/or city agency for any activity, operation or facility which may cause or contribute to stormwater pollution or contamination, illicit discharges, and/or discharge of nonstormwater to the stormwater system, every person undertaking such activity or operation, or owning or operating such facility shall comply with such guidelines or requirements as may be identified by the Director of Public Works. (Ord. 2065 § 1(A), 2018; Ord. 1379 § 1, 1992)

Summary:

The City of Livermore requires the new construction of commercial pools, fountains, and spas to have an approved drain to the sanitary sewer.

Provide summaries of any enforcement activities related to copper-containing discharges from pools, spas, and fountains.

Summary:

The City of Livermore enforces this requirement through its Illicit Discharge Inspection Program and by routinely providing outreach on proper pool, spa, and fountain maintenance BMPs to the public.

**C.13.c.iii ► Industrial Sources Copper Reduction Results**

Based upon inspection activities conducted under Provision C.4, highlight copper reduction results achieved among the facilities identified as potential users or sources of copper, facilities inspected, and BMPs addressed.

Summary:

The City of Livermore periodically conducts pretreatment (sanitary sewer) and stormwater inspection of facilities that are identified as a potential copper source, such as Metal Finishers (as defined under 40 CFR Part 433), Semi-Conductor Facilities (as defined under 40 CFR Part 469), Automotive Repair Facilities, and Recycling Facilities. Additionally, the City requires all facilities that wash vehicles/equipment or have drains in the vehicle service bays to plumb all fixtures to a sand/oil interceptor and connect to the sanitary sewer system. All such facilities are required to obtain a wastewater discharge permit and wastewater discharges to the sanitary sewer system are routinely monitored for compliance with all local discharge limits for heavy metals (including copper).



**Section 15 – Provision C.15 Exempted and Conditionally Exempted Discharges**

**C.15.b.iii.(3) ► Ongoing Implementation Practices**

Annually report on the following ongoing practices:

- Ensuring proper BMPs and SOPs are included in contracts for non-municipal (contracted) staff hired by Permittees to assist with containment and cleanup, and to assist with prevention and mitigation of adverse impacts, of discharges associated with firefighting emergencies; and
- Evaluating the adequacy of large industrial sites' BMPs and SOPs for the prevention, containment and cleanup of emergency firefighting discharges into storm drains and receiving waters within Permittees' jurisdictions and cause those BMPs and SOPs to be improved as appropriate.

Summary:

Please refer to Section C.15 of the ACCWP FY 22-23 Annual Report.

**C.15.b.vi.(2) ► Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering**

Provide implementation summaries of the required BMPs to promote measures that minimize runoff and pollutant loading from excess irrigation. Generally the categories are:

- Promote conservation programs
- Promote outreach for less toxic pest control and landscape management
- Promote use of drought tolerant and native vegetation
- Promote outreach messages to encourage appropriate watering/irrigation practices
- Implement Illicit Discharge Enforcement Response Plan for ongoing, large volume landscape irrigation runoff.

Summary:

The City's requirements for new development projects include the following requirements:

All new development projects are required to address the following, and implement when feasible, the following:

Landscaping shall be designed to both minimize irrigation and the runoff of irrigation waters. It shall also be designed to promote surface infiltration where appropriate. Landscaping plans should also consider measures and/or planting selections, which serve to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.

If a landscaping plan is required as part of a development project application, the plan shall meet the following conditions related to reduction of pesticide use on the project site:

Where feasible, landscaping shall be designed and operated to treat stormwater runoff by incorporating elements that collect, detain, and infiltrate runoff. In areas that provide detention of water, plants that are tolerant of saturated soil conditions and prolonged exposure to water shall be specified.

Plant materials selected shall be appropriate to site specific characteristics such as soil type, topography, climate, amount and timing of sunlight, prevailing winds, rainfall, air movement, patterns of land use, ecological consistency and plant interactions to ensure successful establishment.

Existing native trees, shrubs, and ground cover shall be retained and incorporated into the landscape plan to the maximum extent practicable.

Unless otherwise specified, proper maintenance of landscaping shall be the responsibility of the property owner.

Integrated pest management (IPM) principles and techniques shall be encouraged as part of the landscaping design. Some examples of IPM principles and techniques include the following:

Select plants that are well adapted to soil conditions at the site.

Select plants that are well adapted to sun and shade conditions at the site. Consider future conditions when plants reach maturity. Consider seasonal changes and time of day.

Provide irrigation appropriate to the water requirements of the selected plants.

Select pest and disease resistant plants.

Plant a diversity of species to prevent a potential pest infestation from affecting the entire landscaping plan.

Use "insectary" plants in the landscaping to attract and keep beneficial insects.

Landscaping shall also comply with City of Livermore's "Water Efficient Landscape Ordinance". However, areas of a site used for bioswales or other landscaped areas that function as a stormwater treatment measure shall be exempt from the Water Efficient Landscaping requirements.

The City as part of its Public Outreach events provides and promotes the following information to the public:

Promotional items and informational materials described IPM and its controls mechanisms, the benefits of using IPM products, and the OWOW Program. The product included labels that identified the control mechanism, active ingredient(s), and the OWOW local store of purchase Stormwater Pollution Brochure, Bay Begins Brochure, Home Maintenance Tips for a Cleaner Bay Brochure, Grow It! Guides, Control It! Guides, Healthy Home and Garden Booklet, Pest Bugging You? Pocket Guides, The 10 Most Wanted Bugs in Your Garden Brochure, A Kid's Guide to Backyard Bug Guides, and Pest or Pal? Activity Guides.

Refer to the C.3 New Development and Redevelopment, C.7. Public Information and Outreach and C.9. Pesticide Toxicity Control sections of the ACCWP FY 22-23 Annual Report as needed.

**Section 17 – Provision C.17 Discharges Associated with Unsheltered Homeless Populations**

**C.17.a.iii.(1) ► Regional Best Management Practice Report**

*(For FY 22-23 Annual Report only)* Collectively submit, acceptable to the Executive Officer, a best management practice report as described in Provision C.17.a.i.(2)

Summary:

See the Regional BMP Report submitted by BAMSC on behalf of all MRP Permittees to the Water Board Executive Officer and included in the ACCWP FY 22-23 Annual Report.

**C.17.a.iii.(2) ► BMP Implementation and Effectiveness Evaluation**

*(For FY 22-23 and FY 24-25 Annual Reports only)* Submit a map identifying the approximate location(s) of unsheltered homeless populations within your jurisdiction, including homeless encampments and other areas where other unsheltered homeless people live.

Summary:

A map showing the count of unsheltered populations by census tract in relation to storm drain inlets and existing streams, rivers, flood control channels, and other surface water bodies within our jurisdiction is included in Appendix 17-1. The map was developed using the point-in-time survey count data provided by the County of Alameda from the *Alameda County Homeless Count and Survey Comprehensive Report 2022*. Due to privacy and safety concerns, and in absence of a relevant approved policy for sharing County PIT data, the County did not provide location data below the census tract level for this publicly available report.

The City of Livermore has developed a mechanism for community members to report homeless activity within the city, which includes encampments, trash, drug paraphernalia, human waste, and other bio-hazard issues related to the homeless. In response to the reported homeless activity, the city has contracted with Block by Block to provide the clean-up services on a daily basis. The city also deploys two dedicated homeless liaison officers to directly engage the Livermore homeless population.

*(For FY 22-23 and FY 24-25 Annual Reports only)* Report on the best management practices being implemented and include the effectiveness evaluation reporting required in Provision C.17.a.ii.(3) and additional actions or changes to existing actions that the Permittee will implement to improve existing practices.

Summary:

As estimated by the Alameda County 2022 Point-in-Time (PIT) count, the City of Livermore has a total unsheltered population of roughly 174. This number includes a count of unsheltered homeless sleeping outdoors on the street, at bus and train stations, in parks, tents, and other make-shift shelters, and in vehicles and abandoned properties. At the time the 2022 PIT count was conducted, these unsheltered individuals were observed in the following census tracts within City of Livermore boundary– *Census tracts and BMPs are included in the Livermore C17 report map exhibit*. These census tracts include areas (e.g., city streets, parks) that are under our jurisdiction, and other areas (e.g., freeways, expressways, creeks) that are not under our jurisdiction. We coordinate with the Livermore Police Department, Livermore Housing and Human Services Division, Livermore Neighborhood Preservation, Alameda County Housing and Community Development Department, Alameda County Healthcare for the Homeless, Caltrans, Union Pacific, Zone 7 Water District, Block by Block, CityServe of the Tri-Valley, Open Heart Kitchen, Swords to Plowshares, and Abode Services) to provide BMPs and support services to unsheltered populations located within our jurisdiction. For unsheltered populations located in areas that are not under our jurisdiction, we inform the agency that has jurisdiction over the area when unsheltered populations are observed."

The City of Livermore implements the following best management practices (BMPs) and programmatic efforts to address non-stormwater discharges from unsheltered populations located within our jurisdiction." (Guidance -provide information such as in the examples provided below . The effectiveness evaluation must address C.17.a.ii.(3) requirements to specifically report:

- The BMP control measures include enforcing California Fish and Game Code 5256(a) It is unlawful to deposit, permit to pass into, or place where it can pass into the waters of the state, or to abandon, dispose of, or throw away, within 150 feet of the high water mark of the waters of the state, any cans, bottles, garbage, motor vehicle or parts thereof, rubbish, litter, refuse, waste, debris, or the viscera or carcass of any dead mammal, or the carcass of any dead bird.
- Approximately 8% or 14 unsheltered are being serviced in the control measures. The 14 unsheltered in the control measures are located along the Arroyo located in census tracts 4514.1 and 4513.
- All of the 8% or 14 unsheltered in the BMP control measures are engaged on a weekly basis to offer services. The encampments are also cleaned up by Block by Block, Cal Trans, and Zone 7 on a regular basis.

Future actions to address the unsheltered in the identified areas will include additional outreach to offer supportive housing, measures to control brush, tall grass, and trees in order to reduces the number of places the unsheltered can conceal themselves. The City of Livermore will also continue to contract with Block by Block to address daily encampment cleanups in the identified census tracts.

Encampment Cleanup BMP – The City of Livermore routinely conducts cleanups in census tracts 4514.1 and 4513) and other areas (Union Pacific, Zone 7 Water District, and private properties ) where unsheltered populations are known to congregate. Cleanups are conducted by (*Cal Trans, Zone 7 Water District, Block by Block, and Livermore Police Department*) In FY 22-23 we conducted daily encampment cleanups through the city contracted Block by Block and removed trash from these locations.

Coordination with Non-profit organizations. Coordination with Non-profit organizations - The City of Livermore provides funding to the following non-profits for providing supportive services to unsheltered populations: Street outreach, bio-hazard cleanup, permanent supportive housing, mental health, and street medicine.

Internal Coordination - Stormwater staff coordinate efforts with the following departments to inform other staff about stormwater requirements and BMPs that help reduce stormwater discharges from unsheltered populations, and offer support services to unsheltered populations: The City's Housing and Human Services Division conducts quarterly meetings with non-profits, Livermore Police Department, Block by Block and other municipals to discuss encampment resolution. The results are newly formed partnerships that allows the city to respond to encampment cleanups.

**ATTACHMENT C.4**

## Stormwater Industrial and Commercial Inspection Plan FY 2022/2023 through FY2027/2028

- I. On an annual basis, the City shall perform stormwater inspections of all NOI facilities and the following industrial facilities permitted under the City's Pretreatment Program: Categorical Industrial Users(CIU), General Industrial/Commercial Users (G), Photo Processor Users (P),and Vehicle and Equipment Wash Rack Users (WR) The following table provides a specific list of these facilities:

Table 1.0	
Industry Name	Type
Arrowhead Water	G
Eurofins Food Integrity & Innovation	G
Earl Ising dba Culligan Water	G
Turman Commercial Painters	G
Wheel Works #356400-8255	G
Bernard's Chevron	WR
Boatmasters	WR
Dun-Rite Excavating, Inc.	WR
Enterprise Rent-A-Car	WR
Happy Daze RV's	WR
Henderlong Lewis Building	WR
Interstate Storage	WR
Left Coast Diesel	WR
Les Schwab Tire Center #647	WR
Livermore Ford Lincoln-2266 Kitty Hawk	WR
Livermore Ford Lincoln-2304 Kitty Hawk	WR
Livermore Chevron	WR
Livermore Gas and Shop	WR
Marshall Brothers Enterprises, Inc.	WR
Mountain Cascade, Inc.	WR

Pleasanton Truck & Equipment Repair, Inc.	WR
Power Washing Services	WR
SpeeDee Wash	WR
Sunbelt Rentals, Inc.	WR
R. Lance Towing	WR
Nieve Distributors (formerly Sabor de mi Tierra)	G
Protein Research	G
Sutherland Distillery	G
B & S Hacienda	WR
Cactus Car Wash	WR
Chevron 4757 First St (AK Services Inc.)	WR
Clark Pest Control	WR
Cresco Equipment Rental	WR
Hawthorne, LLC	WR
Las Positas Shell	WR
Livermore Car Wash	WR
Livermore Harley-Davidson	WR
Livermore Honda	WR
Jaguar Range Rover of Livermore	WR
Livermore Porsche	WR
Livermore Subaru	WR
LPFD Fire Station 10	WR
LPFD Fire Station 6	WR
LPFD Fire Station 7	WR
LPFD Fire Station 8	WR
LPFD Fire Station 9	WR
Norsol Autowash (formerly Autotopia Car Wash)	WR
Penske Truck Leasing Co.	WR



Roto-Rooter Service Company (Formerly Sanact Inc.)	WR
Altamont Beer Works	G
Concannon Winery	G
Bake Fresh	G
Costco Wholesale #146	P
California Department of Transportation	WR
Goodfellow / Top Grade	WR
Hertz Rental	WR
JAM Services	WR
Las Positas Golf Course	WR
Livermore Maintenance Services Center (MSC)	WR
Livermore Police Department	WR
Livermore Toyota	WR
RGW Construction	WR
Royal Restrooms	WR
SAB Stanley Shell	WR
Specialized Truck Repair	WR
Vasco Road Chevron	WR
Wal-Mart Tire & Lube Express	WR
Zone 7 Water Agency	WR
Eight Bridges Brewing, Inc.	G/NOI*
River's End Brewing	G/NOI
Maas Brothers-285 S. Vasco	SIU/NOI
Maas Brothers-275 S. Vasco (Zero Discharge)	SIU/NOI
RG Plating and Anodizing, LLC	SIU/NOI
Gillig	SIU/NOI
US Foods	WR/NOI
Heritage Solutions	G/NOI
Packaging Innovators	G/NOI

Form Factor-501 Lawrence	SIU/NOI
Form Factor-7545 Longard	SIU/NOI
Bonner Processing, Inc. (Zero Discharge)	SIU/NOI
Shadow Puppets Brewery	G/NOI
AI Industries	SIU/NOI
ADMEDES	SIU/NOI
InPhenix, Inc.	SIU/NOI
Bolb Semiconductor (Zero Discharge)	SIU/NOI
Harris Rebar Northern CA	WR/NOI
Livermore Amador Valley Transit Authority (LAVTA)	WR/NOI
Livermore Amador Valley Transit Authority (LAVTA)-875 Atlantis	WR/NOI
Livermore Municipal Airport	WR/NOI
Livermore Sanitation	WR/NOI
Boss Rose Cellars LLC	NOI
Cuda Ridge Wines	NOI
Kinney Family Vintners LLC DBA Occasio Winery	NOI
T&R Freight Hauling	NOI
C&Y Global Warehouse	NOI
Las Positas Vineyards	NOI
WGG Enterprises LLC	NOI
Bruce Gomes	NOI
DAA Draexlmaier Automotive of America LLC	NOI
Meritor (formerly Fabco Automotive Corp.)	NOI
Fenestra Winery	NOI
Jifco Inc	NOI
Refund Recycle Center	NOI
Tom Chiang	NOI
Pacific Steel Group	NOI
Triangle Coatings	NOI
Alloy Metal Products	NOI
Advantage Metal Products	NOI

Nestle Waters North America	NOI
Custom Gear & Machine Incorporated	NOI
Jabil	NOI
Lam Research Corp	NOI
Topcon Positioning Systems Inc	NOI

*\*NOI list as of 07/07/2020*

II. The 5-Year inspection plan detailed below outlines how the City of Livermore will prioritize its inspection to adequately address the requirements of Provision C.4.b.:

**Fiscal Year 2022/2023:** All Pretreatment and NOI Facilities identified in Table 1.0 (114 Facilities)  
 All Facilities Listed under SIC 5093, Scrap & Waste Materials (2 Facilities)  
 All Facilities Listed under SIC 4212, Local Trucking (5 Facilities)  
 All Facilities Listed under SIC 5261, Retail Nurseries (5 Facilities)  
 All Facilities Listed under SIC 5211, Lumber and Other Building Material Dealers (10 Facilities)

**FY 2022/2023- 136 Facility Inspections**

**Fiscal Year 2023/2024:** All Pretreatment and NOI Facilities identified in Table 1.0 (114 Facilities)  
 All Facilities Listed under SIC 8711, Engineering Services (15 Facilities)  
 All Facilities Listed under SIC 8731, R&D Labs-Commercial (5 Facilities)  
 All Facilities Listed under SIC 8734, Testing Labs (2 Facilities)

**FY 2023/2024- 136 Facility Inspections**

**Fiscal Year 2024/2025:** All Pretreatment and NOI Facilities identified in Table 1.0 (114 Facilities)  
 All Facilities Listed under SIC 5812, Restaurants with oil & grease interceptors (150 Facilities)

**FY 2024/2025- 264 Facility Inspections**

**Fiscal Year 2025/2026:** All Pretreatment and NOI Facilities identified in Table 1.0 (114 Facilities)  
 All Facilities Listed under SIC, Restaurant with a Grease Trap or No Grease Removal Device (125 Facilities)

## **FY 2025/2026- 239 Facility Inspections**

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**Fiscal Year 2026/2027:** All Pretreatment and NOI Facilities identified in Table 1.0 (114 Facilities)

All Facilities Listed under SIC 3599, Industrial and Commercial Machinery and Equipment (20 Facilities)

All Facilities Listed under SIC 3679, Electronic Components Manufacturing (5 Facilities)

All Facilities Listed under SIC 3089, Plastic Products (3 Facilities)

## **FY 2026/2027- 142 Facility Inspections**

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**Fiscal Year 2027/2028:** All Pretreatment and NOI Facilities identified in Table 1.0 (114 Facilities)

All Facilities Listed under SIC 7532, Automotive Body Shops, and all facilities Listed under SIC 7538, Automotive Repair Shops (62 Facilities)

All Facilities Listed under SIC 5541, Gasoline Service Stations (29 Facilities)

## **FY 2027/2028- 205 Facility Inspections**

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**Note:** *The “number” of facilities listed under each SIC in this 5-Year Inspection plan is based up on an estimate of the number of facilities in each category based on past inspection inventory. Prior to each fiscal year, a new query of the City’s Business License database shall be performed to get the most accurate available figure for each facility type/category scheduled to be inspected.*

**ATTACHMENT C.10**

**Stormwater Trash Reduction Plan  
for  
City of Livermore, California**



**November 2022**

**Schaaf & Wheeler**  
CONSULTING CIVIL ENGINEERS

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## 1. Introduction

This report is to provide a multi-year plan to reduce trash entering channels within the City of Livermore from the municipal separate stormwater system (MS4) using full trash capture devices, with the goal of meeting trash reduction requirements as outlined in the Regional Water Quality Control Board (RWQCB) NPDES Municipal Permit section C.10.

The NPDES permit includes the following deadlines for trash reduction milestones (deadlines in grey) have passed:

- Progress report detailing whether baseline trash load and trash load reduction tracking method are being determined individually or collaboratively due by February 1, 2011. Compliance obtained by BASMAA letter entitled *Progress Report: Trash Baseline Loads and Load Reduction Tracking – MRP Provision C.10.a(ii)*.
- Short-term trash reduction load plan due by February 1, 2012. Compliance obtained by City of Livermore *Baseline Trash Load and Short-Term Trash Load Reduction Plan*.
- Establish baseline trash load and trash load reduction tracking method by February 1, 2012. Compliance obtained by BASMAA reports: *Trash Load Reduction Tracking Method Technical Report* and *Preliminary Baseline Trash Generation Rated for San Francisco Bay Area MS4s Technical Memorandum*.
- Installation of full trash capture devices (meeting NPDES criteria for mesh screen and capacity) treating a minimum of 20 acres runoff area by July 1, 2014. Compliance obtained through inlet filters.
- Long-Term Trash Load Reduction Plan due by February 1, 2014. Compliance obtained by the City of Livermore *Trash Long-Term Reduction Plan and Progress Assessment Strategy*.
- 40% reduction in baseline trash load by July 1, 2014. Short term trash reduction compliance is described in the *Baseline Trash Load and Short-Term Trash Load Reduction Plan* by City of Livermore dated 2/1/2012.
- 60% reduction in baseline trash load performance guideline for July 1, 2016. Met as reported in City's FY reporting.
- 70% reduction in baseline trash load by July 1, 2017. Met as per City's FY reporting.
- 80% reduction in baseline trash load by July 1, 2019. Met as per City's FY reporting.
- 90% reduction in baseline trash load by June 30, 2023
- 100% reduction in baseline trash load by June 30, 2025 (final compliance)

This Stormwater Trash Reduction Plan (Plan) has been designed to guide the City to 100% long term trash reduction. The Plan includes a schedule for implementation, a description of proposed control measures and proposed best management practices (BMPs). This Stormwater Trash Reduction Plan is intended to provide detailed guidance on how the reduction goals will

be obtained. The Plan provides the City with a 'road map' to follow to meet the long-term trash reduction requirements.

## **1.1 Changes from Last Draft**

The following is a list of changes made since the previous draft of this report dated July 2017:

- October 2022 Update
  - Completion of 2019 project which installed 3 large-scale and 152 inlet devices
  - Update to the 2022 Municipal Regional Permit
  - 10% credit for single-use plastic bags and polystyrene bans phased-out
  - Trash Reduction Schedule and Device Costs updated
  - Updated to plan to reach 100% credit

## 2. Trash Generation and Management Areas

### 2.1 Trash Generation

Trash generation rates are based on land use, income level and visual assessment. The City of Livermore, with Bay Area Stormwater Management Agencies Association (BASMAA), has developed trash generation rates and categories for all land within the City limits.

#### 2.1.1 BASMAA Baseline Trash Generation Rates

Generation rates published by BASMAA in the June 20, 2014 final technical report *San Francisco Bay Area Stormwater Trash Generation Rates* and updates to Trash Generation Rates released in July 2016 were used to develop a range based on land use and are summarized in Table 1. Updates changed rates to weighted acres, with one weighted acre roughly equating to 7.5 gallons per acre, per year. Generation rate represents the amount of trash littered, not necessarily the amount that washes into the storm drain after street sweeping. Total jurisdictional generation (Preliminary Baseline load) for each land use category includes generation on City streets. The portion of the baseline generation that occurs on City streets amounts to 3,852 gallons per year. State Highway 580 generates approximately 22,068 gallons per year within City limits; however, it is considered non-jurisdictional and is not included in the total baseline generation. Local State-owned facilities are not differentiated in the trash generation map and are included in the jurisdictional and street trash loads in Table 1 below.

**Table 1: San Francisco Bay Area Trash Generation Rates by Land Use**

Land Use	Generation Rate	Rate (Weighted Acres)	Rate (gallons/acre/yr)	Jurisdictional Total (gal/yr)*	Streets (gal/yr)
Commercial & Services	Medium	1	7.5	4,442	666
Industrial	Medium	1	7.5	9,089	847
Residential	Low-High	0-4	0.0 – 30.0	3,642	965
Retail	Medium-High	1-4	7.5 - 30.0	6,394	1,156
K-12 Schools	Low	0	0.0	311	64
Urban Parks	Medium	1	5.0	1,656	154
Transportation (Highways)	Very High	12	90.0	0	0
<i>*Jurisdictional Totals include Streets.</i>			Total:	<b>25,534</b>	3,852

#### 2.1.2 Livermore Trash Generation Rates

The City of Livermore developed a Preliminary Generation Trash Load based on the generation rates in Table 1, land-use and effective loading area. Activities already undergone by the City to reduce trash in the Municipal Separate Storm Sewer System (MS4) were tabulated and used to create the Preliminary Baseline Trash Load. Vacant lots are considered not to generate trash, regardless of zoning. If a vacant lot was developed after establishment of baseline loads, no credit is considered for treating the area. Activities previously counted towards a reduction in baseline have been updated to zero per the City and regional change in methodology towards jurisdictional credits.

**Table 2: Baseline Trash Load for the City of Livermore**

Category	Annual Load (gallons)
Preliminary Generation Trash Load	25,534
Load Removed via Baseline Street Sweeping	0
Load Removed via Baseline Storm Drain Inlet Maintenance	0
Load Removed via Baseline Stormwater Pump Station Maintenance	0
<b>Preliminary Trash Baseline Load (City 2015-16 Trash Reporting Tool, July 2016)</b>	<b>25,534</b>

### 2.3 Trash Management

The City is tasked with removing trash which can make its way to the creeks and ultimately to the San Francisco Bay via the City’s MS4. BASMAA has developed several methods by which to track the reduction in trash load, both quantitatively and qualitatively.

#### 2.3.1 Implemented Enhanced Trash Management

The City has created ordinances and enhanced control measures to reduce the volume of trash making it into the waterways annually. Reduction percentages for the ordinance bans on plastic bags and polystyrene foam cannot be claimed after the final compliance deadline, based on new guidance provided by the RWQCB for the MRP 3.0. However, the City may demonstrate and claim full trash capture equivalence of a source control in a specific trash generation area if the control is documented, assessed, and verified in accordance with C.10.b.iii. The Source Control and Visual Assessment plans are discussed further in Section 3.2 of this report. An additional 152 connector pipe screens and inlet filters were installed by the City in 2019 capturing 1,150 acres, as well as three large-scale devices capturing 810 acres. The calculated trash load reduction is based on updated generation rates from Table 1 and watershed delineations for each of the installed trash capture devices. See Figures 1-3 for existing treatment device watersheds and trash generation levels. Media filters, inlet filters, tree well filters and hydrodynamic separators installed by private properties to meet the MRP Section C.3 requirement for post-construction stormwater quality are also considered full trash capture and included in Table 3. The reduction in trash provided by these devices is tabulated below.

The City has also implemented qualitative trash reduction measures. These include public education and outreach, activities to reduce trash from uncovered loads, anti-littering and illegal dumping enforcement activities, on-land clean-up and creek cleanups. Effects of these qualitative practices can only be measured through visual assessments and documentation. This credit is not tabulated or considered in this report for optimizing trash capture device locations. Once a trash device is installed, credits from visual assessment are replaced.

Table 3 is a summary of the quantifiable trash management measures implemented at the time of this updated Plan.

**Table 3: Implemented Trash Control Measures**

Trash Control Measure	Estimated Reduction %	Trash Load Reduced (gal/year)	Cumulative Estimated Reduction % (Compared to Baseline)
City Owned Full-Capture Large-Scale Treatment Devices	15.7	4,003	15.7
City Owned Small Full-Capture Treatment Devices (321 inlet filters and 11 tree well filters)	26.1	6,662	41.8
Private Full-Capture Treatment Devices*	5.0	1,281	45.9
<b>Total</b>		<b>11,946</b>	<b>46.8%</b>

\*Devices installed on private property to meet C.3 Water Quality Treatment requirements which also meet full-trash capture.

To reach 90% reduction, the City must capture an additional 11,035 gallons of trash per year (43.2%) over the baseline in Table 3. To obtain 100% reduction from the baseline, the City must capture an additional 13,588 gallons per year (53.2%) over the baseline in Table 3.

### 2.3.2 Existing Full Trash Capture Devices

Trash management areas (TMA) are defined in the City's *Trash Long-Term Reduction Plan and Progress Assessment Strategy* based on geographical distribution of trash generating areas, types of trash sources, and current or planned control measure locations. Refer to the City's Long-Term Reduction Plan for detailed explanation and delineation.

The City has installed a total of 321 connector pipe screens/basket style devices in storm drain inlets, three large-scale devices and 11 tree well filters. Below (Table 4) is a summary of the existing City owned full trash capture device locations and capture rate within the trash management areas. Devices and drainage areas are shown in Figure 1 through Figure 3: Existing City Owned Trash Capture Device Watersheds – City Northeast

**Table 4: Existing City Owned Full Trash Capture Devices**

TMA	No. of Existing Trash Capture Devices in Each Trash Generation Category			
	Very High	High	Medium	Low
1	0	0	4	0
4	0	0	44	3
6	0	0	2	1
9	0	0	4	0
11	0	1	0	0
16	0	0	0	122
11I	0	0	10	0
11R	0	2	0	0

TMA	No. of Existing Trash Capture Devices in Each Trash Generation Category			
	Very High	High	Medium	Low
12C	0	0	7	1
12I	0	0	1	0
12R	0	10	2	0
13I	0	0	1	0
14C	0	0	6	1
14R	0	0	2	0
15P	0	0	4	4
1C	0	0	35	0
1I	0	0	22	0
1R	0	0	11	0
2C	0	0	13	2
2I	0	0	5	0
2R	0	10	0	0
3R	0	16	6	0
4C	0	0	2	0
4P	0	0	0	1
8A	0	0	2	0
8B	0	0	2	1
<b>Total</b>	0	39	185	136

*\*Trash capture of Very High generating areas is for non-jurisdictional areas only (Caltrans right-of-way).*

The City has required private developments to install water quality treatment measures to meet section C.3 of the MRP. Some of those devices also meet the requirements of section C.10 full trash capture. These devices include media filters, hydrodynamic separators, tree well filters and inlet screens. Some private sites include Low Impact Development measures which have been counted as full trash capture. The private properties cover approximately 230 acres of the City and capture 1,281 gallons of trash per year (5.0%) in addition to the volume captured by the City owned devices.

Private, full capture devices are shown in Figure 4. The capture volumes are based on the generation rates developed by the City for each parcel based on land use. Details regarding these private parcels are included in Appendix A.

## 3. Trash Capture Plan

### 3.1 Capital Improvement Projects

To meet trash load reduction goals, the City may install additional full trash capture devices, partial trash capture devices, and perform trash cleanups. For full trash capture there are a variety of devices available to meet the 90% goal:

1. Catch basin inlet screens
2. End of pipe netting or structures serving an entire drainage network
3. Inline netting or structures on a storm drain trunk line

When selecting a device it is important to consider drainage area, hydraulic losses across the system when full, permitting requirements in open channels, device maintenance and access, property rights and utility clearance. All of these factors should be weighed against the device, installation and maintenance costs to ensure maximum capture volume per dollar spent.

It is important to recognize that much of the City of Livermore drains directly into the creeks (Figure 5: Trash Generation Directly to Creeks), without first entering the City owned Municipal Separate Storm Sewer System (MS4). These areas account for roughly 7% of the trash generating areas. They drain by surface flow or privately owned storm drain systems which outfall directly to the Creek. This includes some industrial, commercial and high density residential properties. These areas could be managed through privately owned and maintained full trash capture devices.

#### 3.1.1 Device Locations

The following procedure was used to determine optimal treatment device types and locations:

1. Identify high generation areas based on Livermore's *Baseline Trash Load*.
2. Define the inlets that intercept the high generation areas and delineate catchments. Where there are many inlets which drain to a common outfall consider a large treatment device along the trunk line. Large system scale devices were not considered in drainage basins which have a significant number of existing City owned inlet filters.
3. Calculate treatment rate of each device.
4. "Ground Truth": Only consider devices which treat a real development (i.e. do not treat open space, vacant parcels, etc.)
5. To the greatest extent practicable, do not consider devices in areas heavily impacted by flooding based on the SDMP. If necessary, consider off-line treatment.
6. Group devices based on location to streamline maintenance.

Large scale devices are generally preferred for areas that would require a large number of inlet filter devices to treat a large, connected upstream system, as the large devices provide for easier maintenance at a comparable cost per gallon of trash reduction. The proposed devices shown in Figure 6 through Figure 11 bring the cumulative reduction over the baseline to approximately 89.3%.

Several inlet screens were not viable to construct in 2019 due to inlet configuration, accounting for nearly 4% of the City's trash generating areas. This, in addition to the 7% draining directly to the creeks accounts for the 11% unattainable through public full trash capture.

See Appendix C for detailed conceptual layouts of each planned large-scale device location and Appendix B for a full-sized map of proposed devices and their drainage areas.

### *3.1.2 System Hydraulics*

Due to flooding as indicated in the City's Storm Drain Master Plan, it is imperative that the installation of the new in-line and outfall trash capture devices consider the potential loss in head across the structure when full or partially full with trash. It will be necessary to install some of the large scale devices off-line from the main trunk with a diversion structure to re-direct the treatment flow rate. See Table 9 for details of which devices are recommended off-line. This also has the advantage of optimizing the treatment devices since they will not have to have the overflow capacity equal to the capacity of the existing storm drain line.

Catch basin inlet filters capture trash before it enters the City system thereby not significantly impacting the hydraulics of the system as a whole. However, localized ponding can occur at individual inlets during rain events if the inserts are not routinely maintained. All capture devices must be cleaned and maintained at least two times a year based on manufacturer's recommendations and frequency of storm events.

### *3.1.3 Device Options*

The State Water Resources Control Board produced a list of approved full trash capture devices (updated October 2022) which may be used to comply with the NPDES permit. Full trash capture devices must trap all particles retained by a 5 mm mesh screen and have a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour storm event per the MRP Section C.10.a.ii. For all drainage areas the NOAA ATLAS 14 average 1-year, 1-hour intensity of 0.31 inches per hour is used to calculate runoff. Note: flow rates may be more accurate for large drainage areas when using the hydrograph method in place of the rational method and result in smaller treatment rates. Hydrograph methodology should be utilized during detailed design where possible. Runoff coefficients were taken from the City of Livermore Facilities Planning Guidelines dated August 1995 Table 3-3 based on land use.



**Table 5: Runoff Coefficients for Device Sizing**

Land Use	Runoff Coefficient (C)
Commercial/Retail	0.95
Light Industrial	0.80
Residential - Rural	0.40
Residential – Low Density	0.50
Residential – Medium Density	0.60
Residential – High Density	0.70
Residential/Commercial Mixed Use	0.75
K-12 Schools	0.60
Urban Parks	0.35
Agriculture/Rangeland/Urban Open	0.30
State Facilities/Utilities/Transportation	0.90

### 3.2 Alternate Options

After installation of all proposed full trash capture devices the City will still need to account for 11.4% in treatment reduction credit. Areas draining directly to creeks account for about 7.2% of the treatment reduction credits and are likely off the table for trash capture devices, see Figure 5. C.10.b outlines several possibilities for reducing the baseline trash load to meet the MRP requirements.

Creek cleanups may offset up to 10% of the trash reduction goal, phasing out in June 2025, to help meet the interim 90% reduction goal. The City must coordinate creek cleanups at a minimum frequency of twice per year, and sufficient to demonstrate the sustained improvement of the creek area.

To meet the 100% reduction goal the City may submit a Source Control Plan to the Board. If acceptable, the Source Control Plan may account for up to 10% in load reduction, or 2553 gal/year. The Source Control Plan must outline jurisdiction-wide actions to reduce trash at the source. The City must also provide evidence that the source control actions are reducing trash by the claimed values by implementing ongoing Visual Assessment Plan which thoroughly documents, measures, assesses and verifies all stated reduction values.

Any remaining credit may be reached by reducing trash generating area designations using a Visual Assessment Plan. The Visual Assessment Plan shall propose an acceptable method to monitor effectiveness of trash reducing policies and cleanup efforts. This ongoing program would assess the percentage of discharge reduction in very high, high, and moderate generation areas. Where observed trash is reduced over time the City may directly reduce the trash generation category of the area to help meet the required total reduction of the baseline trash load.

### 3.3 Cost Estimates

The cost of a City-funded approach to completing capital improvements for trash load reduction is summarized in Table 6. The following assumptions were made in determining construction costs for each proposed device:

- For previously identified large scale hydrodynamic full capture devices, the device cost varies based on treatment rates based on data provided by Contech and BioClean;
- For newly identified large scale hydrodynamic full capture device, the device costs are based on 2018-2019 project construction cost estimates and an assumed 15% increase in market costs;
- For large scale netting full capture devices, the device cost varies based on treatment rates based on data provided by TrashTrap;
- Catch basin inlet filters were assumed to be for 24" x 36" inlets and cost \$2,400 each to procure and construct based on an average of the 2018-2019 project construction costs and an assumed 15% increase in market costs. The following are currently available products: Kristar FloGard Plus, BioClean Grate Inlet Skimmer Box, Gentile Family Industries Wavy Grate Trash Catcher, Revel Environmental Triton Bioflex Trash Guard, G2 Construction Collector Pipe Screen and United Stormwater Connector Pipe Screen;
- Large scale devices were assumed to have a lifetime of 50-years while stainless steel inlet filters/connector pipe screens were assumed to be replaced every 25 years;
- Estimated Construction Cost includes installation, diversion structure and the device. It does not include maintenance or device replacement.
- For cleaning, replacement and maintenance, the following assumptions were made:
  - Large scale devices are cleaned twice a year, requiring 1 hour of a team of two maintenance workers at \$262.86/hour and a vacuum truck at \$344.73/hour;
  - Inlet filters/connector pipe screens are cleaned two times a year, requiring 15 minutes of a team of two maintenance workers and vacuum truck;

**Table 6: Device Cost Estimates**

ID	Device Type	Construction Year	Acres	Load Reduction (gal/yr)	Percentage Reduction	Estimated Construction Cost	Yearly Maintenance Cost	Lifetime Cost	Lifetime Cost in thousands per Reduction %
165	In-line	2024	468.4	1894	7.42%	\$1,280,000	\$1,220	\$1,341,000	\$181
110	In-line	2025	862.9	1749	6.85%	\$2,190,000	\$1,220	\$2,251,000	\$329
1010	In-line	2024	520.9	1705	6.68%	\$1,140,000	\$1,220	\$1,201,000	\$180
533	In-line	2024	93.6	714	2.80%	\$376,000	\$1,220	\$437,000	\$156
1152	In-line	2024	157.1	594	2.33%	\$994,000	\$1,220	\$1,055,000	\$453
1122	In-line	2024	51.6	390	1.53%	\$189,000	\$1,220	\$250,000	\$164
517	In-line	2024	57.2	385	1.51%	\$406,000	\$1,220	\$467,000	\$310
6000	In-line	2024	52.1	301	1.18%	\$412,000	\$1,220	\$473,000	\$401
114	Outfall	2025	171.1	436	1.71%	\$270,000	\$1,220	\$331,000	\$194
10002	In-Line	2025	34.5	211	0.83%	\$270,000	\$1,220	\$331,000	\$401
164	In-Line	2025	44.2	204	0.80%	\$270,000	\$1,220	\$331,000	\$413
189	In-Line	2025	26.5	149	0.58%	\$270,000	\$1,220	\$331,000	\$569
173	In-Line	2025	24.2	141	0.55%	\$270,000	\$1,220	\$331,000	\$599
534	In-Line	2025	30.2	141	0.55%	\$270,000	\$1,220	\$331,000	\$601
103	CPS	2025	21.0	96	0.38%	\$270,000	\$1,220	\$331,000	\$881
10045	CPS	2025	27.0	10	0.04%	\$270,000	\$1,220	\$331,000	\$8,459
10029	Inlet	2023	15.6	226	0.88%	\$2,400	\$310	\$10,150	\$11
10048	CPS	2023	17.1	140	0.55%	\$2,400	\$310	\$10,150	\$19
10030	Inlet	2023	13.7	123	0.48%	\$2,400	\$310	\$10,150	\$21
10007	Inlet	2023	4.7	95	0.37%	\$2,400	\$310	\$10,150	\$27
601	Inlet	2023	10.3	73	0.29%	\$2,400	\$310	\$10,148	\$35
10046	Inlet	2023	16.7	72	0.28%	\$2,400	\$310	\$10,150	\$36
607	Inlet	2023	2.1	57	0.22%	\$2,400	\$310	\$10,150	\$46
485	Inlet	2023	7.5	57	0.22%	\$2,400	\$310	\$10,150	\$46
10003	Inlet	2023	6.1	46	0.18%	\$2,400	\$310	\$10,150	\$56
484	Inlet	2023	6.1	46	0.18%	\$2,400	\$310	\$10,150	\$56
481	Inlet	2023	5.6	42	0.17%	\$2,400	\$310	\$10,150	\$61
10036	Inlet	2023	13.9	40	0.16%	\$2,400	\$310	\$10,150	\$64
10050	Inlet	2023	8.7	39	0.15%	\$2,400	\$310	\$10,150	\$66
160	Inlet	2023	6.1	35	0.14%	\$2,400	\$310	\$10,150	\$75
375	Inlet	2023	11.0	32	0.13%	\$2,400	\$310	\$10,149	\$81
10016	Inlet	2023	12.4	30	0.12%	\$2,400	\$310	\$10,150	\$85
167	Inlet	2023	5.7	30	0.12%	\$2,400	\$310	\$10,150	\$85
171	Inlet	2023	5.3	28	0.11%	\$2,400	\$310	\$10,150	\$93

ID	Device Type	Construction Year	Acres	Load Reduction (gal/yr)	Percentage Reduction	Estimated Construction Cost	Yearly Maintenance Cost	Lifetime Cost	Lifetime Cost in thousands per Reduction %
486	Inlet	2023	3.5	26	0.10%	\$2,400	\$310	\$10,150	\$99
175	Inlet	2023	4.1	26	0.10%	\$2,400	\$310	\$10,150	\$99
10008	Inlet	2023	3.3	24	0.09%	\$2,400	\$310	\$10,150	\$108
440	Inlet	2023	3.8	24	0.09%	\$2,400	\$310	\$10,150	\$109
10011	Inlet	2023	5.3	23	0.09%	\$2,400	\$310	\$10,150	\$113
10040	Inlet	2023	13.6	22	0.09%	\$2,400	\$310	\$10,150	\$116
10037	Inlet	2023	9.9	21	0.08%	\$2,400	\$310	\$10,150	\$122
170	Inlet	2023	3.3	21	0.08%	\$2,400	\$310	\$10,150	\$122
10049	Inlet	2023	19.1	19	0.07%	\$2,400	\$310	\$10,150	\$140
10038	Inlet	2023	13.8	20	0.08%	\$2,400	\$310	\$10,150	\$132
10009	Inlet	2023	4.9	20	0.08%	\$2,400	\$310	\$10,150	\$133
523	Inlet	2023	2.4	18	0.07%	\$2,400	\$310	\$10,150	\$141
10034	Inlet	2023	2.9	18	0.07%	\$2,400	\$310	\$10,150	\$145
287	Inlet	2023	2.2	17	0.07%	\$2,400	\$310	\$10,150	\$153
10017	Inlet	2023	2.5	13	0.05%	\$2,400	\$310	\$10,150	\$197
395	Inlet	2023	2.2	16	0.06%	\$2,400	\$310	\$10,150	\$161
394	Inlet	2023	1.9	13	0.05%	\$2,400	\$310	\$10,150	\$207
10033	Inlet	2023	1.5	11	0.04%	\$2,400	\$310	\$10,150	\$228
388	Inlet	2023	1.9	11	0.04%	\$2,400	\$310	\$10,150	\$239
10028	Inlet	2023	10.3	10	0.04%	\$2,400	\$310	\$10,150	\$260
174	Inlet	2023	6.4	10	0.04%	\$2,400	\$310	\$10,150	\$264
168	Inlet	2023	2.4	9	0.04%	\$2,400	\$310	\$10,150	\$284
10026	Inlet	2023	2.5	9	0.04%	\$2,400	\$310	\$10,150	\$287
10010	Inlet	2023	1.1	8	0.03%	\$2,400	\$310	\$10,150	\$316
10044	Inlet	2023	2.0	8	0.03%	\$2,400	\$310	\$10,150	\$320
10013	Inlet	2023	1.6	8	0.03%	\$2,400	\$310	\$10,150	\$321
10035	Inlet	2023	15.3	8	0.03%	\$2,400	\$310	\$10,150	\$323
482	Inlet	2023	1.1	8	0.03%	\$2,400	\$310	\$10,150	\$340
10021	Inlet	2023	10.4	8	0.03%	\$2,400	\$310	\$10,150	\$340
10041	Inlet	2023	4.9	8	0.03%	\$2,400	\$310	\$10,150	\$344
10018	Inlet	2023	2.7	7	0.03%	\$2,400	\$310	\$10,150	\$365
529	Inlet	2023	0.9	7	0.03%	\$2,400	\$310	\$10,150	\$369
10025	Inlet	2023	3.2	5	0.02%	\$2,400	\$310	\$10,150	\$560
10012	Inlet	2023	10.6	4	0.02%	\$2,400	\$310	\$10,150	\$602
10023	Inlet	2023	1.2	4	0.02%	\$2,400	\$310	\$10,150	\$627

ID	Device Type	Construction Year	Acres	Load Reduction (gal/yr)	Percentage Reduction	Estimated Construction Cost	Yearly Maintenance Cost	Lifetime Cost	Lifetime Cost in thousands per Reduction %
10020	Inlet	2023	3.4	4	0.02%	\$2,400	\$310	\$10,150	\$640
10047	Inlet	2023	3.6	4	0.02%	\$2,400	\$310	\$10,150	\$645
10042	Inlet	2023	3.4	4	0.02%	\$2,400	\$310	\$10,150	\$649
10027	Inlet	2023	3.9	4	0.01%	\$2,400	\$310	\$10,150	\$728
10043	Inlet	2023	2.6	4	0.01%	\$2,400	\$310	\$10,150	\$731
10005	Inlet	2023	0.5	3	0.01%	\$2,400	\$310	\$10,150	\$787
10039	Inlet	2023	9.0	3	0.01%	\$2,400	\$310	\$10,150	\$922
472	Inlet	2023	0.2	3	0.01%	\$2,400	\$310	\$10,150	\$930
10022	Inlet	2023	2.0	3	0.01%	\$2,400	\$310	\$10,150	\$1,009
10006	Inlet	2023	2.2	3	0.01%	\$2,400	\$310	\$10,150	\$1,027
10004	Inlet	2023	10.0	2	0.01%	\$2,400	\$310	\$10,150	\$1,174
10019	Inlet	2023	5.2	2	0.01%	\$2,400	\$310	\$10,150	\$1,207
10015	Inlet	2023	1.4	2	0.01%	\$2,400	\$310	\$10,150	\$1,366
10032	CPS	2023	0.8	2	0.01%	\$2,400	\$310	\$10,150	\$1,509
10031	Inlet	2023	1.1	2	0.01%	\$2,400	\$310	\$10,150	\$1,611
10024	Inlet	2023	1.4	2	0.01%	\$2,400	\$310	\$10,150	\$1,690
		Total	3,041	3,041	42.5%	\$9,313,000	Total	\$10,824,000	

### 3.4 Schedule for Implementation

Table 7 describes an implementation schedule to reach 100% reduction over four years.

To reach 90% reduction by 2025, a combination of large scale devices and all identified inlet filter devices should be installed in conjunction with implementing the Source Control Plan described in section 3.1 of this report. The eight large scale devices identified in the 2017 iteration of this report are phased over the course of two years from 2023 to 2025. In order to meet the 100% reduction goal, the remaining large scale devices should be installed by 2026.

**Table 7: Implementation Schedule**

Year	Inlet Devices	Large Devices	Area (Acre)	Reduction	Total Cost
2022-23	69	0	398	6.8%	\$165,600
2023-25	0	8	2264	30.3%	\$6,987,000
2025-26	0	8	379	5.4%	\$2,160,000
<b>Total</b>	<b>69</b>	<b>16</b>	<b>3,041</b>	<b>42.5%</b>	<b>\$9,312,600</b>

## Appendix A: Treatment Tables

A-1: Proposed Public Device Treatment Calculations

Device ID	Device Type	Catchment Area (ac)	Weighted C Value	Treatment Intensity (in/hr)	Treatment Flow Rate (cfs)
10003	Inlet	6.1	1.0	0.31	1.81
174	Inlet	6.4	0.2	0.31	0.39
485	Inlet	7.5	1.0	0.31	2.22
10044	Inlet	2.0	0.4	0.31	0.27
167	Inlet	5.7	0.2	0.31	0.44
168	Inlet	2.4	0.2	0.31	0.13
170	Inlet	3.3	0.3	0.31	0.31
171	Inlet	5.3	0.2	0.31	0.40
175	Inlet	4.1	0.3	0.31	0.38
394	Inlet	1.9	0.7	0.31	0.41
481	Inlet	5.6	0.9	0.31	1.66
482	Inlet	1.1	0.9	0.31	0.30
484	Inlet	6.1	1.0	0.31	1.80
486	Inlet	3.5	0.9	0.31	1.03
523	Inlet	2.4	0.8	0.31	0.61
529	Inlet	0.9	0.8	0.31	0.23
10005	Inlet	0.5	0.8	0.31	0.13
10007	Inlet	4.7	0.9	0.31	1.34
10009	Inlet	4.9	0.5	0.31	0.75
10010	Inlet	1.1	0.9	0.31	0.32
10011	Inlet	5.3	0.5	0.31	0.76
160	inlet	6.1	0.6	0.31	1.14
388	Inlet	1.9	0.7	0.31	0.43
395	Inlet	2.2	0.9	0.31	0.62
533	In-line	93.6	0.7	0.31	20.72
534	In-Line	30.2	0.5	0.31	4.79
601	Inlet	10.3	0.9	0.31	2.88
10002	In-Line	34.5	0.7	0.31	6.98
10008	Inlet	3.3	0.8	0.31	0.81
10012	Inlet	10.6	0.0	0.31	0.16
10013	Inlet	1.6	0.6	0.31	0.27
10015	Inlet	1.4	0.1	0.31	0.06
10033	Inlet	1.5	0.9	0.31	0.45
10034	Inlet	2.9	0.8	0.31	0.70
10035	Inlet	15.3	0.1	0.31	0.27
10048	in-line	17.1	0.7	0.31	3.65

Device ID	Device Type	Catchment Area (ac)	Weighted C Value	Treatment Intensity (in/hr)	Treatment Flow Rate (cfs)
440	Inlet	3.8	0.8	0.31	0.93
472	Inlet	0.2	0.9	0.31	0.07
103	In-Line	21.0	0.2	0.31	1.37
287	Inlet	2.2	0.5	0.31	0.33
517	In-line	57.2	0.7	0.31	12.82
10042	Inlet	3.4	0.1	0.31	0.16
10036	Inlet	13.9	0.4	0.31	1.59
607	Inlet	2.1	0.9	0.31	0.56
110	In-line	862.9	0.1	0.31	38.91
114	Outfall	171.1	0.3	0.31	13.61
164	In-Line	44.2	0.4	0.31	5.21
165	In-line	468.4	0.4	0.31	53.79
173	Inlet	24.2	0.3	0.31	2.04
189	Inlet	26.5	0.7	0.31	5.64
375	inlet	11.0	0.4	0.31	1.26
1010	In-line	520.9	0.2	0.31	38.40
1122	In-line	51.6	0.8	0.31	12.40
1152	In-line	157.1	0.3	0.31	14.42
6000	In-line	52.1	0.7	0.31	11.84
10004	Inlet	10.0	0.0	0.31	0.09
10006	Inlet	2.2	0.1	0.31	0.10
10016	Inlet	12.4	0.3	0.31	1.01
10017	Inlet	2.5	0.6	0.31	0.43
10018	Inlet	2.7	0.2	0.31	0.15
10019	Inlet	5.2	0.0	0.31	0.07
10020	Inlet	3.4	0.1	0.31	0.13
10021	Inlet	10.4	0.1	0.31	0.25
10022	Inlet	2.0	0.1	0.31	0.08
10023	Inlet	1.2	0.4	0.31	0.14
10024	Inlet	1.4	0.1	0.31	0.05
10025	Inlet	3.2	0.2	0.31	0.15
10026	Inlet	2.5	0.2	0.31	0.17
10027	Inlet	3.9	0.0	0.31	0.03
10028	Inlet	10.3	0.0	0.31	0.12
10029	Inlet	15.6	0.4	0.31	1.90
10030	Inlet	13.7	0.4	0.31	1.59
10031	Inlet	1.1	0.1	0.31	0.03
10032	in-line	0.8	0.2	0.31	0.05
10037	Inlet	9.9	0.2	0.31	0.57
10038	Inlet	13.8	0.2	0.31	0.65

Device ID	Device Type	Catchment Area (ac)	Weighted C Value	Treatment Intensity (in/hr)	Treatment Flow Rate (cfs)
10039	Inlet	9.0	0.0	0.31	0.09
10040	Inlet	13.6	0.1	0.31	0.55
10041	Inlet	4.9	0.2	0.31	0.25
10043	Inlet	2.6	0.1	0.31	0.12
10045	Inlet	27.0	0.0	0.31	0.29
10046	Inlet	16.7	0.5	0.31	2.45
10047	Inlet	3.6	0.1	0.31	0.13
10049	Inlet	19.1	0.1	0.31	0.52
10050	Inlet	8.7	0.5	0.31	1.30



**A-2: Existing City Owned Device Treatment Calculations**

Existing Device Name	Area (ac)	Location	TMA	Trash Generation Rate	Trash Load (gal/yr)
Tree Well Filters	0.4	5489 Las Positas Road	4	Medium	0.0
Public Tree Well Filters	1.1	6200 Northfront Rd	16	Low	1.6
Public Tree Well Filters	2.2	6200 Northfront Rd	16	Low	0.0
Public Tree Well Filters	2.4	6200 Northfront Rd	16	Low	0.0
Public Tree Well Filters	3.4	6200 Northfront Rd	16	Low	0.0
Public Tree Well Filters	0.3	5699 Las Positas Road	4	Medium	2.4
Public Tree Well Filters	0.8	5699 Las Positas Road	4	Medium	6.0
Public Tree Well Filters	1.5	5699 Las Positas Road	4	Medium	11.2
Public Tree Well Filters	1.9	5699 Las Positas Road	4	Medium	14.1
Public Tree Well Filters	2.3	5699 Las Positas Road	4	Medium	15.0
Public Tree Well Filters	0.0	3142 Constitution Drive	1C	Medium	0.0
Public Tree Well Filters	0.0	3142 Constitution Drive	1C	Medium	0.0
5G1TC201	3.4	4569 LAS POSITAS RD	4	Medium	21.2
5G1TC106	4.6	4555 LAS POSITAS RD	4	Medium	29.2
5F2TC411	0.5	N MINES RD & TECHNOLOGY DR	4	Medium	3.6
5F2TC408	0.4	N MINES RD & TECHNOLOGY DR	4	Medium	3.2
5F2TC402	2.5	TECHNOLOGY DR & N MINES RD	4	Medium	18.7
5F2TC401	0.8	TECHNOLOGY DR & N MINES RD	4	Medium	16.6
5F2TC317	2.6	N MINES RD & TECHNOLOGY DR	3R	High	67.0
5F2TC316	1.6	N MINES RD & TECHNOLOGY DR	3R	High	47.4
5F2TC124	12.9	4273 FIRST ST	3R	High	372.0
5F2TC111	0.7	4250 FIRST ST	16	Low	0.0
5F2TC102	0.7	FIRST ST & N MINES RD	3R	High	18.8
4G3TC520	8.7	4647 C LAS POSITAS RD	4	Medium	34.3
4G3TC512	7.4	ARROYO VISTA & LAS POSITAS RD	16	Low	14.2
4G3TC509	4.1	LAS POSITAS AND ARROYO VISTA	3R	High	27.9
4G3TC507	1.2	4671 LAS POSITAS RD	16	Low	6.2
4G3TC505	0.0	LAS POSITAS RD & BENNETT DR	4	Medium	0.0
4G3TC502	1.5	4659 C LAS POSITAS RD	16	Low	0.1
4G3TC420	0.8	4749 BENNETT DR	16	Low	0.0
4G3TC418	5.1	4747 ARROYO VISTA	16	Low	10.7
4G3TC413	4.3	4749 BENNETT DR	16	Low	0.0
4G3TC412	1.4	4749 BENNETT DR	4	Medium	10.5
4G3TC315	4.8	SOUTH FRONT LN & FIRST ST	16	Low	135.4
4G3TC307	1.4	4740 BENNETT DR	4	Medium	10.1
4G3TC305	6.0	4771 ARROYO VISTA	4	Medium	44.8
4G3TC303	19.1	4749 BENNETT DR	16	Low	91.7
4G3TC300	1.8	4741 BENNETT DR	4	Medium	13.1
4G3TC233	0.5	4707 FIRST ST	3R	High	15.5
4G3TC230	0.6	4700 FIRST ST	3R	N/A	6.2
4G3TC226	0.6	SOUTH FRONT LN & FIRST ST	3R	High	13.7
4G3TC221	0.6	4849 SOUTH FRONT RD	4	Medium	4.6

Existing Device Name	Area (ac)	Location	TMA	Trash Generation Rate	Trash Load (gal/yr)
4G3TC219	1.2	4849 SOUTH FRONT RD	3R	High	24.7
4F4TC525	2.9	FIRST ST & BELLMWR DR	3R	High	86.0
4F4TC423	1.4	LAS POSITAS BLVD & FIRST ST	3R	High	43.4
4F4TC420	2.2	LAS POSITAS BLVD & FIRST ST	3R	High	65.6
4F4TC310	0.5	FIRST ST & SOUTHFRONT	3R	Medium	7.7
4F4TC308	0.2	LAS POSITAS RD & FIRST ST	3R	Medium	0.8
4F4TC307	1.0	4526 LAS POSITAS RD	16	Low	0.0
4F4TC306	0.4	LAS POSITAS RD & FIRST ST	16	Low	0.1
4F4TC305	0.3	LAS POSITAS RD & FIRST ST	3R	Medium	1.9
4F4TC303	0.5	FIRST ST & LAS POSITAS RD	3R	Medium	8.0
4F4TC206	6.0	4290 LAS POSITAS RD	16	Low	0.0
4F4TC205	2.7	4300 LAS POSITAS RD	16	Low	0.0
4F4TC203	0.7	4300 LAS POSITAS RD	3R	Medium	5.7
4F4TC202	0.5	4514 LAS POSITAS RD	3R	High	6.6
4F4TC200	2.5	4440 LAS POSITAS RD	16	Low	0.0
4F4TC101	0.5	4290 LAS POSITAS RD	3R	Medium	3.1
4F3TC208	0.1	NORTH MINES RD & LAS POSITAS RD	2C	Medium	0.5
4F3TC207	0.1	NORTH MINES RD & LAS POSITAS RD	2C	Medium	0.9
4F3TC206	0.4	3100 LAS POSITAS RD	2C	Medium	2.9
4F3TC205	16.9	LAS POSITAS RD & N MINES RD	16	Low	0.3
4F3TC204	0.5	NORTH MINES RD & LAS POSITAS RD	2C	Medium	3.7
4F3TC201	21.0	N MINES RD & LAS POSITAS RD	16	Low	0.0
4F3TC104	0.4	3200 LAS POSITAS RD	2C	Medium	2.3
4F3TC103	4.6	missing	16	Low	1.5
4F3TC102	0.4	3400 LAS POSITAS RD	2C	Medium	2.7
4F3TC101	0.0	3400 LAS POSITAS RD	2C	Medium	0.0
4F1TC508	0.3	3400 LAS POSITAS RD	2C	Medium	2.1
4F1TC506	0.2	Missing	16	Low	0.0
4F1TC502	0.0	3600 LAS POSITAS RD	16	Low	0.0
4F1TC501	0.1	Missing	16	Low	0.0
4E4TC404	30.4	LAS POSITAS RD & HILLIKER PL	16	Low	0.0
4E4TC403	3.1	2500 LAS POSITAS RD	16	Low	0.4
4E4TC402	2.6	2301 LAS POSITAS RD	2R	High	29.9
4E4TC401	3.8	2301 LAS POSITAS RD	2R	High	20.4
4E4TC314	0.0	2904 LAS POSITAS RD	16	Low	0.0
4E4TC313	4.9	2881 LAS POSITAS RD	16	Low	0.0
4E4TC310	5.3	2900 LAS POSITAS RD	16	Low	0.0
4E4TC309	0.4	3000 LAS POSITAS RD	2C	Medium	2.4
4E4TC308	0.9	3031 LAS POSITAS RD	16	Low	1.2
4E4TC305	0.2	2826 LAS POSITAS RD	2R	High	6.9
4E4TC304	0.2	2792 LAS POSITAS RD	2R	High	5.8
4E4TC303	0.5	LAS POSITAS RD & HILLIKER PL	2R	High	14.9
4E4TC302	3.8	2825 LAS POSITAS RD	16	Low	0.3

Existing Device Name	Area (ac)	Location	TMA	Trash Generation Rate	Trash Load (gal/yr)
4E4TC301	2.9	LAS POSITAS RD & HILLIKER PL	16	Low	0.0
4E4TC300	0.1	LAS POSITAS RD & HILLIKER PL	16	Low	0.0
4E4TC202	0.8	3000 LAS POSITAS RD	2C	Medium	5.7
4E3TC504	1.0	N LIVERMORE AVE & LAS POSITAS RD	2I	Medium	5.0
4E3TC417	2.4	N LIVERMORE AVE & LAS POSITAS RD	2R	High	70.7
4E3TC415	2.6	LAS POSITAS RD & N LIVERMORE AVE	2R	High	78.8
4E3TC411	6.3	LAS POSITAS RD & N LIVERMORE AVE	2R	High	48.2
4E3TC402	10.5	N LIVERMORE AVE & LAS POSITAS RD	2R	High	87.4
4E3TC401	0.2	N LIVERMORE AVE & LAS POSITAS RD	2I	Medium	1.7
4D1TC505	0.7	CONSTITUTION DR & SHEA CENTER DR		Low	0.0
4D1TC503	1.4	CONSTITUTION DR & SHEA CENTER DR		Low	0.0
4D1TC501	10.9	CONSTITUTION DR & SHEA CENTER DR	1C	Medium	79.8
4D1TC402	0.6	2580 SHEA CENTER DR	1C	Medium	3.7
4D1TC303	5.1	GATEWAY AVE & SHEA CENTER DR	1I	Medium	16.1
4C4TC419	1.1	LINDBERGH AVE & ARMSTRONG ST	1	Medium	7.1
4C4TC418	2.1	405 LINDBERGH AVE	1C	Medium	16.0
4C4TC415	2.9	135 LINDBERGH AVE	1C	Medium	21.6
4C4TC414	4.6	122 LINDBERGH AVE	1C	Medium	34.8
4C4TC410	0.6	170 LINDBERGH AVE	1C	Medium	4.7
4C4TC408	1.5	335 LINDBERGH AVE	1C	Medium	11.1
4C4TC406	4.3	LINDBERGH AVE & ARMSTRONG ST	1C	Medium	18.7
4C4TC403	3.9	274 LINDBERGH AVE	1C	Medium	29.3
4C4TC400	2.7	201 LINDBERGH AVE	1	Medium	20.3
4C4TC300	0.6	ARMSTRONG ST & EARHART WAY	16	Low	1.4
4C4TC203	1.5	349 EARHART WAY	1I	Medium	11.4
4C4TC200	2.7	419 EARHART WAY	1C	Medium	20.2
4C3TC510	0.2	550 AIRWAY BLVD	16	Low	0.0
4C3TC508	0.2	465 AIRWAY BLVD	16	Low	0.0
4C3TC507	1.7	550 AIRWAY BLVD		Low	0.0
4C3TC506	1.5	464 AIRWAY BLVD		Low	0.0
4C3TC505	2.1	448 AIRWAY BLVD		Low	0.0
4C3TC439	0.6	472 LINDBERGH AVE	1I	Medium	3.9
4C3TC408	3.3	LINDBERGH AVE & NISSEN DR	1C	Medium	24.5
4C3TC401	6.9	AIRWAY BLVD & CLUBHOUSE DR	16	Low	0.0
4C3TC304	1.9	2333 NISSEN DR	1C	Medium	13.7
4C3TC224	1.2	AIRWAY BLVD & KITTY HAWK RD	1I	Medium	9.3
4C3TC216	2.8	EARHART WAY & NISSEN DR	1C	Medium	22.7
4C3TC206	0.2	AIRWAY BLVD & KITTY HAWK RD	1I	Medium	1.3
4C3TC204	0.3	AIRWAY BLVD & KITTY HAWK RD	16	Low	0.2
4C3TC202	0.4	KITTY HAWK RD & AIRWAY BLVD	1I	Medium	1.2
4C3TC200	4.1	2383 NISSEN DR	1C	Medium	36.5
4C3TC115	0.2	KITTY HAWK RD & AIRWAY BLVD		Low	0.0
4C3TC114	0.1	AIRWAY BLVD & KITTY HAWK RD		Low	0.0

Existing Device Name	Area (ac)	Location	TMA	Trash Generation Rate	Trash Load (gal/yr)
4C3TC110	0.3	KITTY HAWK RD & AIRWAY BLVD		Low	0.2
4C3TC109	0.3	AIRWAY BLVD & KITTY HAWK RD		Low	0.0
4C2TC525	1.0	466 COLLIER CANYON		Low	2.6
4C2TC524	2.9	467 COLLIER CANYON	1R	Medium	21.9
4C2TC523	3.3	445 COLLIER CANYON	1R	Medium	24.4
4C2TC522	2.0	INDEPENDENCE DR & COLLIER CANYON	1C	Medium	14.3
4C2TC519	0.6	444 COLLIER CANYON	1R	Medium	1.3
4C2TC518	2.1	COLLIER CANYON & INDEPENDENCE DR	1R	Medium	15.6
4C2TC517	0.4	COLLIER CANYON & INDEPENDENCE DR	1R	Medium	1.1
4C2TC515	1.7	INDEPENDENCE DR & COLLIER CANYON	1R	Medium	11.6
4C2TC514	1.2	COLLIER CYN RD & CONSTITUTION DR	1I	Medium	8.9
4C2TC511	3.4	COLLIER CANYON RD & CONSTITUTION DR	16	Low	0.1
4C2TC510	0.3	COLLIER CANYON RD & CONSTITUTION DR	16	Low	0.0
4C2TC509	1.5	COLLIER CANYON & INDEPENDENCE DR	1R	Medium	11.1
4C2TC508	0.3	COLLIER CANYON & INDEPENDENCE DR	1R	Medium	2.1
4C2TC506	0.5	Cotton Wood Creek and Constitution Drive	16	Low	2.6
4C2TC505	0.6	Cotton Wood Creek and Constitution Drive	16	Low	1.4
4C2TC502	1.7	CONSTITUTION DR & SHEA CENTER DR		Low	0.0
4C2TC501	5.5	CONSTITUTION DR & SHEA CENTER DR	1C	Medium	40.8
4C2TC401	3.1	2854 INDEPENDENCE DR	1R	Medium	23.5
4C2TC312	1.0	NORTH CANYONS PKWY & INDEPENDENCE DR	1I	Medium	7.3
4C2TC304	3.5	455 NORTH CANYONS PKWY	1R	Medium	26.4
4C2TC301	13.2	2694 GATEWAY AVE	1I	Medium	84.2
4C2TC300	0.7	2694 GATEWAY AVE	1I	Medium	5.0
4C2TC211	0.2	2648 COLLIER CYN RD	16	Low	1.0
4C2TC210	0.2	2649 COLLIER CYN RD	1I	Medium	1.4
4C2TC103	29.2	477 INDEPENDENCE DR	1I	Medium	104.6
4C1TC536	2.0	DOOLAN RD & COLLIER CYN	1C	Medium	13.8
4C1TC529	1.5	DOOLAN RD & COLLIER CYN	1C	Medium	11.4
4C1TC523	3.8	missing	1C	Medium	28.2
4C1TC416	2.7	2929 CONSTITUTION DR	1C	Medium	20.2
4C1TC414	2.1	2850 CONSTITUTION DR	1C	Medium	15.6
4C1TC413	0.2	KITTY HAWK RD & AIRWAY BLVD	1C	Medium	1.6
4C1TC410	1.1	N CANYONS PKWY & REPUBLIC DR	16	Low	2.1
4C1TC409	9.2	901 N CANYON PKWY	1I	Medium	32.7
4C1TC407	3.2	N CANYON PKWY & DOOLAN RD	1I	Medium	23.9
4C1TC405	1.9	952 N CANYONS PKWY	16	Low	2.7
4C1TC404	0.6	DOOLAN RD & N CANYONS PKWY	1C	Medium	4.0
4C1TC400	1.9	2801 CONSTITUTION DR	1C	Medium	14.1
4C1TC313	4.8	AIRWAY BLVD & N CANYONS PKWY	1I	Medium	2.3
4C1TC312	4.2	1815 DOOLAN RD	1I	Medium	20.6
4C1TC311	0.5	AIRWAY BLVD & N CANYONS PKWY	1R	Medium	4.1
4C1TC308	0.7	AIRWAY BLVD & N CANYONS PKWY	1I	Medium	5.2

Existing Device Name	Area (ac)	Location	TMA	Trash Generation Rate	Trash Load (gal/yr)
4C1TC307	2.3	N CANYONS PKWY & AIRWAY BLVD	16	Low	13.1
4C1TC300	0.9	2882 CONSTITUTION DR	1C	Medium	6.4
4C1TC207	0.7	CONSTITUTION DR & N CANYONS PKWY	1C	Medium	0.0
4C1TC205	0.0	CONSTITUTION DR & N CANYONS PKWY	1C	Medium	0.0
4C1TC204	1.4	3142 N CANYONS PKWY	1C	Medium	10.5
4C1TC203	14.4	455 NORTH CANYONS PKWY	16	Low	15.7
4C1TC202	0.0	CONSTITUTION DR & N CANYONS PKWY	1C	Medium	0.0
104	6.3	777 Rincon Ave	11R	High	185.4
105	30.5	492 Rincon Ave	9	Medium	230.3
106	15.8	missing	9	Medium	99.4
107	7.2	1027 Locust Ave	9	Medium	55.3
111	243.8	missing	16	Low	1418.8
113	25.6	3500 Robertson Park Rd	14C	Medium	8.4
116	5.0	51 Wright Brothers Ave	11R	High	90.2
117	4.7	1382 Stealth St.	11I	Medium	35.3
118	3.7	330 Wright Brothers Ave	11I	Medium	27.5
145	2.7	5551 Jacqueline Way	6	Medium	16.7
147	4.5	5606 Charlotte Way	6	Low	0.4
148	12.5	2700 Robertson Park Rd	15P	Medium	93.7
150	6.4	1901 Rutan Drive	11I	Medium	47.7
152	11.1	283 East Airway Blvd	11I	Medium	46.1
153	6.8	137 East Airway Blvd	11I	Medium	47.1
155	4.1	1 East Airway Blvd	11I	Medium	27.2
156	7.8	1 East Airway Blvd	11I	Medium	32.6
157	9.4	1852 Rutan Drive	11I	Medium	51.7
159	3.0	350 Sonic Ave	11I	Medium	21.6
166	5.2	2700 Robertson Park Rd	15P	Medium	31.2
169	6.4	5563 Jacqueline Way	6	Medium	18.9
172	5.3	1519 N. Vasco Road	12R	Medium	14.2
176	17.3	1600 N. Vasco Road	12R	Medium	95.6
177	3.1	1350 N. Vasco Road	16	Low	15.8
187	2.2	3011 Comcast Place	1I	Medium	16.2
188	31.6	3011 Comcast Place	16	Low	144.8
190	12.6	455 North Canyons Pkwy	1I	Medium	94.1
304	0.7	4301 First St	3R	High	16.7
338	16.5	1012 Wagoner Dr	16	Low	3.8
339	5.0	1222 Wagoner Dr	16	Low	0.0
340	1.2	1202 Concannon Blvd	14C	Medium	3.9
342	6.3	1455 Kingsport Ave	14C	Medium	14.3
344	10.2	1527 Heidelberg Dr	16	Low	0.7
345	6.0	1620 Heidelberg Dr	16	Low	1.5
346	23.9	1125 Catalina Dr	14R	Medium	167.2
347	6.9	1951 Holmes St	14R	Medium	10.7

Existing Device Name	Area (ac)	Location	TMA	Trash Generation Rate	Trash Load (gal/yr)
348	9.8	1051 Catalikna Dr	16	Low	35.5
349	15.8	924 Florence Rd	16	Low	68.5
350	3.5	310 El Camino	16	Low	1.7
351	17.7	592 Sonoma Ave	16	Low	0.0
352	27.5	502 Lorren Way	16	Low	0.0
354	2.4	427 Ontario Dr	16	Low	0.0
355	8.2	418 Ontario Dr	16	Low	0.4
358	2.0	1351 Murdell Lane	16	Low	0.0
359	11.9	1298 Murdell Lane	15P	Low	0.0
360	15.2	300 Wall St	14C	Low	0.0
362	12.5	Concannon Blvd	16	Low	31.9
363	5.9	1458 Darwin Ave	16	Low	4.5
364	12.5	1503 Helsinki	16	Low	9.5
366	1.9	1505 South Livermore Ave	15P	Low	0.1
372	7.7	401 East Jack London Blvd	14C	Medium	3.5
378	10.8	1362 Shawnee Rd	15P	Low	4.0
383	0.9	1253 Portola Ave	11	High	28.3
384	1.2	1253 Portola Ave	16	Low	11.2
389	15.1	487 East Airway Blvd	11I	Medium	64.7
397	3.3	288 Lindbergh Ave	1	Medium	24.3
398	2.8	288 Lindbergh Ave	1	Medium	21.0
402	2.3	122 Lindbergh Ave	1C	Medium	17.4
403	2.3	122 Lindbergh Ave	1I	Medium	16.9
404	8.6	2150 Kitty Hawk Rd	16	Low	9.9
407	3.1	1010 Murrieta Blvd	8B	Medium	23.4
409	2.1	968 Murrieta Blvd	8B	Low	0.4
413	15.5	1204 Blossom Circle	16	Low	31.0
414	11.6	1150 Nielsen Ave	16	Low	0.5
416	13.8	4245 Drake Way	16	Low	0.5
417	5.7	994 Loyola Way	15P	Medium	27.9
418	2.7	4392 Pomona Way	16	Low	0.0
419	27.7	missing	15P	Medium	20.8
422	2.6	5280 Irene Way	14C	Medium	1.2
430	22.1	5800 Patterson Pass Road	4P	Low	0.3
436	3.8	5888 Northfront Rd	12I	Medium	18.4
437	3.2	983 Central Avenu	16	Low	0.8
439	13.5	5221 Wisteria Ave	16	Low	46.5
444	5.8	1287 Arrowhead Ave	16	Low	24.3
445	8.8	1438 Columbine Way	16	Low	33.4
446	1.9	5625 Mt. Hamilton Court	16	Low	0.2
447	8.3	5641 Mount Day Dr.	16	Low	0.3
448	3.4	5531 Brushy Peak Ct	16	Low	3.9
449	6.8	1893 N. Vasco Road	12C	Medium	24.3

Existing Device Name	Area (ac)	Location	TMA	Trash Generation Rate	Trash Load (gal/yr)
455	4.3	6500 Garaventa Ranch Road	16	Low	0.0
458	25.6	missing	16	Low	34.2
460	3.9	5502 Broadmoor St	16	Low	0.0
461	8.7	5681 Broadmoor St	16	Low	0.0
462	6.4	5625 Haggin Oaks Ave	16	Low	3.6
465	10.2	5902 Pasatiempo St	12C	Low	0.0
471	9.9	1330 Morning Glory Ct	12C	Medium	29.7
473	4.1	860 Las Flores Rd	12C	Medium	30.4
474	1.3	848 Las Flores Rd	12C	Medium	9.6
476	15.2	392 Thrasher Ave	16	Low	39.3
483	10.3	901 North Canyon Pkwy	11	Medium	34.9
487	10.6	821 Rancho Dr	9	Medium	92.0
488	2.9	760 El Rancho Dr	16	Low	8.3
492	9.0	282 Daisyfield Dr	16	Low	7.2
496	2.5	2090 Las Positas Ct	2I	Medium	4.5
497	2.5	2133 Las Positas Ct	2I	Medium	17.7
498	0.7	2186 Las Positas Ct	2C	Low	15.3
499	0.9	missing	2C	Low	19.7
502	19.3	3981 First St	4	Medium	45.2
503	13.7	2021 Las Positas Ct	2I	Medium	66.9
505	4.2	4047 First St	4	Medium	35.9
506	2.3	4043 First St	4	Medium	3.6
508	1.1	4374 Contractors Common	4	Medium	6.7
509	8.9	4398 Contractors Common	4	Low	16.9
514	4.0	455 Technology Dr.	4	Medium	21.8
516	0.7	45 Contractors St	4	Low	1.7
518	2.5	3765 Mt. Diablo Rd	4	Medium	18.5
520	2.4	4777 Bennett Dr	4	Medium	17.7
521	1.6	4777 Bennett Dr	4	Medium	12.1
522	2.6	4953 Southfront Rd	4	Medium	19.7
524	1.3	422 Preston Court	4	Medium	9.7
528	3.7	4771 Arroyo Court	4	Medium	27.5
530	2.9	422 Preston Court	4	Medium	13.8
606	2.8	1004 Larkspur Dr	16	Low	0.5
608	1.0	922 Larkspur Dr	12R	High	25.5
609	7.2	922 Larkspur Dr	12C	Medium	72.3
610	4.3	4673 Lassen Rd	12R	High	14.9
611	2.4	4673 Lassen Rd	12R	High	27.6
612	0.4	4673 Lassen Rd	12R	High	10.8
613	0.4	4673 Lassen Rd	12C	Medium	3.1
614	10.5	4673 Lassen Rd	12C	Medium	16.0
615	4.3	6200 Northfront Road	16	Low	73.8
616	3.3	816 N. Vasco Road	12R	High	37.0

Existing Device Name	Area (ac)	Location	TMA	Trash Generation Rate	Trash Load (gal/yr)
617	15.6	863 N. Vasco Road	12R	High	70.1
618	1.9	816 N. Vasco Road	12R	High	36.9
619	2.0	816 N. Vasco Road	12R	High	6.7
620	11.0	2268 Research Dr	13I	Medium	81.9
631	6.1	2413 Casino Lave	16	Low	19.0
632	19.7	645 Loyola Way	16	Low	27.5
633	10.9	2748 Kellogg Loop	16	Low	35.7
635	12.5	826 Del Norte Dr	16	Low	13.3
636	8.8	1206 Notre Dame Court	16	Low	11.8
637	10.0	758 Loyola Way	16	Low	8.4
638	3.0	1303 Chateau Common	16	Low	10.2
639	3.5	4493 Edgewood Way	16	Low	7.7
640	7.1	S, Vasco & Bargeman Lane	16	Low	5.2
641	11.7	622 Lido Dr	15P	Low	3.9
642	4.5	1277 Heather Lane	16	Low	6.5
644	7.5	933 Algonquin Ave	16	Low	6.1
645	5.0	79 Meritage Common	16	Low	6.0
647	5.1	E. Jack London & Hageman Dr	16	Low	5.6
648	8.5	1358 Roselli Dr	16	Low	5.1
649	1.5	Sonic Ave & Stealth St	16	Low	4.3
650	19.3	501 Saddleback Cir	16	Low	5.4
652	4.2	1204 St. Mary Dr	16	Low	3.5
653	6.9	831 Turino St	16	Low	3.3
655	1.9	701 Sandpipe Common	16	Low	3.2
656	1.1	5698 Carnegie Way	16	Low	3.1
657	1.2	60 Meritage Common	16	Low	3.0
658	3.9	1202 Gonzaga Court	16	Low	3.0
659	3.9	2409 Decker Lan	16	Low	2.9
660	3.8	1207 Gonzaga Court	16	Low	2.9
661	21.3	4253 Baylor Way	16	Low	4.5
662	2.6	1315 Chateau Common	16	Low	6.4
1000	140.2	missing	16	Low	982.0
1151	427.4	missing	4	Medium	1601.7
10644	0.8	missing	16	Low	1.7
10667	3.3	3102-3278 Constitution Drive	1C	Medium	0.0
10685	1.5	missing	3R	High	4.1
10686	8.4	missing	3R	High	102.1
10730	0.8	missing	16	Low	0.0
10731	0.4	missing	16	Low	0.0
10764	0.9	missing	16	Low	0.0
<b>Total</b>	<b>2465.6</b>				<b>10655</b>



**A-3: Existing Parcels with Private Devices Treatment Calculations**

Street Number	Street Name	Hydrodynamic Separator	Water Quality Inlets	Media Filters	Private Tree Well Filter	Public Tree Well Filter*	LID	Area (ac)	Trash Captured (minus ex City device catchments) (gal/year)
	Blue Bell Drive at Las Flores						X	3.36	23.98
	Brisa Street at Vasco Road						X	12.32	
6850	Brisa Street		X					6.35	47.64
50	Contractor's Street	X						2.34	17.55
3102-3278	Constitution Drive	X						8.96	67.18
3142	Constitution Drive					X			
4542	Contractor's Place	X						2.00	15.00
800	East Stanley Boulevard	X						9.53	71.45
	First Street at Portola Ave						X	3.77	0.001
4707	First Street						X	0.42	12.82
1660	Freisman Road						X	9.82	
200	Greenville Road	X						1.44	10.82
7600	Hawthorne Avenue						X	12.75	
7770	Hawthorne Avenue		X					4.95	37.14
740	Holmes Street						X	0.38	
3103-3197	Independence Drive			X				4.62	34.62
2304	Kitty Hawk Road		X					2.56	18.24
2282	Kitty Hawk Road		X					8.18	61.33
922	Larkspur Drive	X							
2901	Las Positas Boulevard						X	2.77	
3100	Las Positas Road	X						5.07	38.05
3200	Las Positas Road	X						3.20	24.01
3400	Las Positas Road	X						1.91	14.31
2500	Las Positas Road	X						5.58	167.39
5699	Las Positas Road					X			
5489	Las Positas Road				X			16.96	127.21
6211	Las Positas Road	X						6.07	45.49
6475	Las Positas Road	X						3.14	23.58
6553-6589	Las Positas Road	X						2.99	22.45
7480	Las Positas Road		X					0.003	0.02
7551	Longard Road							3.03	25.33
	Morning Glory Circle						X	5.56	41.67
6650	National Drive		X					6.16	46.20
7600-7648	National Drive	X						2.27	17.05
6061	Northfront Road		X					0.47	14.24
6049	Northfront Road		X					0.54	16.18
100	North Canyons Parkway	X						3.31	24.80
	Old First Street						X	6.21	
1202	Portola Avenue							.03	0.19
2330	Railroad Avenue	X						1.82	13.62
3560	Robertson Park Road		X					8.22	61.64
	Sardonyx Court						X	4.87	
5750	Scenic Avenue		X					0.70	
1860	Second Street				X			0.7	5.23

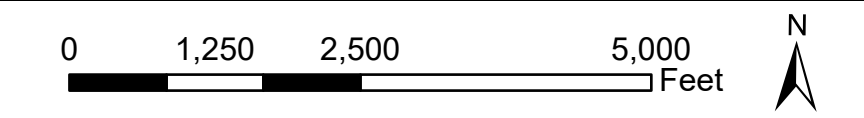
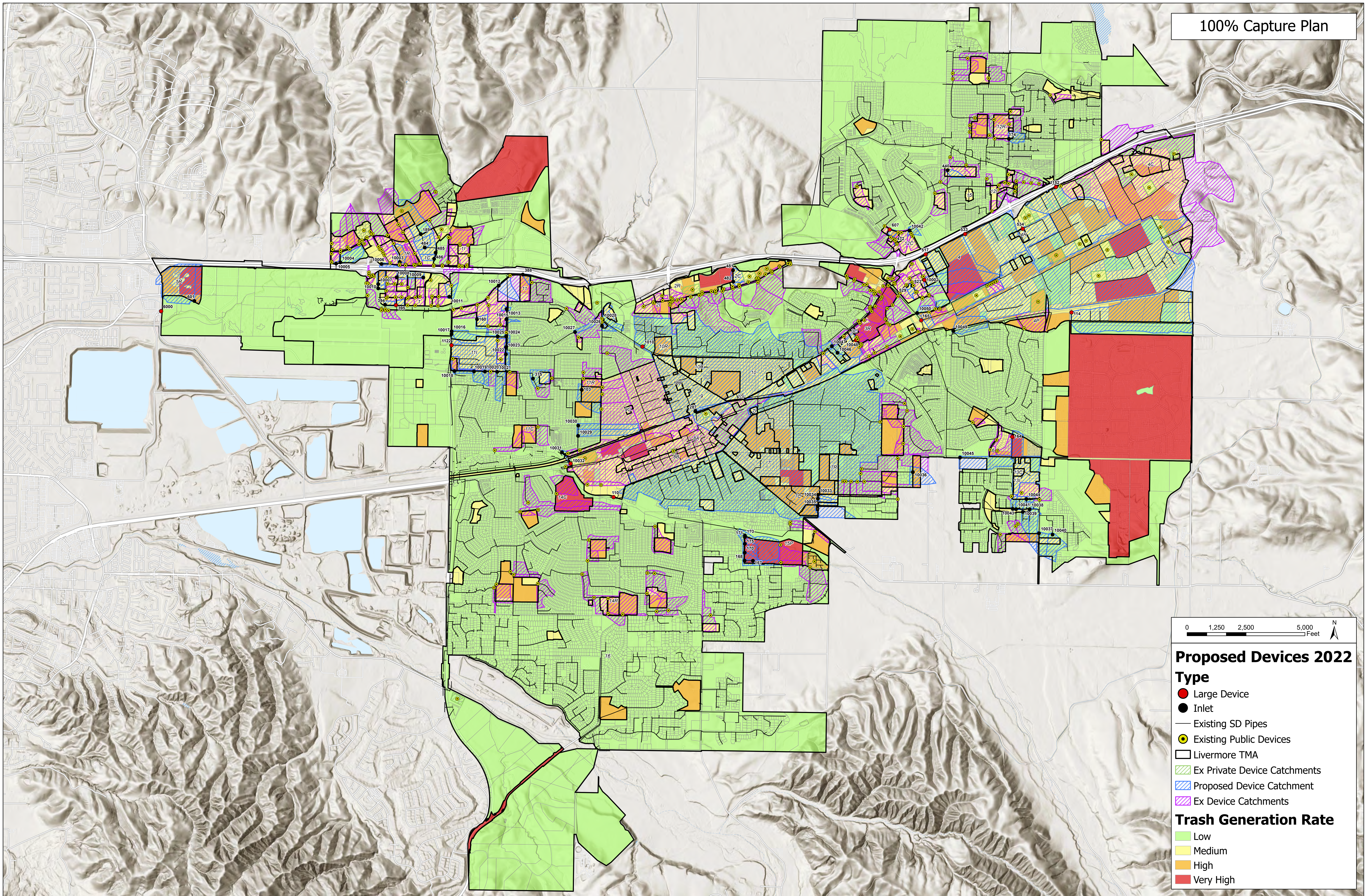
Street Number	Street Name	Hydrodynamic Separator	Water Quality Inlets	Media Filters	Private Tree Well Filter	Public Tree Well Filter*	LID	Area (ac)	Trash Captured (minus ex City device catchments) (gal/year)
6153-6175	Southfront Road		X					6.46	48.43
355	South Vasco Road			X				11.50	86.25
	Vasco Road at Brisa Street						X	17.05	
	Vasco Road at East Avenue						X	5.02	
101	Vineyard Avenue	X						4.20	
<b>Totals</b>								<b>229.56</b>	<b>1281</b>

\*Drainage areas and capture volumes for public tree well filters unknown at this time

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# Appendix B: Full Scale 100% Trash Capture Plan

# 100% Capture Plan



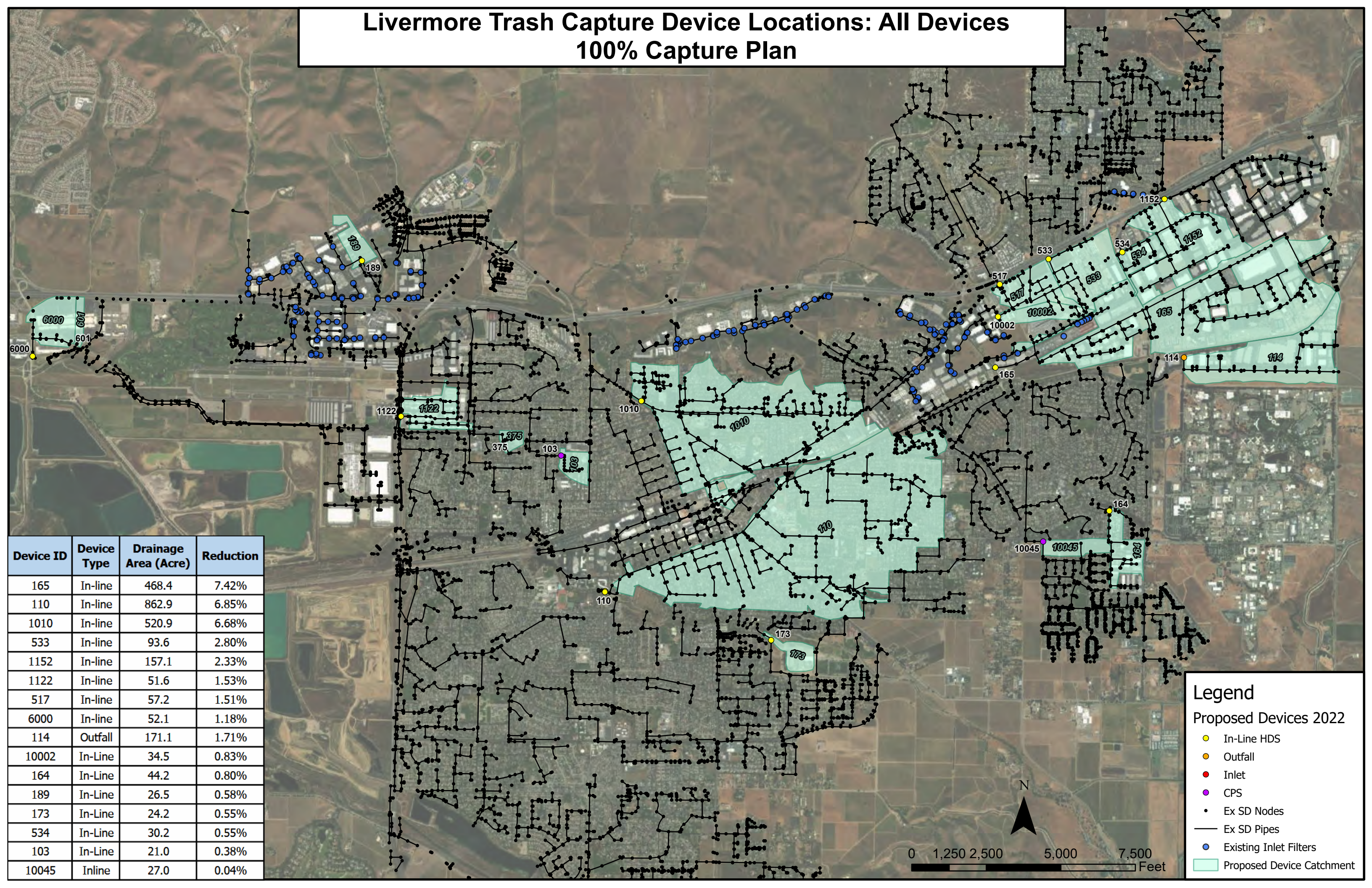
## Proposed Devices 2022

- Type**
- Large Device
  - Inlet
  - Existing SD Pipes
  - Existing Public Devices
  - Livermore TMA
  - ▨ Ex Private Device Catchments
  - ▨ Proposed Device Catchment
  - ▨ Ex Device Catchments

- Trash Generation Rate**
- Low
  - Medium
  - High
  - Very High

# Appendix C: Conceptual Device Drawings

# Livermore Trash Capture Device Locations: All Devices 100% Capture Plan

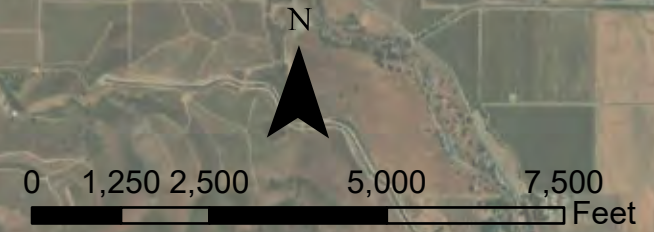


Device ID	Device Type	Drainage Area (Acre)	Reduction
165	In-line	468.4	7.42%
110	In-line	862.9	6.85%
1010	In-line	520.9	6.68%
533	In-line	93.6	2.80%
1152	In-line	157.1	2.33%
1122	In-line	51.6	1.53%
517	In-line	57.2	1.51%
6000	In-line	52.1	1.18%
114	Outfall	171.1	1.71%
10002	In-Line	34.5	0.83%
164	In-Line	44.2	0.80%
189	In-Line	26.5	0.58%
173	In-Line	24.2	0.55%
534	In-Line	30.2	0.55%
103	In-Line	21.0	0.38%
10045	Inline	27.0	0.04%

### Legend

**Proposed Devices 2022**

- In-Line HDS
- Outfall
- Inlet
- CPS
- Ex SD Nodes
- Ex SD Pipes
- Existing Inlet Filters
- Proposed Device Catchment



# Project Description

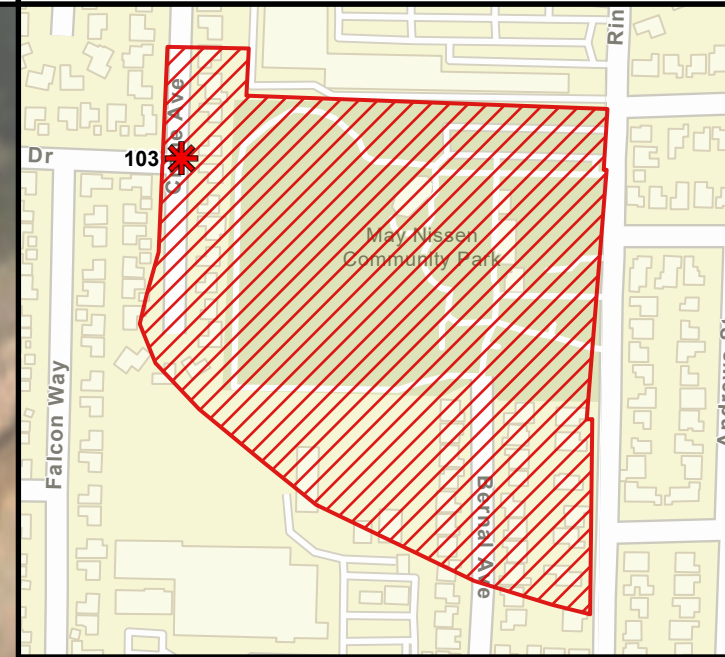
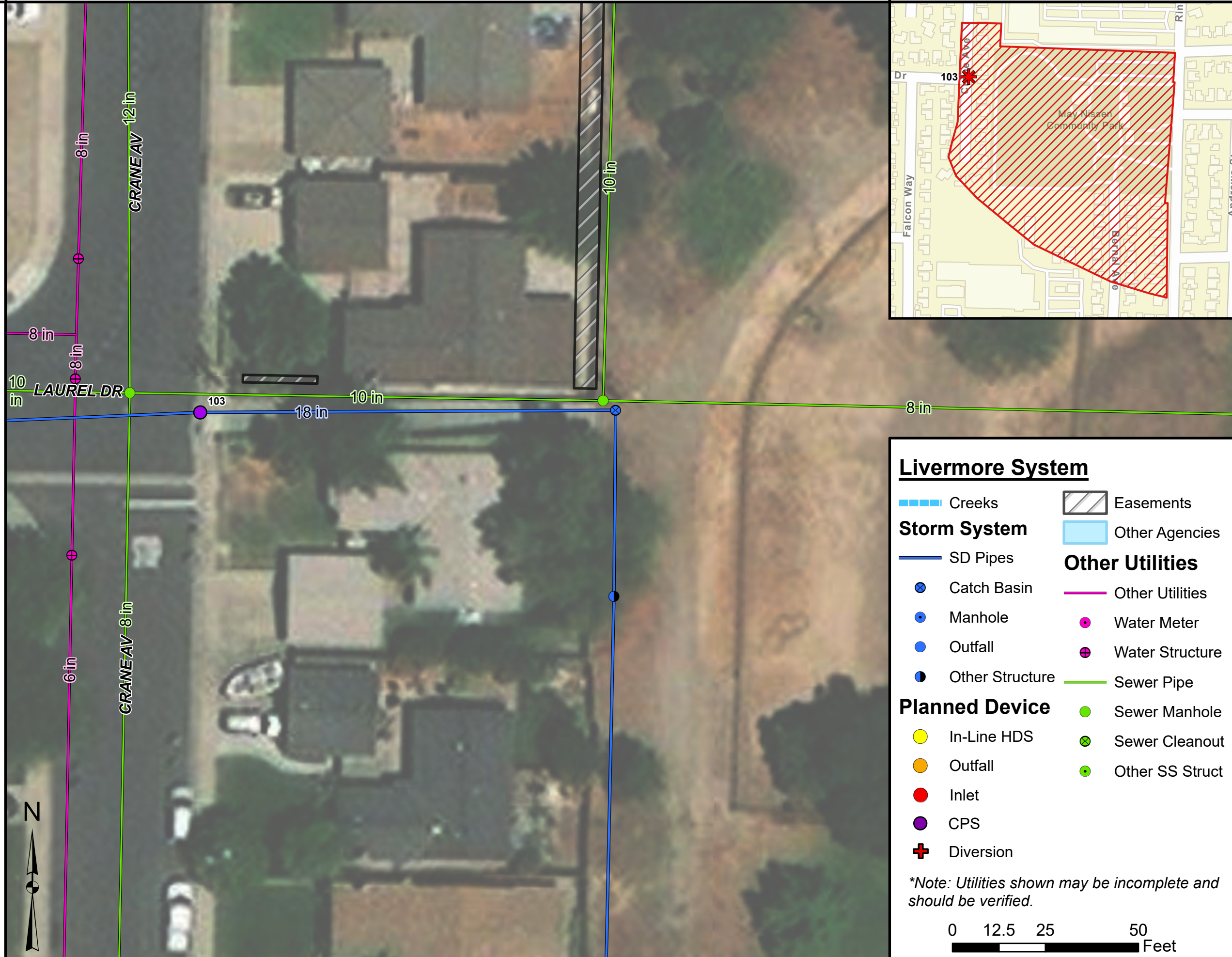
# Livermore Trash Capture Device Locations: Device 103

# Vicinity Map

**Device Type:**  
CPS

**Service Area:**  
21 Acres

**Field Notes:**



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

*\*Note: Utilities shown may be incomplete and should be verified.*





# Project Description

## Device Type:

In-Line HDS

## Service Area:

862 Acres

## Field Notes:

Bike path within city ROW

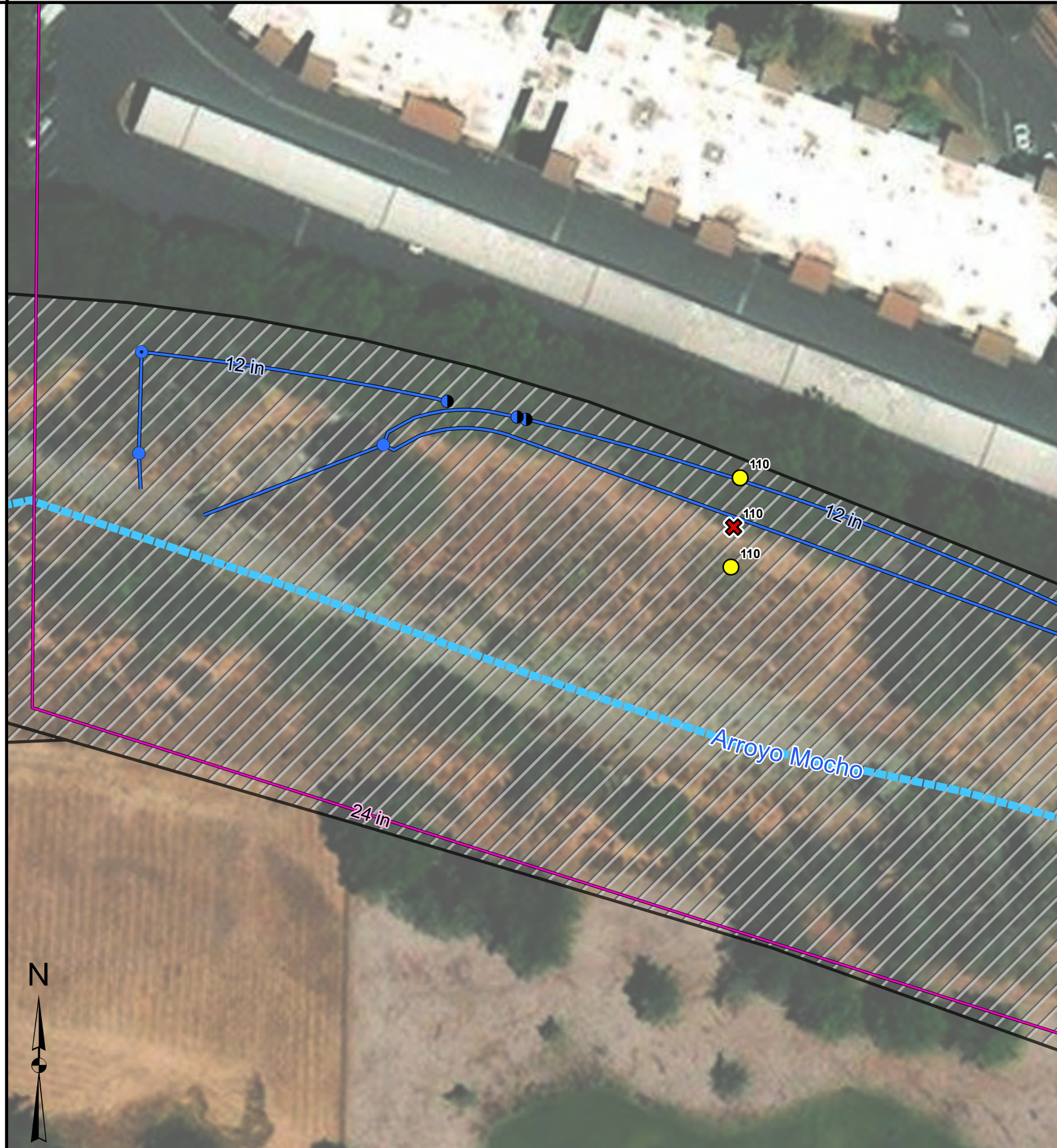
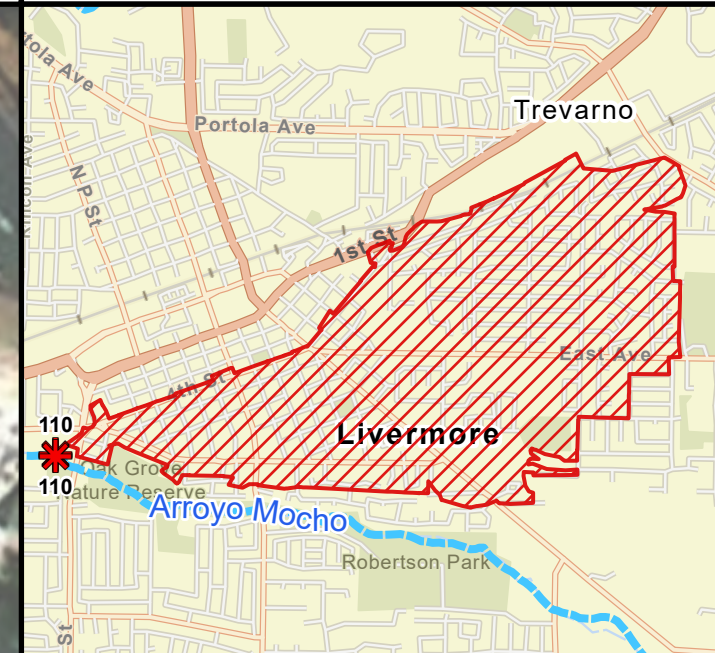
Double 60" (one is capped for future)

Low OH lines at access from Holmes



# Livermore Trash Capture Device Locations: Device 110

# Vicinity Map



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



## Project Description

### Device Type:

Outfall

### Service Area:

171 Acres

### Field Notes:

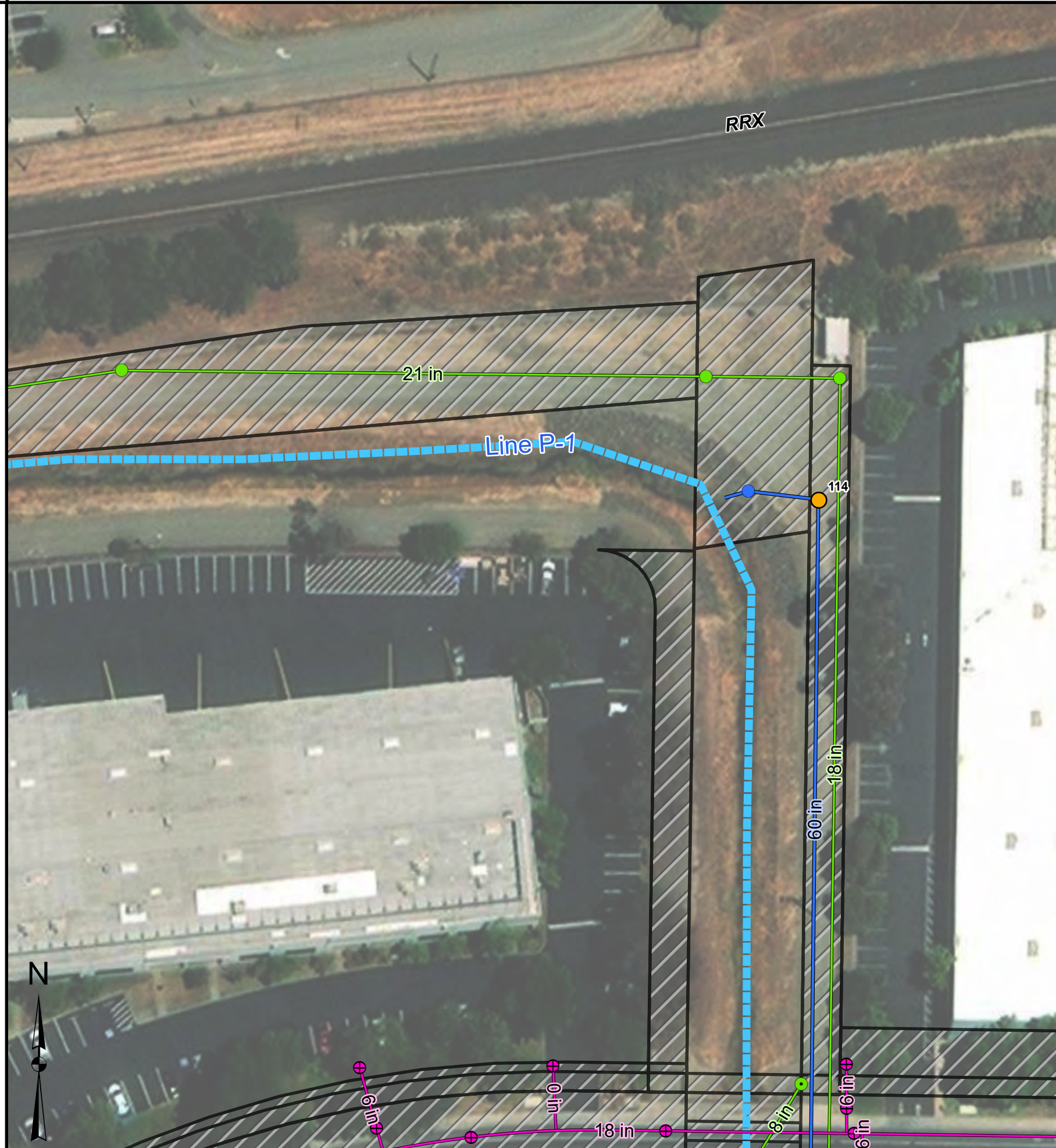
Device off-line in landscape strip

Water line to hydrant (verify location)

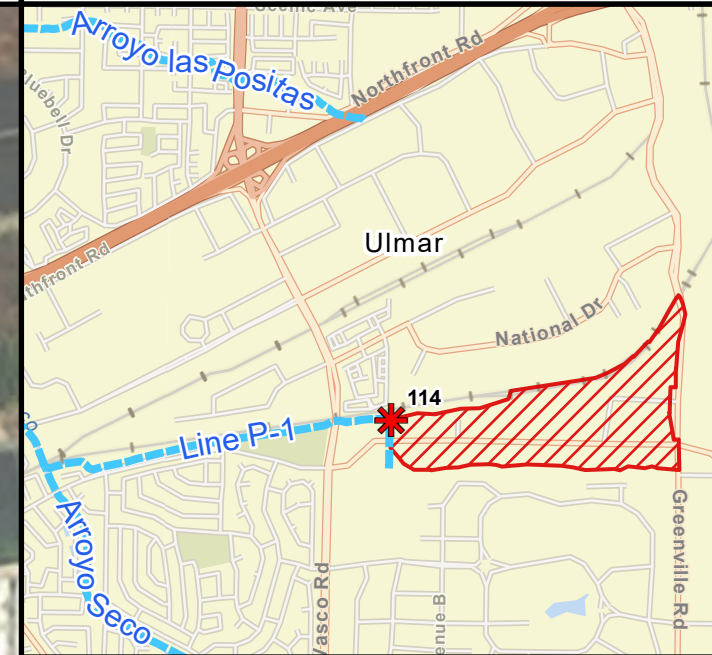
Overhead lines parallel to Line P-1



## Livermore Trash Capture Device Locations: Device 114



## Vicinity Map



### Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



# Project Description

**Device Type:**  
In-Line HDS

**Service Area:**  
44 Acres

**Field Notes:**  
Park strip north of Susan Ln City ROW

Large Zone 7 water line in park strip. Verify location

Water, gas, SS and street lights on Susan

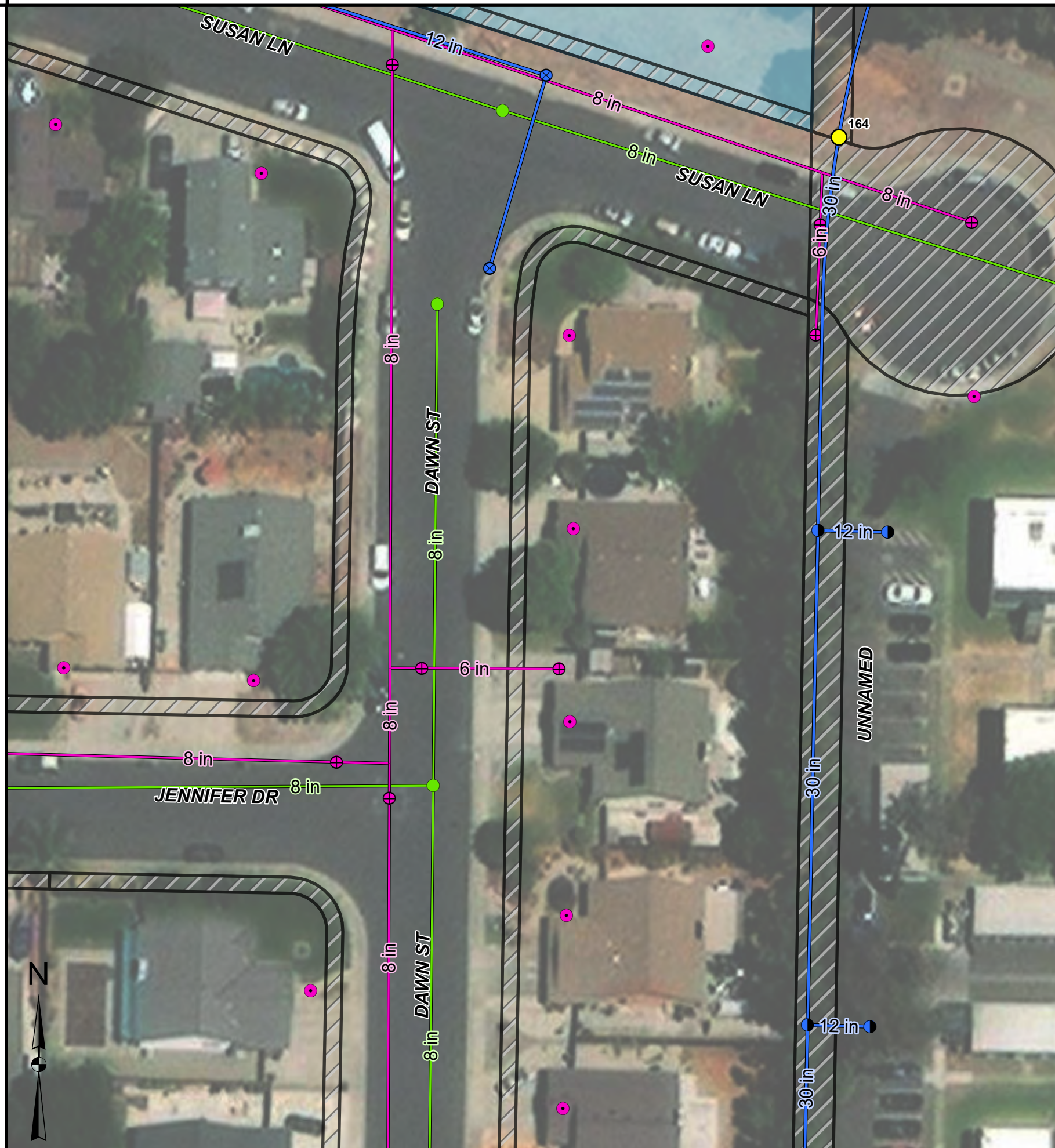
Flooding issues upstream (trees on pipe)



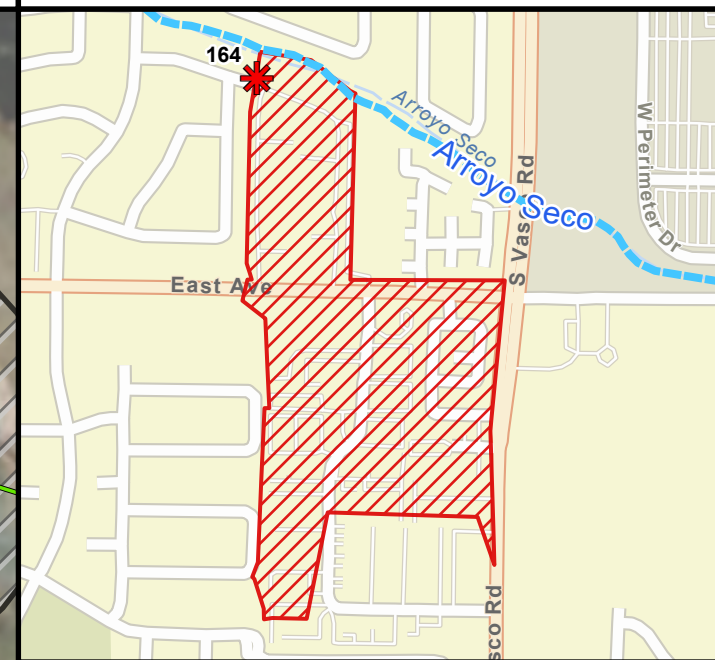
164

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# Livermore Trash Capture Device Locations: Device 164



# Vicinity Map



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



## Project Description

### Device Type:

In-Line HDS

### Service Area:

468 Acres

### Field Notes:

Place on access road between outfall and private property

Location with Zone 7 ROW

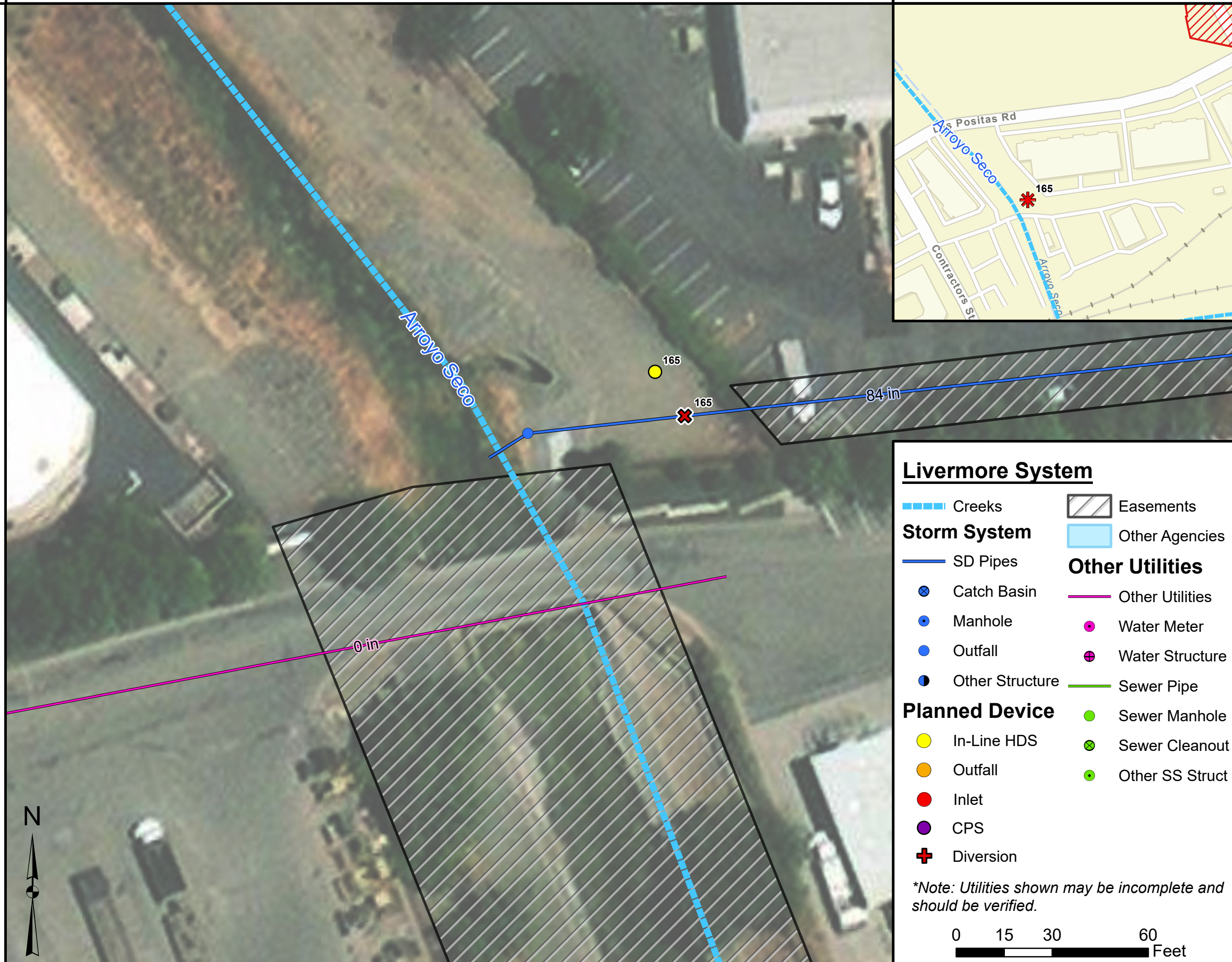
Flooding issues upstream

May be environmental concerns with installing so close to creek



**Schaaf & Wheeler**  
CONSULTING CIVIL ENGINEERS

## Livermore Trash Capture Device Locations: Device 165



## Vicinity Map



# Project Description

## Device Type:

In-Line HDS

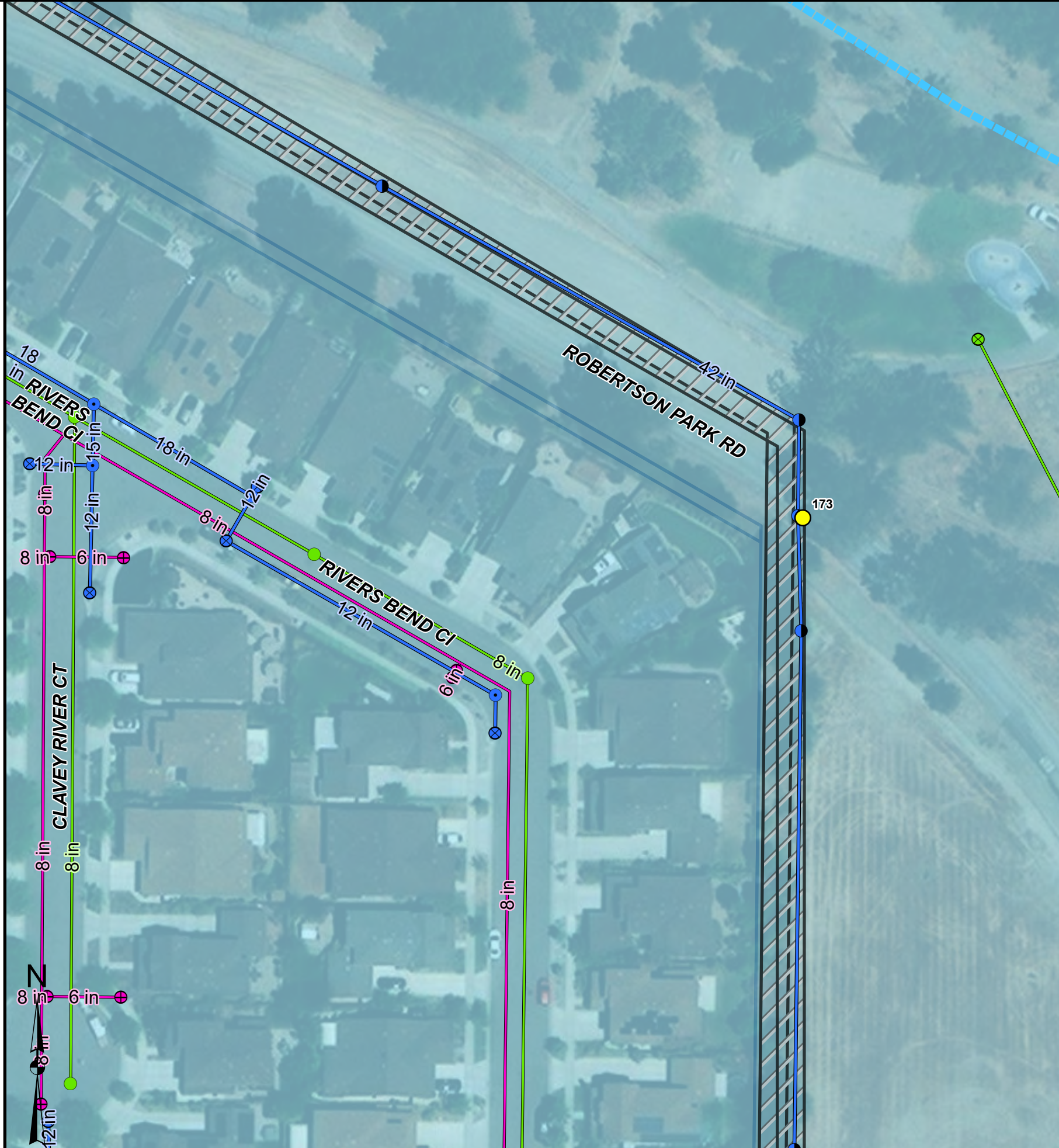
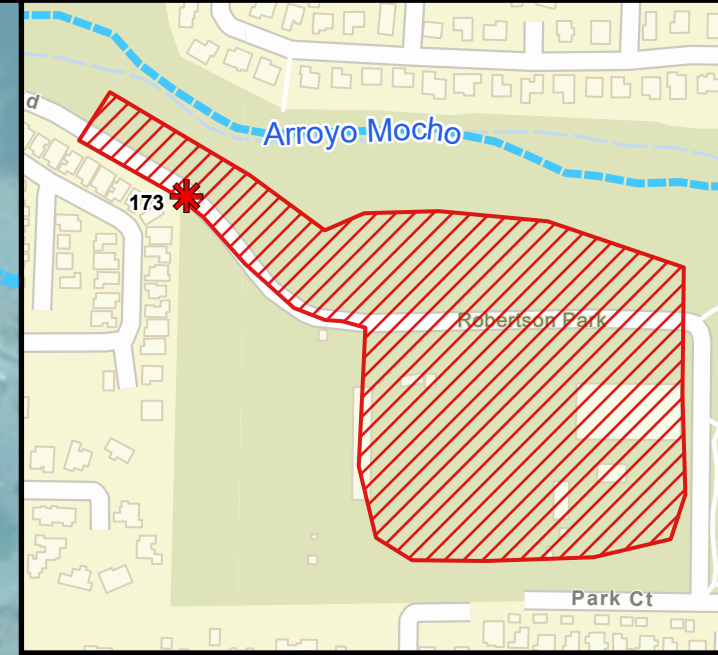
## Service Area:

24 Acres

## Field Notes:

# Livermore Trash Capture Device Locations: Device 173

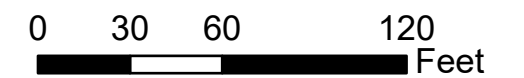
# Vicinity Map



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



# Project Description

## Device Type:

In-Line HDS

## Service Area:

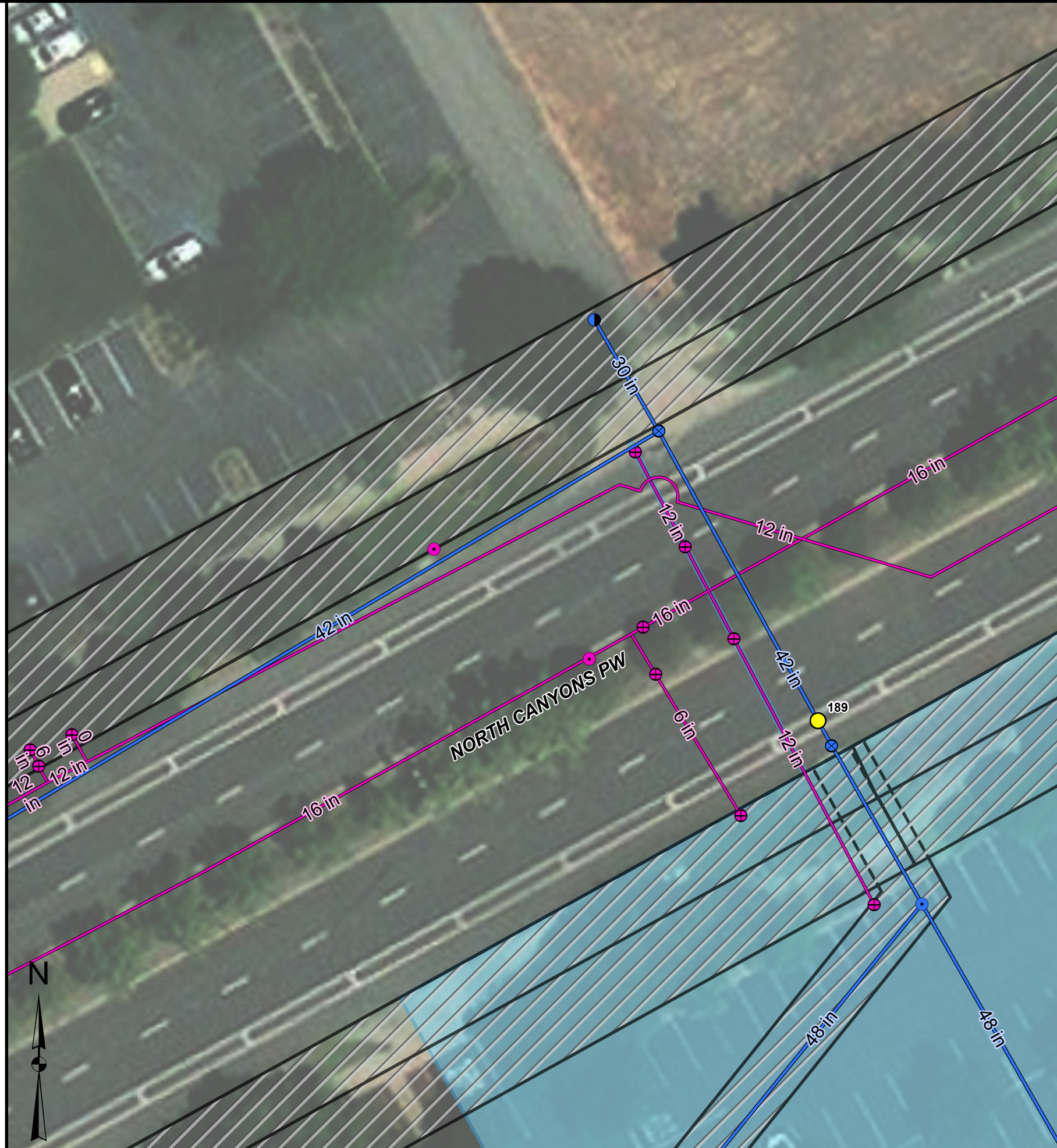
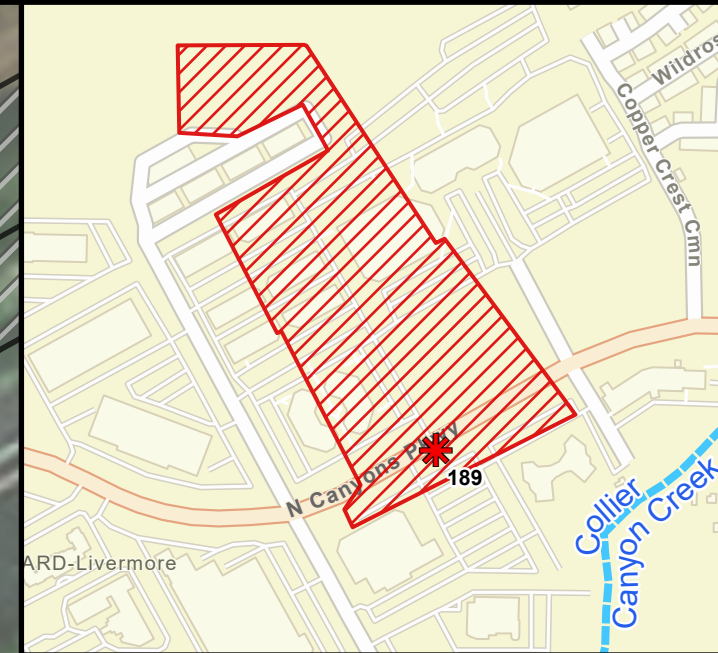
26 Acres

## Field Notes:



# Livermore Trash Capture Device Locations: Device 189

# Vicinity Map



**Livermore System**

Creeks	Easements
<b>Storm System</b>	Other Agencies
SD Pipes	<b>Other Utilities</b>
Catch Basin	Other Utilities
Manhole	Water Meter
Outfall	Water Structure
Other Structure	Sewer Pipe
<b>Planned Device</b>	Sewer Manhole
In-Line HDS	Sewer Cleanout
Outfall	Other SS Struct
Inlet	
CPS	
Diversion	

*\*Note: Utilities shown may be incomplete and should be verified.*

0 15 30 60 Feet

# Project Description

# Livermore Trash Capture Device Locations: Device 517

# Vicinity Map

## Device Type:

In-Line HDS

## Service Area:

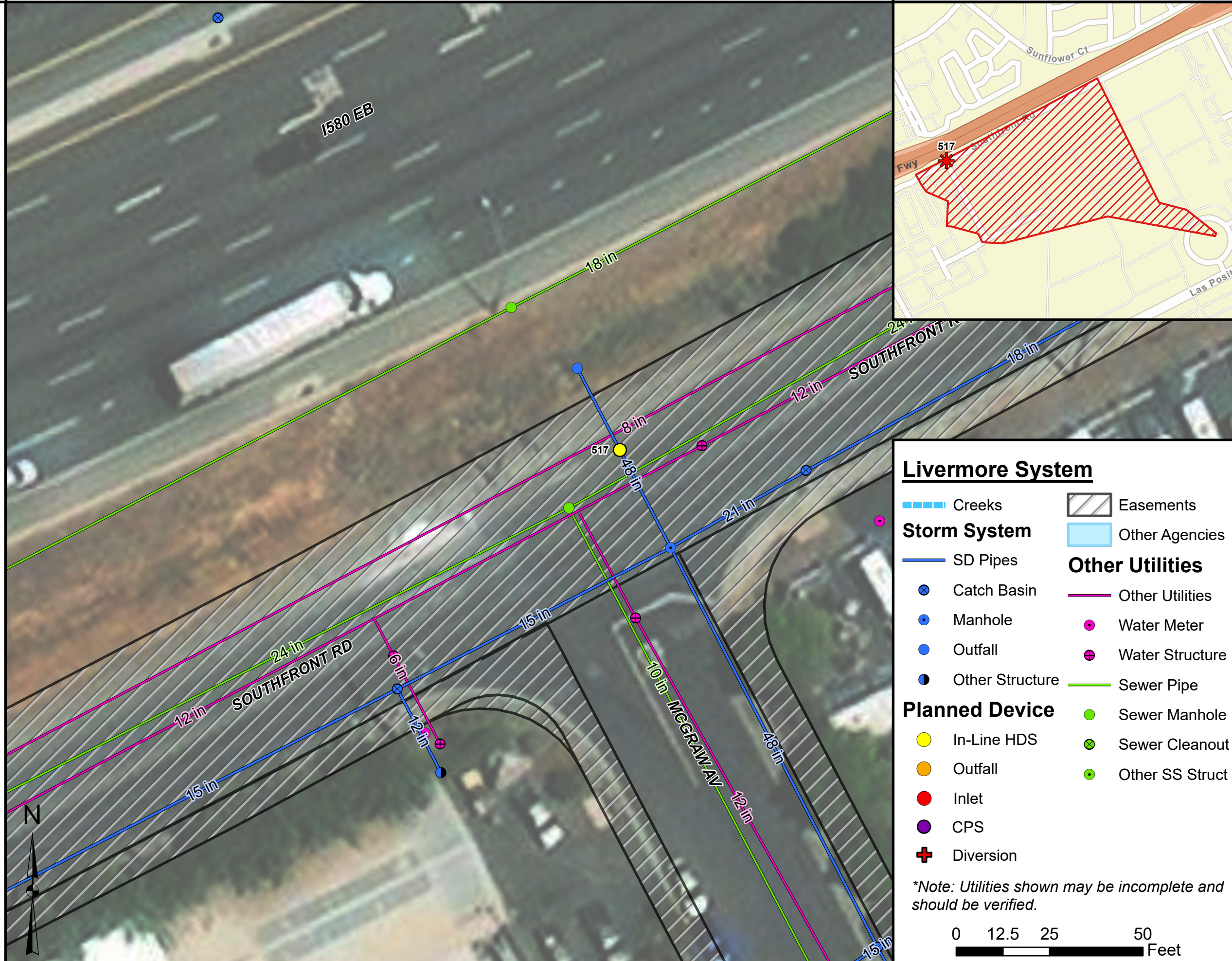
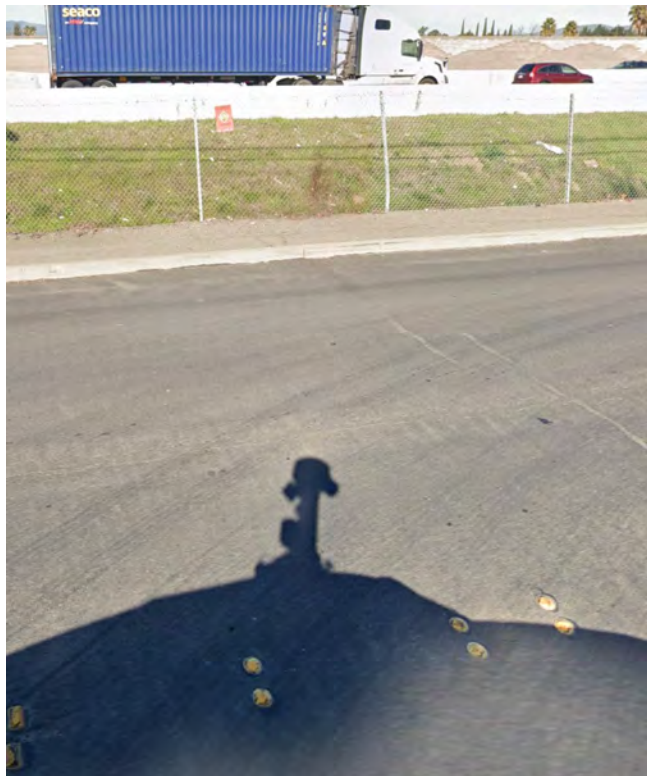
57 Acres

## Field Notes:

Water line and sewer trunk line on Southfront

OH electric on both sides

Street lighting on north side of Southfront



## Project Description

### Device Type:

In-Line HDS

### Service Area:

93 Acres

### Field Notes:

Very shallow pipes (~2.5' deep)

Adjacent parcel may be developed in the near future

Caltrans 24" culvert from upstream  
Potentially treat Caltrans runoff also

Could place off-line to avoid OH lines

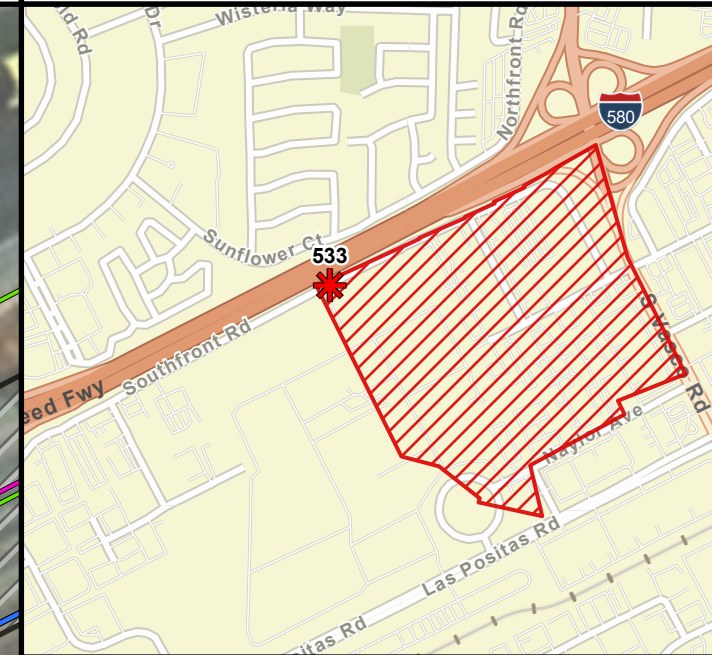


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## Livermore Trash Capture Device Locations: Device 533



## Vicinity Map



### Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.





# Project Description

## Device Type:

In-Line HDS

## Service Area:

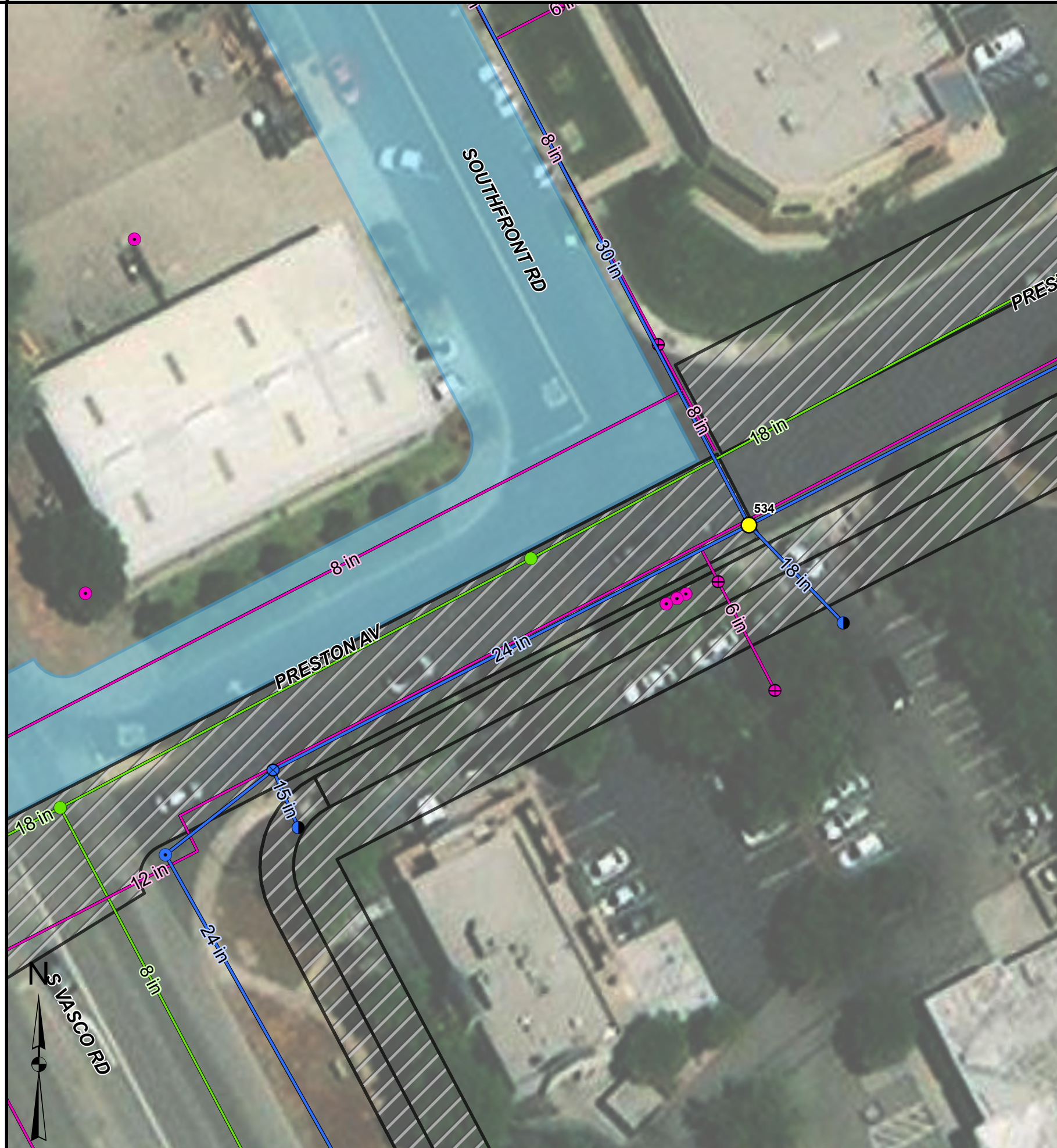
30 Acres

## Field Notes:

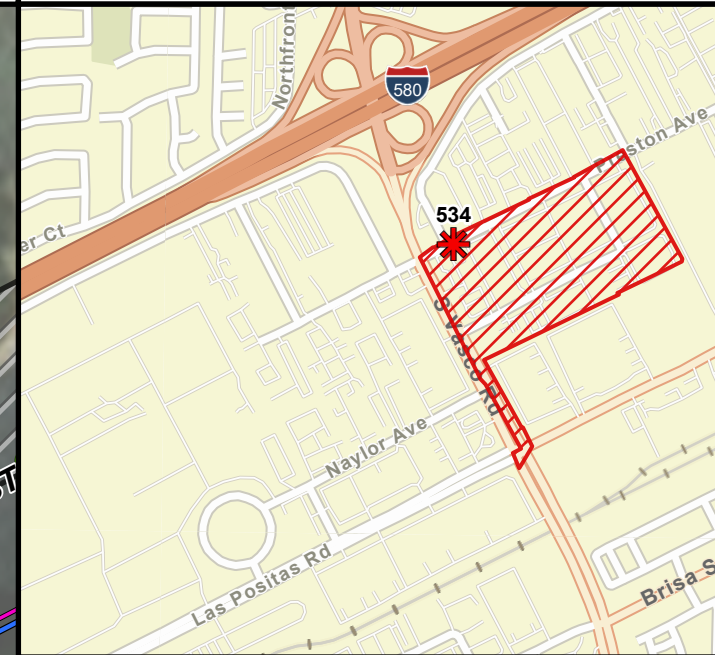
Locate to avoid OH lines



# Livermore Trash Capture Device Locations: Device 534



# Vicinity Map



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Water Meter            |
| Manhole               | Water Structure        |
| Outfall               | Sewer Pipe             |
| Other Structure       | Sewer Manhole          |
| <b>Planned Device</b> | Sewer Cleanout         |
| In-Line HDS           | Other SS Struct        |
| Outfall               |                        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



# Project Description

## Device Type:

In-Line HDS

## Service Area:

520 Acres

## Field Notes:

Place one device at curb return for service

SS on north side of Portola (10' deep)

Pipe from diversion (6' deep) over SS

OH lighting and trees on Portola

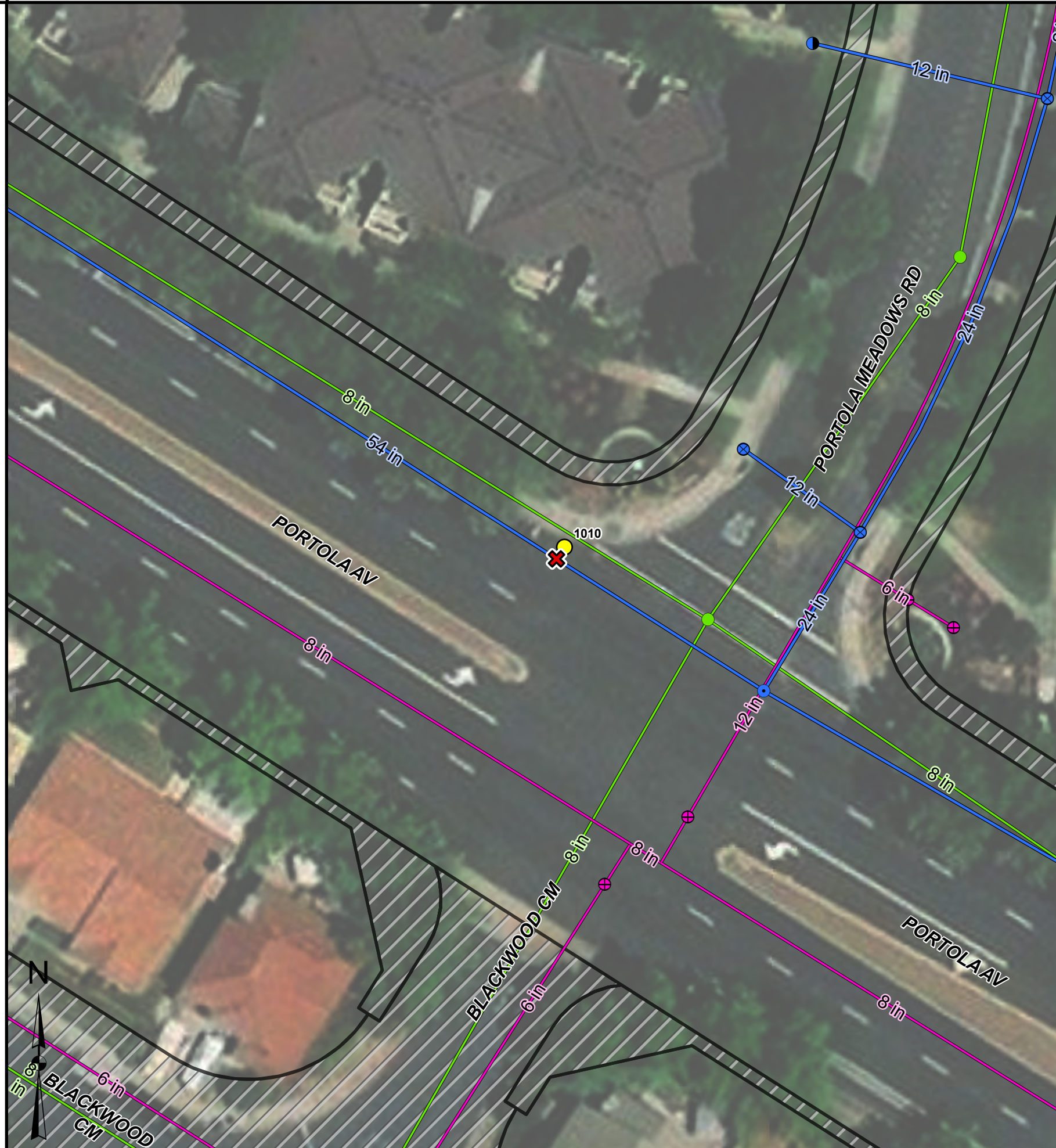
Can move downstream if necessary



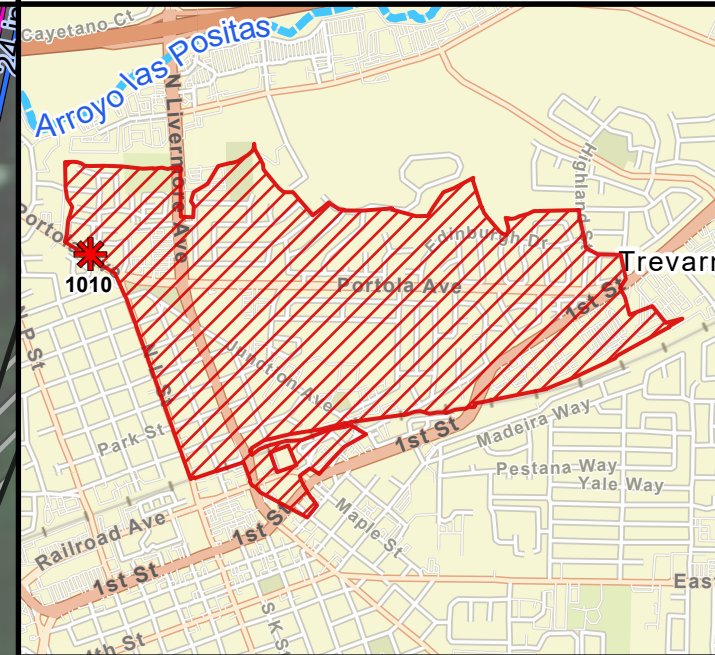
1010

**Schaaf & Wheeler**  
CONSULTING CIVIL ENGINEERS

# Livermore Trash Capture Device Locations: Device 1010



# Vicinity Map



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



# Project Description

## Device Type:

In-Line HDS

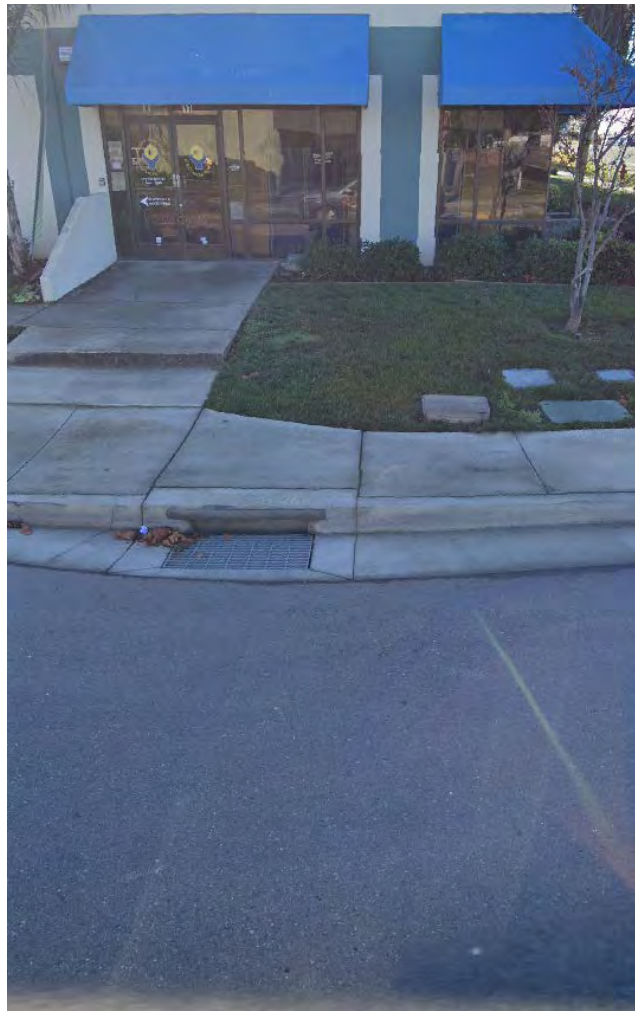
## Service Area:

51 Acres

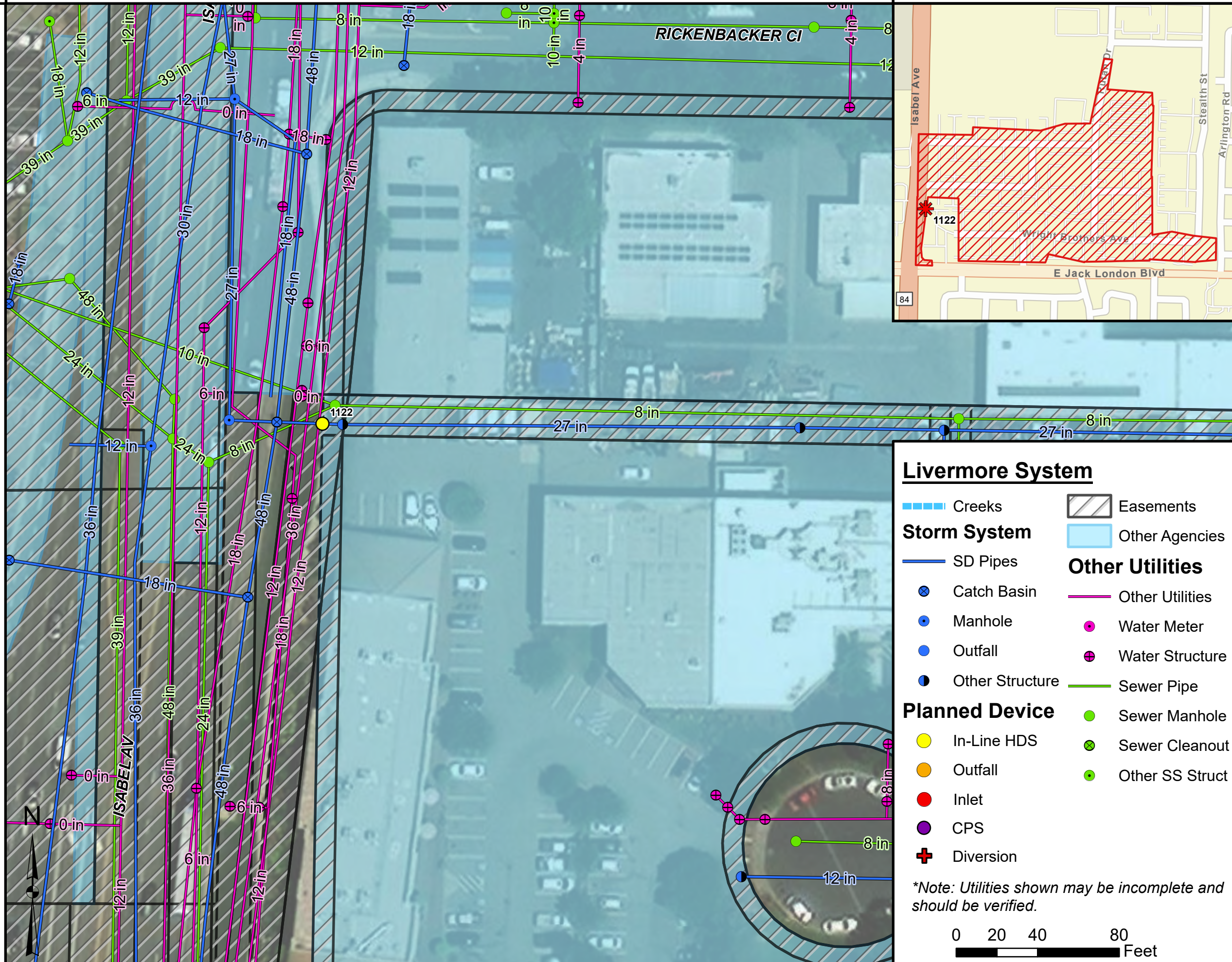
## Field Notes:

Easements should be verified

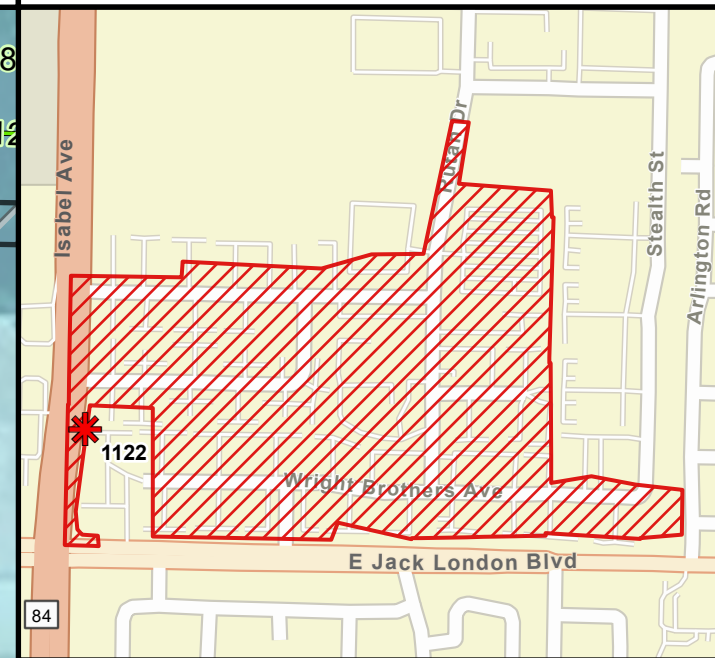
Verify water line locations and depths



# Livermore Trash Capture Device Locations: Device 1122



# Vicinity Map



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



# Project Description

## Device Type:

In-Line HDS

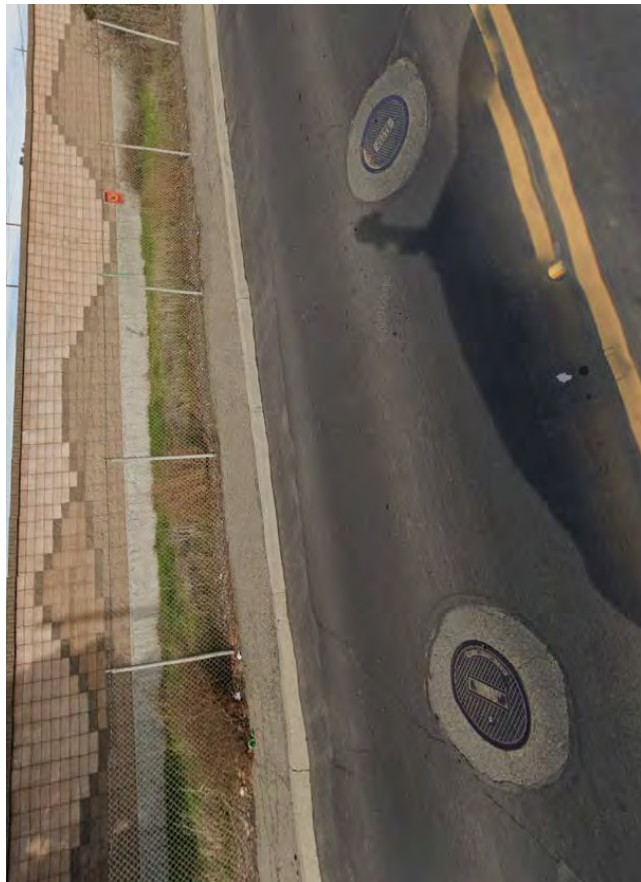
## Service Area:

157 Acres

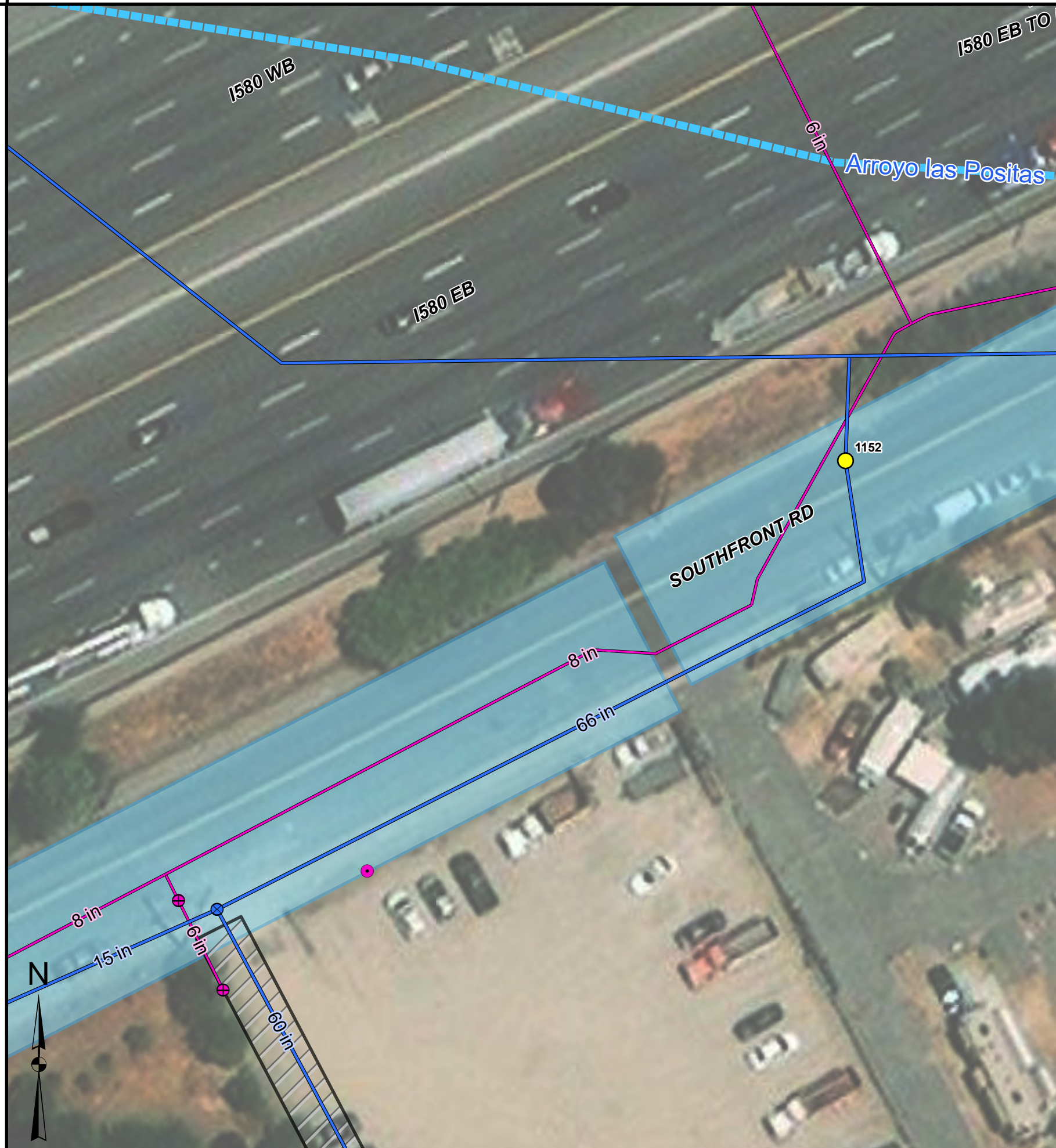
## Field Notes:

OH power lines both sides of Southfront

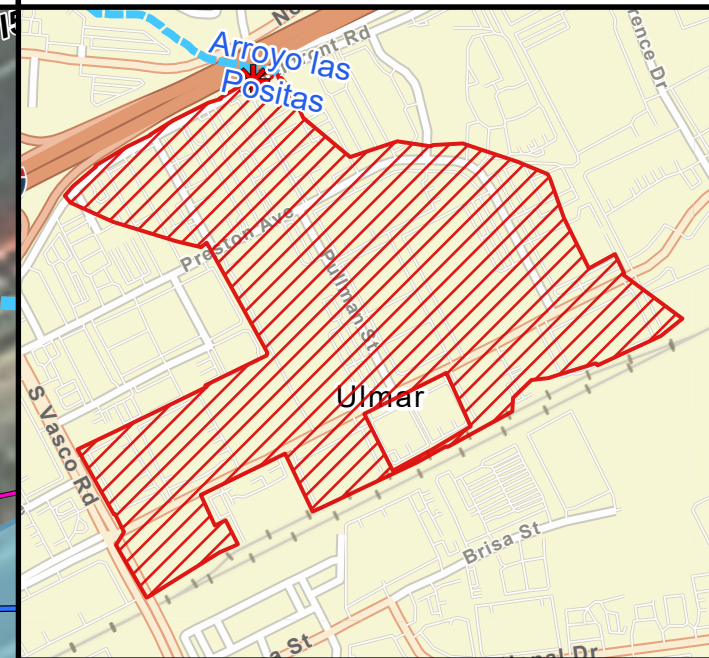
Verify sanitary sewer line location



# Livermore Trash Capture Device Locations: Device 1152



# Vicinity Map



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



## Project Description

## Livermore Trash Capture Device Locations: Device 6000

## Vicinity Map

### Device Type:

In-Line HDS

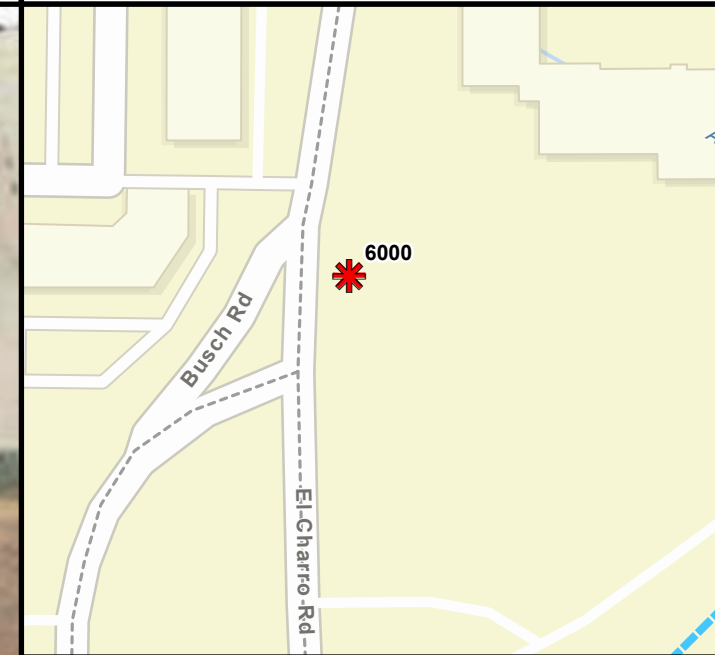
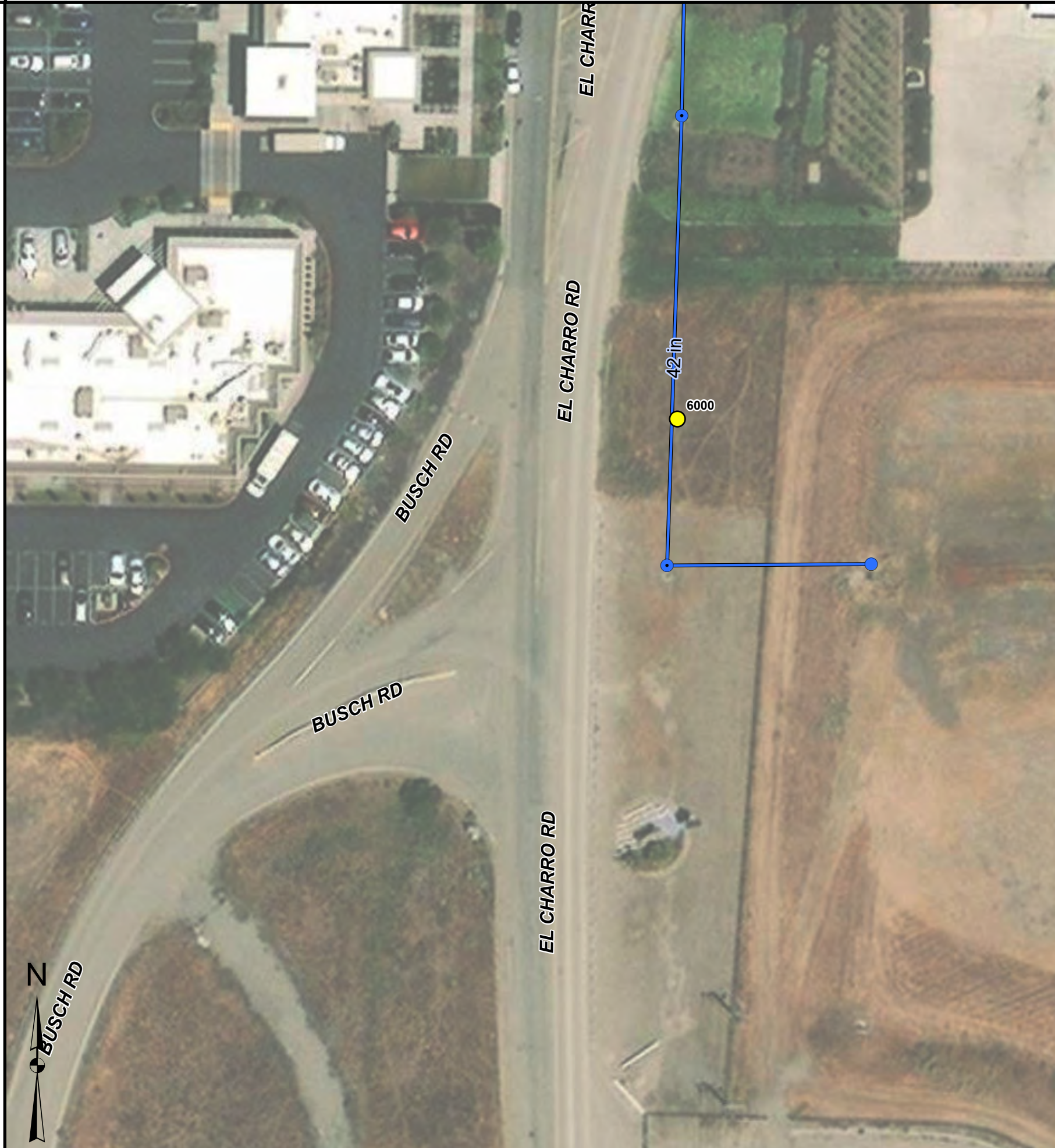
### Service Area:

52 Acres

### Field Notes:

Upstream of bioretention, adjacent to El Charro

Was not visited



### Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

\*Note: Utilities shown may be incomplete and should be verified.



# Project Description

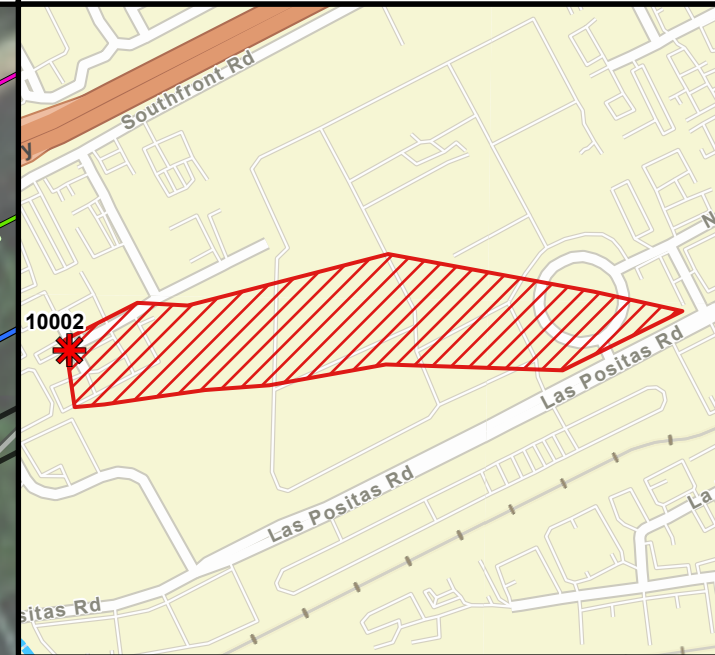
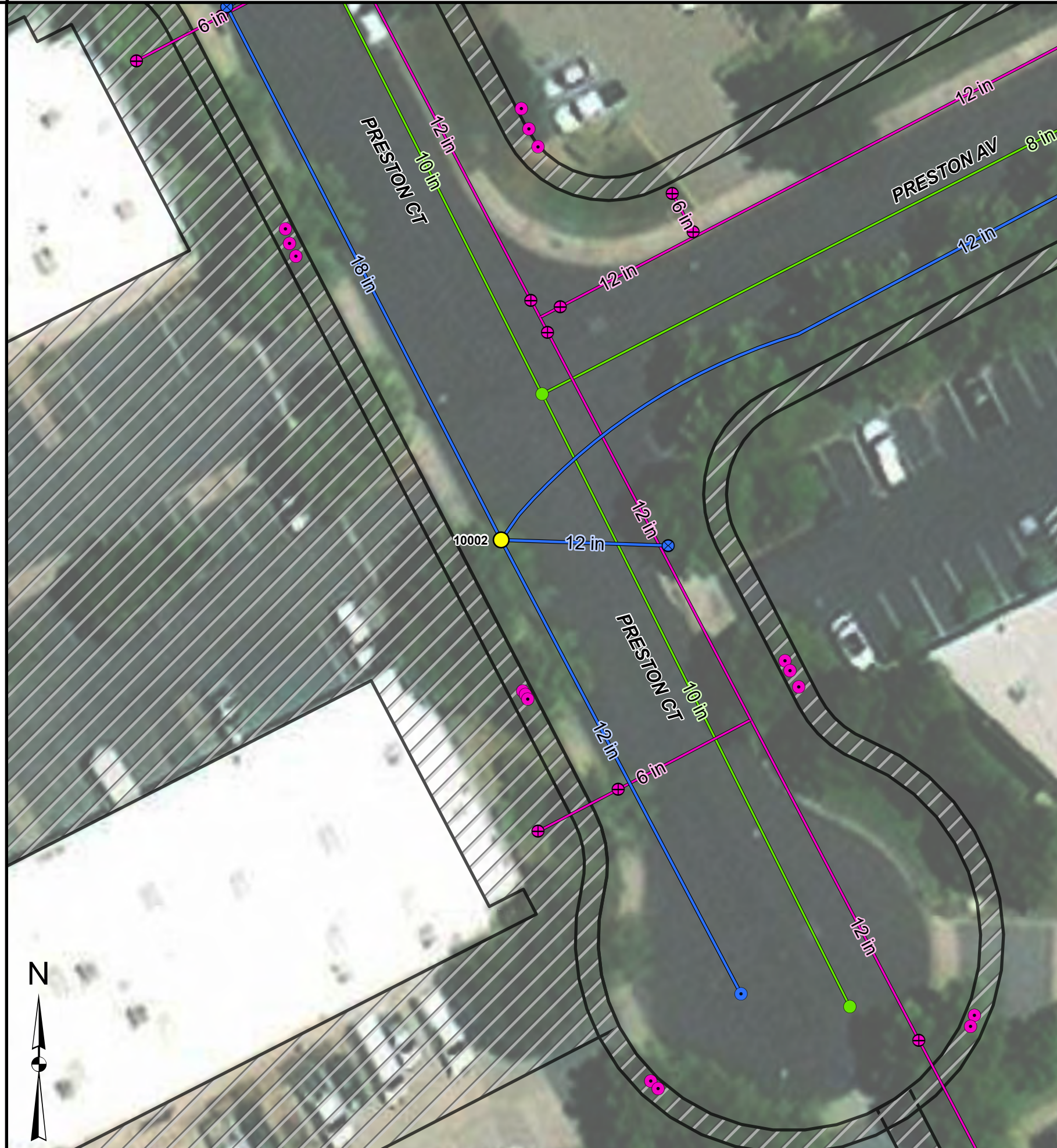
# Livermore Trash Capture Device Locations: Device 10002

# Vicinity Map

**Device Type:**  
In-Line HDS

**Service Area:**  
34 Acres

**Field Notes:**



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Other Utilities        |
| Manhole               | Water Meter            |
| Outfall               | Water Structure        |
| Other Structure       | Sewer Pipe             |
| <b>Planned Device</b> | Sewer Manhole          |
| In-Line HDS           | Sewer Cleanout         |
| Outfall               | Other SS Struct        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

*\*Note: Utilities shown may be incomplete and should be verified.*



# Project Description

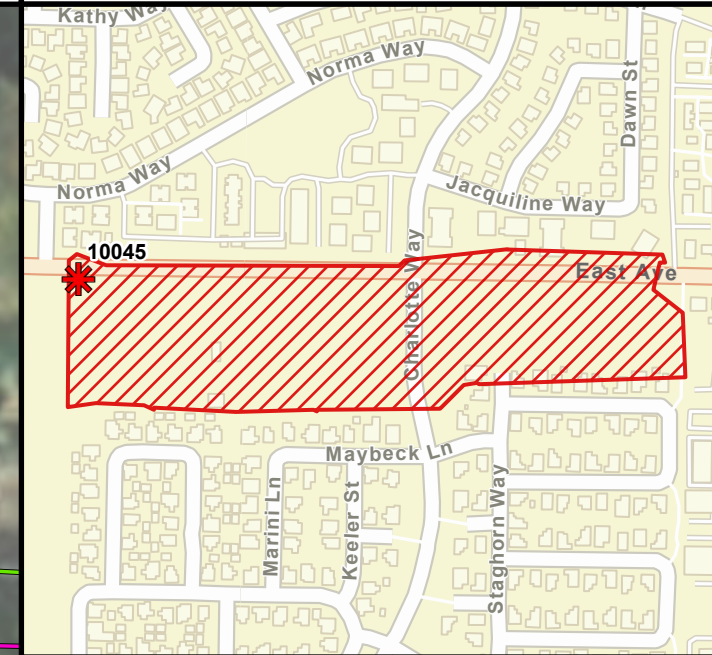
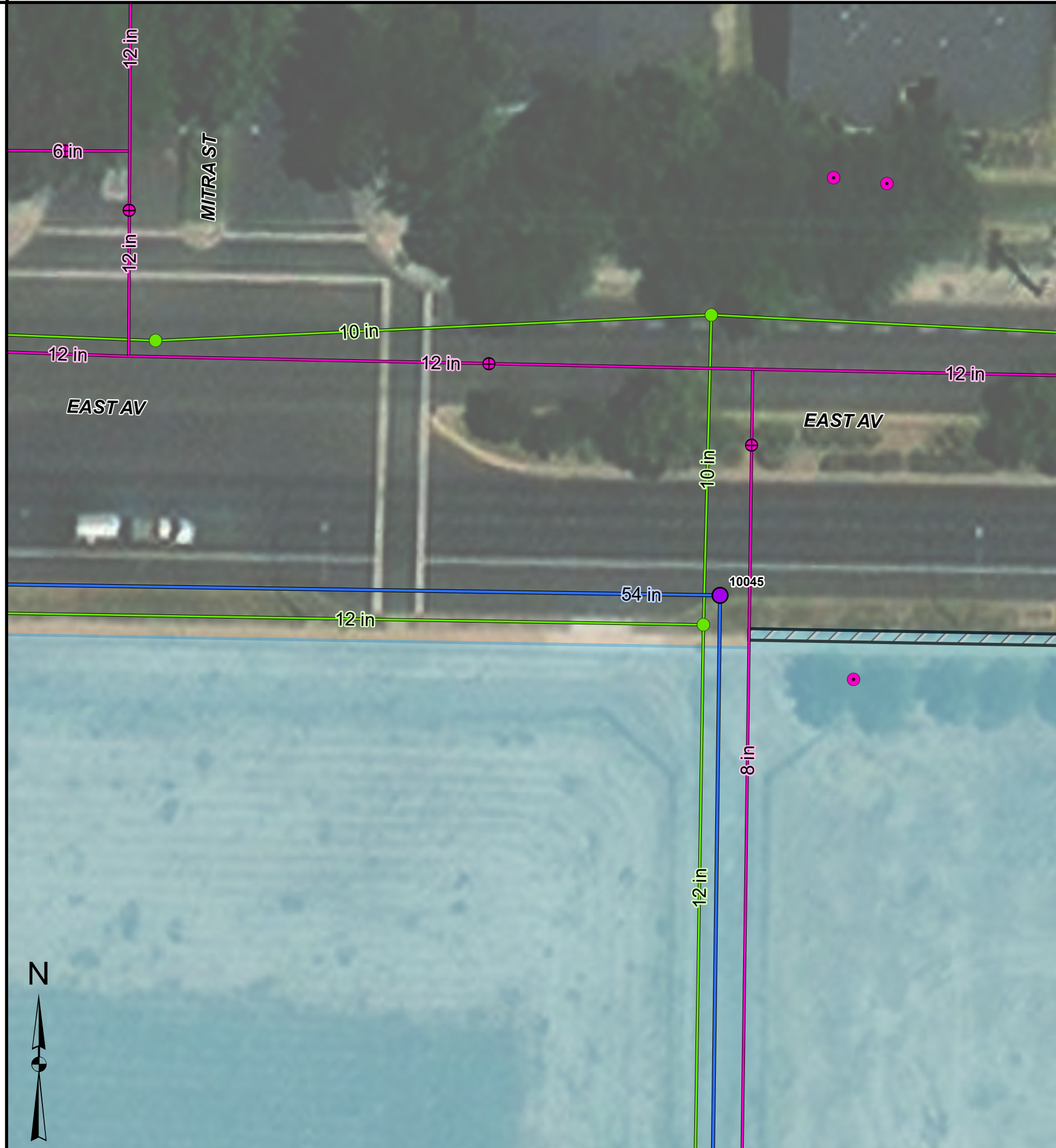
# Livermore Trash Capture Device Locations: Device 10045

# Vicinity Map

**Device Type:**  
CPS

**Service Area:**  
27 Acres

**Field Notes:**



## Livermore System

- |                       |                        |
|-----------------------|------------------------|
| Creeks                | Easements              |
| <b>Storm System</b>   | Other Agencies         |
| SD Pipes              | <b>Other Utilities</b> |
| Catch Basin           | Water Meter            |
| Manhole               | Water Structure        |
| Outfall               | Sewer Pipe             |
| Other Structure       | Sewer Manhole          |
| <b>Planned Device</b> | Sewer Cleanout         |
| In-Line HDS           | Other SS Struct        |
| Outfall               |                        |
| Inlet                 |                        |
| CPS                   |                        |
| Diversion             |                        |

*\*Note: Utilities shown may be incomplete and should be verified.*

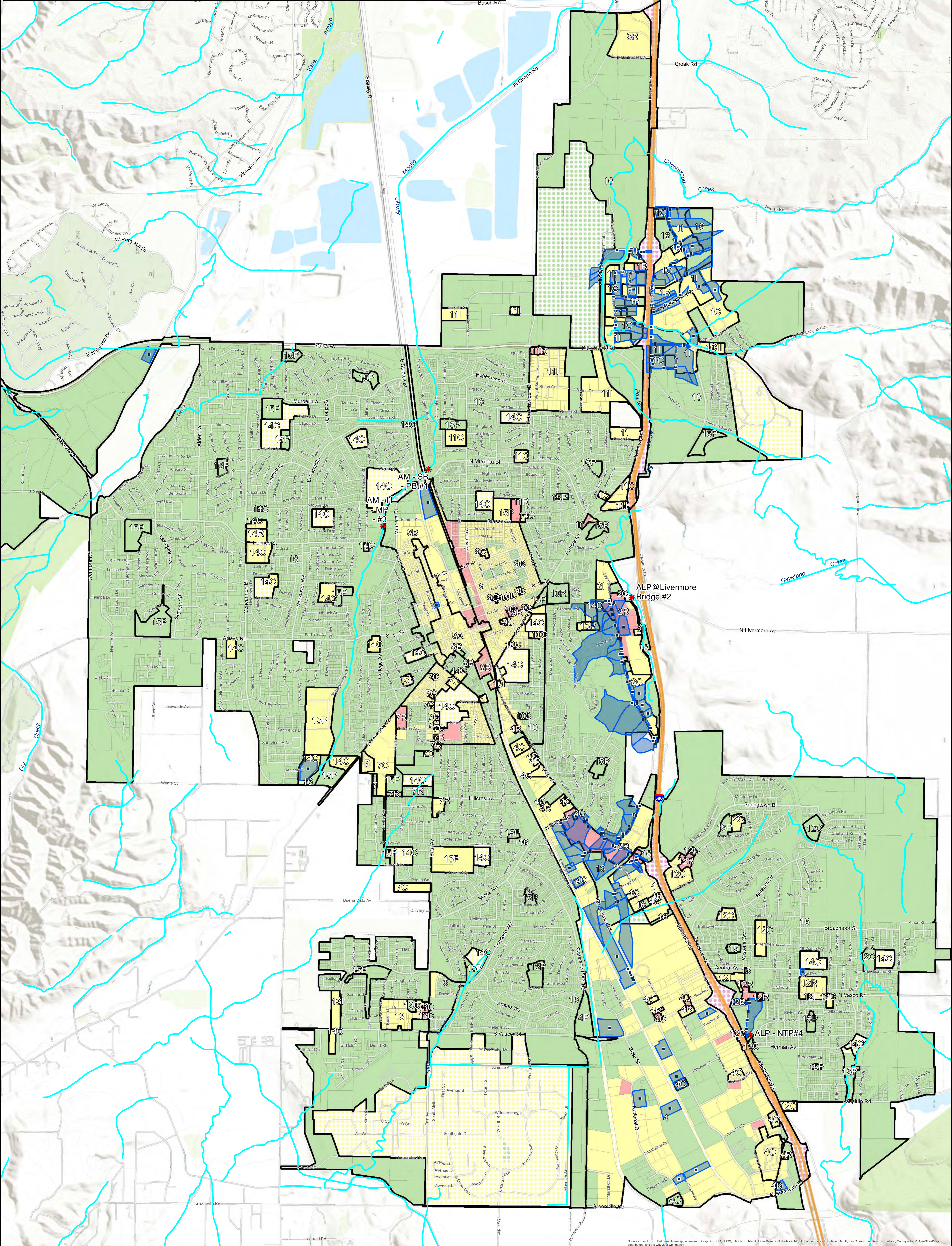


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# Appendix D: Trash Management Area Map

# City of Livermore Full Trash Capture and Trash Management Area Map



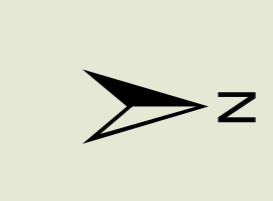
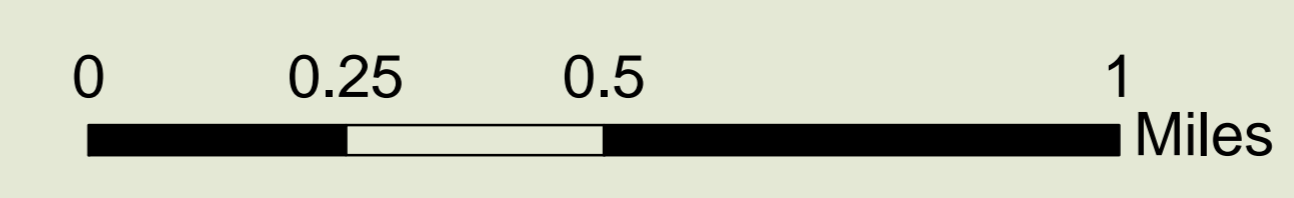
**Legend**  
**Trash Generation Category**  
 Low  
 Moderate  
 High  
 Very High

★ Creek/Shoreline Hotspot  
 Full-Capture Location  
 Trash Management Area  
 Non-Jurisdictional (Dot color = Generation Category)

Streets  
 Freeway  
 Creeks  
 Parcel Boundary

**Data Sources:**  
 Roads: Alameda County  
 City Boundaries: Alameda County  
 Creeks: Alameda County  
 Parcels: Alameda County  
 Background: ESRI World Topographic Map

**Map Created By:**  
 EOA, Inc.  
**Date:**  
 July 13th, 2016



Source: Esri, HERE, DeLorme, Mapbox, Incomer P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCO, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox, © OpenStreetMap contributors, and the GIS User Community

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## Appendix E: Approved Trash Capture Devices

## **Certified Trash Full Capture Systems Available to the Public (Updated September 2022)**

### **Trash Provisions**

To qualify as a trash full capture system (System) as described below and satisfy the requirements of the Trash Provisions,<sup>1</sup> a System installed after December 2, 2015 must be certified, prior to installation, by the State Water Resources Control Board (State Water Board) Executive Director, or designee, that meets the full capture system definition. The Trash Provisions define a full capture system as a treatment control, or series of treatment controls, including but not limited to, a multi-benefit project or a low impact development control that traps all particles that are 5-millimeter or greater, and has a design treatment capacity that is either:

1. Of not less than the peak flow rate resulting from a one-year, one-hour storm event (design storm) in the subdrainage area, or
2. Appropriately sized and designed to carry at least the same flows as the corresponding storm drain.

Consistent with these requirements, the Systems shall not bypass trash below the design storm under maximum operational loading conditions and shall not have a diversion structure present upstream such that a portion of the peak flow is not treated to trap all particles 5-millimeter or greater.

### **Vector Control Accessibility**

According to the California Health and Safety Code,<sup>2</sup> California landowners are legally responsible to abate (eliminate the source of) a public nuisance arising from their property, including mosquitoes. Mosquito vector control districts have substantial authority to access public and private property, inspect known or suspected sources of mosquitoes, abate mosquito sources, and charge the landowner for work performed

---

<sup>1</sup> Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California adopted by the State Water Board.

<sup>2</sup> Health & Safety Code sections 2001-2002, 2060-2067, 100170, and 131075.

and/or charge fees if a landowner is unwilling or unable to address a mosquito source arising from their property.

If not designed properly, a System may impede the mosquito vector control district's ability to (1) visually inspect the System and/or storm vault for mosquito breeding, and (2) apply the appropriate chemical treatment. Moreover, some Systems may create a habitat for mosquitoes.

All the Systems in the tables below have been reviewed and approved by the Mosquito Vector Control Association of California for vector control accessibility. However, prior to installation of any Systems, the local mosquito vector control district should be contacted to ensure the installation conforms to the local district's visual inspection, treatment, and vector breeding minimizing guidelines. The Mosquito Vector Control Association of California may also be contacted via email at [Trashtreatment@mvcac.org](mailto:Trashtreatment@mvcac.org).

### **Certified Trash Full Capture System Tables**

The Systems included in the tables below are: 1) new Systems certified by the State Water Board Executive Director after adoption of the Trash Provisions, and 2) legacy Systems that were certified pursuant to the Trash Provisions include those full capture systems that were listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014). All Systems remain certified unless and until they are decertified by the State Water Board's Executive Director or designee. Legacy Systems' descriptions are included in "fact sheets" that have been updated to address the application requirements for new Systems.

The tables do not include the Department of Transportation's Systems as its Systems are not available to the public. Multi-benefit trash treatment systems are listed separately on the State Water Board's Trash Implementation webpage at: [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/trash\\_implementation.html](https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html).

Systems are either identified by their application number or, for legacy Systems, by a fact sheet alpha numeric designation.

**Please note:** Only Systems originally manufactured or distributed by the listed applicants are certified full capture systems.

The alphabetical tables of System applicants are divided into two categories:

- *Catch Basin Inserts and Other Insert Systems.* These Systems typically are inserted into existing stormwater infrastructure; and
- *High Flow Capacity Trash Full Capture Systems.* These Systems are generally self-contained units that typically are not inserted into existing stormwater infrastructure and that are designed to treat trash from large drainage areas.

## **How to Access Certified System Applications and Legacy System Fact Sheets**

Other than those applications pertaining to the Department of Transportation's certified Systems, all certified System applications and legacy System fact sheets may be obtained from the California Stormwater Quality Association's trash webpage at: <https://www.casqa.org/resources/trash/certified-full-capture-system-trash-treatment-control-devices>. To obtain the Department of Transportation's certified applications, please contact Leo Cosentini (contact information below).

All questions concerning the Trash Provisions and the tables below should be directed to Leo Cosentini by email at [Leo.Cosentini@waterboards.ca.gov](mailto:Leo.Cosentini@waterboards.ca.gov) or by phone at (916) 341-5524.

**TABLE 1. Catch Basin Inserts and Other Insert Systems**

<b>Applicant/Owner</b>	<b>Full Capture System Name</b>	<b>Date of Application Certification and Update (if applicable), or Fact Sheet Update</b>	<b>Date of Vector Control Accessibility Approval</b>
AbTech Industries, Inc.	Ultra Urban Filter Curb Opening and Drop-In	Application 25 06/30/20	04/8/20
Advanced Drainage Systems, Inc.	FLEXSTORM PURE Full Trash Capture Inserts	Application 3 03/15/18 Updated 04/21/21	03/30/21
Advanced Drainage Systems, Inc.	FLEXSTORM Connector Pipe Screen	Fact Sheet ADS-1 Updated 06/08/21	03/30/21
Advanced Drainage Systems, Inc.	Barracuda Hydrodynamic Separator	Application 21 06/26/2019 Updated 05/21/21	03/15/2019
Bio Clean® Environmental Services, Inc.	Curb Inlet and Grate Inlet Filters	Application 4 03/15/18 Updated 10/21/21	10/20/21
Bio Clean® Environmental Services, Inc.	Modular Connector Pipe Trash Screen	Fact Sheet BC-3 Updated 04/30/20	03/10/20
BrightWater™	Connector Pipe Screen	Application 29 03/15/18 Updated 12/29/20	11/19/20
BrightWater™	Curb Inlet Filter	Application 26 06/30/20	04/17/20



Applicant/Owner	Full Capture System Name	Date of Application Certification and Update (if applicable), or Fact Sheet Update	Date of Vector Control Accessibility Approval
Ecology Control Industries	Debris Dam - Catch Basin Insert for Curb Inlet Design	Fact Sheet ECI-1 12/02/15 Updated 06/17/20	04/29/20
Enviropod® International: A Stormwater 360 Group Company	Enviropod® LittaTrap™ Full Capture	Application 27 10/14/20	07/20/20
Fabco Industries, Inc.	Fabco Connector Pipe Screen	Application 36 07/06/22	06/16/22
Filtrexx® Sustainable Technologies	StormExx® Clean	Application 16 08/10/18 Updated 11/25/19	12/06/19
Frog Creek Partners, LLC	Gutter Bin® Channel Filtration System and Mundus Bag® Water Filter	Application 22 06/26/19	04/19/19
Frog Creek Partners, LLC	Gutter Bin® Eco Curb Inlet Filter and Mundus Bag® Water Filter	Application 23 02/18/19	10/14/19
Frog Creek Partners, LLC	Gutter Bin® Eco Drop Inlet Filter and Mundus Bag® Water Filter	Application 24 02/18/20	12/06/19
G2 Construction, Inc.	G2 CPS-Mod™ and Removable CPS-Mod™ Screen	Application 18 06/26/19	03/15/19
G2 Construction, Inc.	G2 Grated Inlet Trash Screen	Application 19 06/26/19	04/10/19
Inventive Resources, Inc.	Water Decontaminator	Application 2 03/15/18 Updated 02/05/21	04/20/20

Applicant/Owner	Full Capture System Name	Date of Application Certification and Update (if applicable), or Fact Sheet Update	Date of Vector Control Accessibility Approval
Oldcastle Infrastructure	FloGard® + Plus® Catchbasin Trash Screen Insert, Combination Inlet Style Drop in Basket	Fact Sheet OI-1 12/02/15 Updated 06/09/21	06/09/21
Oldcastle Infrastructure	FloGard® Catchbasin Trash Screen Insert, Flat Grated Inlet Style Drop in Basket	Fact Sheet OI-2 12/02/15 Updated 06/09/21	06/09/21
Oldcastle Infrastructure	FloGard® Catchbasin Outlet Trash Screen Insert Connector Pipe Screen	Fact Sheet OI-3 Updated 01/29/19	12/06/19
Revel Environmental Manufacturing, Inc.	Triton™ Bioflex Inlet Trash Guard Catchbasin Polyester Fiber Mesh Trash Filter Insert	Fact Sheet REM-1 12/02/15 Updated 09/10/21	09/07/21
Revel Environmental Manufacturing, Inc.	Triton™ Crescent Pipe Screen	Application 12 07/10/18	03/15/19
Revel Environmental Manufacturing, Inc.	Triton™ Perf-Full Trash Capture Insert	Application 13 07/10/18 Updated 12/21/21	12/20/21
Safe Drain Stormwater Holdings, Inc.	Storm Vector Guard	Application 30 02/11/21	12/17/20
Stormtek	Stormtek ST3 & STEG Catchbasin Connector Pipe	Fact Sheet AS-1, A1S-2 12/02/15 Updated 08/12/21	08/04/21
United Stormwater, Inc.	Connector Pipe Trash Screen	Fact Sheet USW-1 12/02/15 Updated 01/29/22	01/26/22



**TABLE 2. High Flow Capacity Trash Full Capture Systems**

<b>Applicant/Owner</b>	<b>Full Capture System Name</b>	<b>Date of Application Certification and Update (if applicable), or Fact Sheet Update</b>	<b>Date of Vector Control Accessibility Approval</b>
<b>AquaShield, Inc.</b>	<b>Aqua-Swirl® Stormwater Treatment System</b>	<b>Application 1 08/04/17 Updated 11/06/20</b>	<b>12/03/20</b>
<b>Advanced Drainage Systems Inc.</b>	<b>Barracuda Hydrodynamic Separator</b>	<b>Application 21 06/26/19 Updated 05/21/21</b>	<b>03/15/19</b>
<b>Bio Clean® Environmental Services, Inc.</b>	<b>Debris Separating Baffle Box</b>	<b>Application 6 03/15/18</b>	<b>07/28/20</b>
<b>Bio Clean® Environmental Services, Inc.</b>	<b>Bio Clean® Deflective Screening Device</b>	<b>Application 20 06/26/19</b>	<b>07/28/20</b>
<b>Bio Clean® Environmental Services, Inc.</b>	<b>Modular Wetland System®</b>	<b>Application 15 07/10/18</b>	<b>03/15/19</b>
<b>Coanda Inc.</b>	<b>Coanda Trash Screen and Debris Fence</b>	<b>Fact Sheet COA-1 12/02/15 Updated 09/10/21</b>	<b>09/07/21</b>

<b>Applicant/Owner</b>	<b>Full Capture System Name</b>	<b>Date of Application Certification and Update (if applicable), or Fact Sheet Update</b>	<b>Date of Vector Control Accessibility Approval</b>
<b>Contech Engineered Solutions</b>	<b>Continuous Deflective Separator Hydrodynamic Separator</b>	<b>Fact Sheet CCP-1HF 12/02/15 Updated 05/27/21</b>	<b>04/29/21</b>
<b>Jensen® Stormwater Systems</b>	<b>Jensen® Deflective Separators</b>	<b>Application 5 03/15/18</b>	<b>12/06/19</b>
<b>Hydro International®</b>	<b>Downstream Defender® (In-Line and Off-Line Configurations)</b>	<b>Application 14 07/10/18</b>	<b>03/16/20</b>
<b>Hydro International®</b>	<b>First Defense® High-Capacity Full Trash Capture Device</b>	<b>Application 28 10/30/20</b>	<b>08/20/20</b>
<b>Hydro International®</b>	<b>Hydro Up-Flo Filter®</b>	<b>Application 11 07/18/18</b>	<b>03/16/20</b>
<b>Hydro International®</b>	<b>Hydro DryScreen®</b>	<b>Application 10 07/10/18 Updated 05/05/21</b>	<b>04/29/21</b>

<b>Applicant/Owner</b>	<b>Full Capture System Name</b>	<b>Date of Application Certification and Update (if applicable), or Fact Sheet Update</b>	<b>Date of Vector Control Accessibility Approval</b>
<b>Oldcastle Infrastructure</b>	<b>FloGard® NetTech</b>	<b>Fact Sheet OI-11HF 12/02/15 Updated 02/08/20</b>	<b>12/03/20</b>
<b>Oldcastle Infrastructure</b>	<b>Nutrient Separating Baffle Box®</b>	<b>Application 17 10/12/18 Updated 07/21/20</b>	<b>07/20/20</b>
<b>Roscoe Moss Company</b>	<b>Storm Flo® Trash Screen – Linear Radial Gross Solids Removal Device</b>	<b>Fact Sheet RMC-1HF 12/02/15 Updated 03/30/21</b>	<b>03/11/21</b>
<b>StormTrap®, LLC</b>	<b>SiteSaver®</b>	<b>Application 9 03/15/18 Updated 02/23/21</b>	<b>03/18/21</b>
<b>StormTrap®, LLC</b>	<b>TrashTrap® Net and Fixed Basket In-Line Stormwater Treatment System</b>	<b>Application 34 06/21/22</b>	<b>05/03/22</b>
<b>StormTrap®, LLC</b>	<b>TrashTrap® Net and Fixed Basket End-of-Pipe Stormwater Treatment System</b>	<b>Application 35 07/06/22</b>	<b>06/01/22</b>

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## Appendix F: Figures



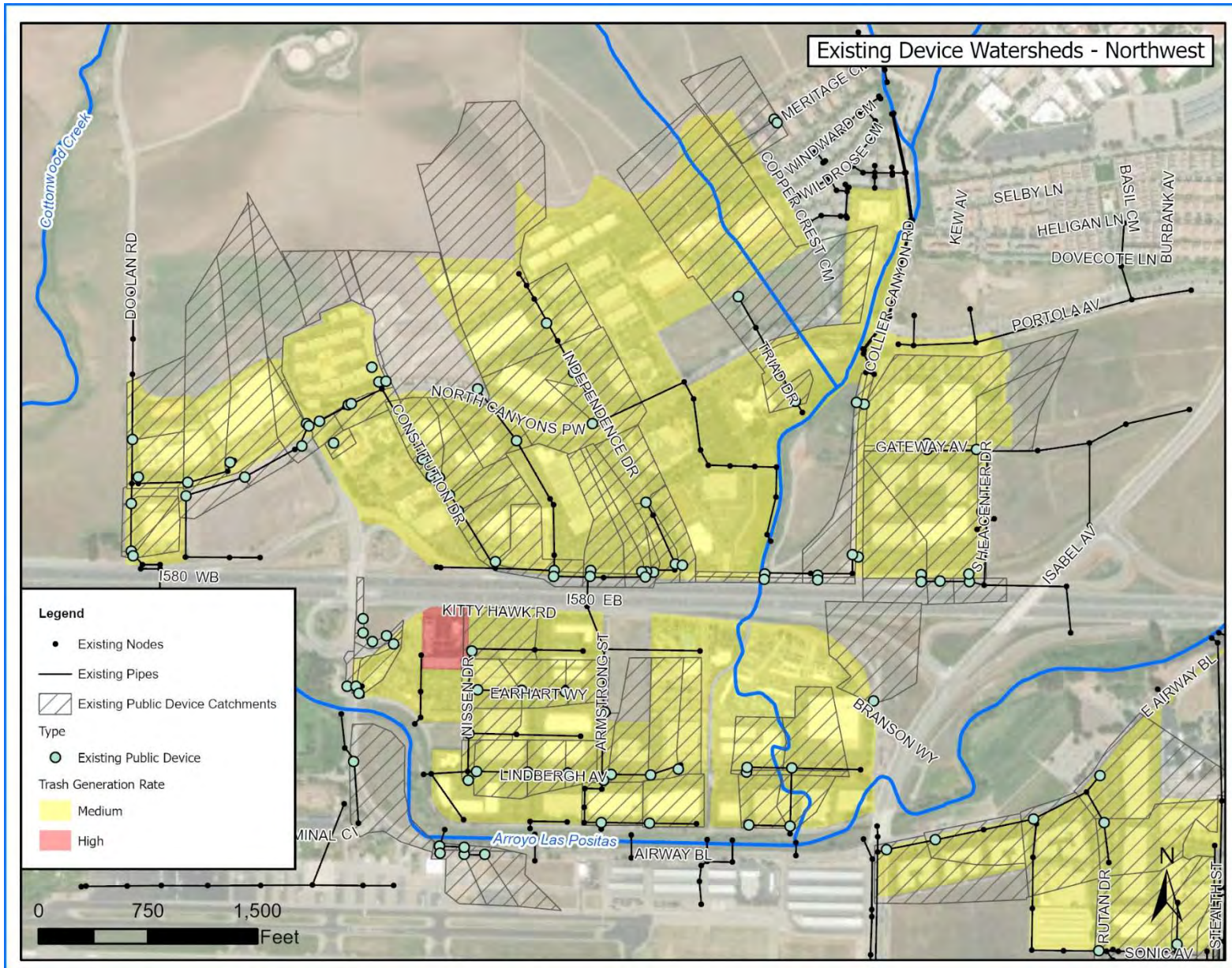


Figure 1: Existing City Owned Trash Capture Device Watersheds – City Northwest

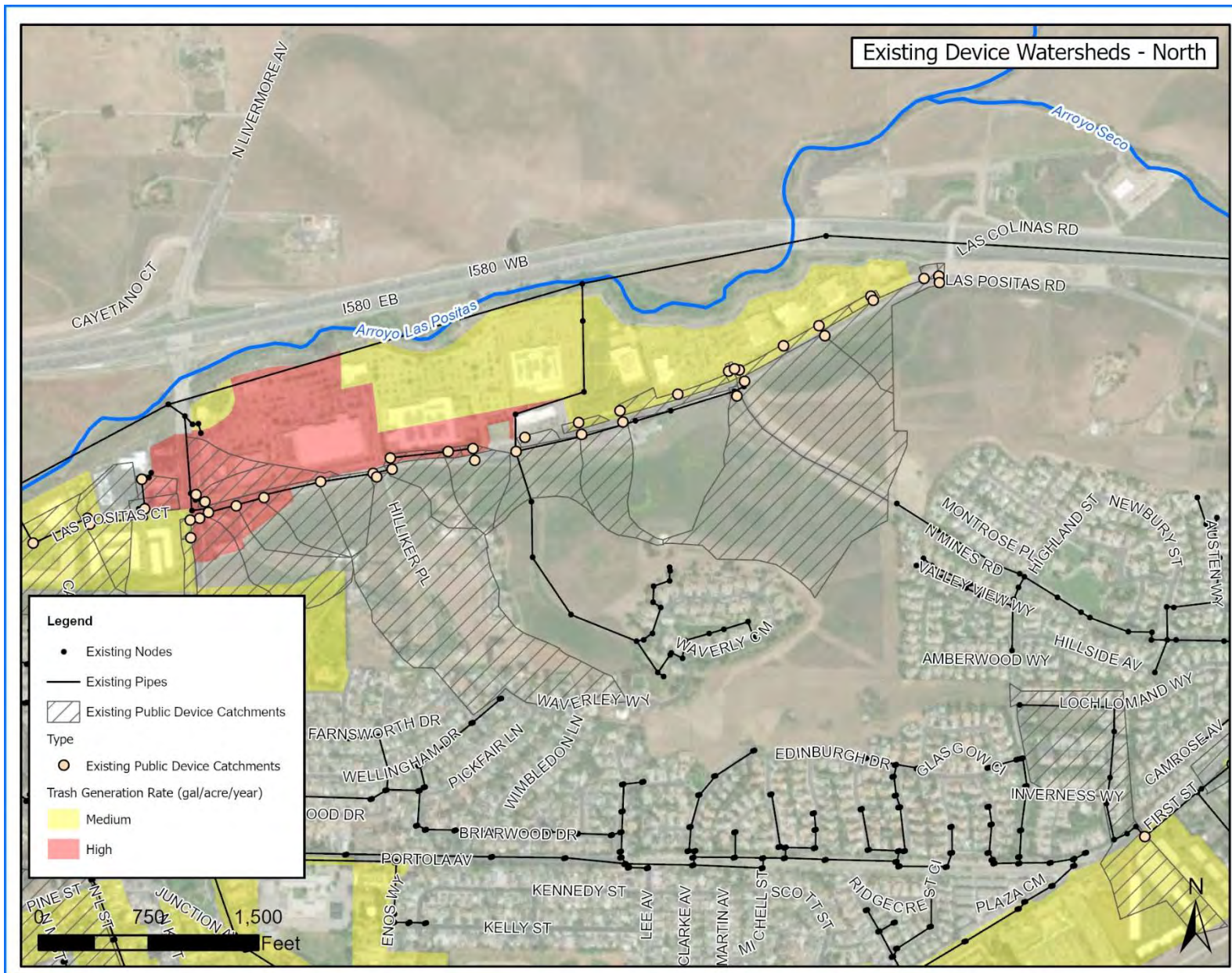


Figure 2: Existing City Owned Trash Capture Device Watersheds – City North

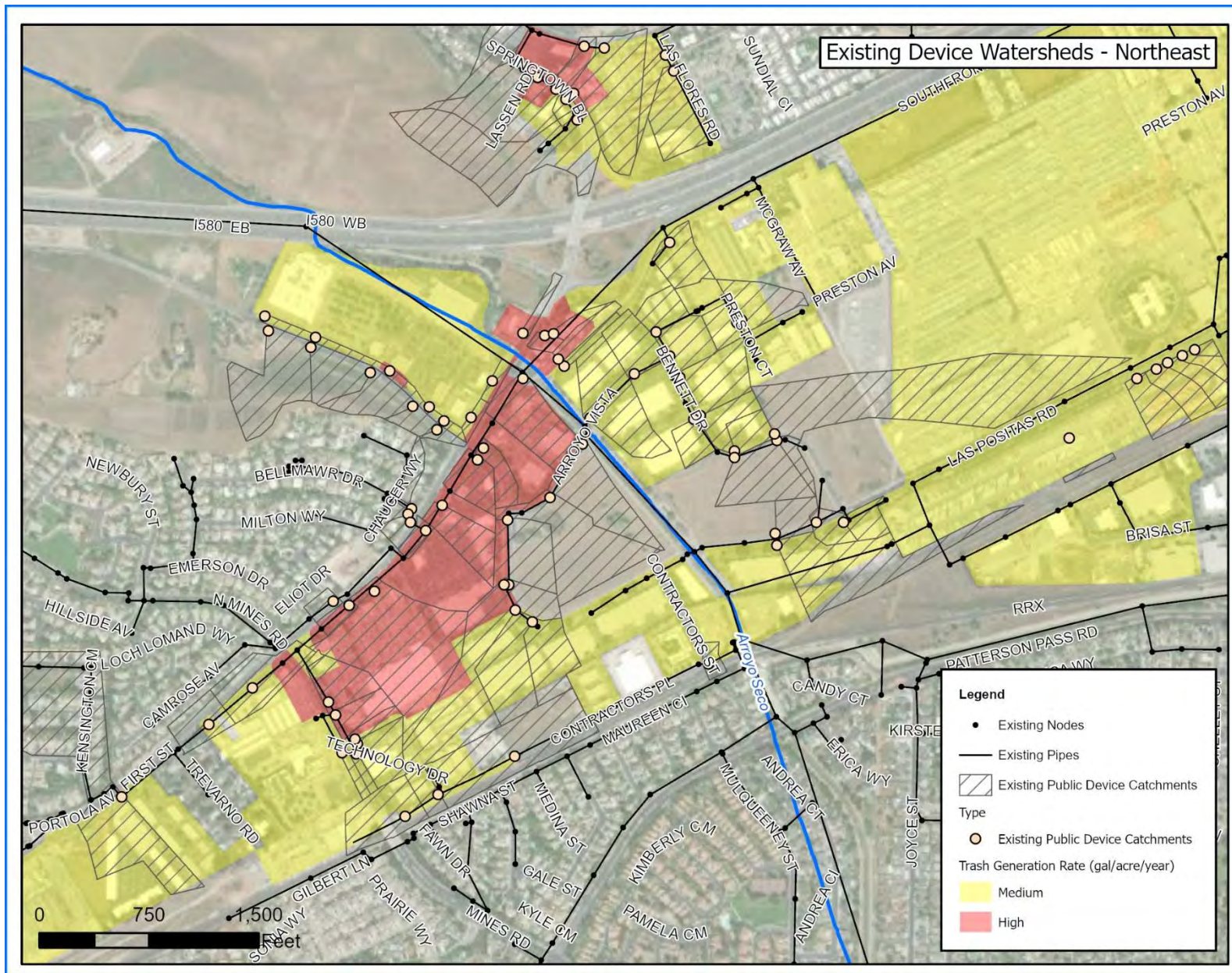


Figure 3: Existing City Owned Trash Capture Device Watersheds – City Northeast

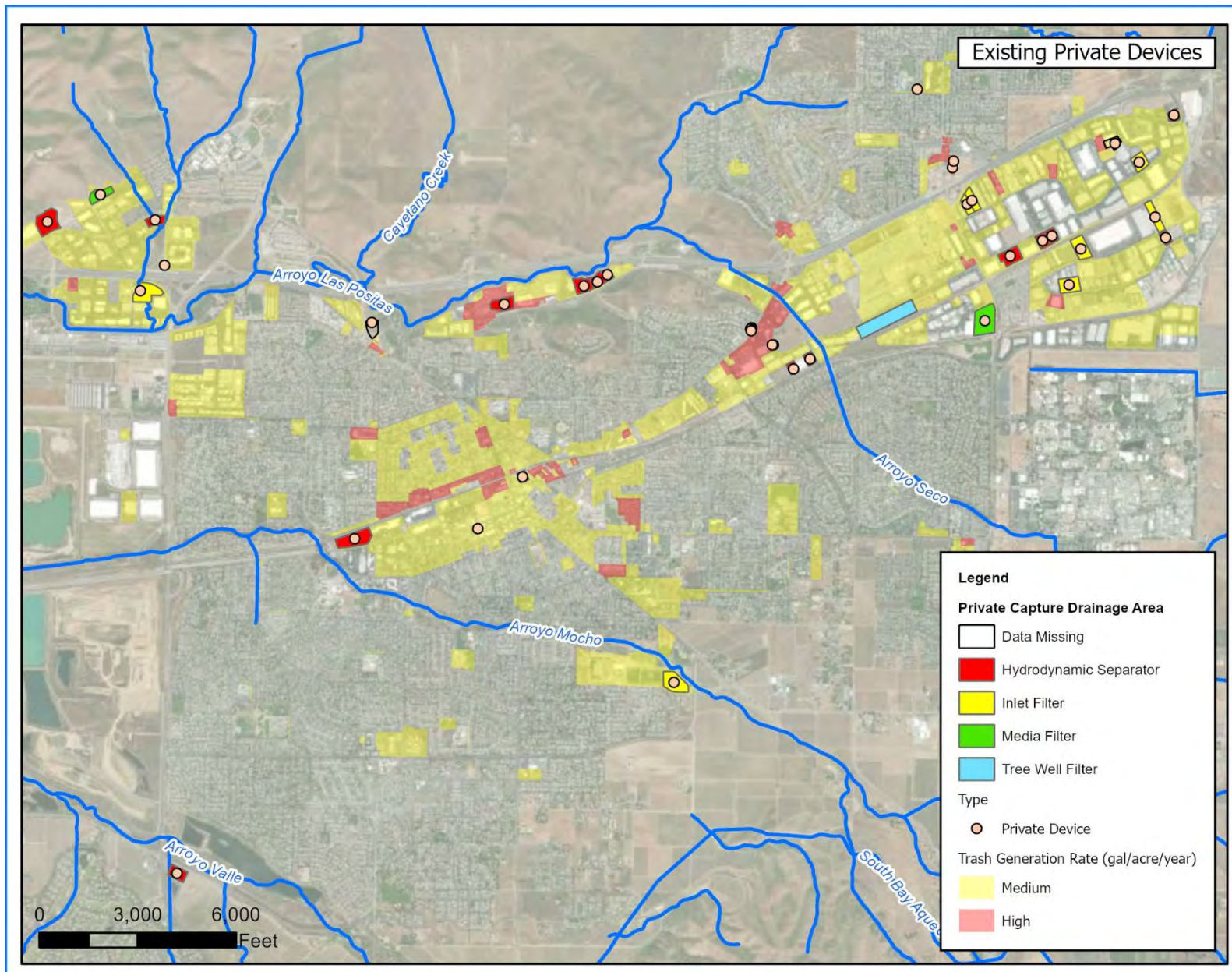


Figure 4: Existing Private Devices

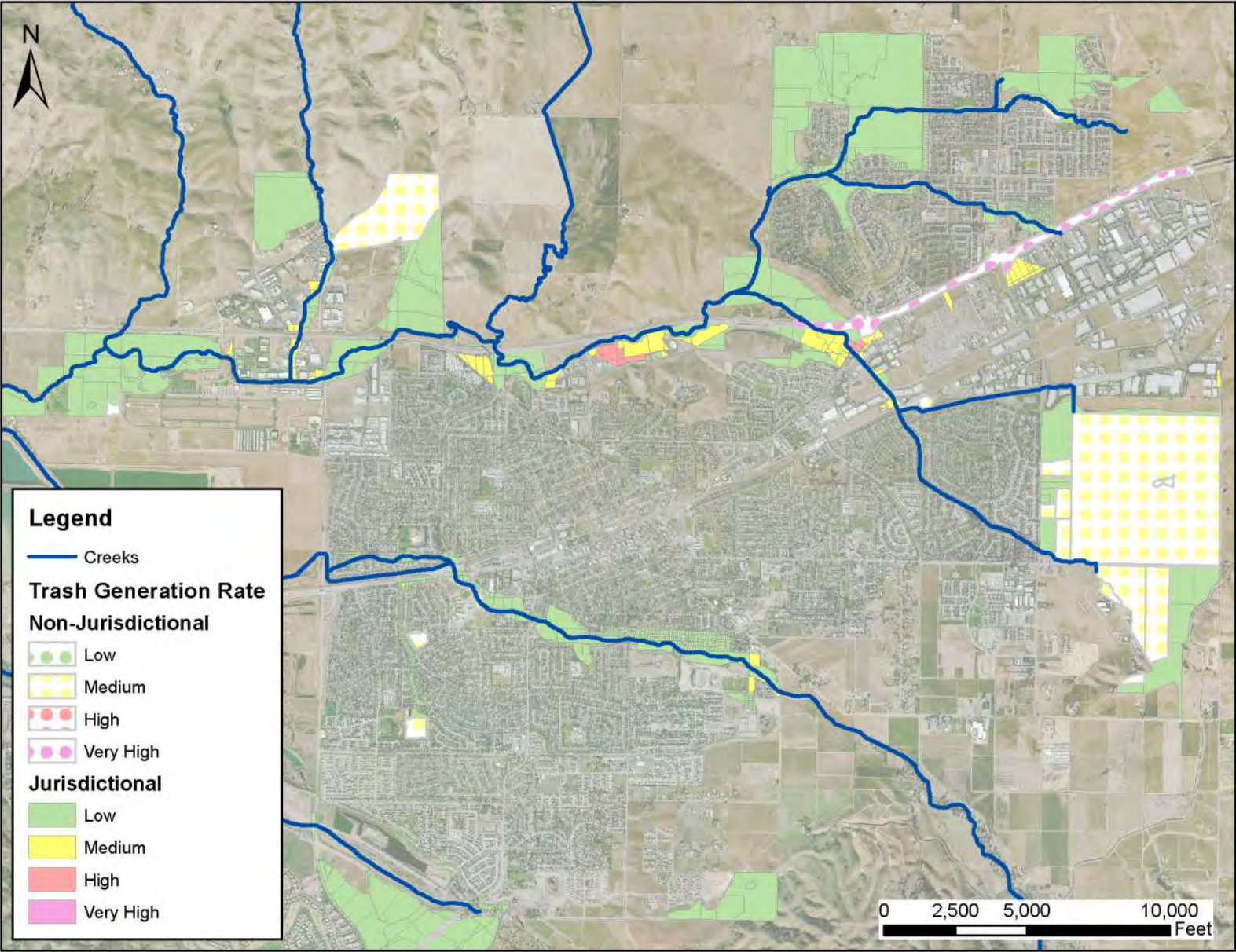


Figure 5: Trash Generation Directly to Creeks

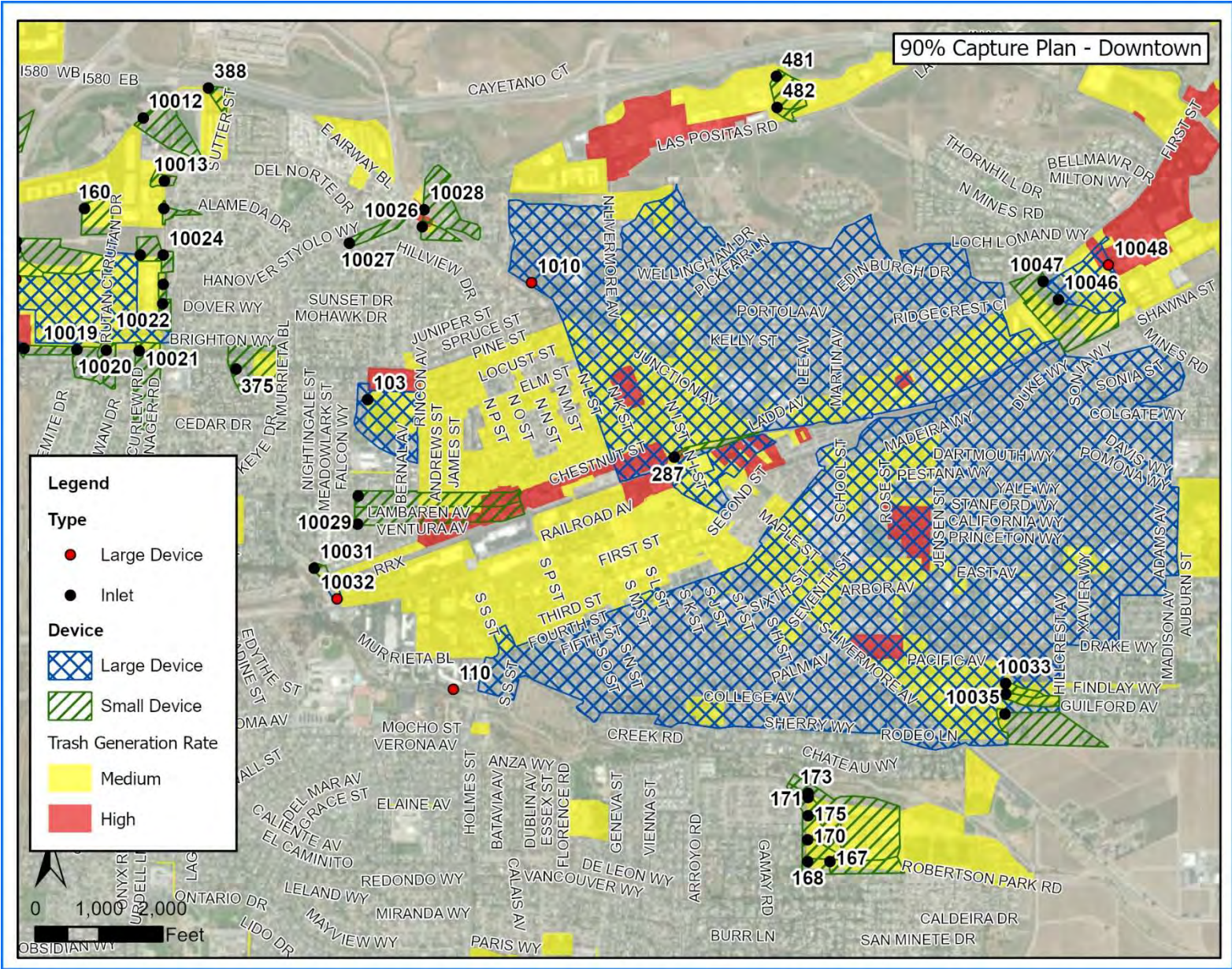


Figure 6: 90% Goal Proposed Full Capture Device Locations - Downtown

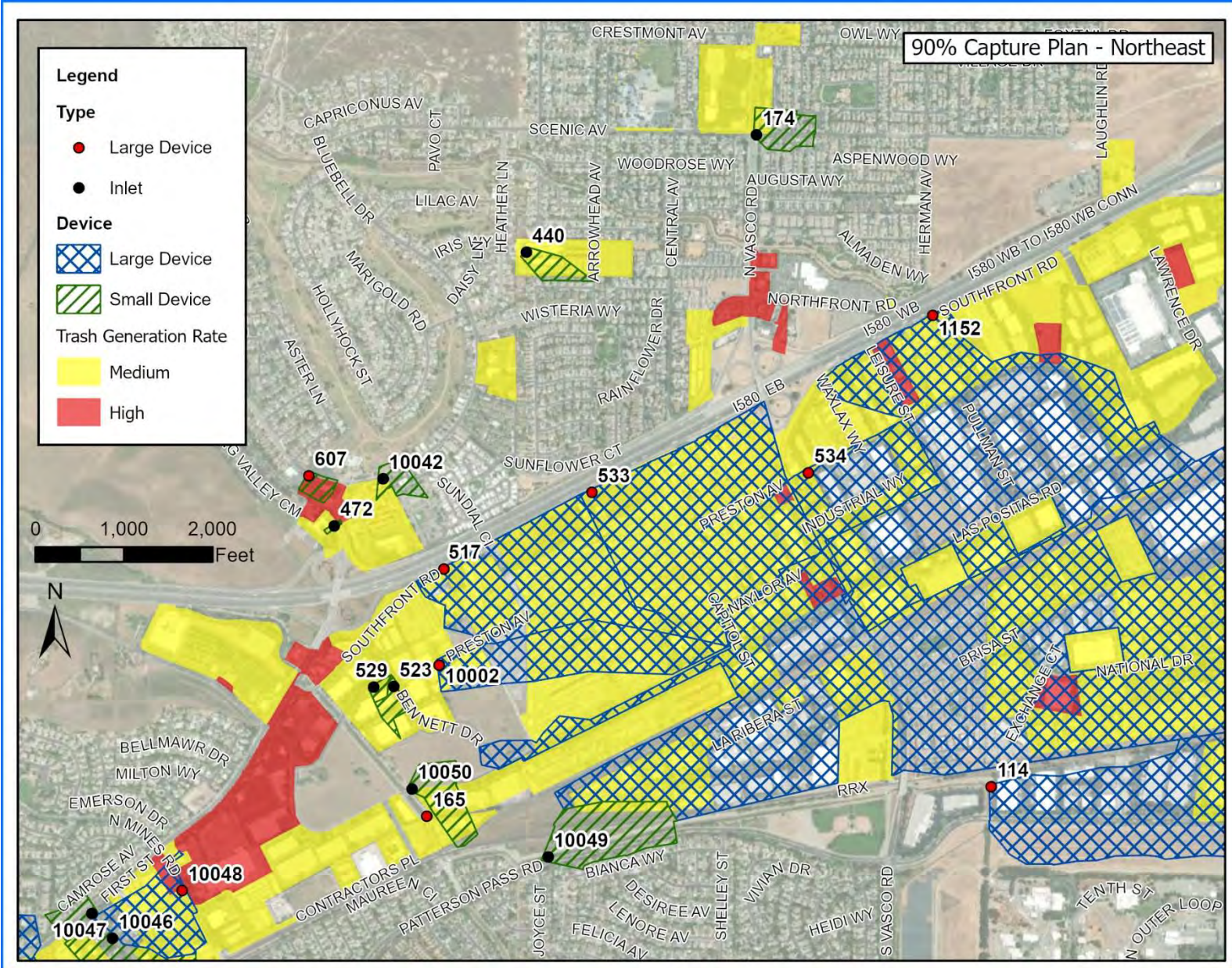


Figure 7: 90% Goal Proposed Full Capture Device Locations – Northeast





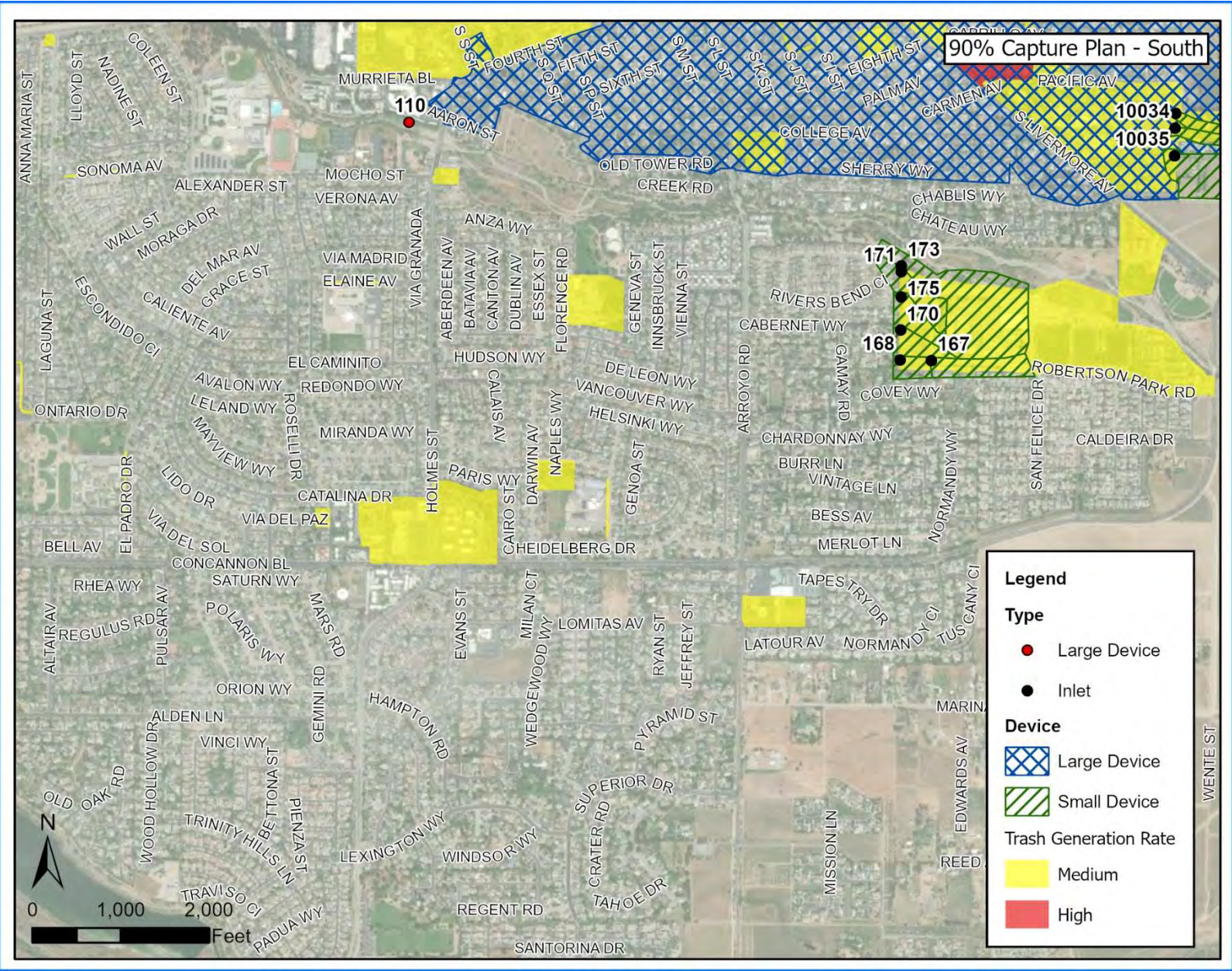


Figure 9: 90% Goal Proposed Full Capture Device Locations – South



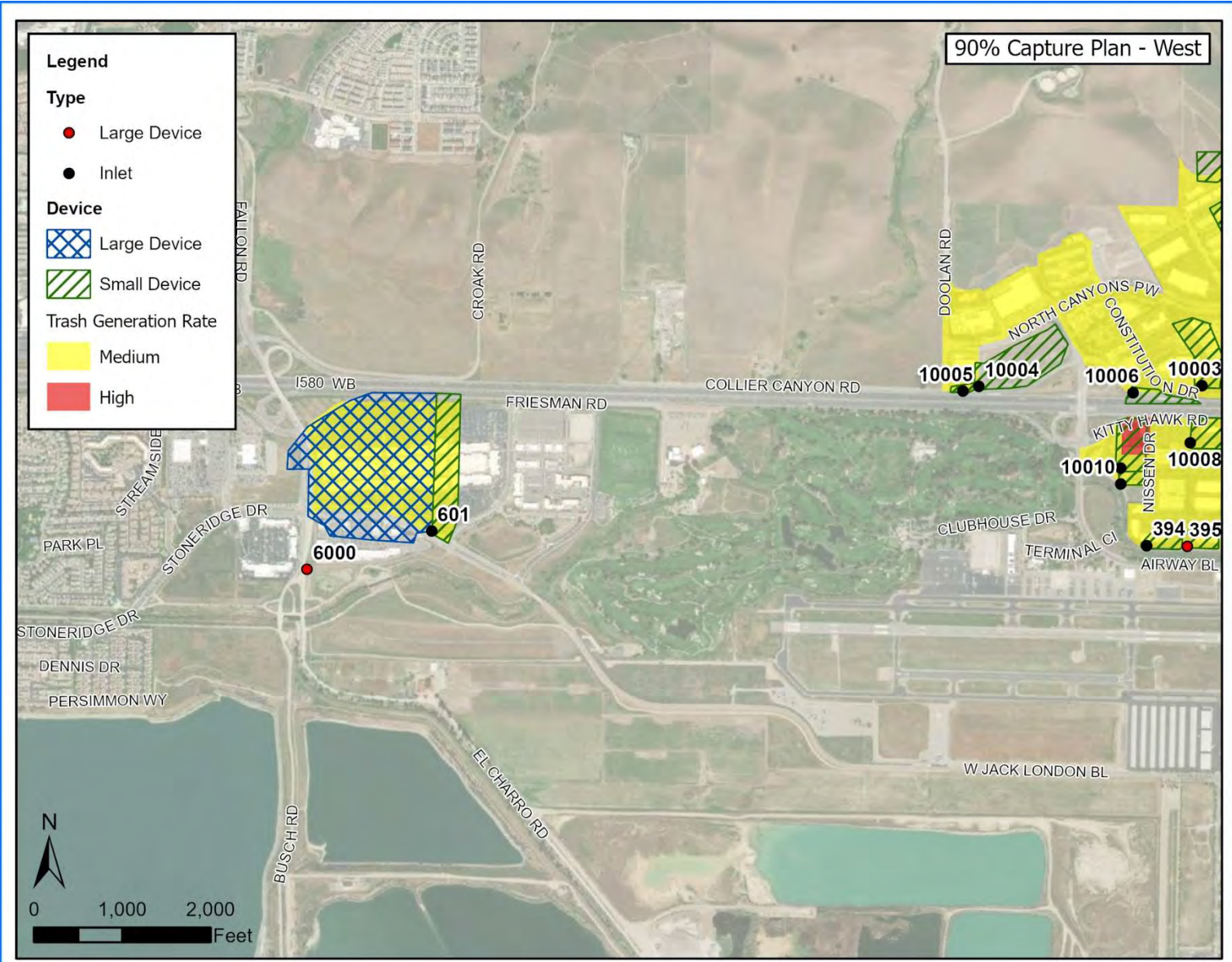


Figure 11: 90% Goal Proposed Full Capture Device Locations – West

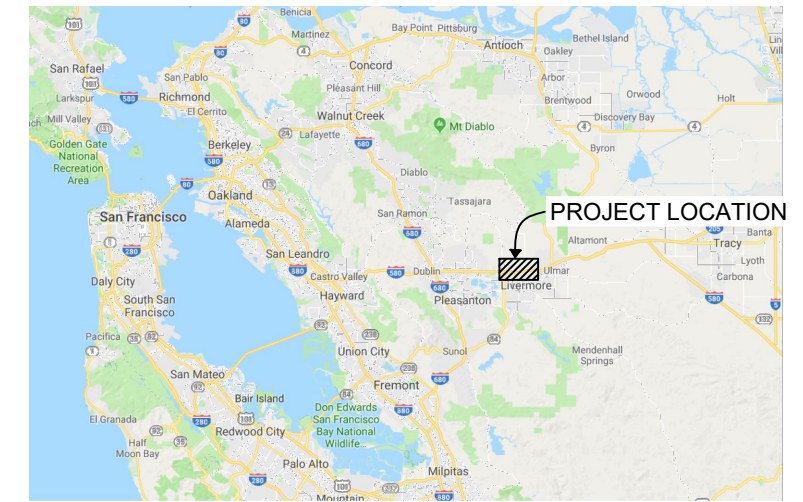
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# CITY OF LIVERMORE COMMUNITY DEVELOPMENT DEPARTMENT

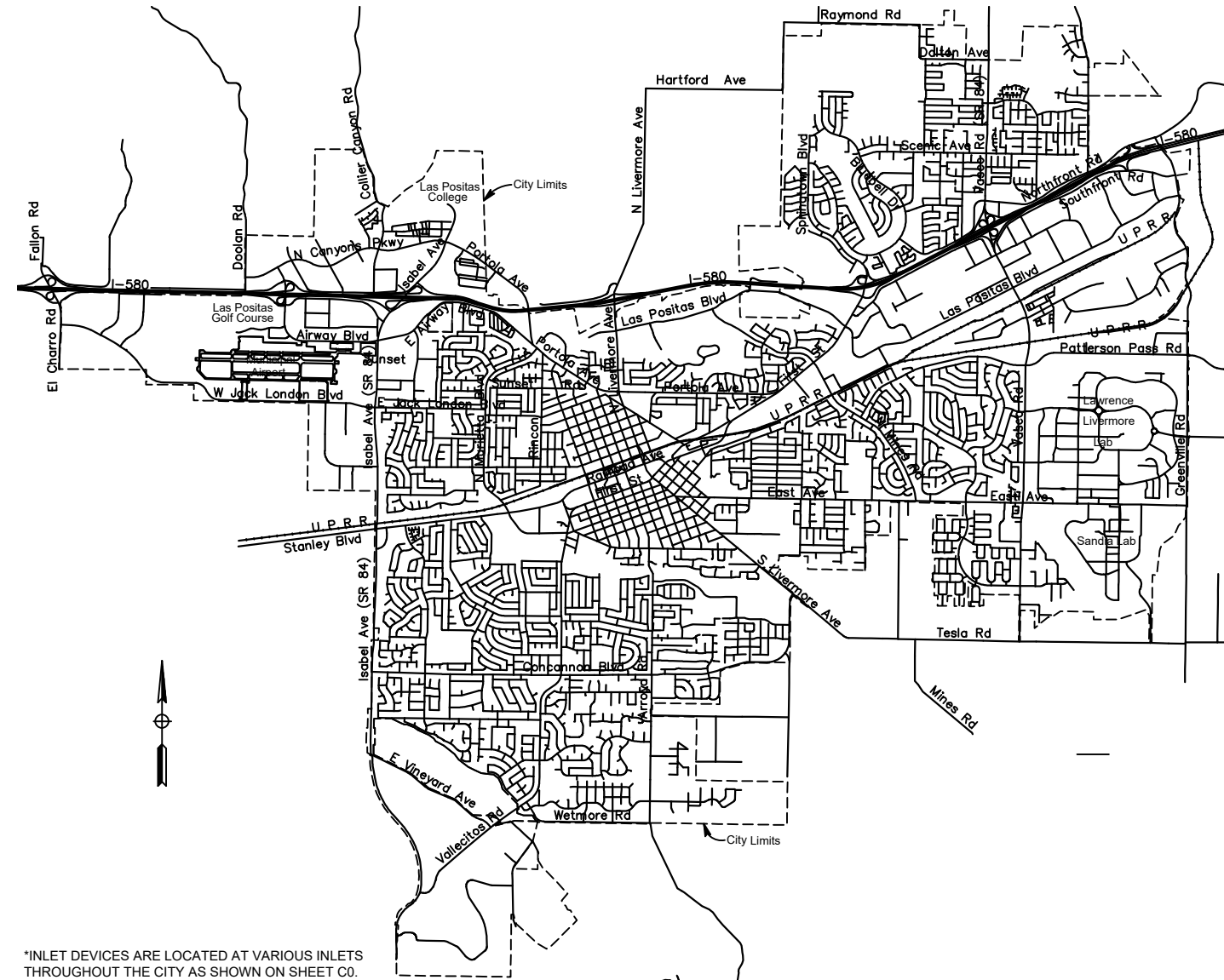
## PLANS FOR THE CONSTRUCTION OF THE 2023 STORM WATER TRASH CAPTURE PROJECT

CITY PROJECT NO. 2021-12

MARCH 2023



**VICINITY MAP**  
NOT TO SCALE



**LOCATION MAP**  
NOT TO SCALE

\*INLET DEVICES ARE LOCATED AT VARIOUS INLETS THROUGHOUT THE CITY AS SHOWN ON SHEET C0.

**APPROVALS**

PREPARED UNDER THE DIRECTION OF :

Edward I. Reyes      3-7-23  
 Edward I. Reyes      Date  
 Associate Civil Engineer  
 RCE No. 83245  
 EXP. 3/31/2023

\_\_\_\_\_  
 Caitlin J. Tharp      Date  
 Consulting Engineer  
 RCE No. 76810  
 EXP. 12/31/2024

RECOMMENDED FOR APPROVAL :

\_\_\_\_\_  
 Mike Wells      Date  
 Public Work Supervisor/Collections

\_\_\_\_\_  
 Anthony Smith      Date  
 Water Resources Division Manager

\_\_\_\_\_  
 Joel Waxdeck      Date  
 Assistant City Engineer

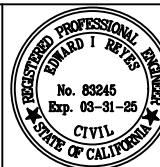
APPROVED BY :

\_\_\_\_\_  
 Bob Vinn      Date  
 City Engineer

**INDEX OF SHEETS**

NO.	NAME	TITLE
1	T1	TITLE SHEET
2	T2	NOTES & LEGEND
3	C0	INLET SITE MAP
4-12	C1-C9	INLET LOCATION PLANS
13	DET1	STANDARD DETAILS-1

Inch  
1  
0



APPROVED BY	DATE				
DESIGNED BY: JSR	02/27/23				
DRAWN BY: JSR					
CHECKED BY: MW, JW, ER		NO.	DATE	BY	REVISIONS

CITY OF  
**LIVERMORE**  
CALIFORNIA  
COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
City Project No. 2021-12

2023 STORM WATER TRASH CAPTURE PROJECT  
**TITLE SHEET**

<b>T1</b>
Sheet 1
Of 13
Scale: NTS

**GENERAL NOTES**

1. THE CONTRACTOR SHALL COMPLETE ALL WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS INCLUDING THE PROJECT SPECIFICATIONS, THE PROJECT PLANS, THE LATEST VERSION OF THE CITY OF LIVERMORE STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND ALL OTHER TERMS AND CONDITIONS OF THE CONTRACT DOCUMENTS UNLESS OTHERWISE NOTED IN PLANS.
2. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY NOTIFY THE CITY INSPECTOR UPON DISCOVERY OF ANY FIELD CONFLICTS.
4. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR 48 HOURS PRIOR TO REQUIRED INSPECTION (NOT INCLUDING WEEKENDS). ALL UTILITY SHUTDOWNS ARE TO BE COORDINATED THROUGH THE CITY. ANY TEMPORARY SUSPENSION OF WORK OR SUBSEQUENT RESUMPTION OF WORK REQUIRES NOTIFICATION OF THE CITY.
5. THE CONTRACTOR SHALL KEEP EXISTING STREETS FREE FROM DIRT AND DEBRIS DURING ALL PHASES OF CONSTRUCTION.
6. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) 800-227-2600, 48 HOURS PRIOR TO START OF EXCAVATION OR DEMOLITION OF IMPROVEMENTS.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING FACILITIES INCLUDING TREES, LANDSCAPING, IRRIGATION, FENCES, WALLS, SIDEWALK EXISTING STRIPING, AND OTHER PAVEMENT SURFACES, UTILITIES AND UTILITY STRUCTURES WITHIN, AND ADJACENT TO, PROJECT AREAS. ANY DAMAGE TO FACILITIES, UTILITIES OR UTILITY STRUCTURES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
8. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR FOR THE DESIGN AND IMPLEMENTATION OF SHORING. SHORING DESIGN SHALL TAKE INTO CONSIDERATION WEIGHT OF ALL EQUIPMENT AND MATERIALS USED.
9. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEMOLITION DEBRIS AND EXCESS EXCAVATED MATERIALS TO A SUITABLE SITE. ALL TESTING REQUIRED FOR DISPOSAL SHALL BE CONDUCTED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL LOCATE ELECTRICAL TRENCHES TO AVOID EXISTING UTILITIES, CONTRACTOR SHALL PROTECT EXISTING UTILITIES IN PLACE AS REQUIRED BY TRENCH INSTALLATION.
11. CONSTRUCTION MATERIALS AND EQUIPMENT SHALL BE KEPT OFF DRIVEWAYS AND PRIVATE PROPERTY AND CONSOLIDATED IN AREAS WITHIN THE CITY RIGHT-OF-WAY AND EASEMENTS DURING WORKING HOURS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
12. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT IN THE STREET RIGHT-OF-WAY SHALL NOT BE PERMITTED, UNLESS AT A LOCATION APPROVED BY TRAFFIC ENGINEER.
13. FOLLOW NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM REQUIREMENTS IN EFFECT AT THE TIME OF CONSTRUCTION.
14. CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, FLAG MEN, CONES OR OTHER DEVICES NECESSARY TO FOR PUBLIC SAFETY IN ACCORDANCE WITH SPECIFICATIONS. SEE ALSO TRAFFIC CONTROL NOTES
15. CONTRACTOR SHALL PERFORM CONSTRUCTION AND OPERATION IN A MANNER WHICH WILL NOT ALLOW HARMFUL POLLUTANTS TO ENTER THE STORM DRAIN SYSTEM. TO ENSURE COMPLIANCE, THE CONTRACTOR SHALL IMPLEMENT THE APPROPRIATE BEST MANAGEMENT PRACTICE (BMP) AS OUTLINED IN THE "CALIFORNIA STORMWATER BMP HANDBOOK" FOR CONSTRUCTION ([www.cabmphandbooks.com](http://www.cabmphandbooks.com)). INCLUDING, BUT NOT LIMITED TO:
  - A. STORM DRAIN FLOW SHALL BE DIVERTED AROUND OR THROUGH CONSTRUCTION ACTIVITIES PER SECTION NS-5, CLEAR WATER DIVERSION
  - B. STOCK PILED MATERIALS SHALL BE PROTECTED PER SECTION WM-3, STOCKPILE MANAGEMENT
  - C. HANDLING OF ALL SHRUBS, TREES, AND MATERIALS TO BE DISPOSED OF SHALL FOLLOW SECTION WM-5 SOLID WASTE MANAGEMENT
  - D. EXCLUSION FENCE SHALL FOLLOW SECTION SE-1, SILT FENCE.

**TRAFFIC CONTROL NOTES**

1. DURING ALL CONSTRUCTION PERIODS, CONTRACTOR SHALL HAVE AT THE JOBSITE, ALL NECESSARY TRAFFIC CONTROL DEVICES NEEDED TO IMPLEMENT APPROVED TRAFFIC CONTROL PLAN.
2. CONTRACTOR TO MAINTAIN A MEANS OF ACCESS TO PROPERTIES, DRIVEWAYS, AND DWELLINGS AT ALL TIMES.
3. PROVIDE AND MAINTAIN APPROPRIATE TRAFFIC CONTROL IN ACCORDANCE WITH CALTRANS "MANUALS OF TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" CURRENT EDITION. FAILURE TO COMPLY MY RESULT IN IMMEDIATE STOPPAGE OF WORK UNTIL THE PROPER TRAFFIC CONTROL IS IN ORDER.
4. CONSTRUCTION SHALL BE SEQUENCED TO PROVIDE THE LEAST POSSIBLE ADVERSE EFFECT TO RESIDENCES AND BUSINESS.
5. CONTRACTOR SHALL COORDINATE DETOUR ROUTES (IF NECESSARY) WITH THE CITY.

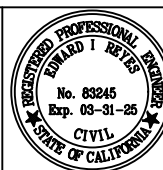
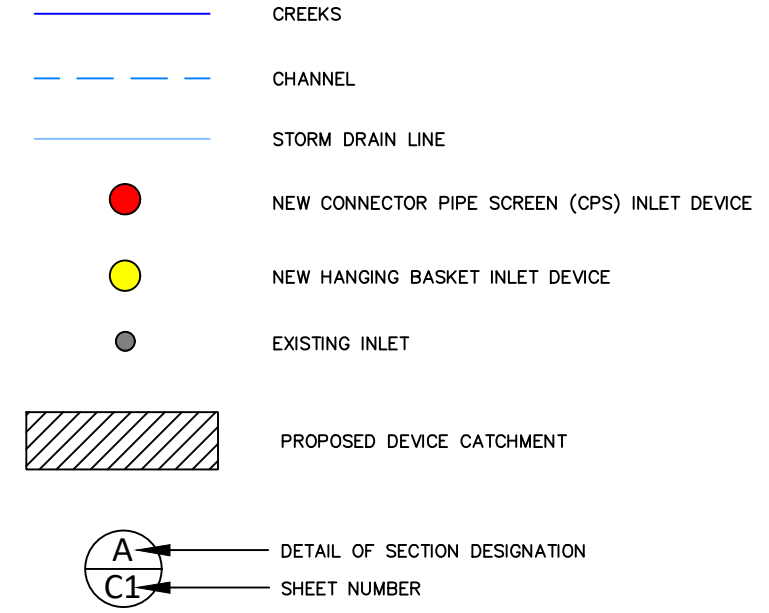
**CONTRACTOR'S LICENSE CLASSIFICATION:**

IN ACCORDANCE WITH THE PROVISIONS OF CALIFORNIA PUBLIC CONTRACT CODE SECTION 3300, THE CITY OF LIVERMORE HAS DETERMINED THAT THE GENERAL CONTRACTOR SHALL POSSESS A VALID CLASS "A" OR CLASS "C-12" CONTRACTOR'S LICENSE AT THE TIME OF BID OPENING AND FOR THE DURATION OF THE CONTRACT.

**ABBREVIATIONS**

AB	AGGREGATE BASE
AC	ASPHALTIC CONCRETE
APPOX	APPROXIMATELY
ASPH	ASPHALT
BMP	BEST MANAGEMENT PRACTICE
CB	CATCH BASIN
CTB	CEMENT TREATED BASE
CL	CENTER LINE
CONC	CONCRETE
CONST	CONSTRUCTION
DEMO	DEMOLISH
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
ELEV	ELEVATION
EXIST/(E)	EXISTING
FG	FINISHED GRADE
FT	FEET, FOOT
INV	INVERT
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
RCP	REINFORCED CONCRETE PIPE
RC	RELATIVE COMPACTION
RCB	REINFORCED CONCRETE BOX
REQD	REQUIRED
ROW	RIGHT-OF-WAY
SPECS	SPECIFICATIONS
SS	SANITARY SEWER
STD	STANDARD
STA	STATION
SD	STORM DRAIN
TYP	TYPICAL
VER/(V)	VERTICAL
W/	WITH

**LEGEND**



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DRAWN BY: JSR				
CHECKED BY: MW, JW, ER	NO.	DATE	BY	REVISIONS

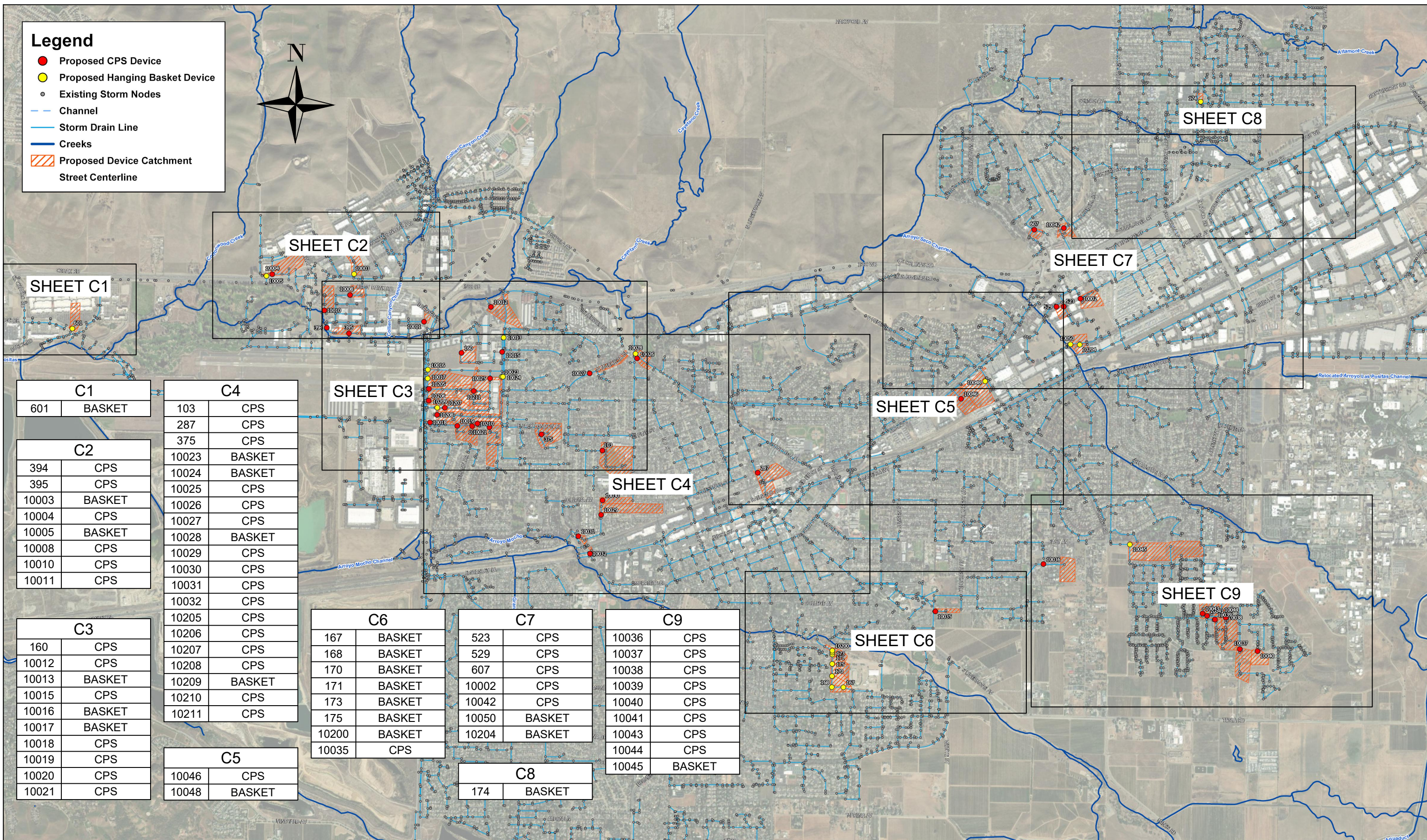
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**LIVERMORE**  
 CALIFORNIA  
 COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
 City Project No. 2021-12

2023 STORM WATER TRASH CAPTURE PROJECT  
**NOTES, LEGEND & ABBREVIATIONS**

<b>T2</b>
Sheet 2
Of 13
Scale: NTS

### Legend

- Proposed CPS Device
- Proposed Hanging Basket Device
- Existing Storm Nodes
- Channel
- Storm Drain Line
- Creeks
- Proposed Device Catchment
- Street Centerline



C1	
601	BASKET

C2	
394	CPS
395	CPS
10003	BASKET
10004	CPS
10005	BASKET
10008	CPS
10010	CPS
10011	CPS

C3	
160	CPS
10012	CPS
10013	BASKET
10015	CPS
10016	BASKET
10017	BASKET
10018	CPS
10019	CPS
10020	CPS
10021	CPS

C4	
103	CPS
287	CPS
375	CPS
10023	BASKET
10024	BASKET
10025	CPS
10026	CPS
10027	CPS
10028	BASKET
10029	CPS
10030	CPS
10031	CPS
10032	CPS
10205	CPS
10206	CPS
10207	CPS
10208	CPS
10209	BASKET
10210	CPS
10211	CPS

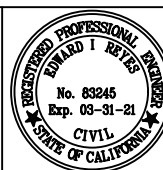
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10046	CPS
10048	BASKET

C6	
167	BASKET
168	BASKET
170	BASKET
171	BASKET
173	BASKET
175	BASKET
10200	BASKET
10035	CPS

C7	
523	CPS
529	CPS
607	CPS
10002	CPS
10042	CPS
10050	BASKET
10204	BASKET

C8	
174	BASKET

C9	
10036	CPS
10037	CPS
10038	CPS
10039	CPS
10040	CPS
10041	CPS
10043	CPS
10044	CPS
10045	BASKET



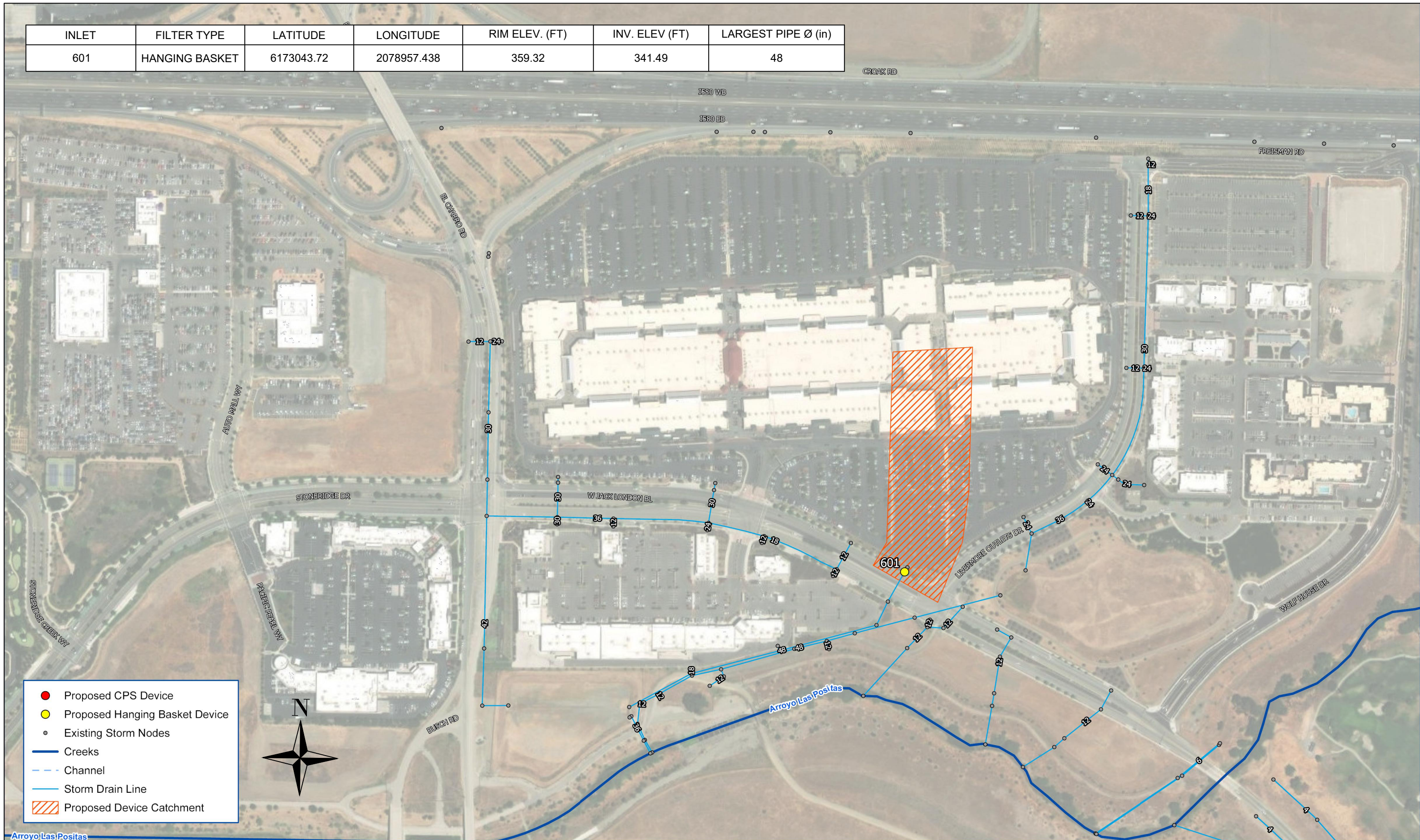
APPROVED BY	DATE				
DESIGNED BY: JSR					
DRAWN BY: JSR					
CHECKED BY: MW, JW, ER	NO.	DATE	BY	REVISIONS	

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City Project No. 2010-30

2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

**C0**  
Sheet **3**  
Of **13**  
Scale: **NTS**

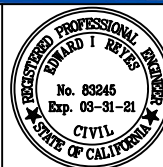
INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV (FT)	LARGEST PIPE Ø (in)
601	HANGING BASKET	6173043.72	2078957.438	359.32	341.49	48



- Proposed CPS Device
- Proposed Hanging Basket Device
- Existing Storm Nodes
- Creeks
- - - Channel
- Storm Drain Line
- Proposed Device Catchment



Inch  
1  
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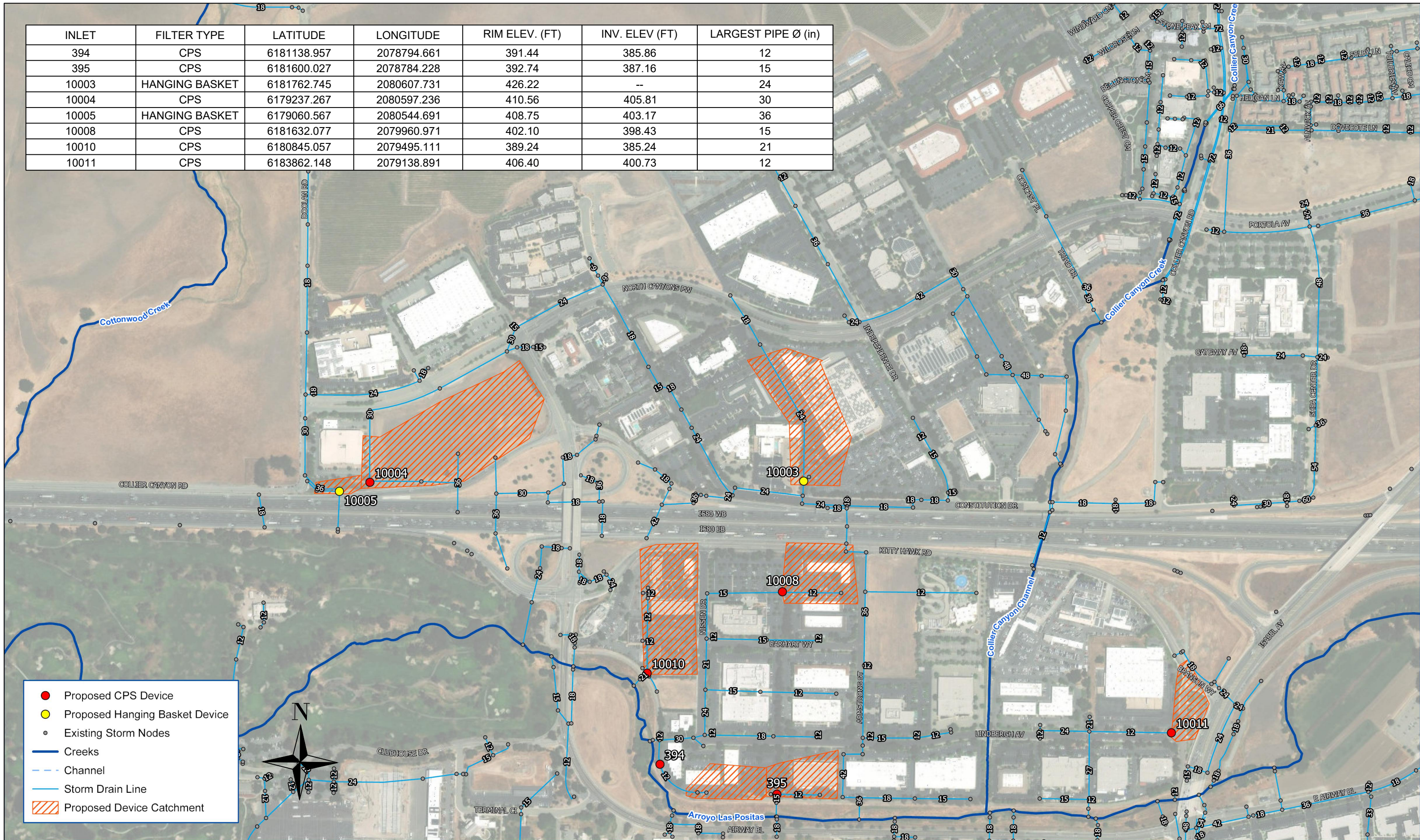
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CALIFORNIA  
COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
City Project No. 2010-30

2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

<b>C1</b>
Sheet <b>4</b>
Of <b>13</b>
Scale: <b>NTS</b>

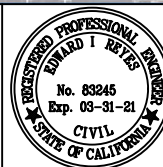


INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV (FT)	LARGEST PIPE Ø (in)
394	CPS	6181138.957	2078794.661	391.44	385.86	12
395	CPS	6181600.027	2078784.228	392.74	387.16	15
10003	HANGING BASKET	6181762.745	2080607.731	426.22	--	24
10004	CPS	6179237.267	2080597.236	410.56	405.81	30
10005	HANGING BASKET	6179060.567	2080544.691	408.75	403.17	36
10008	CPS	6181632.077	2079960.971	402.10	398.43	15
10010	CPS	6180845.057	2079495.111	389.24	385.24	21
10011	CPS	6183862.148	2079138.891	406.40	400.73	12



- Proposed CPS Device
- Proposed Hanging Basket Device
- Existing Storm Nodes
- Creeks
- - - Channel
- Storm Drain Line
- ▨ Proposed Device Catchment

Inch  
1  
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DESIGNED BY: JSR	02/27/23			
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	NO.	DATE	BY	REVISIONS

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COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
City Project No. 2010-30

2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

**C2**  
Sheet 5  
Of 13  
Scale: NTS



- Proposed CPS Device
- Proposed Hanging Basket Device
- Existing Storm Nodes
- Creeks
- - - Channel
- Storm Drain Line
- Proposed Device Catchment

INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV (FT)	LARGEST PIPE Ø (in)
160	CPS	6185040.277	2078186.731	412.36	405.11	30
10012	CPS	6185961.307	2079609.641	416.22	407.47	12
10013	HANGING BASKET	6186291.975	2078615.621	423.18	418.85	12
10015	CPS	6186286.530	2078181.935	421.29	416.96	18
10016	HANGING BASKET	6183962.196	2077669.602	404.14	393.14	54
10017	HANGING BASKET	6183959.755	2077550.151	404.09	393.01	54
10018	CPS	6184083.926	2075984.479	411.87	406.95	12
10019	CPS	6184913.257	2075964.241	415.74	409.57	12
10020	CPS	6185375.087	2075964.241	417.09	413.50	12
10021	CPS	6185895.934	2075950.600	420.24	415.24	15



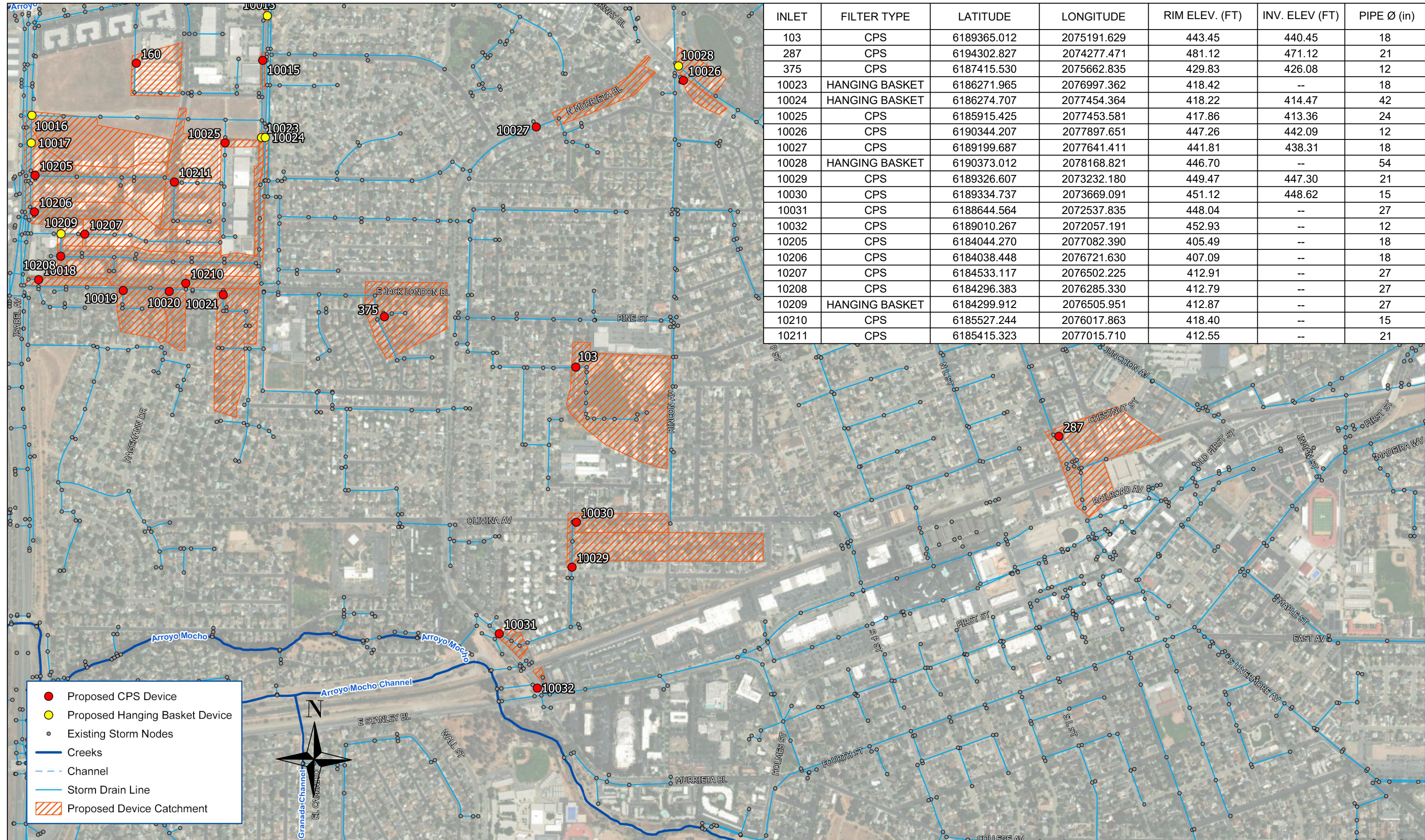
1-800-227-2600  
CALL BEFORE YOU DIG  
UNDERGROUND SERVICE ALERT

APPROVED BY	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	NO.	DATE	BY
JSR	02/27/23	JSR	JSR	MW, JW, ER			
RECORD DRAWING				REVISIONS			

CITY OF  
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CALIFORNIA  
COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
City Project No. 2010-30

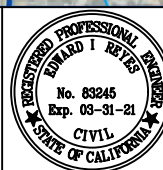
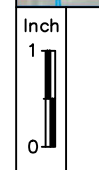
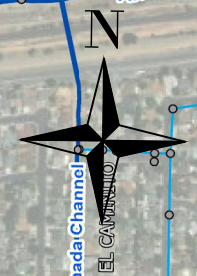
2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

**C3**  
Sheet **6**  
Of **13**  
Scale: **NTS**



INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV (FT)	PIPE Ø (in)
103	CPS	6189365.012	2075191.629	443.45	440.45	18
287	CPS	6194302.827	2074277.471	481.12	471.12	21
375	CPS	6187415.530	2075662.835	429.83	426.08	12
10023	HANGING BASKET	6186271.965	2076997.362	418.42	--	18
10024	HANGING BASKET	6186274.707	2077454.364	418.22	414.47	42
10025	CPS	6185915.425	2077453.581	417.86	413.36	24
10026	CPS	6190344.207	2077897.651	447.26	442.09	12
10027	CPS	6189199.687	2077641.411	441.81	438.31	18
10028	HANGING BASKET	6190373.012	2078168.821	446.70	--	54
10029	CPS	6189326.607	2073232.180	449.47	447.30	21
10030	CPS	6189334.737	2073669.091	451.12	448.62	15
10031	CPS	6188644.564	2072537.835	448.04	--	27
10032	CPS	6189010.267	2072057.191	452.93	--	12
10205	CPS	6184044.270	2077082.390	405.49	--	18
10206	CPS	6184038.448	2076721.630	407.09	--	18
10207	CPS	6184533.117	2076502.225	412.91	--	27
10208	CPS	6184296.383	2076285.330	412.79	--	27
10209	HANGING BASKET	6184299.912	2076505.951	412.87	--	27
10210	CPS	6185527.244	2076017.863	418.40	--	15
10211	CPS	6185415.323	2077015.710	412.55	--	21

- Proposed CPS Device
- Proposed Hanging Basket Device
- Existing Storm Nodes
- Creeks
- - - Channel
- Storm Drain Line
- ▨ Proposed Device Catchment



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DESIGNED BY: JSR	02/27/23				
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CHECKED BY: MW, JW, ER		NO.	DATE	BY	REVISIONS

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 CALIFORNIA  
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 City Project No. 2010-30

2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

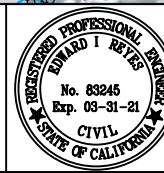
**C4**  
 Sheet 7  
 Of 13  
 Scale: NTS

INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV (FT)	PIPE Ø (in)
10046	CPS	6200337.149	2076758.689	531.15	527.15	24
10048	HANGING BASKET	6201123.462	2077297.488	529.78	524.19	24



- Proposed CPS Device
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Inch  
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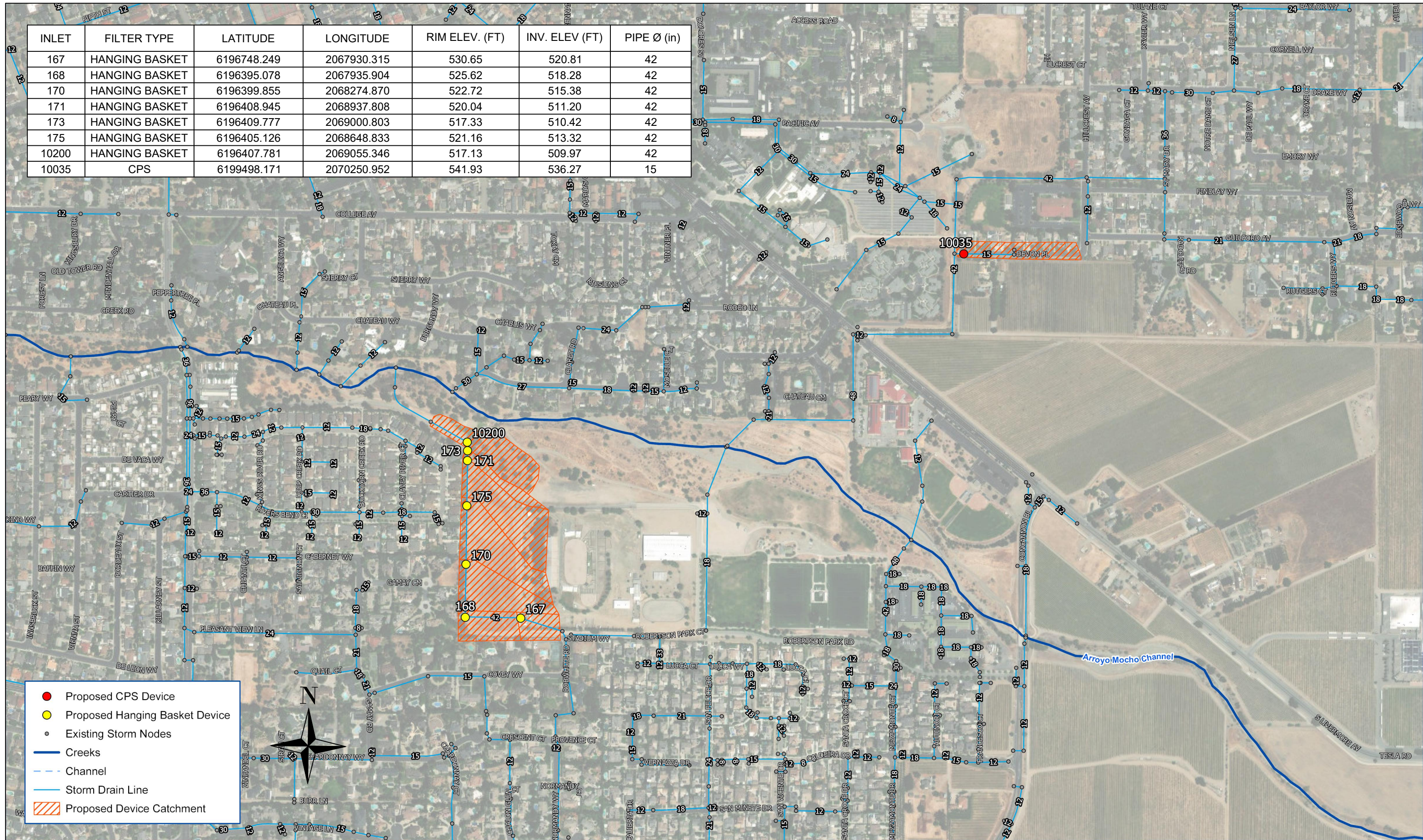
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City Project No. 2010-30

2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

**C5**  
Sheet 8  
Of 13  
Scale: NTS

INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV (FT)	PIPE Ø (in)
167	HANGING BASKET	6196748.249	2067930.315	530.65	520.81	42
168	HANGING BASKET	6196395.078	2067935.904	525.62	518.28	42
170	HANGING BASKET	6196399.855	2068274.870	522.72	515.38	42
171	HANGING BASKET	6196408.945	2068937.808	520.04	511.20	42
173	HANGING BASKET	6196409.777	2069000.803	517.33	510.42	42
175	HANGING BASKET	6196405.126	2068648.833	521.16	513.32	42
10200	HANGING BASKET	6196407.781	2069055.346	517.13	509.97	42
10035	CPS	6199498.171	2070250.952	541.93	536.27	15



- Proposed CPS Device
- Proposed Hanging Basket Device
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- - - Channel
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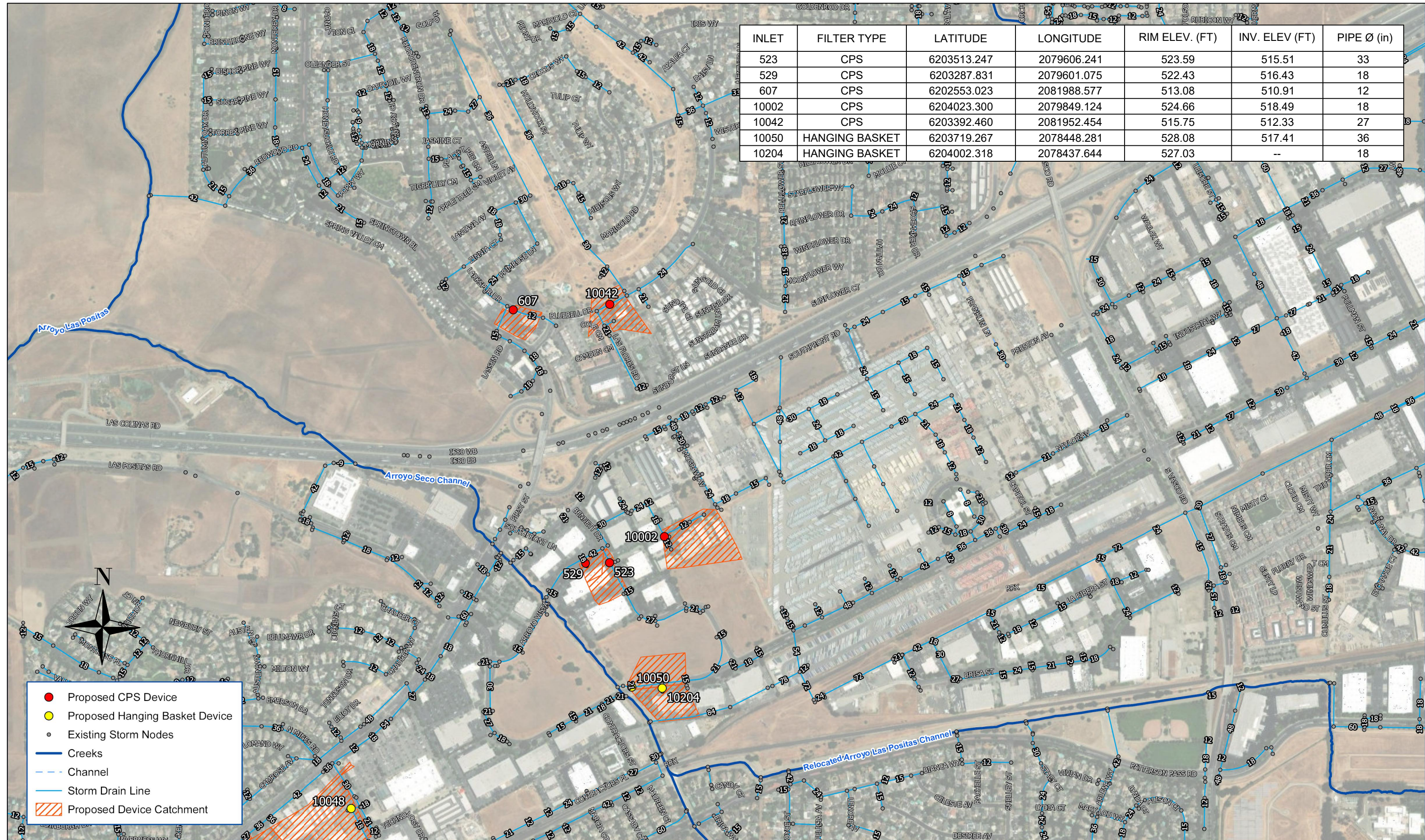
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	NO.	DATE	BY	REVISIONS

CITY OF  
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COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
City Project No. 2010-30

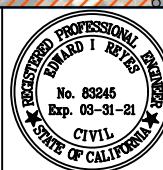
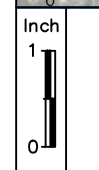
2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

**C6**  
Sheet **9**  
Of **13**  
Scale: **NTS**

INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV (FT)	PIPE Ø (in)
523	CPS	6203513.247	2079606.241	523.59	515.51	33
529	CPS	6203287.831	2079601.075	522.43	516.43	18
607	CPS	6202553.023	2081988.577	513.08	510.91	12
10002	CPS	6204023.300	2079849.124	524.66	518.49	18
10042	CPS	6203392.460	2081952.454	515.75	512.33	27
10050	HANGING BASKET	6203719.267	2078448.281	528.08	517.41	36
10204	HANGING BASKET	6204002.318	2078437.644	527.03	--	18



- Proposed CPS Device
- Proposed Hanging Basket Device
- Existing Storm Nodes
- Creeks
- - - Channel
- Storm Drain Line
- Proposed Device Catchment



APPROVED BY	DATE				
DESIGNED BY: JSR	02/27/23				
DRAWN BY: JSR					
CHECKED BY: MW, JW, ER		NO.	DATE	BY	REVISIONS

CITY OF  
**LIVERMORE**  
CALIFORNIA  
COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
City Project No. 2010-30

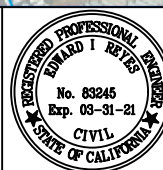
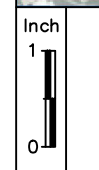
2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

**C7**  
Sheet 10  
Of 13  
Scale: NTS



INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV. (FT)	PIPE Ø (in)
174	HANGING BASKET	6207616.736	2085839.051	528.60	--	33

- Proposed CPS Device
- Proposed Hanging Basket Device
- Existing Storm Nodes
- Creeks
- - - Channel
- Storm Drain Line
- Proposed Device Catchment

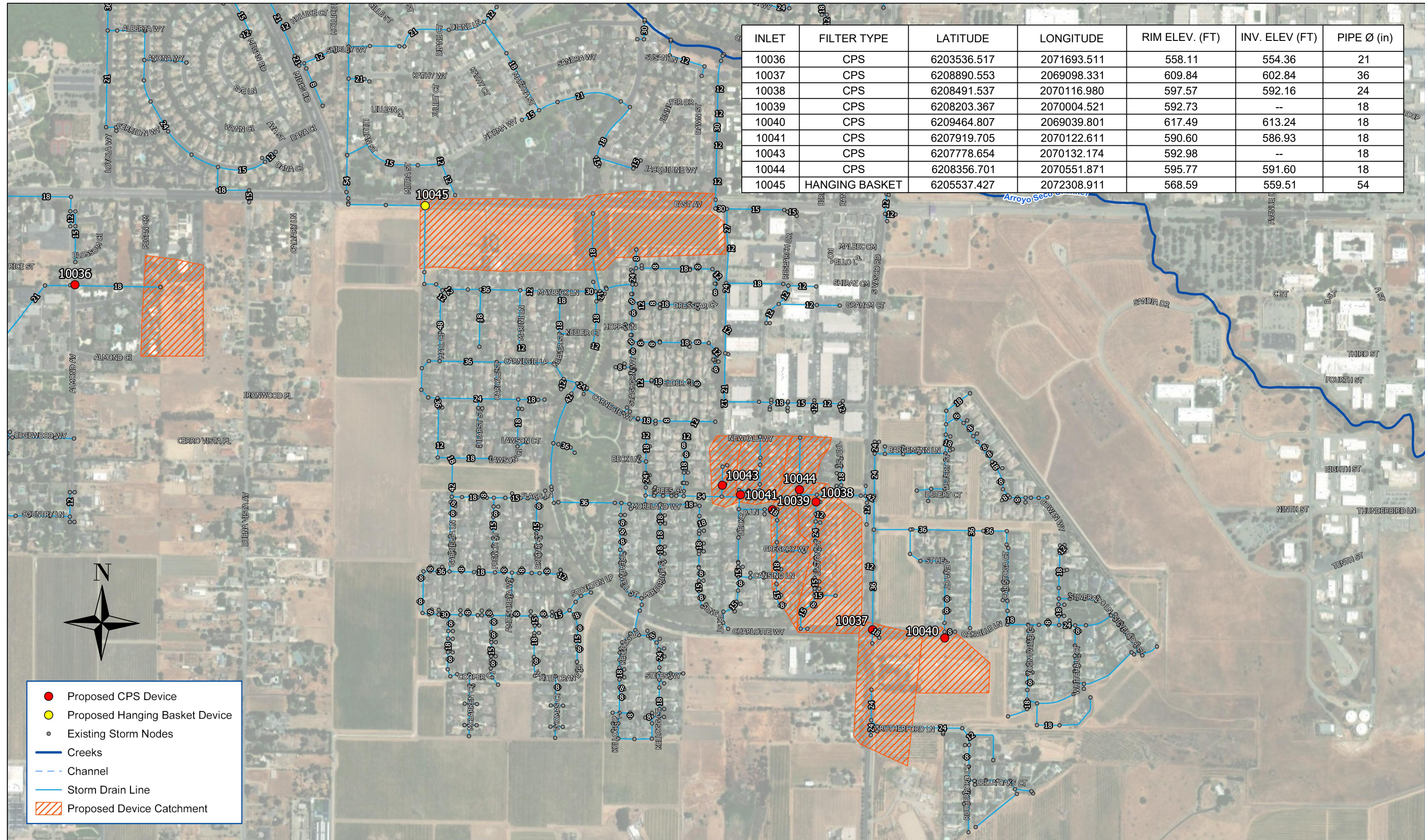


APPROVED BY	DATE				
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City Project No. 2010-30

2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

**C8**  
Sheet 11  
Of 13  
Scale: NTS



INLET	FILTER TYPE	LATITUDE	LONGITUDE	RIM ELEV. (FT)	INV. ELEV (FT)	PIPE Ø (in)
10036	CPS	6203536.517	2071693.511	558.11	554.36	21
10037	CPS	6208890.553	2069098.331	609.84	602.84	36
10038	CPS	6208491.537	2070116.980	597.57	592.16	24
10039	CPS	6208203.367	2070004.521	592.73	--	18
10040	CPS	6209464.807	2069039.801	617.49	613.24	18
10041	CPS	6207919.705	2070122.611	590.60	586.93	18
10043	CPS	6207778.654	2070132.174	592.98	--	18
10044	CPS	6208356.701	2070551.871	595.77	591.60	18
10045	HANGING BASKET	6205537.427	2072308.911	568.59	559.51	54

**Legend**

- Proposed CPS Device
- Proposed Hanging Basket Device
- Existing Storm Nodes
- Creeks
- - - Channel
- Storm Drain Line
- Proposed Device Catchment



Inch 1  
0

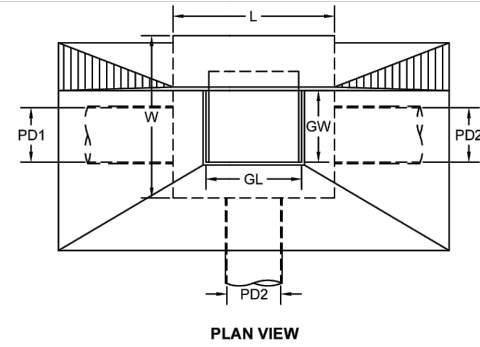
APPROVED BY	DATE				
DESIGNED BY: JSR	02/27/23				
DRAWN BY: JSR					
CHECKED BY: MW, JW, ER		NO.	DATE	BY	REVISIONS

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**LIVERMORE**  
CALIFORNIA  
COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
City Project No. 2010-30

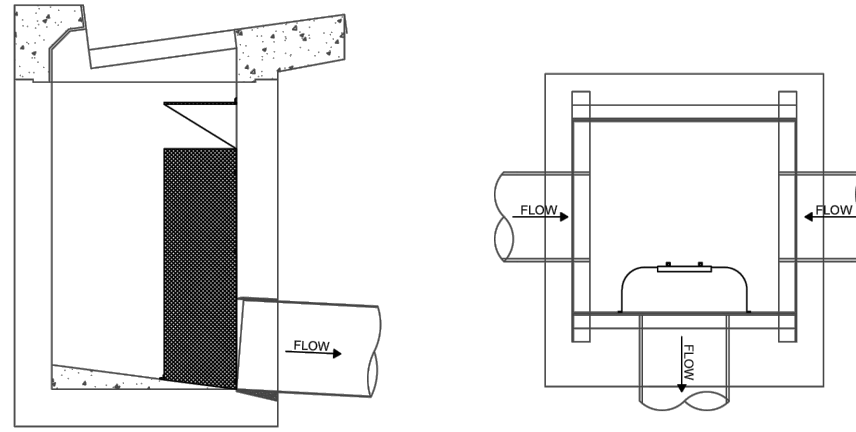
2023 STORM WATER TRASH CAPTURE PROJECT  
**INLET FILTER LOCATION PLAN**

**C9**  
Sheet 12  
Of 13  
Scale: NTS

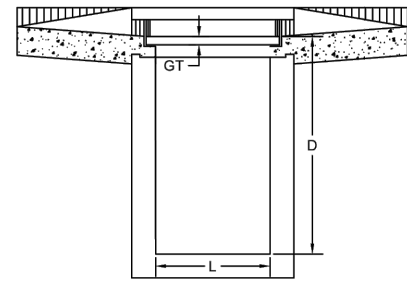




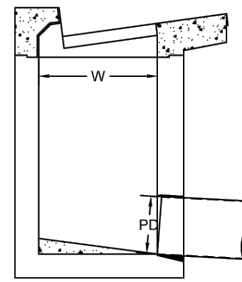
PLAN VIEW



1  
2  
CONNECTOR PIPE SCREEN DETAIL  
NTS



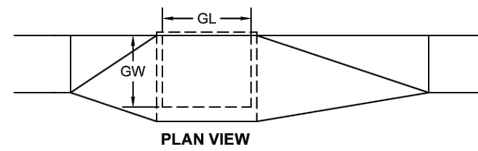
SECTION VIEW A



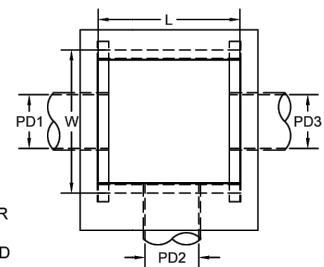
SECTION VIEW B

1  
1  
CURB INLET DETAIL  
NTS

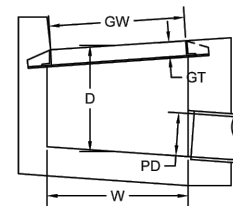
ABBREVIATIONS	
L	CATCH BASIN LENGTH
W	CATCH BASIN WIDTH
GW	GRATE WIDTH
GL	GRATE LENGTH
GT	GRATE THICKNESS
D	CATCH BASIN DEPTH
PD1	PIPE DIAMETER OF PIPE 1
PD2	PIPE DIAMETER OF PIPE 2
PD3	PIPE DIAMETER OF PIPE 3



PLAN VIEW

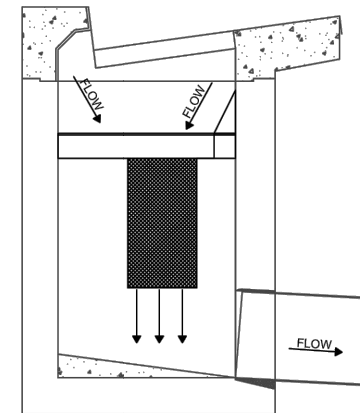


SECTION VIEW A



SECTION VIEW B

1  
2  
GRATE INLET DETAIL  
NTS

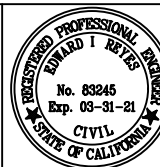


1  
2  
HANGING BASKET FILTER DETAIL  
NTS

GENERAL NOTES:

1. PD1, PD2, AND PD3 ARE SHOWN FOR REFERENCE ONLY. ACTUAL PIPE LOCATIONS ARE TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

Inch  
1  
0



APPROVED BY	DATE				
DESIGNED BY: JSR	02/27/23				
DRAWN BY: JSR					
CHECKED BY: MW, JW, ER	NO.	DATE	BY	REVISIONS	

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COMMUNITY DEVELOPMENT DEPARTMENT-ENGINEERING DIVISION  
City Project No. 2010-30

2023 STORM WATER TRASH CAPTURE PROJECT  
**STANDARD DETAILS**

<b>S1</b>
Sheet 13
Of 13
Scale: NTS











Storm Drain Trash Capture Devices CIP 2021-12 Addendum No.1 5/1/2023

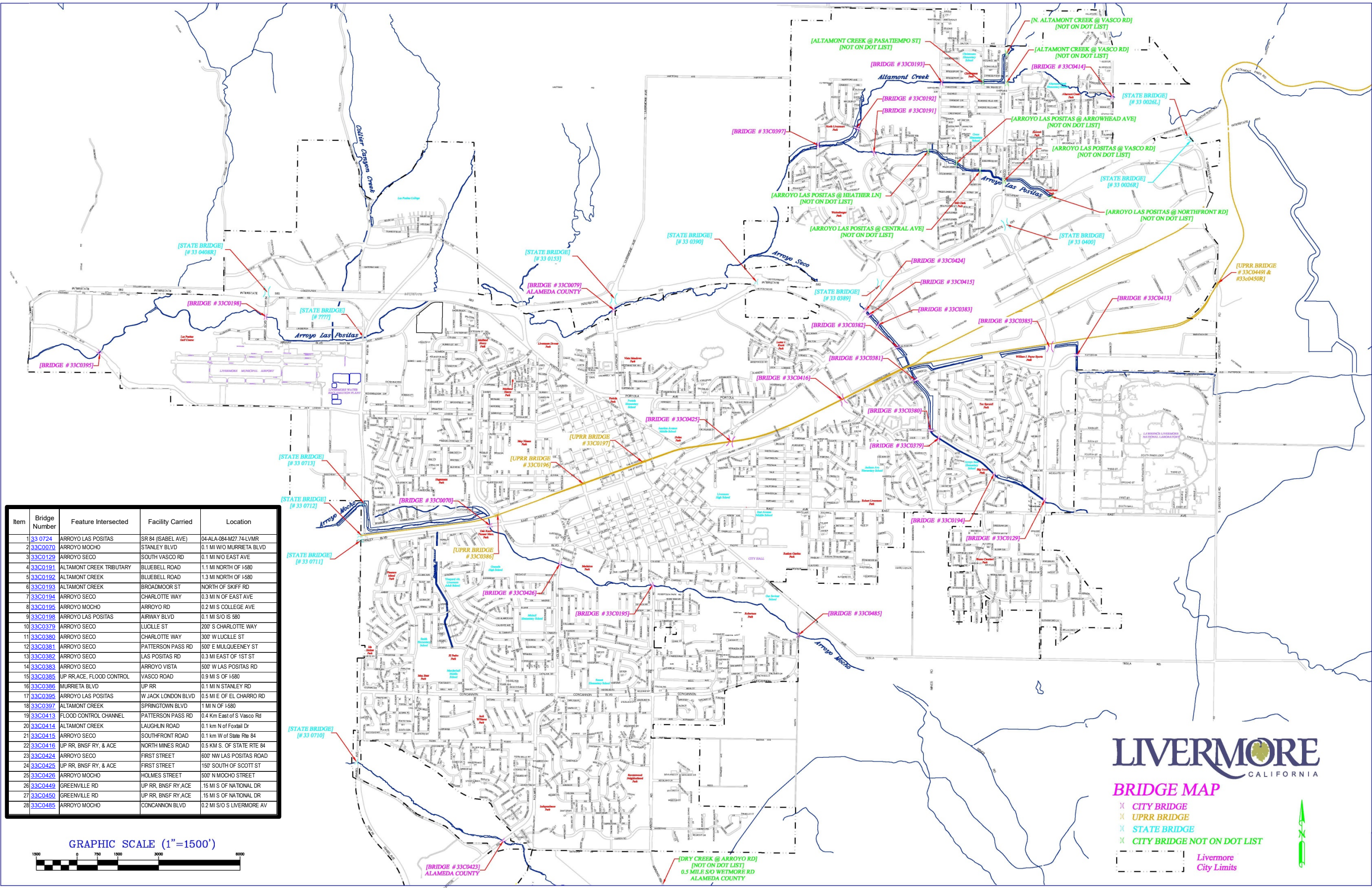
All Proposed Devices																						
Device ID	Asset ID	Device Type	Latitude	Longitude	Inlet Width 'W' (in)	Inlet Length 'L' (in)	Inlet Depth 'D' (in)	Grate Width 'GW' (in)	Grate Length 'GL' (in)	Public/Private	Clogged	Rim Elevation (ft)	Invert Elevation (ft)	Largest Pipe Diameter (in)	10yr/30min Rainfall (in/hr)	Runoff Coefficient	Area (acres)	Flowrate (cfs)	Percent Credit	Notes	Field Data Collection Date	
103	3986	CPS	6189365.012	2075191.629	34	40	36	24	40	Public	no	443.45	440.45	18	0.400	0.7	21.041	5.891	0.376	Curb Inlet	2023-01-23	
160	3171	CPS	6185040.277	2078186.731	30	30	87	34	34	Private	no	412.36	405.11	30	0.400	0.7	5.109	1.430	0.135	Ditch inlet	2023-01-23	
167	5122	Hanging Basket	6196748.249	2067930.315	35	24	118	24	40	Private	no	530.65	520.81	42	0.400	0.7	1.034	0.290	0.025	Grate inlet in gravel road. Running water.	2023-01-23	
168	5120	Hanging Basket	6196395.078	2067935.904	36	40	88	24	36	Private	no	525.62	518.28	42	0.400	0.7	1.668	0.467	0.036	Grate inlet in grassy area	2023-01-23	
170	5076	Hanging Basket	6196399.855	2068274.87	24	36	88	24	40	Private	yes	522.72	515.38	42	0.400	0.7	2.957	0.828	0.082	Grate under leaves and dirt. Grated inlet in grassy field	2023-01-23	
171	5011	Hanging Basket	6196408.945	2068937.808	24	36	106	24	40	Private	yes	520.04	511.20	42	0.400	0.7	3.674	1.029	0.106	Grated inlet in grassy field. Grate clogged with leaves	2023-01-23	
173	5004	Hanging Basket	6196409.777	2069000.803	24	40	83	24	36	Public	yes	517.33	510.42	42	0.400	0.7	0.768	0.215	0.021	Grated inlet off road. Grate clogged with leaves.	2023-01-23	
174	1292	Hanging Basket	6207616.736	2085839.051	-	-	-	-	-	Public	-	528.60	-	33	0.400	0.7	1.316	0.368	0.038	Curb inlet. Did not field visit.	2023-01-25	
175	5034	Hanging Basket	6196405.126	2068648.833	24	36	94	24	40	Private	no	521.16	513.32	42	0.400	0.7	3.637	1.018	0.103	Grated inlet in grassy field	2023-01-23	
287	4167	CPS	6194302.827	2074277.471	24	40	120	24	40	Public	no	481.12	471.12	21	0.400	0.7	12.888	3.609	0.438	Curb inlet. Did not field visit.	2023-01-24	
375	3869	CPS	6187415.53	2075662.835	30	40	45	24	40	Public	no	429.83	426.08	12	0.400	0.7	10.964	3.070	0.125	Curb Inlet	2023-01-23	
394	-	CPS	6181138.957	2078794.661	24	-	67	24	-	Private	no	391.44	385.86	12	0.400	0.7	1.857	0.520	0.049	Circular grate inlet, in parking lot. Not on inlet listed in city's GIS.	2023-01-24	
395	2951	CPS	6181600.027	2078784.228	26	27	67	26	27	Private	no	392.74	387.16	15	0.400	0.7	2.173	0.608	0.063	Curb inlet.	2023-01-24	
523	2661	CPS	6203513.247	2079606.241	34	40	97	24	40	Public	no	523.59	515.51	33	0.400	0.7	2.175	0.609	0.064	Curb inlet.	2023-01-25	
529	6177	CPS	6203287.831	2079601.075	30	40	72	24	40	Public	no	522.43	516.43	18	0.400	0.7	0.936	0.262	0.027	Curb inlet.	2023-01-25	
601	8361	Hanging Basket	6173043.72	2078957.438	34	40	214	24	40	Public	no	359.32	341.49	48	0.400	0.7	5.264	1.474	0.155	Curb Inlet	2023-01-24	
607	2269	CPS	6202553.023	2081988.577	32	40	26	24	40	Public	no	513.08	510.91	12	0.400	0.7	1.954	0.547	0.210	Curb inlet.	2023-01-25	
10002	2352	CPS	6204023.3	2079849.124	32	40	74	24	40	Public	no	524.66	518.49	18	0.400	0.7	6.564	1.838	0.132	Curb inlet.	2023-01-25	
10003	1765	Hanging Basket	6181762.745	2080607.731	24	40	-	24	40	Private	no	426.22	-	24	0.400	0.7	6.130	1.716	0.180	Treated.	2023-01-24	
10004	1766	CPS	6179237.267	2080597.236	24	40	57	24	40	Public	no	410.56	405.81	30	0.400	0.7	10.044	2.812	0.009	Grate inlet.	2023-01-24	
10005	1777	Hanging Basket	6179060.567	2080544.691	40	57	67	40	57	Public	no	408.75	403.17	36	0.400	0.7	0.504	0.141	0.013	Grate inlet. 32 inch outlet pipe.	2023-01-24	
10008	2331	CPS	6181632.077	2079960.971	24	40	44	24	40	Private	no	402.10	398.43	15	0.400	0.7	3.312	0.927	0.094	Needs cleaning. Grate inlet. City confirm ownership.	2023-01-24	
10010	2682	CPS	6180845.057	2079495.111	26	40	48	26	40	Private	no	389.24	385.24	21	0.400	0.7	5.495	1.539	0.395	Would need to add gate from zone 7 roadway to access.	2023-01-24	
10011	2776	CPS	6183862.148	2079138.891	33	40	68	24	40	Public	no	406.40	400.73	12	0.400	0.7	1.574	0.441	0.014	Curb inlet	2023-01-24	
10012	2660	CPS	6185961.307	2079609.641	32	40	105	24	40	Public	no	416.22	407.47	12	0.400	0.7	10.641	2.979	0.017	Curb inlet	2023-01-23	
10013	3001	Hanging Basket	6186291.975	2078615.621	26	36	52	26	36	Public	no	423.18	418.85	12	0.400	0.7	0.458	0.128	0.006	Grate inlet.	2023-01-23	
10015	3175	CPS	6186286.53	2078181.935	32	40	52	24	40	Public	no	421.29	416.96	18	0.400	0.7	0.315	0.088	0.007	Curb inlet	2023-01-23	
10018	527	CPS	6184083.926	2075984.479	33	40	59	24	40	Public	no	411.87	406.95	12	0.400	0.7	1.478	0.414	0.074	Curb Inlet	2023-01-23	
10019	535	CPS	6184913.257	2075970.003	31	40	74	24	40	Public	no	415.74	409.57	12	0.400	0.7	4.952	1.387	0.001	Curb Inlet.	2023-01-23	
10020	528	CPS	6185375.087	2075964.241	34	40	43	24	40	Public	no	417.09	413.50	12	0.400	0.7	2.868	0.803	0.000	Curb Inlet.	2023-01-23	
10021	6123	CPS	6185895.934	2075950.6	45	40	60	24	40	Public	no	420.24	415.24	15	0.400	0.7	9.365	2.622	0.001	Curb Inlet.	2023-01-23	
10023	3420	Hanging Basket	6186271.965	2076997.362	35	40	-	24	40	Public	no	418.42	-	18	0.400	0.7	1.237	0.346	0.032	Curb Inlet.	-	
10024	3421	Hanging Basket	6186274.707	2077454.364	36	40	45	24	40	Public	no	418.22	414.47	42	0.400	0.7	1.494	0.418	0.001	Curb Inlet.	2023-01-23	
10025	-	CPS	6185915.425	2077453.581	24	24	54	24	27	Private	no	417.86	413.36	24	0.400	0.7	0.614	0.172	0.018	Grate Inlet. In private parking lot. Not on inlet listed in city's GIS.	2023-01-23	
10026	6244	CPS	6190344.207	2077897.651	32	40	62	24	40	Public	no	447.26	442.09	12	0.400	0.7	1.252	0.351	0.031	Curb inlet.	2023-01-24	
10027	3387	CPS	6189199.687	2077641.411	29	40	42	24	40	Public	no	441.81	438.31	18	0.400	0.7	3.880	1.086	0.013	Curb inlet	2023-01-24	
10028	3177	Hanging Basket	6190373.012	2078168.821	32	40	-	24	40	Public	-	446.70	-	54	0.400	0.7	2.658	0.744	0.003	Curb Inlet. Treated.	2023-01-24	
10029	4437	CPS	6189326.607	2073232.18	36	38	26	30	38	Public	no	449.47	447.30	21	0.400	0.7	12.497	3.499	0.427	Curb Inlet	2023-01-23	
10030	-	CPS	6189334.737	2073669.091	32	40	30	24	40	Public	no	451.12	448.62	15	0.400	0.7	4.234	1.186	0.000	Curb Inlet. Not on inlet listed in city's GIS.	2023-01-23	
10031	6009	CPS	6188644.564	2072537.835	31	36	-	24	40	Public	yes	448.04	-	27	0.400	0.7	1.111	0.311	0.006	Check pipe sizes for CPS versus hanging	2023-01-23	
10032	5989	CPS	6189010.267	2072057.191	24	36	-	24	40	Public	yes	452.93	-	12	0.400	0.7	0.251	0.070	0.006	Clogged with leaves. Pump under RR overpass	2023-01-23	
10035	4835	CPS	6199498.171	2070250.952	31	36	68	24	40	Public	no	541.93	536.27	15	0.400	0.7	1.925	0.539	0.000	Curb Inlet.	2023-01-23	
10036	4597	CPS	6203536.517	2071693.511	31	36	45	25	41	Public	no	558.11	554.36	21	0.400	0.7	7.634	2.137	0.158	Curb Inlet.	2023-01-23	
10037	7820	CPS	6208890.553	2069098.331	24	36	84	24	40	Public	no	609.84	602.84	36	0.400	0.7	9.938	2.783	0.083	Off road with side inlet	2023-01-23	
10038	6459	CPS	6208491.537	2070116.98	-	-	65	24	40	Public	no	597.57	592.16	24	0.400	0.7	10.589	2.965	0.003	Construction filter fabric. In grassy swale. Couldn't lift grate due to vegetation.	2023-01-23	
10039	-	CPS	6208203.367	2070004.521	24	36	-	24	40	Public	no	592.73	-	18	0.400	0.7	4.454	1.247	0.000	Blocked by filter fabric. In grassy swale. Not on inlet listed in city's GIS.	2023-01-23	
10040	7808	CPS	6209464.807	2069039.801	24	36	51	26	36	Public	no	617.49	613.24	18	0.400	0.7	4.966	1.390	0.087	Off roadway in swale. 12" system connects down St Helena	2023-01-23	
10041	6470	CPS	6207919.705	2070122.611	24	36	44	24	40	Public	no	590.60	586.93	18	0.400	0.7	4.000	1.120	0.006	In grassy swale	2023-01-23	
10042	9393	CPS	6203392.46	2081952.454	33	26	41	33	26	Public	no	515.75	512.33	27	0.400	0.7	3.384	0.947	0.016	Grate inlet.	2023-01-25	
10043	6469	CPS	6207778.654	2070132.174	-	-	-	-	-	Public	-	592.98	-	18	0.400	0.7	2.400	0.672	0.003	Curb Inlet. Did not visit in field.	-	
10044	6497	CPS	6208356.701	2070551.871	24	36	50	24	40	Public	no	595.77	591.60	18	0.400	0.7	3.018	0.845	0.005	In swale	2023-01-23	
10045	800	Hanging Basket	6205537.427	2072308.911	22	34	109	22	40	Public	no	568.59	559.51	54	0.400	0.7	27.031	7.569	0.039	Off street grate inlet.	2023-01-23	
10046	-	CPS	6200337.149	2076758.689	24	-	48	24	-	Public	no	531.15	527.15	24	0.400	0.7	8.667	2.427	0.055	Manhole. 2 grate inlets feed into. 24 in diameter pipe at manhole. Not on inlet listed in city's GIS.	2023-01-24	
10048	3459	Hanging Basket	6201123.462	2077297.488	32	40	67	24	40	Public	no	529.78	524.19	24	0.400	0.7	14.370	4.024	0.544	Curb inlet. 2 ft standing water inside. Treated. Needs cleaning.	2023-01-24	
10050	3089	Hanging Basket	6203719.267	2078448.281	40	40	128	24	40	Public	no	528.08	517.41	36	0.400	0.7	3.290	0.921	0.008	Curb Inlet.	2023-01-25	
10200	4999	Hanging Basket	6196407.781	2069055.346	-	-	86	24	40	Public	-	517.13	509.97	42	0.400	0.7	2.847	0.797	0.018	Grate Inlet.	-	
10204	-	Hanging Basket	6204002.318	2078437.644	-	-	-	-	-	Public	-	527.03	-	18	0.400	0.7	3.321	0.930	0.096	Curb Inlet. Did not field visit. Not on inlet listed in city's GIS.	-	
10205	8599	CPS	6184044.27	2077082.39	-	-	-	-	-	Public												

**ATTACHMENT C.12**

COUNTY (Data as of 10/31/2014)	AGENCY	Bridge Number	Google Map Link	Facility Carried	Feature Intersected	Location	YEAR BUILT	LANES
Alameda County	City of Livermore	33C0070	<a href="http://maps.google.com/maps?q=STANLEY+BLVD">http://maps.google.com/maps?q=STANLEY+BLVD</a>	STANLEY BLVD	ARROYO MOCHO	0.1 MI W/O MURRIETA BLV	1940	5
Alameda County	City of Livermore	33C0129	<a href="http://maps.google.com/maps?q=SOUTH+VASCO+RD">http://maps.google.com/maps?q=SOUTH+VASCO+RD</a>	SOUTH VASCO RD	ARROYO SECO	0.1 MI N/O EAST AVE	1958	4
Alameda County	City of Livermore	33C0191	<a href="http://maps.google.com/maps?q=BLUEBELL+ROAD">http://maps.google.com/maps?q=BLUEBELL+ROAD</a>	BLUEBELL ROAD	ALTAMONT CREEK TRIBUT	1.1 MI NORTH OF I-580	1970	2
Alameda County	City of Livermore	33C0192	<a href="http://maps.google.com/maps?q=BLUEBELL+ROAD">http://maps.google.com/maps?q=BLUEBELL+ROAD</a>	BLUEBELL ROAD	ALTAMONT CREEK	1.3 MI NORTH OF I-580	1970	2
Alameda County	City of Livermore	33C0193	<a href="http://maps.google.com/maps?q=BROADMOOR+ST">http://maps.google.com/maps?q=BROADMOOR+ST</a>	BROADMOOR ST	ALTAMONT CREEK	JUST N FIRESTONE RD	1970	2
Alameda County	City of Livermore	33C0194	<a href="http://maps.google.com/maps?q=CHARLOTTE+WAY">http://maps.google.com/maps?q=CHARLOTTE+WAY</a>	CHARLOTTE WAY	ARROYO SECO	0.3 MI N OF EAST AVE	1968	2
Alameda County	City of Livermore	33C0195	<a href="http://maps.google.com/maps?q=ARROYO+RD">http://maps.google.com/maps?q=ARROYO+RD</a>	ARROYO RD	ARROYO MOCHO	0.2 MI S COLLEGE AVE	1987	2
Alameda County	City of Livermore	33C0198	<a href="http://maps.google.com/maps?q=AIRWAY+BLVD">http://maps.google.com/maps?q=AIRWAY+BLVD</a>	AIRWAY BLVD	ARROYO LAS POSITAS	0.1 MI S/O IS 580	1972	2
Alameda County	City of Livermore	33C0379	<a href="http://maps.google.com/maps?q=LUCILLE+ST">http://maps.google.com/maps?q=LUCILLE+ST</a>	LUCILLE ST	ARROYO SECO	200' S CHARLOTTE WAY	1964	2
Alameda County	City of Livermore	33C0380	<a href="http://maps.google.com/maps?q=CHARLOTTE+WAY">http://maps.google.com/maps?q=CHARLOTTE+WAY</a>	CHARLOTTE WAY	ARROYO SECO	300' W LUCILLE ST	1987	2
Alameda County	City of Livermore	33C0381	<a href="http://maps.google.com/maps?q=PATTERSON+PASS+RD">http://maps.google.com/maps?q=PATTERSON+PASS+RD</a>	PATTERSON PASS RD	ARROYO SECO	500' E MULQUEENEY ST	1987	4
Alameda County	City of Livermore	33C0382	<a href="http://maps.google.com/maps?q=LAS+POSITAS+RD">http://maps.google.com/maps?q=LAS+POSITAS+RD</a>	LAS POSITAS RD	ARROYO SECO	0.3 MI EAST OF 1ST ST	1985	2
Alameda County	City of Livermore	33C0383	<a href="http://maps.google.com/maps?q=ARROYO+VISTA">http://maps.google.com/maps?q=ARROYO+VISTA</a>	ARROYO VISTA	ARROYO SECO	500' W LAS POSITAS RD	1985	2
Alameda County	City of Livermore	33C0385	<a href="http://maps.google.com/maps?q=VASCO+ROAD">http://maps.google.com/maps?q=VASCO+ROAD</a>	VASCO ROAD	UP RR,ACE, FLOOD CONTR	0.9 MI S OF I-580	1987	4
Alameda County	City of Livermore	33C0386	<a href="http://maps.google.com/maps?q=UP+RR">http://maps.google.com/maps?q=UP+RR</a>	UP RR	MURRIETA BLVD	0.1 MI N STANLEY RD	1987	
Alameda County	City of Livermore	33C0397	<a href="http://maps.google.com/maps?q=SPRINGTOWN+BLVD">http://maps.google.com/maps?q=SPRINGTOWN+BLVD</a>	SPRINGTOWN BLVD	ALTAMONT CREEK	1 MI N OF I-580	1981	2
Alameda County	City of Livermore	33C0413	<a href="http://maps.google.com/maps?q=PATTERSON+PASS+RD">http://maps.google.com/maps?q=PATTERSON+PASS+RD</a>	PATTERSON PASS RD	FLOOD CONTROL CHANNE	0.4 Km East of S Vasco Rd	2000	4
Alameda County	City of Livermore	33C0414	<a href="http://maps.google.com/maps?q=LAUGHLIN+ROAD">http://maps.google.com/maps?q=LAUGHLIN+ROAD</a>	LAUGHLIN ROAD	ALTAMONT CREEK	0.1 km N of Foxtail Dr		2
Alameda County	City of Livermore	33C0415	<a href="http://maps.google.com/maps?q=SOUTHFRONT+ROAD">http://maps.google.com/maps?q=SOUTHFRONT+ROAD</a>	SOUTHFRONT ROAD	ARROYO SECO	0.1 km W of State Rte 84	1999	5
Alameda County	City of Livermore	33C0416	<a href="http://maps.google.com/maps?q=NORTH+MINES+ROAD">http://maps.google.com/maps?q=NORTH+MINES+ROAD</a>	NORTH MINES ROAD	UP RR, BNSF RY, & ACE	0.5 KM S. OF STATE RTE 84	1999	4
Alameda County	City of Livermore	33C0423	<a href="http://maps.google.com/maps?q=VALLECITOS+ROAD">http://maps.google.com/maps?q=VALLECITOS+ROAD</a>	VALLECITOS ROAD	ARROYO DEL VALLE	450' NW VINEYARD ROAD	1940	2
Alameda County	City of Livermore	33C0424	<a href="http://maps.google.com/maps?q&gt;FIRST+STREET">http://maps.google.com/maps?q&gt;FIRST+STREET</a>	FIRST STREET	ARROYO SECO	600' NW LAS POSITAS ROA	1994	7
Alameda County	City of Livermore	33C0425	<a href="http://maps.google.com/maps?q&gt;FIRST+STREET">http://maps.google.com/maps?q&gt;FIRST+STREET</a>	FIRST STREET	UP RR, BNSF RY, & ACE	150' SOUTH OF SCOTT ST	1977	4
Alameda County	City of Livermore	33C0426	<a href="http://maps.google.com/maps?q&gt;HOLMES+STREET">http://maps.google.com/maps?q&gt;HOLMES+STREET</a>	HOLMES STREET	ARROYO MOCHO	500' N MOCHO STREET	1939	4
	<b>Number of Bridges:</b>	<b>24</b>						

Width(ft)	Length(ft)	Federal Aid Highway	NHS Highway	Functional Class
63.65	124.67	On	Off	Urban Minor Art.
79.07	29.53	On	Off	Urban Minor Art.
52.17	59.06	On	Off	Urban Minor Coll.
40.35	49.21	On	Off	Urban Minor Coll.
51.84	26.25	On	Off	Urban Minor Art.
50.85	42.65	On	Off	Urban Minor Art.
55.77	154.20	On	Off	Urban Minor Coll.
51.84	98.43	On	Off	Urban Minor Art.
40.03	26.25	Off	Off	Urban Local Str.
48.88	26.25	Off	Off	Urban Local Str.
68.24	39.37	On	Off	Urban Minor Coll.
47.90	62.34	Off	Off	Urban Local Str.
47.90	59.06	Off	Off	Urban Local Str.
67.91	226.38	On	Off	Urban Minor Coll.
	147.64	Off	Off	
64.96	88.58	On	Off	Urban Minor Art.
67.59	29.53	On	Off	Urban Minor Art.
39.70	30' (wrong data -13.12336)	On	Off	Urban Minor Coll.
61.35	55.77	On	Off	Urban Minor Coll.
67.91	223.10	On	Off	Urban Minor Coll.
25.92	246.06	On	Off	Rural Major Coll.
113.85	111.55	On	Off	Urban Principal Art.
65.94	193.57	Off	Off	Urban Local Str.
67.91	101.71	On	Off	Urban Minor Coll.

Bridge Number	IRIS Bridge Description	IRIS Asset for D	Width	Length	Area	\$/SF Cost	Bridge Cost	Image
COLP001	Altamont Creek Pedestrian Bridge	Deck	8	10	80	\$ 750	\$ 60,000	
COLP002	Arroyo Road Pedestrian Bridge	Deck	6	132	792	\$ 1,000	\$ 792,000	
COLP003	Big Trees Park btwn Susan Ln/Cheryl	Deck	7	75	525	\$ 1,000	\$ 525,000	
COLP004	Charlotte Bridge - Arroyo Seco School	Deck	5	40	200	\$ 750	\$ 150,000	
COLP005	El Charro Pedestrian Bridge	Deck	8	85	680	\$ 1,000	\$ 680,000	
COLP008	Livermore Avenue Pedestrian Bridge	Deck	8	212	1696	\$ 1,000	\$ 1,696,000	
COLP006	Northfront Park - North Side Pedestrian Bridge	Deck	21	90	1890	\$ 1,000	\$ 1,890,000	
COLP007	Northfront Park - South Side Pedestrian Bridge	Deck	21	90	1890	\$ 1,000	\$ 1,890,000	
COLC001	Rockrose-Culverts Pedestrian Bridge	Deck	8	20	160	\$ 750	\$ 120,000	
COLP011	Springtown Golf Course Pedestrian Bridge	Deck	12	33	396	\$ 1,000	\$ 396,000	
COLP010	Vasco Road East Side Pedestrian Bridge	Deck	6	56	336	\$ 1,000	\$ 336,000	
COLP009	Vasco Road West Side Pedestrian Bridge	Deck	6	75	450	\$ 1,000	\$ 450,000	



Item	Bridge Number	Feature Intersected	Facility Carried	Location
1	33 0724	ARROYO LAS POSITAS	SR 84 (ISABEL AVE)	04-ALA-084-M27.74-LVMR
2	33C0070	ARROYO MOCHO	STANLEY BLVD	0.1 MI W/O MURRIETA BLVD
3	33C0129	ARROYO SECO	SOUTH VASCO RD	0.1 MI N/O EAST AVE
4	33C0191	ALTAMONT CREEK TRIBUTARY	BLUEBELL ROAD	1.1 MI NORTH OF I-580
5	33C0192	ALTAMONT CREEK	BLUEBELL ROAD	1.3 MI NORTH OF I-580
6	33C0193	ALTAMONT CREEK	BROADMOOR ST	NORTH OF SKIFF RD
7	33C0194	ARROYO SECO	CHARLOTTE WAY	0.3 MI N OF EAST AVE
8	33C0195	ARROYO MOCHO	ARROYO RD	0.2 MI S COLLEGE AVE
9	33C0198	ARROYO LAS POSITAS	AIRWAY BLVD	0.1 MI S/O IS 580
10	33C0379	ARROYO SECO	LUCILLE ST	200' S CHARLOTTE WAY
11	33C0380	ARROYO SECO	CHARLOTTE WAY	300' W LUCILLE ST
12	33C0381	ARROYO SECO	PATTERSON PASS RD	500' E MULQUEENEY ST
13	33C0382	ARROYO SECO	LAS POSITAS RD	0.3 MI EAST OF 1ST ST
14	33C0383	ARROYO SECO	ARROYO VISTA	500' W LAS POSITAS RD
15	33C0385	UP RR, ACE, FLOOD CONTROL	VASCO ROAD	0.9 MI S OF I-580
16	33C0386	MURRIETA BLVD	UP RR	0.1 MI N STANLEY RD
17	33C0395	ARROYO LAS POSITAS	W JACK LONDON BLVD	0.5 MI E OF EL CHARRO RD
18	33C0397	ALTAMONT CREEK	SPRINGTOWN BLVD	1 MI N OF I-580
19	33C0413	FLOOD CONTROL CHANNEL	PATTERSON PASS RD	0.4 Km East of S Vasco Rd
20	33C0414	ALTAMONT CREEK	LAUGHLIN ROAD	0.1 km N of Foxtail Dr
21	33C0415	ARROYO SECO	SOUTHFRONT ROAD	0.1 km W of State Rte 84
22	33C0416	UP RR, BNSF RY, & ACE	NORTH MINES ROAD	0.5 KM S. OF STATE RTE 84
23	33C0424	ARROYO SECO	FIRST STREET	600' NW LAS POSITAS ROAD
24	33C0425	UP RR, BNSF RY, & ACE	FIRST STREET	150' SOUTH OF SCOTT ST
25	33C0426	ARROYO MOCHO	HOLMES STREET	500' N MOCHO STREET
26	33C0449	GREENVILLE RD	UP RR, BNSF RY ACE	15 MI S OF NATIONAL DR
27	33C0450	GREENVILLE RD	UP RR, BNSF RY ACE	15 MI S OF NATIONAL DR
28	33C0485	ARROYO MOCHO	CONCANNON BLVD	0.2 MI S/O S LIVERMORE AV

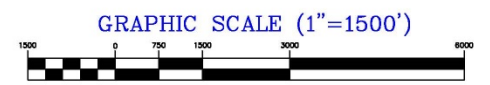
# LIVERMORE

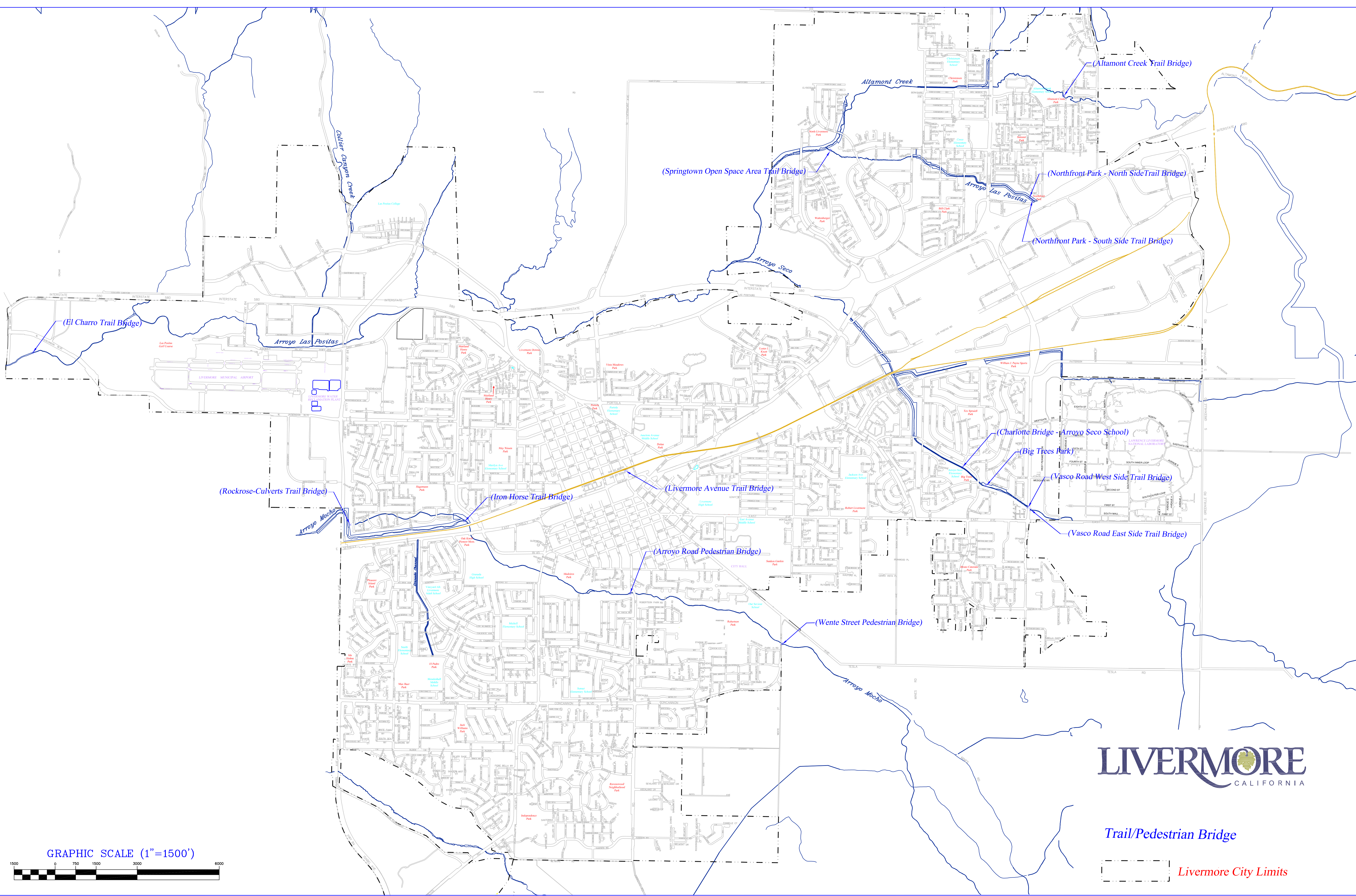
CALIFORNIA

## BRIDGE MAP

- (Red line) CITY BRIDGE
- (Yellow line) UPRR BRIDGE
- (Blue line) STATE BRIDGE
- (Green line) CITY BRIDGE NOT ON DOT LIST

--- Livermore City Limits





**LIVERMORE**  
CALIFORNIA

*Trail/Pedestrian Bridge*

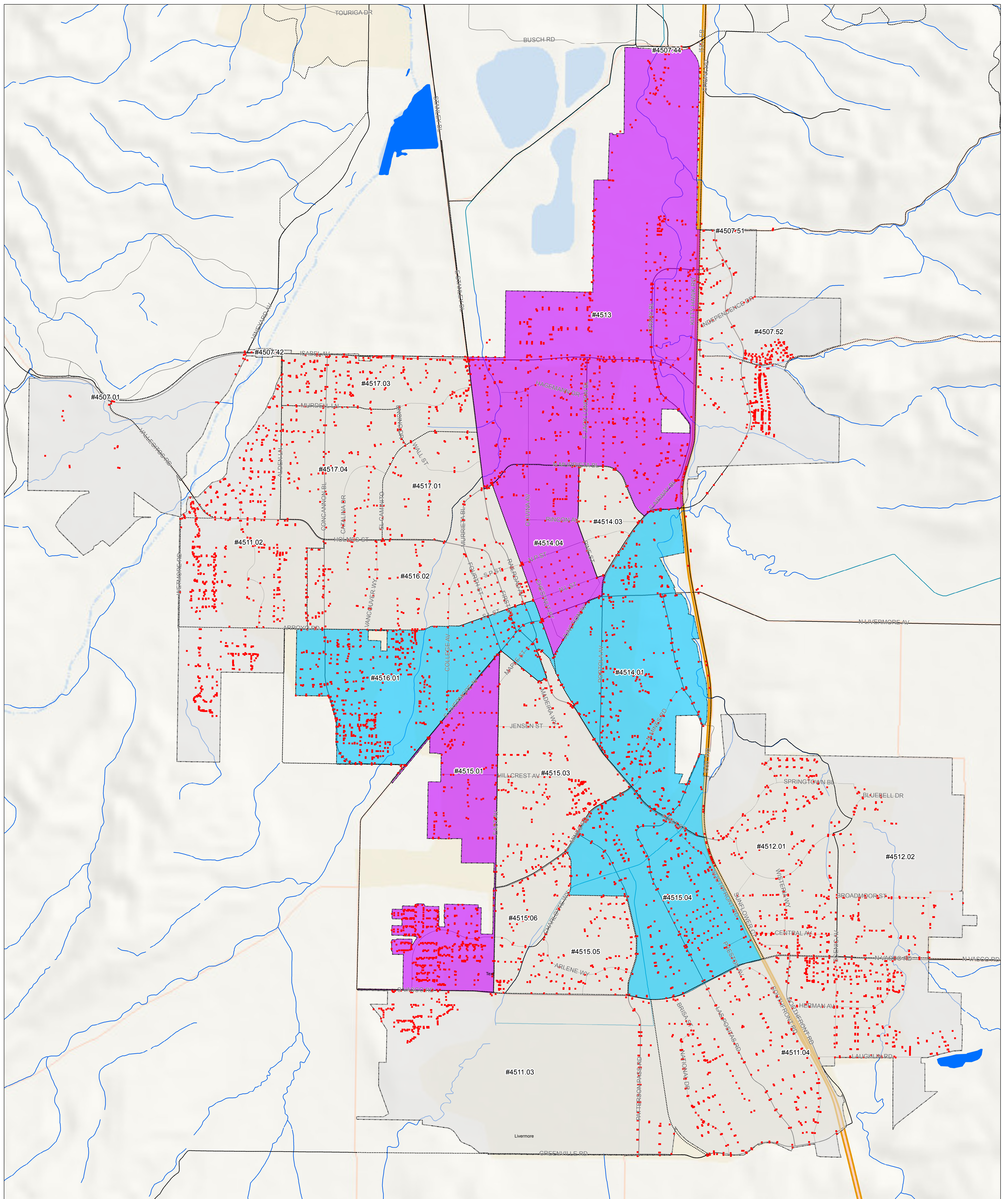
*Livermore City Limits*

GRAPHIC SCALE (1"=1500')





**ATTACHMENT C.17**



# LIVERMORE C17 PIT Data Map

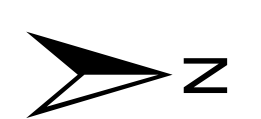
**DRAFT**

C.17 PIT Data	• Storm Inlets	— Canal or Ditch
0-8	■ Lakes	— Stream or River
8-29	⋯ Census Tract Boundary	— Arterial
29-70	⋯ County Boundary	— Collector
70-176	⋯ City Boundary	— Freeway
176-272		

### Notes:

1. Unsheltered population counts by census tract data source: Alameda County Homeless Count and Survey Comprehensive Report prepared by Alameda County, 2022.
2. As defined by Alameda County, unsheltered persons are individuals or families with a primary nighttime residence that is a public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings, including a car, park, abandoned building, bus or train stations, airport, or campground.
3. Freeways, expressways, and railroads are outside of the City's jurisdiction.
4. Census tracts may not align with jurisdictional boundaries. Associated data are approximate.

0 0.275 0.55 1.1 Miles



Information contained on these maps is for the sole purpose of the Alameda County Clean Water Program. Accuracy of the data is not guaranteed. Map Created by ACCWP GIS



7/28/2023