

Appendix A
State Water Resources Control Board
General Order 2022-0103-DWQ

STATE WATER RESOURCES CONTROL BOARD
1001 I Street, Sacramento, California 95814
ORDER WQ 2022-0103-DWQ
STATEWIDE WASTE DISCHARGE REQUIREMENTS
GENERAL ORDER FOR SANITARY SEWER SYSTEMS

This Order was adopted by the State Water Resources Control Board on December 6, 2022.

This Order shall become effective **180 days after the Adoption Date of this General Order**, on June 5, 2023.

The Enrollee shall comply with the requirements of this Order upon the Effective Date of this General Order.

This General Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, protect the Enrollee from liability under federal, state, or local laws, nor create a vested right for the Enrollee to continue the discharge of waste.

CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the State Water Board on December 6, 2022.

AYE: Chair E. Joaquin Esquivel
 Vice Chair Dorene D'Adamo
 Board Member Sean Maguire
 Board Member Laurel Firestone
 Board Member Nichole Morgan

NAY: None

ABSENT: None

ABSTAIN: None

 for

Jeanine Townsend
Clerk to the Board

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

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1. INTRODUCTION

This General Order regulates sanitary sewer systems designed to convey sewage. For the purpose of this Order, a sanitary sewer system includes, but is not limited to, pipes, valves, pump stations, manholes, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks. A sanitary sewer system includes:

- Laterals owned and/or operated by the Enrollee;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

Sewage is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system. Sewage contains high levels of suspended solids, non-digested organic waste, pathogenic bacteria, viruses, toxic pollutants, nutrients, oxygen-demanding organic compounds, oils, grease, pharmaceuticals, and other harmful pollutants.

For the purpose of this General Order, a spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Sewage and its associated wastewater spilled from a sanitary sewer system may threaten public health, beneficial uses of waters of the State, and the environment.

This General Order serves as statewide waste discharge requirements and supersedes the previous State Water Resources Control Board (State Water Board) Order 2006-0003-DWQ and amendments thereafter. All sections and attachments of this General Order are enforceable by the State Water Board and Regional Water Quality Control Boards (Regional Water Boards). Through this General Order, the State Water Board requires an Enrollee to:

- Comply with federal and state prohibitions of discharge of sewage to waters of the State, including federal waters of the United States;
- Comply with specifications, and notification, monitoring, reporting and recordkeeping requirements in this General Order that implement the federal Clean Water Act, the California Water Code (Water Code), water quality control plans (including Regional Water Board Basin Plans) and policies;
- Proactively operate and maintain resilient sanitary sewer systems to prevent spills;
- Eliminate discharges of sewage to waters of the State through effective implementation of a Sewer System Management Plan;
- Monitor, track, and analyze spills for ongoing system-specific performance improvements; and
- Report noncompliance with this General Order per reporting requirements.

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An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including:

- A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
 - greater than one (1) mile in length (each individual sanitary sewer system);
 - one (1) mile or less in length where the State Water Board or a Regional Water Board requires regulatory coverage under this Order; or
- A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Board or a Regional Water Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

For the purpose of this Order, a sanitary sewer system includes only systems owned and/or operated by the Enrollee.

2. REGULATORY COVERAGE AND APPLICATION REQUIREMENTS

2.1. Requirements for Continuation of Existing Regulatory Coverage

To continue regulatory coverage from previous Order 2006-0003-DWQ under this General Order, **within the 60-days-prior-to the Effective Date of this General Order**, the Legally Responsible Official of an existing Enrollee shall electronically certify the Continuation of Existing Regulatory Coverage form in the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database. The Legally Responsible Official will receive an automated CIWQS-issued Notice of Applicability email, confirming continuation of regulatory coverage under this General Order. All regulatory coverage under previous Order 2006-0003-DWQ will cease on the Effective Date of this Order.

An Enrollee continuing existing regulatory coverage is not required to submit a new application package or pay an application fee for enrollment under this General Order. The annual fee due date for continued regulatory coverage from previous Order 2006-0003-DWQ to this General Order remains unchanged.

A previous Enrollee of Order 2006-0003-DWQ that fails to certify the Continuation of Existing Regulatory Coverage form in the online CIWQS database by the Effective Date of this Order is considered a New Applicant, and will not have regulatory coverage for its sanitary sewer system(s) until:

- A new application package for system(s) enrollment is submitted per section 2.2 (Requirements for New Regulatory Coverage) below; and
- The new application package is approved per section 2.2.2 (Approval of Application Package (For New Applicants Only)).

2.2. Requirements for New Regulatory Coverage

No later than 60 days prior to commencing and/or assuming operation and maintenance responsibilities of a sanitary sewer system, a duly authorized representative that

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maintains legal authority over the public or private sanitary sewer system is required to enroll under this General Order by submitting a complete application package as specified below and as provided in Attachment B (Application for Enrollment Form) of this General Order.

Unless required by a Regional Water Board, a public agency that owns a combined sewer system subject to the Combined Sewer Overflow Control Policy (33 U.S. Code § 1342(q)), is not required to enroll, under this Order, the portions of its sanitary sewer system(s) that collects combined sanitary wastewater and stormwater.

2.2.1. Application Package Requirements

The Application for Enrollment package for new applicants must include the following items:

- **Application for Enrollment Form.** The form in Attachment B of this General Order must be completed, signed, and certified by a Legally Responsible Official, in accordance with section 5.1 (Designation of a Legally Responsible Official) of this General Order. If an electronic Application for Enrollment form is available at the time of application, a new applicant shall submit its application form electronically; and
- **Application Fee.** A fee payable to the “State Water Resources Control Board” in accordance with the Fee Schedule in the California Code of Regulations, Title 23, section 2200, or subsequent fee regulations updates.

The application fee for this General Order is based on the sanitary sewer system’s threat to water quality and complexity designations of category 2C or 3C, which is assigned based on the population served by the system. The current Fee Schedule for sanitary sewer systems is listed under subdivision (a)(2) at the following website: [Fee Schedule](https://www.waterboards.ca.gov/resources/fees/water_quality/) (https://www.waterboards.ca.gov/resources/fees/water_quality/).

2.2.2. Approval of Application Package (For New Applicants Only)

The Deputy Director of the State Water Board, Division of Water Quality (Deputy Director) will consider approval of each complete Application for Enrollment package. The Deputy Director will issue a Notice of Applicability letter which serves as approved regulatory coverage for the new Enrollee.

If the submitted application package is not complete in accordance with section 2.2.1 (Application Package Requirements) of this General Order, the Deputy Director will send a response letter to the applicant outlining the application deficiencies. The applicant will have 60 days from the date of the response letter to correct the application deficiencies and submit the identified items necessary to complete the application package to the State Water Board.

2.2.3. Electronic Reporting Account for New Enrollee

Within 30 days after the date of the Approval of Complete Application Package for System Enrollment, a duly authorized representative for the Enrollee shall obtain a CIWQS Sanitary Sewer System Database user account by clicking the “User Registration” button and following the directions on the [CIWQS Login Page](#)

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(<https://ciwqs.waterboards.ca.gov>). If additional assistance is needed to establish an online CIWQS user account, contact State Water Board staff by email at CIWQS@waterboards.ca.gov. The online user account will provide the Enrollee secure access to the online CIWQS database for electronic reporting.

2.3. Regulatory Coverage Transfer

Regulatory coverage under this General Order is not transferable to any person or party except after an existing Enrollee submits a written request for a regulatory coverage transfer to the Deputy Director, at least 60 days in advance of any proposed system ownership transfer. The written request must include a written agreement between the existing Enrollee and the new Enrollee containing:

- Acknowledgement that the transfer of ownership is solely of an existing system with an existing waste discharge identification (WDID) number;
- The specific ownership transfer date in which the responsibility and regulatory coverage transfer between the existing Enrollee and the new Enrollee becomes effective; and
- Acknowledgement that the existing Enrollee is liable for violations occurring up to the ownership transfer date and that the new Enrollee is liable for violations occurring on and after the ownership transfer date.

The Deputy Director will consider approval of the written request. If approved, the Deputy Director will issue a Notice of Applicability letter which serves as an approved transfer of regulatory coverage to the new Enrollee.

3. FINDINGS

3.1. Legal Authorities

3.1.1. Federal and State Regulatory Authority

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States (33 U.S.C. 1251). The Water Code authorizes the State Water Board to implement the Clean Water Act in the State and to protect the quality of all waters of the State (Water Code sections 13000 and 13160).

3.1.2. Discharge of Sewage

A discharge of untreated or partially treated sewage is a discharge of waste as defined in Water Code section 13050(d) that could affect the quality of waters of the State and is subject to regulation by waste discharge requirements issued pursuant to Water Code section 13263 and Chapter 9, Division 3, Title 23 of the California Code of Regulations. A discharge of sewage may pollute and alter the quality of the waters of the State to a degree that unreasonably affects the beneficial uses of the receiving water body or facilities that serve those beneficial uses (Water Code section 13050(l)(1)).

3.1.3 Water Boards Authority to Require Technical Reports, Monitoring, and Reporting

Water Code sections 13267 and 13383 authorize the Regional Water Boards and the State Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Water Code section 13267(b), authorizes the Regional Water Boards to “require any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region... or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of water within its region shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires...In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.” Water Code section 13267(f) authorizes the State Water Board to require this information if it consults with the Regional Water Boards and determines that it will not duplicate the efforts of the Regional Water Boards. The State Water Board has consulted with the Regional Water Boards and made this determination.

The technical and monitoring reports required by this General Order and Attachment E (Notification, Monitoring, Reporting and Recordkeeping Requirements) are necessary to evaluate and ensure compliance with this General Order. The effort to develop required technical reports will vary depending on the system size and complexity and the needs of the specific technical report. The burden and cost of these reports are reasonable and consistent with the interest of the state in protecting water quality, which is the primary purpose of requiring the reports.

Water Code section 13383(a) authorizes the Water Boards to “establish monitoring, inspection, entry, reporting, and recordkeeping requirements... for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.” Section 13383(b) continues, “the state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.”

Reporting of spills from privately owned sewer laterals and systems pursuant to section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) of this General Order is authorized by Water Code section 13225(c) and encouraged by the State Water Board, wherein a local agency may investigate and report on any technical factors involved in water quality control provided the burden including costs of such reports bears a reasonable relationship to the need for the report and the benefits to be obtained therefrom. The burden of reporting private spills under section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) is minimal and is outweighed by the benefit of providing Regional Water Boards an opportunity to respond to these spills

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when an Enrollee, which in many cases has a contractual relationship with the owner of the private system, has knowledge of the spills.

3.1.4. Water Board Authority to Prescribe General Waste Discharge Requirements

Water Code section 13263(i) provides that the State Water Board may prescribe general waste discharge requirements for a category of discharges if the State Water Board finds or determines that:

- The discharges are produced by the same or similar operations;
- The discharges involve the same or similar types of waste;
- The discharges require the same or similar treatment standards; and
- The discharges are more appropriately regulated under general waste discharge requirements than individual waste discharge requirements.

Since 2006, the State Water Board has been regulating over 1,100 publicly owned sanitary sewer systems (See section 3.1.5 (Previous Statewide General Waste Discharge Requirements) of this General Order). California also has a large unknown number of unregulated privately owned sanitary sewer systems. All waste conveyed in publicly owned and privately owned sanitary sewer systems (as defined in this General Order) is comprised of untreated or partially treated domestic waste and/or industrial waste. Generally, sanitary sewer systems are designed and operated to convey waste by gravity or under pressure; system-specific design elements and system-specific operations do not change the common nature of the waste, the common threat to public health, or the common impacts on water quality. Spills of waste from a sanitary sewer system prior to reaching the ultimate downstream treatment facility are unauthorized and enforceable by the State Water Board and/or a Regional Water Board. Therefore, spills from sanitary sewer systems are more appropriately regulated under general waste discharge requirements.

As specified in Water Code sections 13263(a) and 13241, the implementation of requirements set forth in this Order is for the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisance. The requirements implement the water quality control plans (Basin Plans) for each Regional Water Board and take into account the environmental characteristics of sewer service areas and hydrographic units within the state. Additionally, the State Water Board has considered water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality, costs associated with compliance with these requirements, the need for developing housing within California, and the need to protect sources of drinking water and other water supplies.

3.1.5. Previous Statewide General Waste Discharge Requirements

On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ serving as Waste Discharge Requirements pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260) for inadvertent discharges to waters of the State. Order 2006-0003-DWQ prohibited discharges of untreated or partially treated sewage. Order 2006-0003-DWQ also required system-specific management, operation, and maintenance of publicly owned sewer systems greater than one mile in length.

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To decrease the impacts on human health and the environment caused by sewage spills, the previous Order required enrollees to develop a rehabilitation and replacement plan that identifies system deficiencies and prioritizes short-term and long-term rehabilitation actions. The previous Order also required enrollees to:

1. Maintain information that can be used to establish and prioritize appropriate Sewer System Management Plan activities; and
2. Implement a proactive approach to reduce spills.

The previous Order required Sewer System Management Plan elements for “the proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management.”

On July 30, 2013, the State Water Board amended General Order 2006-0003-DWQ with Order WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

Many enrollees of Order 2006-0003-DWQ have already implemented proactive measures to reduce sewage spills. Other enrollees, however, still need technical assistance and funding to improve sanitary sewer system operation and maintenance for the reduction of sewage spills.

3.1.6. Existing Memorandum of Agreement with California Water Environment Association

The California Water Environment Association is a nonprofit organization dedicated to providing water industry certifications, training, and networking opportunities. The Association’s Technical Certification Program provides accredited sanitary sewer system operator certification for collection system operators and maintenance workers.

On February 10, 2016, the State Water Board entered into a collaborative agreement with the Association titled *Memorandum of Agreement Between the California State Water Resources Control Board and the California Water Environment Association - Training Regarding Requirements Set Forth in Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*. The Memorandum sets forth collaborative training necessary for regulated sanitary sewer system personnel to operate and maintain a well operating system and ensure full compliance with statewide sewer system regulations.

On March 15, 2018, the State Water Board and the California Water Environment Association amended the existing Memorandum of Agreement to include collaborative outreach and expand training needs associated with further updates to Water Board regulations for sanitary sewer systems. The State Water Board encourages further Agreement updates as necessary to support improved sewer system operations and the professionalism of collection system operators.

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3.2. General

3.2.1. Waters of the State

Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state as defined in Water Code section 13050(e), and are inclusive of waters of the United States.

3.2.2. Sanitary Sewer System Spill Threats to Public Health and Beneficial Uses

Sewage contains high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. Sewage spills may cause a public nuisance, particularly when sewage is discharged to areas with high public exposure such as streets and surface waters used for drinking, irrigation, fishing, recreation, or other public consumption or contact uses.

More specifically, sanitary sewer spills may:

- Adversely affect aquatic life and/or threaten water quality when reaching receiving waters;
- Inadvertently release trash, including plastics;
- Impair the recreational use and aesthetic enjoyment of surface waters by polluting surface water or groundwater;
- Threaten public health through direct public exposure to bacteria, viruses, intestinal parasites, and other microorganisms that can cause serious illness such as gastroenteritis, hepatitis, cryptosporidiosis, and giardiasis;
- Negatively impact ecological receptors and biota within surface waters; and
- Cause nuisance including odors, closure of beaches and recreational areas, and property damage.

Sanitary sewer system spills may pollute receiving waters and threaten beneficial uses of surface water and groundwater. Potentially threatened beneficial uses include, but are not limited to the following (with associated acronym representations as included in statewide water quality control plans and Regional Water Boards' Basin Plans):

- Municipal and Domestic Supply (MUN)
- Water Contact Recreation (REC-1) and Non-Contact Water Recreation (REC-2)
- Cold Freshwater Habitat (COLD)
- Warm Freshwater Habitat (WARM)
- Native American Culture (CUL)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Wetland Habitat (WET)
- Agricultural Supply (AGR)
- Estuarine Habitat (EST)

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- Commercial and Sport Fishing (COMM)
- Subsistence Fishing (SUB)
- Tribal Tradition and Culture (CUL)
- Tribal Subsistence Fishing (T-SUB)
- Aquaculture (AQUA)
- Marine Habitat (MAR)
- Preservation of Biological Habitats of Special Significance (BIOL)
- Migration of Aquatic Organisms (MIGR)
- Shellfish Harvesting (SHELL)
- Industrial Process Supply (PROC)
- Industrial Service Supply (IND)
- Hydropower Generation (POW)
- Navigation (NAV)
- Flood Peak Attenuation/Flood Water Storage (FLD)
- Water Quality Enhancement (WQE)
- Fresh Water Replenishment (FRSH)
- Groundwater Recharge (GWR)
- Inland Saline Water Habitat (SAL)

3.2.3. Proactive Sanitary Sewer System Management to Eliminate Spill Causes

Finding 3 of the previous Order, 2006-0003-DWQ, states: “Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO [sanitary sewer overflow]. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.”

Many spills are preventable through proactive attention on sanitary sewer system management using the best practices and technologies available to address major causes of spills, including but not limited to:

- Blockages from sources including but not limited to:
 - Fats, oils and grease;
 - Tree roots;
 - Rags, wipes and other paper, cloth and plastic products; and
 - Sediment and debris.
- Sewer system damage and exceedance of sewer system hydraulic capacity from identified system-specific environmental, and climate-change impacts, including but not limited to:

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- Sea level rise impacts including flooding, coastal erosion, seawater intrusion, tidal inundation and submerged lands;
- Increased surface water flows due to higher intensity rain events;
- Flooding;
- Wildfires and wildfire induced impacts;
- Earthquake induced damage;
- Landslides; and
- Subsidence.
- Infrastructure deficiencies and failures, including but not limited to:
 - Pump station mechanical failures;
 - System age;
 - Construction material failures;
 - Manhole cover failures;
 - Structural failures; and
 - Lack of proper operation and maintenance.
- Insufficient system capacity (temporary or sustained), due to factors including but not limited to:
 - Excessive and/or increased storm or groundwater inflow/infiltration;
 - Insufficient capacity due to population increase and/or new connections from industrial, commercial and other system users; and
 - Stormwater capture projects utilizing a sanitary sewer system to convey stormwater to treatment facilities for reuse.
- Community impacts, including but not limited to:
 - Power outages;
 - Vandalism; and
 - Contractor-caused or other third party-caused damages.

3.2.4. Underground Sanitary Sewer System Leakage

Portions of some sanitary sewer systems may leak, causing underground exfiltration (exiting) of sewage from the system. Exfiltrated sewage that remains in the underground infrastructure trench and/or the soil matrix, and that does not discharge into waters of the State (surface water or groundwater) may not threaten beneficial uses.

Underground exfiltrated sewage may threaten beneficial uses if discharged to waters of the State. Exfiltrated sewage that discharges to groundwater may impact beneficial uses of groundwater and pollute groundwater supply. Additionally, if in close proximity, exfiltrated sewage may enter into a compromised underground drainage conveyance system that discharges into a water of the United States, or into groundwater that is hydrologically connected to (feeds into) a water of the United States, thus potentially causing: (1) a Clean Water Act violation, (2) threat and impact to beneficial uses, and/or (3) surface water pollution.

3.2.5. Proactive Sanitary Sewer System Management to Reduce Inflow and Infiltration

Excessive inflow (stormwater entering) and infiltration (groundwater seepage entering) to sanitary sewer systems is preventable through proactive sewer system management using the best practices and technologies available. The efficiency of the downstream wastewater treatment processes is dependent on the performance of the sanitary sewer system. When the structural integrity of a sanitary sewer system deteriorates, high volumes of inflow and infiltration can enter the sewer system. High levels of inflow and infiltration increase the hydraulic load on the downstream treatment plant, which can reduce treatment efficiency, lead to bypassing a portion of the treatment process, cause illegal discharge of partially treated effluent, or in extreme situations make biological treatment facilities inoperable (e.g., wash out the biological organisms that treat the waste).

3.3. Water Quality Control Plans, Policies and Resolutions

The nine Regional Water Boards have adopted region-specific water quality control plans (commonly referred to as Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives. The State Water Board has adopted statewide water quality control plans, policies and resolutions establishing statewide water quality objectives, implementation programs and initiatives.

3.3.1. State Water Board Antidegradation Policy

On October 28, 1968, the State Water Board adopted Resolution 68-16, titled Statement of Policy with Respect to Maintaining High Quality of Waters in California, which incorporates the federal antidegradation policy. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings.

The continued prohibition of sewage discharges from sanitary sewer systems into waters of the State aligns with Resolution 68-16. A sewage discharge from sanitary sewers to waters of the State is prohibited by this Order. Therefore, this Order does not allow degradation of waters of the State. In addition, this Order: (1) further expands the existing prohibition of sewage discharges to include waters of the State, in addition to waters of the United States as provided in previous Order 2006-0003-DWQ, and (2) enhances the ability for Water Board enforcement of violations of the established prohibitions.

3.3.2. State Water Board Sources of Drinking Water Policy

On May 19, 1988, the State Water Board adopted Resolution 88-63 (amended on February 1, 2006), titled Sources of Drinking Water, establishing state policy that all waters of the State, with certain exceptions, are suitable or potentially suitable for municipal or domestic supply.

3.3.3. State Water Board Cost of Compliance Resolution

On September 24, 2013, the State Water Board adopted Resolution 2013-0029, titled Directing Actions in Response to Efforts by Stakeholders on Reducing Costs of

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Compliance While Maintaining Water Quality Protection. Through this resolution, the State Water Board committed to continued stakeholder engagement in identifying and implementing measures to reduce costs of compliance with regulatory orders while maintaining water quality protection and improving regulatory program outcomes.

3.3.4. State Water Board Human Right to Water Resolution

On February 16, 2016, the State Water Board adopted Resolution 2016-0010, titled Adopting the Human Right to Water as a Core Value and Directing its Implementation in Water Board Programs and Activities, addressing the human right to water as a core value and directing Water Board programs to implement requirements to support safe drinking water for all Californians.

On November 16, 2021, the State Water Board adopted Resolution 2021-0050 titled Condemning Racism, Xenophobia, Bigotry, and Racial Injustice, and Strengthening Commitment to Racial Equity, Diversity, Inclusion, Access, and Anti-racism. Among other actions, through Resolution 2021-0050, the State Water Board, in summary as corresponding to this General Order, reaffirms its commitment to its Human Right to Water resolution, upholding that every human being in California deserves safe, clean, affordable, and accessible water for human consumption, cooking, and sanitation purposes. Resolution 2021-0050 provides the State Water Board commitment to:

- Protect public health and beneficial uses of waterbodies in all communities, including communities disproportionately burdened by wastes discharge of waste to land and surface water;
- Restore impaired surface waterbodies and degraded aquifers; and
- Promote multi-benefit water quality projects.

Through Resolution 2021-0050, the State Water Board also commits to expanding implementation of its Climate Change Resolution to address the disproportionate effects of extreme hydrologic conditions and sea-level rise on Black, Indigenous, and people of color communities, prioritizing:

- The right to safe, clean, affordable, and accessible drinking water and sanitation;
- Sustainable management and protection of local groundwater resources;
- Healthy watersheds; and
- Access to surface waterbodies that support subsistence fishing.

On June 7, 2022, the State Water Board adopted a Resolution, titled Authorizing the Executive Director or Designee to Enter into One or More Multi-Year Contracts Up to a Combined Sum of \$4,000,000 for a Statewide Wastewater Needs Assessment, supporting the equitable access to sanitation for all Californians and implementation of Resolutions 2016-0010 and 2021-0050.

This General Order supports the State Water Board priority in collecting a comprehensive set of data for California's wastewater systems, including sanitary sewer systems. Data reported per the requirements of this Order will be used with data from other Water Boards' programs, to further develop criteria and create a statewide risk

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framework to prioritize critical funding and infrastructure investments for California's most vulnerable populations, including disadvantaged or severely disadvantaged communities with inadequate or failing sanitation systems and threatened access to healthy drinking water supplies.

3.3.5. State Water Board Open Data Resolution

On July 10, 2018, the State Water Board adopted Resolution 2018-0032, titled Adopting Principles of Open Data as a Core Value and Directing Programs and Activities to Implement Strategic Actions to Improve Data Accessibility and Associated Innovation, directing regulatory programs to assure all monitoring and reporting requirements support the State Water Boards' Open Data Initiative.

3.3.6. State Water Board Response to Climate Change

On March 7, 2017, the State Water Board adopted Resolution 2017-0012, titled Comprehensive Response to Climate Change, requiring a proactive response to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities.

3.4. California Environmental Quality Act

The adoption of this Order is an action to reissue general waste discharge requirements that is exempt from the California Environmental Quality Act (Public Resources Code section 21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment (Cal. Code Regs., Title 14, section 15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal. Code Regs., Title 14, section 15301, to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in sections 15301 and 15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

3.5. State Water Board Funding Assistance for Compliance with Water Board Water Quality Orders

The State Water Board, Division of Financial Assistance administers the implementation of the State Water Board financial assistance programs, per Board-adopted funding policies. Among other funding areas, the Division administers loan and grant funding for the planning and construction of wastewater and water recycling facilities per funding program-specific policies and guidelines. Applicants may apply for Clean Water State Revolving Fund low-interest loan, Small Community Wastewater grant funding assistance, and other funding available at the time of application, for some of the costs associated with complying with this General Order.

Funding applicants may obtain further information regarding current funding opportunities, and Division of Financial Assistance staff contact information at the following website: [Financial Assistance Funding - Grants and Loans | California State Water Resources Control Board](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/).

(https://www.waterboards.ca.gov/water_issues/programs/grants_loans/)

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Section 13477.6 of the Water Code authorizes the Small Community Grant Fund. The Small Community Grant Fund allows the State Water Board to provide grant funding assistance to small, disadvantaged communities and small severely disadvantaged communities that may not otherwise be able to afford a loan or similar financing for projects to comply with requirements of this General Order. The State Water Board also considers loan forgiveness on a disadvantaged community-specific basis.

For disadvantaged communities' wastewater needs, the State Water Board places priority on the funding of projects that address:

- Public health;
- Violations of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permits;
- Providing sewer system service to existing septic tank owners; and
- High priority public health and water quality concerns identified by a Regional Water Board.

3.6. Notification to Interested Parties

On January 31, 2022, the State Water Board notified interested parties and persons of its intent to reissue Sanitary Sewer Systems General Order 2006-0003-DWQ by issuing a draft General Order for a 60-day public comment period. State Water Board staff conducted extensive stakeholder outreach and encouraged public participation in the adoption process for this General Order. On March 15, 2022, the State Water Board held a public meeting to hear and consider oral public comments. The State Water Board considered all public comments prior to adopting this General Order.

THEREFORE, IT IS HEREBY ORDERED, that pursuant to Water Code sections 13263, 13267, and 13383 this General Order supersedes Order 2006-0003-DWQ, Order WQ 2013-0058-EXEC, and any amendments made to these Orders thereafter, except for enforcement purposes and to meet the provisions contained in Division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, the Enrollee shall comply with the requirements in this Order.

4. PROHIBITIONS

4.1 Discharge of Sewage from a Sanitary Sewer System

Any discharge from a sanitary sewer system that has the potential to discharge to surface waters of the State is prohibited unless it is promptly cleaned up and reported as required in this General Order.

4.2 Discharge of Sewage to Waters of the State

Any discharge from a sanitary sewer system, discharged directly or indirectly through a drainage conveyance system or other route, to waters of the State is prohibited.

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4.3. Discharge of Sewage Creating a Nuisance

Any discharge from a sanitary sewer system that creates a nuisance or condition of pollution as defined in Water Code section 13050(m) is prohibited.

5. SPECIFICATIONS

5.1. Designation of a Legally Responsible Official

The Enrollee shall designate a Legally Responsible Official that has authority to ensure the enrolled sanitary sewer system(s) complies with this Order, and is authorized to serve as a duly authorized representative. The Legally Responsible Official must have responsibility over management of the Enrollee's entire sanitary sewer system, and must be authorized to make managerial decisions that govern the operation of the sanitary sewer system, including having the explicit or implicit duty of making major capital improvement recommendations to ensure long-term environmental compliance. The Legally Responsible Official must have or have direct authority over individuals that:

- Possess a recognized degree or certificate related to operations and maintenance of sanitary sewer systems, and/or
- Have professional training and experience related to the management of sanitary sewer systems, demonstrated through extensive knowledge, training and experience.

For example, a sewer system superintendent or manager, an operations manager, a public utilities manager or director, or a district engineer may be designated as a Legally Responsible Official.

The Legally Responsible Official shall complete the electronic [CIWQS "User Registration" form](https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) (<https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp>). A Legally Responsible Official that represents multiple enrolled systems shall complete the electronic CIWQS "User Registration" form for each system.

The Enrollee shall submit any change to its Legally Responsible Official, and/or change in contact information, to the State Water Board within 30 calendar days of the change by emailing ciwqs@waterboards.ca.gov and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

5.2. Sewer System Management Plan Development and Implementation

To facilitate adequate local funding and management of its sanitary sewer system(s), the Enrollee shall develop and implement an updated Sewer System Management Plan. The scale and complexity of the Sewer System Management Plan, and specific elements of the Plan, must match the size, scale and complexity of the Enrollee's sanitary sewer system(s). The Sewer System Management Plan must address, at minimum, the required Plan elements in Attachment D (Sewer System Management Plan – Required Elements) of this General Order. To be effective, the Sewer System Management Plan must include procedures for the management, operation, and maintenance of the sanitary sewer system(s). The procedures must: (1) incorporate the

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prioritization of system repairs and maintenance to proactively prevent spills, and (2) address the implementation of current standard industry practices through available equipment, technologies, and strategies.

For an existing Enrollee under Order 2006-0003-DWQ that has certified its Continuation of Existing Regulatory Coverage, per section 2.1 (Requirements for Continuation of Existing Regulatory Coverage) of this General Order:

Within six (6) months of the Adoption Date of this General Order:

- The Legally Responsible Official shall upload the Enrollee's existing Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

For a new Enrollee:

Within twelve (12) months of the Application for Enrollment approval date:

- The governing entity of the new Enrollee shall approve its Sewer System Management Plan; and
- The Legally Responsible Official shall certify and upload its Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

5.3. Certification of Sewer System Management Plan and Plan Updates

The Legally Responsible Official shall certify and upload its Sewer System Management Plan and all subsequent updates to the online CIWQS Sanitary Sewer System Database.

5.4. Sewer System Management Plan Audits

The Enrollee shall conduct an internal audit of its Sewer System Management Plan, and implementation of its Plan, at a minimum frequency of once every three years. The audit must be conducted for the period after the end of the Enrollee's last required audit period. **Within six months after the end of the required 3-year audit period**, the Legally Responsible Official shall submit an audit report into the online CIWQS Sanitary Sewer System Database per the requirements in section 3.10 (Sewer System Management Plan Audit Reporting Requirements) of Attachment E1 of this General Order.

Audit reports submitted to the CIWQS Sanitary Sewer System Database will be viewable only to Water Boards staff.

The internal audit shall be appropriately scaled to the size of the system(s) and the number of spills. The Enrollee's sewer system operators must be involved in completing the audit. At minimum, the audit must:

- Evaluate the implementation and effectiveness of the Enrollee's Sewer System Management Plan in preventing spills;
- Evaluate the Enrollee's compliance with this General Order;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and

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- Identify necessary modifications to the Sewer System Management Plan to correct deficiencies.

The Enrollee shall submit a complete audit report that includes:

- Audit findings and recommended corrective actions;
- A statement that sewer system operators’ input on the audit findings has been considered; and
- A proposed schedule for the Enrollee to address the identified deficiencies.

A new Enrollee of this General Order (that did not have a sanitary sewer system enrolled in the previous State Water Board Order 2006-0003-DWQ) shall conduct its first internal Sewer System Management Plan audit for the time period between the date of submittal of its certified Sewer System Management Plan and the third subsequent December 31st date. The audit report must be submitted into the online CIWQS Sanitary Sewer System Database **by July 1 of the following calendar year.**

See the following tables for clarification:

Initial Audit Period and Audit Due Date for New Enrollees

	Audit Period	Audit Due Date
New Enrollee	Certified Sewer System Management Plan Submittal Date through the third subsequent December 31 st date	July 1 st date after audit period
<i>Example</i>	<i>Certified Sewer System Management Plan Submittal Date of August 2, 2025 Audit Period of August 2, 2025 through December 31, 2027</i>	<i>July 1, 2028</i>

Initial Audit Period for Transition from 2-Year Audit Required in Previous Order 2006-0003-DWQ to 3-Year Audit Required in this General Order

	Audit Period	Audit Due Date
An Enrollee previously regulated by Order 2006-003-DWQ	A 3-year period starting from the end of last required 2-year Audit Period	Within six months after end of 3-year Audit Period
<i>Example</i>	<i>Last required Audit Period start date of August 2, 2021; Audit Period of August 2, 2021 through August 1, 2024</i>	<i>February 1, 2025</i>

Three-Year Ongoing Audit Period

	Audit Period	Audit Due Date
Each Enrollee	A 3-year period starting from the end of last required Audit Period	Within six months after end of 3-year Audit Period

5.5. Six-Year Sewer System Management Plan Update

At a minimum, the Enrollee shall update its Sewer System Management Plan every six (6) years after the date of its last Plan Update due date. (For an Enrollee previously regulated by Order 2006-0003-DWQ, the six-year period shall commence on the due date identified in section 3.11 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this Order. The Updated Sewer System Management Plan must include:

- Elements required in Attachment D (Sewer System Management Plan – Required Elements) of this Order;
- Summary of revisions included in the Plan update based on internal audit findings; and
- Other sewer system management-related changes.

The Enrollee’s governing entity shall approve the updated Plan. The Legally Responsible Official shall upload and certify the approved updated Plan in the online CIWQS Sanitary Sewer System Database in accordance with section 3.11 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order. During the time period in between Plan updates, the Enrollee shall continuously document changes to its Sewer System Management Plan in a change log attached to the Plan.

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5.6. System Resilience

The Enrollee shall include and implement system-specific procedures in its Sewer System Management Plan to proactively prioritize: (1) operation and maintenance, (2) condition assessments, and (3) repair and rehabilitation, to address ongoing system resilience, as specified in Attachment D (Sewer System Management Plan – Required Elements) of this General Order.

5.7. Allocation of Resources

The Enrollee shall:

- Establish and maintain a means to manage all necessary revenues and expenditures related to the sanitary sewer system; and
- Allocate the necessary resources to its sewer system management program for:
 - Compliance with this General Order,
 - Full implementation of its updated Sewer System Management Plan,
 - System operation, maintenance, and repair, and
 - Spill responses.

5.8. Designation of Data Submitters

The Legally Responsible Official may designate one or more individuals as a Data Submitter for reporting of spill data. The Legally Responsible Official shall authorize the designation of Data Submitter(s) through the online [CIWQS database](https://ciwqs.waterboards.ca.gov) (<https://ciwqs.waterboards.ca.gov>) prior to the individuals establishing a [CIWQS user account](https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) (<https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp>) and entering spill data into the online CIWQS Sanitary Sewer System Database.

The Legally Responsible Official shall submit any change to its Data Submitter(s), and/or change in Data Submitter contact information, to the State Water Board within 30 calendar days of the change, by emailing ciwqs@waterboards.ca.gov and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

5.9. Reporting Certification

The Legally Responsible Official shall electronically certify, on the Enrollee's behalf, all applications, reports, the Sewer System Management Plan(s) and corresponding updates, and other information submitted electronically into the online CIWQS Sanitary Sewer System Database, as follows:

"I certify under penalty of perjury under the laws of the State of California that the electronically submitted information was prepared under my direction or supervision. Based on my inquiry of the person(s) directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete, and complies with the Statewide Sanitary Sewer Systems General Order. I am aware that there are significant penalties for submitting false information."

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Hardcopy submittals to the State Water Board must be accompanied by the above certification statement.

5.10. System Capacity

The Enrollee shall maintain the system capacity necessary to convey: (1) base flows during dry weather conditions, and (2) wet weather peak flows consistent with designated local historic storms. Design storms must take into account system-specific stormwater contributions via inflow and infiltration, and location-specific depth of groundwater and storm frequencies. The Enrollee shall implement capital improvements to provide adequate hydraulic capacity to:

- Meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance element of its Sewer System Management Plan; and
- Prevent system capacity-related spills, and adverse impacts to the treatment efficiency of downstream wastewater treatment facilities.

5.11. System Performance Analysis

The Enrollee shall include a running 10-year system performance analysis in its Annual Report. The analysis must include two CIWQS-generated graphs presenting the following information:

Graph 1 – Total Spill Volume per Year:

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total spill volume, per Spill Category, for each calendar year.

Graph 2 – Total Number of Spills per Year:

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total number of spills, per Spill Category, for each calendar year.

The current calendar year is the calendar year covered in the Annual Report.

The Enrollee shall generate the graphs in CIWQS, using the existing data in the online CIWQS Sanitary Sewer System Database at the following graph generation link: (https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso_operation_report).

5.12. Spill Emergency Response Plan and Remedial Actions

For Existing Enrollees (with regulatory coverage under Order 2006-0003-DWQ):

Within six (6) months of the Adoption Date of this General Order, the Enrollee shall update and implement its Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

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For New Enrollees:

Within six (6) months of the Application for Enrollment approval date, the Enrollee shall develop and implement a Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

The Enrollee shall certify, in its Annual Report, that its Spill Emergency Response Plan is up to date.

The Spill Emergency Response Plan shall include measures to protect public health and the environment. The Enrollee shall respond to spills from its system(s) in a timely manner that minimizes water quality impacts and nuisance by:

- Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;
- Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and
- Cleaning publicly accessible areas while preventing toxic discharges to waters of the State.

5.13. Notification, Monitoring, Reporting and Recordkeeping Requirements

The Enrollee shall comply with notification, monitoring, reporting, and recordkeeping requirements in Attachment E1 of this General Order.

5.13.1. Spill Categories

Individual spill notification, monitoring and reporting must be in accordance with the following spill categories:

- **Category 1 Spill**

A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

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A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

- **Category 2 Spill**

A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

- **Category 3 Spill**

A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

- **Category 4 Spill**

A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

5.13.2. Annual Report

The Enrollee shall submit an Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

For new Enrollees: Within 30 days of obtaining a CIWQS account, a new Enrollee shall submit its initial Annual Report, as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

5.14. Electronic Sanitary Sewer System Service Area Boundary Map

For continuing enrollees, starting on July 1, 2025, and no later than December 31, 2025:

For new enrollees – no earlier than July 1, 2025, or within 12 months of the Application for Enrollment approval date, whichever date is later:

The Legally Responsible Official shall submit, to the State Water Board, geospatial data detailing the locations of the Enrollee’s sanitary sewer system service area boundary, per the required content and specifications in section 3.8 (Electronic Sanitary Sewer System Service Area Boundary Map) of Attachment E1 of this General Order, for each system identified by a WDID number.

An Enrollee of a disadvantaged community that may need assistance developing an electronic map to comply with this requirement, may contact State Water Board staff for assistance at SanitarySewer@waterboards.ca.gov.

5.15. Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems

Within 24 hours of becoming aware of a spill (as described below) from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to report the following observations to the online CIWQS Sanitary Sewer System Database at the following link:

<https://ciwqs.waterboards.ca.gov>:

- A spill equal or greater than 1,000 gallons that discharges (or has a potential to discharge) to a water of the State, or a drainage conveyance system that discharges to waters of the State; **or**
- Any volume of sewage that discharges (or has a potential to discharge) to surface waters.

In the CIWQS module, the Enrollee is encouraged to identify:

- Time of observation;
- Description of general spill location (for example, street name and cross street names);
- Estimated volume of spill;
- If known, general description of spill destination (for example, flowing into drainage channel, flowing directly into a creek, etc.); and
- If known, name of private system owner/operator.

The CIWQS database will make the name and contact information of the entity voluntarily reporting a private spill, accessible to State and Regional Water Board staff only. The CIWQS database will only make information regarding the actual spill, accessible to the public.

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5.16. Voluntary Notification of Spills from Privately-Owned Laterals and/or Systems to the California Office of Emergency Services

Upon observing or acquiring knowledge of any of the following from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to notify the California Office of Emergency Services (as provided by Health and Safety Code section 5410 et. seq. and Water Code section 13271), or inform the responsible party that State law requires such notification to the Office of Emergency Services by any person that causes or allows a sewage discharge to waters of the State:

- A spill equal to 1,000 gallons or more that discharges (or has a potential to discharge) to waters of the State, or a drainage conveyance system that discharges to waters of the State; or
- A spill of any volume to surface waters.

5.17. Unintended Failure to Report

If an Enrollee becomes aware that they unintentionally failed to submit relevant facts in any report required in this General Order, the Enrollee shall promptly notify Regional Water Board and State Water Board staff. Regional Water Board contact information is included in Attachment F of this Order. State Water Board staff shall be contacted by email at SanitarySewer@waterboards.ca.gov for assistance in formally amending the corresponding report(s) in the online CIWQS Sanitary Sewer System Database.

5.18. Duty to Report to Water Boards

In accordance with Water Code section 13267 and/or section 13383, upon request by the State Water Board Executive Director (or designee) or a Regional Water Board Executive Officer (or designee), the Enrollee shall provide the requested information which the State or Regional Water Board deems necessary to determine compliance with this General Order.

5.19. Operation and Maintenance

To prevent discharges to the environment, the Enrollee shall maintain in good working order, and operate as designed, any facility or treatment and control system designed to contain sewage and convey it to a treatment plant.

6. PROVISIONS

6.1. Enforcement Provisions

The following enforcement provisions are based on existing federal and state regulations, laws and policies, including the federal Clean Water Act, the state Water Code and the State Water Board Enforcement Policy.

6.1.1. Enforceability of Clean Water Act and Water Code Violations

Noncompliance with requirements of this General Order or discharging sewage without enrolling in this General Order constitutes a violation of the Water Code and a potential

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violation of the Clean Water Act and is grounds for an enforcement action by the State Water Board or the applicable Regional Water Board. Failure to comply with the notification, monitoring, inspection, entry, reporting, and recordkeeping requirements may subject the Enrollee to administrative civil liabilities of up to \$10,000 a day per violation pursuant to Water Code section 13385; up to \$1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. Discharging waste not in compliance with the requirements of this General Order or the Clean Water Act may subject the Enrollee to administrative civil liabilities up to \$10,000 a day per violation and additional liability up to \$10 per gallon of discharge not cleaned up after the first 1,000 gallons of discharge; up to \$5,000 a day per violation pursuant to Water Code section 13350 or up to \$20 per gallon of waste discharged; or referral to the Attorney General for judicial civil enforcement.

6.1.2. Monetary Penalties

The Water Code provides the State and Regional Water Boards the authority to pursue formal enforcement actions, including imposing administrative liability and civil monetary penalties, for non-compliance with the requirements of this General Order and violations of the Clean Water Act.

6.1.3. Falsifying or Failure to Report

The Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this General Order, or falsifying any information provided in the technical or monitoring reports is subject to administrative liability and civil monetary penalties. Any person who knowingly fails or refuses to furnish technical or monitoring program reports or falsifies any information provided in reports required by this General Order is subject to criminal penalties.

6.1.4. Severability of General Order

The provisions of this General Order are severable; if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

6.1.5. Indirect Discharges

In the event that a spill enters into a drainage conveyance system, the Enrollee shall take all feasible steps to prevent discharge of sewage into waters of the State by blocking or redirecting the flow in the drainage conveyance system, removing the sewage from the drainage conveyance system, and cleaning the system in a manner that does not inadvertently impact beneficial uses of the receiving water body.

6.1.6. Water Boards' Considerations for Discretionary Enforcement

Consistent with the State Water Board Enforcement Policy, when considering Water Code section 13327 factors, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to contain, control, clean up, and mitigate spills. In assessing the factors, the State Water Board or the applicable Regional Water Board will consider:

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- The Enrollee's compliance with this General Order with a focus on compliance with reporting requirements;
- The Enrollee's provision of adequate funding to implement the requirements of this General Order;
- The Enrollee's compliance with providing a complete and updated Sewer System Management Plan;
- The Enrollee's compliance with implementing its Sewer System Management Plan;
- The overall effectiveness of the Enrollee's Sewer System Management Plan with respect to:
 - System management, operation, and maintenance,
 - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent spills (e.g. adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow, etc.),
 - Preventive maintenance (including cleaning, root grinding, and fats, oils, and grease control) and source control measures,
 - Implementation of backup equipment,
 - Inflow and infiltration prevention and control,
 - Appropriate sanitary sewer system capacity to prevent spills, and
 - The Enrollee's responsiveness to stop and mitigate the impact of the discharge;
- The Enrollee's compliance with identifying the cause of the spill;
- The Enrollee's use of available information and observations to accurately estimate the spill volume and identify the affected or potentially affected receiving waters;
- The Enrollee's thoroughness of cleaning up sewage in drainage conveyance systems after the spill(s);
- The Enrollee's use of water quality and biological monitoring and assessment to determine the short-term and long-term impacts to beneficial uses and the environment;
- The Enrollee's follow up actions to improve system performance;
- The Enrollee's implementation of feasible alternatives to prevent spills, such as:
 - Use of temporary storage or waste retention,
 - Reduction of system inflow and infiltration,
 - Collection and hauling of waste to a treatment facility,
 - Prevention of and/ or containment of spills due to a design storm event identified in the Enrollee's Sewer System Management Plan,

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- Implementation of available equipment, technologies, strategies, and recommended industry practices for maintaining and managing sewer systems to prevent spills, and contain and eliminate discharges to waters of the State; and
- The spill duration and factors beyond the reasonable control of the Enrollee causing the event.

6.1.7. Enforcement Discretion Based on Reporting Compliance

Consistent with the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to comply with spill reporting requirements when determining compliance with Water Code section 13267 and section 13383. When assessing Water Code section 13227 factors, the State Water Board or the applicable Regional Water Board will consider:

- The Enrollee's diligence to comply with all reporting requirements in this General Order;
- The use of best available information for the Enrollee's reporting of spill start date and start time in which the release of sewage from the sanitary sewer system initiated;
- The Enrollee's reporting of spill end date, and end time to be the date and time in which the release of sewage from the sanitary sewer system was stopped;
- The Enrollee's diligence to accurately estimate and report spill volumes;
- The Enrollee's subsequent verification and/or updates to initial Draft Spill Reports in accordance with this General Order; and
- The Enrollee's timely certification of required spill reports.

Consistent with Water Code section 13267 and section 13383, the State Water Board or a Regional Water Board may require an Enrollee to report the results of a condition assessment of a specified portion of the Enrollee's sanitary sewer system.

6.2. Other Regional Water Board Orders

It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with federal and state regulations. This Order will not be interpreted or applied:

- In a manner inconsistent with the federal Clean Water Act;
- To authorize a spill or discharge that is illegal under either the Clean Water Act, the Water Code, and/or an applicable Basin Plan prohibition or water quality standard;
- To prohibit a Regional Water Board from issuing an individual National Pollutant Discharge Elimination System (NPDES) permit or individual waste discharge requirements superseding an Enrollee's regulatory coverage under this General Order for a sanitary sewer system authorized under the Clean Water Act or Water Code;

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- To supersede any more specific or more stringent waste discharge requirements or enforcement orders issued by a Regional Water Board; or
- To supersede any more specific or more stringent state or federal requirements in existing regulation, an administrative/judicial order, or Consent Decree.

6.3. Sewer System Management Plan Availability

The Enrollee's updated Sewer System Management Plan must be maintained for public inspection at the Enrollee's offices and facilities and must be available to the public through CIWQS and/or on the Enrollee's website, in accordance with section 3.8 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

6.4. Entry and Inspection

6.4.1. Entry and Availability of Information

The Enrollee shall allow State and Regional Water Board staff, upon presentation of credentials and other documents as may be required by law, to:

- Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this General Order;
- Have access to and reproduce any records required to be maintained by this General Order;
- Inspect any facility and/or equipment (including monitoring and control equipment), practices, or operations required in this General Order; and
- Sample or monitor substances or parameters for assuring compliance with this General Order, or as otherwise authorized by the Water Code.

6.4.2. Pre-Inspection Questionnaire

The Enrollee shall provide pre-inspection information to State and Regional Water Board staff through the completion of a Pre-Inspection Questionnaire provided by Water Board staff.

ATTACHMENT A - DEFINITIONS

Annual Report

An Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) is a mandatory report in which the Enrollee provides a calendar-year update of its efforts to prevent spills.

Basin Plan

A Basin Plan is a water quality control plan specific to a Regional Water Quality Control Board (Regional Water Board), that serves as regulations to: (1) define and designate beneficial uses of surface and groundwaters, (2) establish water quality objectives for protection of beneficial uses, and (3) provide implementation measures.

Beneficial Uses

The term “Beneficial Uses” is a Water Code term, defined as the uses of the waters of the State that may be protected against water quality degradation. Examples of beneficial uses include but are not limited to, municipal, domestic, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

California Integrated Water Quality System (CIWQS)

CIWQS is the statewide database that provides for mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

Data Submitter

A Data Submitter is an individual designated and authorized by the Enrollee’s Legally Responsible Official to enter spill data into the online CIWQS Sanitary Sewer System Database. A Data Submitter does not have the authority of a Legally Responsible Official to certify reporting entered into the online CIWQS Sanitary Sewer System Database.

Disadvantaged Community

A disadvantaged community is a community with a median household income of less than eighty percent (80%) of the statewide annual median household income.

For the purpose of this General Order, there is no differentiation between a small and large disadvantaged community.

Drainage Conveyance System

A drainage conveyance system is a publicly- or privately-owned separate storm sewer system, including but not limited to drainage canals, channels, pipelines, pump stations, detention basins, infiltration basins/facilities, or other facilities constructed to transport stormwater and non-stormwater flows.

Enrollee

An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including:

- A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
 - greater than one (1) mile in length (each individual sanitary sewer system);
 - one mile or less in length where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order, or
- A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

Environmentally Sensitive Area

An environmentally sensitive area is a designated agricultural and/or wildlife area identified to need special natural landscape protection due to its wildlife or historical value.

Exfiltration

Exfiltration is the underground exiting of sewage from a sanitary sewer system through cracks, offset or separated joints, or failed infrastructure due to corrosion or other factors.

Flood Control Channel

A flood control channel is a channel used to convey stormwater and non-stormwater flows through and from areas for flood management purposes.

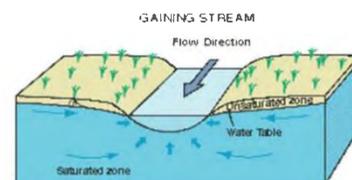
Governing Entity

A governing entity includes but is not limited to the following:

- A publicly elected governing board, council, or commission of a municipal agency;
- A Department or Division director of a federal or state agency that is not governed by a board;
- A governing board or commission of an organization or association; and
- A private system owner/manager that is not governed by a board.

Hydrologically Connected

Two waterbodies are hydrologically connected when one waterbody flows, or has the potential to flow, into the other waterbody. For the purpose of this General Order, groundwater is hydrologically connected to a surface water when the groundwater feeds into the surface water. (The surface waterbody in this example is termed a gaining stream as it gains flow from surrounding groundwater.)



Lateral (including Lower and Upper Lateral)

A lateral is an underground segment of smaller diameter pipe that transports sewage from a customer's building or property (residential, commercial, or industrial) to the Enrollee's main sewer line in a street or easement. Upper and lower lateral boundary definitions are subject to local jurisdictional codes and ordinances, or private system ownership.

A lower lateral is the portion of the lateral located between the sanitary sewer system main, and either the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations.

An upper lateral is the portion of the lateral from the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations, to the building or property.

Legally Responsible Official

A Legally Responsible Official is an official representative, designated by the Enrollee, with authority to sign and certify submitted information and documents required by this General Order.

Nuisance

For the purpose of this General Order, a nuisance, as defined in Water Code section 13050(m), is anything that meets all of the following requirements:

- Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property;
- Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and
- Occurs during, or as a result of, the treatment or disposal of wastes.

Private Sewer Lateral

A private sewer lateral is the privately-owned lateral that transports sewage from private property(ies) into a sanitary sewer system.

Private Sanitary Sewer System

A private sanitary sewer system is a sanitary sewer system of any size that is owned and/or operated by a private individual, company, corporation, or organization. A private sanitary sewer system may or may not connect into a publicly owned sanitary sewer system.

Potential to Discharge, Potential Discharge

Potential to Discharge, or Potential Discharge, means any exiting of sewage from a sanitary sewer system which can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a drainage conveyance system, and the nature of the surrounding environment.

Receiving Water

A receiving water is a water of the State that receives a discharge of waste.

Resilience

Resilience is the ability to recover from or adjust to adversity or change, and grow from disruptions. Resilience can be built through planning, preparing for, mitigating, and adapting to changing conditions.

Sanitary Sewer System

A sanitary sewer system is a system that is designed to convey sewage, including but not limited to, pipes, manholes, pump stations, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks, including:

- Laterals owned and/or operated by the Enrollee;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

For purpose of this Order, sanitary sewer systems include only systems owned and/or operated by the Enrollee.

Satellite Sewer System

A satellite sewer system is a portion of a sanitary sewer system owned or operated by a different owner than the owner of the downstream wastewater treatment facility ultimately treating the sewage.

Sewer System Management Plan

A sewer system management plan is a living document an Enrollee develops and implements to effectively manage its sanitary sewer system(s) in accordance with this General Order.

Sewage

Sewage, and its associated wastewater, is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system.

Spill

A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill under this General Order if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

Training

Training is in-house or external education and guidance needed that provides the knowledge, skills, and abilities to comply with this General Order.

Wash Down Water

Wash down water is water used to clean a spill area.

Waste

Waste, as defined in Water Code section 13050(d), includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

Waste Discharge Identification Number (WDID)

A waste discharge identification number (WDID) identifies each individual sanitary sewer system enrolled under this General Order. A WDID number is assigned to each enrolled system upon an Enrollee's approved regulatory coverage.

Waters of the State

Waters of the State are surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

Waters of the United States

Waters of the United States are surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

Water Quality Objective

A water quality objective is the limit or maximum amount of pollutant, waste constituent or characteristic, or parameter level established in statewide water quality control plans and Regional Water Boards' Basin Plans, for the reasonable protection of beneficial uses of surface waters and groundwater and the prevention of nuisance.

ATTACHMENT B – APPLICATION FOR ENROLLMENT

1. Enrollment Status: (Mark only one item)

- New Enrollee
- New Enrollee with previous regulatory coverage under Order 2006-0003-DWQ
(that failed to certify continuation of coverage in CIWQS per Order 2022-XXXX-DWQ)
Existing WDID Number: _____

2. Applicant Information:

Legally Responsible Official Submitting Application

First and Last Name: _____
Title: _____
Phone: _____
Email: _____

System Owner/Operator Name: _____
Mailing Address: _____
City, State, Zip: _____
County: _____
Sanitary Sewer System Name: _____
Regional Water Quality Control Board(s): _____
Signature and Date: _____

3. Applicant Type (Check one):

- City County State Federal Special District
- Government Combination Private Other Non-governmental Entity

4. Wastewater Treatment Plant Receiving Sanitary Sewer System Waste:

Wastewater Treatment Plant Permittee: _____
WDID No.: _____

5. Billing Information

Billing Address: _____

City, State, Zip: _____

Billing Contact Person and Title: _____

Phone and Email Address: _____

6. Application Fee:

The application fee, as required by Water Code section 13260, is based on the daily population served by the sanitary sewer system. See updated [Fee Schedule](https://www.waterboards.ca.gov/resources/fees/water_quality/).
(https://www.waterboards.ca.gov/resources/fees/water_quality/)

Check one of the following and enter fee amount:

Population Served < 50,000 – Total Fee submitted: \$ _____

Population Served ≥ 50,000 – Total Fee submitted: \$ _____

Make the fee payment payable to the State Water Resources Control Board and mail the complete application package to:

State Water Resources Control Board, Accounting Office
P. O. Box 1888
Sacramento, CA 95812-1888

Attention: Statewide Sanitary Sewer System Program

7. Application Submittal Certification

I certify under penalty of perjury under the laws of the State of California that to the best of my knowledge and belief, the information in the submitted application package is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Print Name: _____

Title: _____

Signature: _____ Date: _____

3. Regulatory Coverage Termination Certification

I certify under penalty of perjury under the laws of the State of California that to the best of my knowledge: 1) the sanitary sewer system I officially represent is not required to be regulated under the Statewide Waste Discharge Requirements for Sanitary Sewer Systems Order 2022-XXXX-DWQ, and 2) the information submitted in this Notice of Termination is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. Additionally, I understand that the submittal of this Notice of Termination does not release sanitary sewer system agencies from liability for any violations of the Clean Water Act.

Print Name: _____

Title: _____

Signature: _____ Date: _____

For State Water Board Use Only

Approved for Termination

Denied and Returned to Enrollee

Deputy Director of Water Quality Signature: _____

Date: _____ Notice of Termination Effective Date: _____

ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS

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ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS

A Sewer System Management Plan (Plan) is a living planning document that documents ongoing local sewer system management program activities, procedures, and decision-making – at the scale necessary to address the size and complexity of the subject sanitary sewer system(s). This Plan may incorporate other programs and other plans by reference, to address short-term and long-term system resilience through:

- Proactive planning and decision-making;
- Local government ordinances;
- Updated operations and maintenance activities and procedures;
- Implementation of capital improvements;
- Sufficient local budget to support staff resources, contractors, equipment, and training; and
- Updated training of staff and contractors.

The Enrollee’s development, update, and implementation of a Sewer System Management Plan addressing the requirements of this Attachment is an enforceable component of this General Order. As specified in Provision 6.1 (Enforcement Provisions) of this General Order, consistent with the Water Code and the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee’s efforts in implementing an effective Sewer System Management Plan to prevent, contain, control, and mitigate spills when considering Water Code section 13327 factors to determine necessary enforcement of this General Order.

This Attachment includes the following required elements that the Enrollee shall address in its Plan and subsequent updates. The Enrollee shall identify any requirement in this Attachment that is not applicable to the Enrollee’s sewer system and shall explain in its Plan why the requirement is not applicable.

1. SEWER SYSTEM MANAGEMENT PLAN GOAL AND INTRODUCTION

The goal of the Sewer System Management Plan (Plan) is to provide a plan and schedule to: (1) properly manage, operate, and maintain all parts of the Enrollee’s sanitary sewer system(s), (2) reduce and prevent spills, and (3) contain and mitigate spills that do occur.

The Plan must include a narrative Introduction section that discusses the following items:

1.1. Regulatory Context

The Plan Introduction section must provide a general description of the local sewer system management program and discuss Plan implementation and updates.

1.2. Sewer System Management Plan Update Schedule

The Plan Introduction section must include a schedule for the Enrollee to update the Plan, including the schedule for conducting internal audits. The schedule must include milestones for incorporation of activities addressing prevention of sewer spills.

1.3. Sewer System Asset Overview

The Plan Introduction section must provide a description of the Enrollee-owned assets and service area, including but not limited to:

- Location, including county(ies);
- Service area boundary;
- Population and community served;
- System size, including total length in miles, length of gravity mainlines, length of pressurized (force) mains, and number of pump stations and siphons;
- Structures diverting stormwater to the sewer system;
- Data management systems;
- Sewer system ownership and operation responsibilities between Enrollee and private entities for upper and lower sewer laterals;
- Estimated number or percent of residential, commercial, and industrial service connections; and
- Unique service boundary conditions and challenge(s).

Additionally, the Plan Introduction section must provide reference to the Enrollee's up-to-date map of its sanitary sewer system, as required in section 4.1 (Updated Map of Sanitary Sewer System) of this Attachment.

2. ORGANIZATION

The Plan must identify organizational staffing responsible and integral for implementing the local Sewer System Management Plan through an organization chart or similar narrative documentation that includes:

- The name of the Legally Responsible Official as required in section 5.1 (Designation of a Legally Responsible Official) of this General Order;
- The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan elements;
- Organizational lines of authority; and
- Chain of communication for reporting spills from receipt of complaint or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, as applicable. (For example, county

health officer, county environmental health agency, and State Office of Emergency Services.)

3. LEGAL AUTHORITY

The Plan must include copies or an electronic link to the Enrollee's current sewer system use ordinances, service agreements and/or other legally binding procedures to demonstrate the Enrollee possesses the necessary legal authority to:

- Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages;
- Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
- Require that sewer system components and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee;
- Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and
- Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

4. OPERATION AND MAINTENANCE PROGRAM

The Plan must include the items listed below that are appropriate and applicable to the Enrollee's system.

4.1. Updated Map of Sanitary Sewer System

An up-to-date map(s) of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The map(s) must show gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries.

4.2. Preventive Operation and Maintenance Activities

A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors.

The scheduling system must include:

- Inspection and maintenance activities;

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- Higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems;
- Regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.

The data collection system must document data from system inspection and maintenance activities, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.

4.3. Training

In-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:

- The requirements of this General Order;
- The Enrollee's Spill Emergency Response Plan procedures and practice drills;
- Skilled estimation of spill volume for field operators; and
- Electronic CIWQS reporting procedures for staff submitting data.

4.4. Equipment Inventory

An inventory of sewer system equipment, including the identification of critical replacement and spare parts.

5. DESIGN AND PERFORMANCE PROVISIONS

The Plan must include the following items as appropriate and applicable to the Enrollee's system:

5.1. Updated Design Criteria and Construction Standards and Specifications

Updated design criteria, and construction standards and specifications, for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances. If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in section 8 (System Evaluation, Capacity Assurance and Capital Improvements) of this Attachment, the procedures must include component-specific evaluation of the design criteria.

5.2. Procedures and Standards

Procedures, and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances.

6. SPILL EMERGENCY RESPONSE PLAN

The Plan must include an up to date Spill Emergency Response Plan to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The Spill Emergency Response Plan must include procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;
- Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained;
- Address emergency system operations, traffic control and other necessary response activities;
- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;
- Remove sewage from the drainage conveyance system;
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;
- Conduct post-spill assessments of spill response activities;
- Document and report spill events as required in this General Order; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

7. SEWER PIPE BLOCKAGE CONTROL PROGRAM

The Sewer System Management Plan must include procedures for the evaluation of the Enrollee's service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. If the Enrollee determines that a program is not needed, the Enrollee shall provide justification in its Plan for why a program is not needed.

The procedures must include, at minimum:

- An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances;
- A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of substances generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;
- Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements;
- Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance;
- An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and
- Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above.

8. SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS

The Plan must include procedures and activities for:

- Routine evaluation and assessment of system conditions;
- Capacity assessment and design criteria;
- Prioritization of corrective actions; and
- A capital improvement plan.

8.1 System Evaluation and Condition Assessment

The Plan must include procedures to:

- Evaluate the sanitary sewer system assets utilizing the best practices and technologies available;

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- Identify and justify the amount (percentage) of its system for its condition to be assessed each year;
- Prioritize the condition assessment of system areas that:
 - Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies;
 - Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas;
 - Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List;
- Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods;
- Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the State;
- Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and
- Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.

8.2. Capacity Assessment and Design Criteria

The Plan must include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for:

- Dry-weather peak flow conditions that cause or contributes to spill events;
- The appropriate design storm(s) or wet weather events that causes or contributes to spill events;
- The capacity of key system components; and
- Identify the major sources that contribute to the peak flows associated with sewer spills.

The capacity assessment must consider:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;

- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change;
- Increases of erosive forces in canyons and streams near underground and above-ground system components due to larger and/or higher-intensity storm events;
- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and
- Necessary redundancy in pumping and storage capacities.

8.3. Prioritization of Corrective Action

The findings of the condition assessments and capacity assessments must be used to prioritize corrective actions. Prioritization must consider the severity of the consequences of potential spills.

8.4. Capital Improvement Plan

The capital improvement plan must include the following items:

- Project schedules including completion dates for all portions of the capital improvement program;
- Internal and external project funding sources for each project; and
- Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and Interagency coordination with other impacted utility agencies.

9. MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

The Plan must include an Adaptive Management section that addresses Plan-implementation effectiveness and the steps for necessary Plan improvement, including:

- Maintaining relevant information, including audit findings, to establish and prioritize appropriate Plan activities;
- Monitoring the implementation and measuring the effectiveness of each Plan Element;
- Assessing the success of the preventive operation and maintenance activities;
- Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and
- Identifying and illustrating spill trends, including spill frequency, locations and estimated volumes.

10. INTERNAL AUDITS

The Plan shall include internal audit procedures, appropriate to the size and performance of the system, for the Enrollee to comply with section 5.4 (Sewer System Management Plan Audits) of this General Order.

11. COMMUNICATION PROGRAM

The Plan must include procedures for the Enrollee to communicate with:

- The public for:
 - Spills and discharges resulting in closures of public areas, or that enter a source of drinking water, and
 - The development, implementation, and update of its Plan, including opportunities for public input to Plan implementation and updates.
- Owners/operators of systems that connect into the Enrollee’s system, including satellite systems, for:
 - System operation, maintenance, and capital improvement-related activities.

ATTACHMENT E1 – NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS

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ATTACHMENT E1– NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS

The Notification Requirements (section 1), Spill-specific Monitoring Requirements (section 2), Reporting Requirements (section 3) and Recordkeeping Requirements (section 4) in this Attachment are pursuant to Water Code section 13267 and section 13383, and are an enforceable component of this General Order. For the purpose of this General Order, the term:

- Notification means the notifying of appropriate parties of a spill event or other activity.
- Spill-specific Monitoring means the gathering of information and data for a specific spill event to be reported or kept as records.
- Reporting means the reporting of information and data into the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database.
- Recordkeeping means the maintaining of information and data in an official records storage system.

Failure to comply with the notification, monitoring, reporting and recordkeeping requirements in this General Order may subject the Enrollee to civil liabilities of up to \$10,000 a day per violation pursuant to Water Code section 13385; up to \$1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement.

Water Code section 13193 et seq. requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Resources Control Board (State Water Board) to collect sanitary sewer spill information for each spill event and make this information available to the public. Sanitary sewer spill information for each spill event includes but is not limited to: Enrollee contact information for each spill event, spill cause, estimated spill volume and factors used for estimation, location, date, time, duration, amount discharged to waters of the State, response and corrective action(s) taken.

1. NOTIFICATION REQUIREMENTS

1.1. Notification of Spills of 1,000 Gallons or Greater to the California Office of Emergency Services

Per Water Code section 13271, for a spill that discharges in or on any waters of the State, or discharges or is deposited where it is, or probably will be, discharged in or on any waters of the State, the Enrollee shall notify the California Office of Emergency Services and obtain a California Office of Emergency Services Control Number as soon as possible **but no later than two (2) hours** after:

- The Enrollee has knowledge of the spill; and
- Notification can be provided without substantially impeding cleanup or other emergency measures.

The notification requirements in this section apply to individual spills of 1,000 gallons or greater, from an Enrollee-owned and/or operated laterals, to a water of the State.

1.2. Spill Notification Information

The Enrollee shall provide the following spill information to the California Office of Emergency Services before receiving a Control Number, as applicable:

- Name and phone number of the person notifying the California Office of Emergency Services;
- Estimated spill volume (gallons);
- Estimated spill rate from the system (gallons per minute);
- Estimated discharge rate (gallons per minute) directly into waters of the State or indirectly into a drainage conveyance system;
- Spill incident description:
 - Brief narrative of the spill event, and
 - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;
- Name and phone number of contact person on-scene;
- Date and time the Enrollee was informed of the spill event;
- Name of sanitary sewer system causing the spill;
- Spill cause or suspected cause (if known);
- Amount of spill contained;
- Name of receiving water body receiving or potentially receiving discharge; and
- Description of water body impact and/ or potential impact to beneficial uses.

1.3. Notification of Spill Report Updates

Following the initial notification to the California Office of Emergency Services and until such time that the Enrollee certifies the spill report in the online CIWQS Sanitary Sewer System Database, the Enrollee shall provide updates to the California Office of Emergency Services regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses.

2. SPILL-SPECIFIC MONITORING REQUIREMENTS

2.1 Spill Location and Spread

The Enrollee shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The Enrollee shall document the critical spill locations, including:

- Photography and GPS coordinates for:
 - The system location where spill originated.
For multiple appearance points of a single spill event, the points closest to the spill origin.
- Photography for:
 - Drainage conveyance system entry locations,
 - The location(s) of discharge into surface waters, as applicable,
 - Extent of spill spread, and
 - The location(s) of clean up.

2.2 Spill Volume Estimation

To assess the approximate spill magnitude and spread, the Enrollee shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The Enrollee shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.

2.3. Receiving Water Monitoring

2.3.1. Receiving Water Visual Observations

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water;
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume entering the receiving water; and
- Photography of:
 - Waterbody bank erosion,
 - Floating matter,
 - Water surface sheen (potentially from oil and grease),

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- Discoloration of receiving water, and
- Impact to the receiving water.

2.3.2. Receiving Water – Water Quality Sampling and Analysis

For sewage spills in which an estimated 50,000 gallons or greater are discharged into a surface water, the Enrollee shall conduct the following water quality sampling no later than **18 hours** after the Enrollee's knowledge of a potential discharge to a surface water:

- Collect one water sample, each day of the duration of the spill, at:
 - The DCS-001 location as described in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment, if sewage discharges to a surface water via a drainage conveyance system; and/or
 - Each of the three receiving water sampling locations in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment;

If the receiving water has no flow during the duration of the spill, the Enrollee must report "No Sampling Due To No Flow" for its receiving water sampling locations.

The Enrollee shall analyze the collected receiving water samples for the following constituents per section 2.3.3 (Water Quality Analysis Specifications) of this Attachment:

- Ammonia, and
- Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the Regional Water Board:
 - Total Coliform Bacteria
 - Fecal Coliform Bacteria
 - *E-coli*
 - Enterococcus

Dependent on the receiving water(s), sampling of bacterial indicators shall be sufficient to determine post-spill (after the spill) compliance with the water quality objectives and bacterial standards of the California Ocean Plan or the California Inland Surface Water Enclosed Bays, and Estuaries Plan, including the frequency and/or number of post-spill receiving water samples as may be specified in the applicable plans.

The Enrollee shall collect and analyze additional samples as required by the applicable Regional Water Board Executive Officer or designee.

2.3.3. Water Quality Analysis Specifications

Spill monitoring must be representative of the monitored activity (40 Code of Federal Regulations section 122.41(j)(1)).

Sufficiently Sensitive Methods

Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. For the purposes of this General Order, a method is sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria.

Environmental Laboratory Accreditation Program-Accredited Laboratories

The analysis of water quality samples required per this General Order must be performed by a laboratory that has accreditation pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

2.3.4. Receiving Water Sampling Locations

The Enrollee shall collect receiving water samples at the following locations.

Sampling of Flow in Drainage Conveyance System (DCS) Prior to Discharge

Sampling Location	Sampling Location Description
DCS-001	A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.

Receiving Surface Water Sampling (RSW)¹

Sampling Location	Sampling Location Description
RSW-001 Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U: Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.

Sampling Location	Sampling Location Description
RSW-001D: Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

¹ The Enrollee must use its best professional judgment to determine the upstream and downstream distances based on receiving water flow, accessibility to upstream/downstream waterbody banks, and size of visible sewage plume.

2.4. Safety and Access Exceptions

If the Enrollee encounters access restrictions or unsafe conditions that prevents its compliance with spill response requirements or monitoring requirements in this General Order, the Enrollee shall provide documentation of access restrictions and/or safety hazards in the corresponding required report.

3. REPORTING REQUIREMENTS

All reporting required in this General Order must be submitted electronically to the online [CIWQS Sanitary Sewer System Database](https://ciwqs.waterboards.ca.gov) (https://ciwqs.waterboards.ca.gov), unless specified otherwise in this General Order. Electronic reporting may solely be conducted by a Legally Responsible Official or Data Submitter(s) previously designated by the Legally Responsible Official, as required in section 5.8 (Designation of Data Submitters) of this General Order.

The Enrollee shall report any information that is protected by the Homeland Security Act, by email to SanitarySewer@waterboards.ca.gov, with a brief explanation of the protection provided by the Homeland Security Act for the subject report to be protected from unauthorized disclosure and/or public access, and for official Water Board regulatory purposes only.

3.1. Reporting Requirements for Individual Category 1 Spill Reporting

3.1.1. Draft Spill Report for Category 1 Spills

Within three (3) business days of the Enrollee’s knowledge of a Category 1 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;

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5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;
 - o If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
 - o Description of the drainage conveyance system transporting the spill;
 - o Photographs of the drainage conveyance system entry location(s);
 - o Estimated spill volume fully recovered from the drainage conveyance system;
 - o Estimated spill volume remaining within the drainage conveyance system;
11. Description and photographs of all discharge point(s) into the surface water;
12. Estimated spill volume that discharged to surface waters; and
13. Estimated total spill volume recovered.

3.1.2. Certified Spill Report for Category 1 Spills

Within 15 calendar days of the spill end date, the Enrollee shall submit a Certified Spill Report for Category 1 spills, to the online CIWQS Sanitary Sewer System Database. Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.1.1 (Draft Spill Report for Category 1 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
 - o The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
 - o The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;

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4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, lateral, pump station, etc.);
6. Description of the pipe material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion;
14. Name and type of receiving water body(s);
15. Description of the water body(s), including but not limited to:
 - o Observed impacts on aquatic life,
 - o Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill,
 - o Responsible entity for closing/restricting use of water body, and
 - o Number of days closed/restricted as a result of the spill.
16. Whether or not the spill was located within 1,000 feet of a municipal surface water intake; and
17. If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, Not Applicable shall be selected.

3.1.3. Spill Technical Report for Individual Category 1 Spill in which 50,000 Gallons or Greater Discharged into a Surface Water

For any spill in which 50,000 gallons or greater discharged into a surface water, **within 45 calendar days** of the spill end date, the Enrollee shall submit a Spill Technical Report to the online CIWQS Sanitary Sewer System Database. The Spill Technical Report, at minimum, must include the following information:

1. Spill causes and circumstances, including at minimum:
 - o Complete and detailed explanation of how and when the spill was discovered;

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- Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions;
 - Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations;
 - Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume;
 - Detailed description of the spill cause(s);
 - Description of the pipe material, and estimated age of the pipe material, at the failure location;
 - Description of the impact of the spill;
 - Copy of original field crew records used to document the spill; and
 - Historical maintenance records for the failure location.
2. Enrollee's response to the spill:
- Chronological narrative description of all actions taken by the Enrollee to terminate the spill;
 - Explanation of how the Sewer System Management Plan Spill Emergency Response Plan was implemented to respond to and mitigate the spill; and
 - Final corrective action(s) completed and a schedule for planned corrective actions, including:
 - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable,
 - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences, and
 - Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill.
3. Water Quality Monitoring, including at minimum:
- Description of all water quality sampling activities conducted;
 - List of pollutant and parameters monitored, sampled and analyzed; as required in section 2.3 (Receiving Water Monitoring) of this Attachment;
 - Laboratory results, including laboratory reports;
 - Detailed location map illustrating all water quality sampling points; and
 - Other regulatory agencies receiving sample results (if applicable).
4. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

3.1.4. Amended Certified Spill Reports for Individual Category 1 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

3.2. Reporting Requirements for Individual Category 2 Spill Reporting

3.2.1. Draft Spill Report for Category 2 Spills

Within three (3) business days of the Enrollee's knowledge of a Category 2 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;

If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;

8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
 - o Description of the drainage conveyance system transporting the spill;
 - o Photographs of the drainage conveyance system entry location(s);
 - o Estimated spill volume fully recovered from the drainage conveyance system;
 - o Estimated spill volume remaining within the drainage conveyance system;

- Estimated spill volume discharged to a groundwater infiltration basin or facility, if applicable; and

11. Estimated total spill volume recovered.

3.2.2. Certified Spill Report for Category 2 Spills

Within 15 calendar days of the spill end date, the Enrollee shall submit a Certified Spill Report for the Category 2 spill, to the online [CIWQS Sanitary Sewer System Database](https://ciwqs.waterboards.ca.gov) (<https://ciwqs.waterboards.ca.gov>). Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.2.1 (Draft Spill Report for Category 2 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
 - The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
 - The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, pump station, etc.);
6. Description of the pipe/infrastructure material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion; and

14. Whether or not the spill was located within 1,000 feet of a municipal surface water intake.

3.2.3. Amended Certified Spill Reports for Individual Category 2 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

3.3. Monthly Certified Spill Reporting for Category 3 Spills

The Enrollee shall report and certify all Category 3 spills to the online CIWQS Sanitary Sewer System Database within 30 calendar days after the end of the month in which the spills occurred. (For example, all Category 3 spills occurring in the month of February shall be reported and certified by March 30th). After the Legally Responsible Official certifies the spills, the online CIWQS Sanitary Sewer System Database will issue a spill event identification number for each spill.

The monthly reporting of all Category 3 spills must include the following items for each spill:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Description, photographs, and GPS coordinates where the spill originated:
 - o If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
7. Estimated total spill volume exiting the system;
8. Description and photographs of the extent of the spill and spill boundaries;
9. Did the spill reach a drainage conveyance system? If Yes:
 - o Description of the drainage conveyance system transporting the spill;
 - o Photographs of the drainage conveyance system entry locations(s);
 - o Estimated spill volume fully recovered from the drainage conveyance system; and

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- Estimated spill volume discharged to a groundwater infiltration basis or facility, if applicable.
- 10. Estimated total spill volume recovered;
- 11. Description of the spill event destination(s), including GPS coordinates, if available, that represent the full spread and reaches of the spill;
- 12. Spill end date and time;
- 13. Description of how the spill volume estimations were calculated, including, at minimum:
 - The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
 - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
- 14. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
- 15. System failure location (for example, main, pump station, etc.);
- 16. Description of the pipe/infrastructure material, and estimated age of the pipe/infrastructure material, at the failure location;
- 17. Description of the impact of the spill;
- 18. Whether or not the spill was associated with a storm event;
- 19. Description of spill response activities including description of immediate spill containment and cleanup efforts;
- 20. Description of spill corrective actions, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of the major milestones for those steps; including, at minimum:
 - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, and
 - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including:
 - Adjusted schedule/method of preventive maintenance,
 - Planned rehabilitation or replacement of sanitary sewer asset,
 - Inspected, repaired asset(s), or replaced defective asset(s),
 - Capital improvements,
 - Documentation verifying immediately implemented system modifications and operating/maintenance modifications,
 - Description of spill response activities,

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- Spill response completion date, and
- Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of spill;

21. Detailed narrative of investigation and investigation findings of cause of spill.

3.4. Monthly Certified Spill Reporting for Category 4 Spills

The Enrollee shall report and certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of the month in which the spills occurred.

3.5. Amended Certified Spill Reports for Category 3 Spills

Within 90 calendar days of the certified Spill Report due date, the Enrollee may update or add additional information to a certified Spill Report by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After 90 calendar days, the Legally Responsible Official shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a certified Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the 90-day timeframe for amending the certified Spill Report, as provided above.

3.6. Annual Certified Spill Reporting of Category 4 and/or Lateral Spills

For all Category 4 spills and spills from its owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the Enrollee shall:

- Maintain records per section 4.4. of this Attachment;
The Enrollee shall provide records upon request by State Water Board or Regional Water Board staff.
- Annually upload and certify a report, in an appropriate digital format, of all recordkeeping of spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

3.7. Monthly Certification of “No-Spills” or “Category 4 Spills” and/or “Non-Category 1 Lateral Spills”

If either (1) no spills occur during a calendar month or (2) only Category 4, and/or Enrollee-owned and/or operated lateral spills (that do not discharge to a surface water) occur during a calendar month, the Enrollee shall certify, within 30 calendar days after

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the end of each calendar month, either a “No-Spill” certification statement, or a “Category 4 Spills” and/or “Non-Category 1 Lateral Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were either no spills, or Category 4 and/or Non-Category 1 Lateral Spills that will be reported annually (per section 3.6 of this Attachment) for the designated month.

If a spill starts in one calendar month and ends in a subsequent calendar month, and the Enrollee has no further spills of any category, in the subsequent calendar month, the Enrollee shall certify “no-spills” for the subsequent calendar month.

If the Enrollee has no spills from its systems during a calendar month, but the Enrollee voluntarily reported a spill from a private lateral or a private system, the Enrollee shall certify “no-spills” for that calendar month.

If the Enrollee has spills from its owned and/or operated laterals during a calendar month, the Enrollee shall not certify “no spills” for that calendar month.

3.8. **Electronic Sanitary Sewer System Service Area Boundary Map**

The Legally Responsible Official shall submit, to the State Water Board, an up-to-date electronic spatial map of its sewer system service area boundaries. The map must be in accordance with section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order and the specification provided on the statewide Sanitary Sewer Systems program website. The map must include the location of wastewater treatment facility(ies) that treats the sewer system waste, if in the same sewer service boundary.

By the Effective Date of this General Order, specifications for the electronic sanitary sewer service area boundary map format will be provided on the statewide Sanitary Sewer Systems Order program website.

3.9. **Annual Report (Previously termed as Collection System Questionnaire in General Order 2006-0003-DWQ)**

A new Enrollee shall complete and submit its first certified Annual Report into the online CIWQS Sanitary Sewer System Database, **within 30 days of obtaining a CIWQS account**; Subsequent Annual Reports are due by April 1 of each year.

All enrollees shall update their previous year’s Annual Report, **by April 1 of each year after the Effective Date of this General Order**, for each calendar year (January 1 through December 31).

The Annual Report must be entered directly into the online CIWQS Sanitary Sewer System Database. The Enrollee’s Legally Responsible Official shall certify the Annual Report as instructed in CIWQS;

The Annual Report must address, and update as applicable, the following items:

- Population served;

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- Updated sewer system service area boundary map, if service area boundary has changed from original map submitted per section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order;
- Number of system operation and maintenance staff:
 - Entry level (less than two years of experience),
 - Journey level (greater than two years of experience),
 - Supervisory level, and
 - Managerial level;
- Number of operation and maintenance staff certified as a certified collection system operator by the California Water Environmental Association (CWEA), with:
 - Corresponding number of certified collection system operator grade levels (Grade I, II, III, IV, and V);
- System information:
 - Miles of system gravity and force mains,
 - Number of upper and lower service laterals connected to system,
 - Estimated number of upper and lower laterals owned and/or operated by the Enrollee,
 - Portion of laterals that is Enrollee's responsibility,
 - Average age the major components of system infrastructure,
 - Number and age of pump stations, and
 - Estimated total miles of the system pipeline not accessible for maintenance;
- Name and location of the treatment plant(s) receiving sanitary sewer system's waste;
- Name of satellite sewer system tributaries;
- Number of system's gravity sewer above or underground crossings of water bodies throughout system;
- Number of force main (pressurized pipe) above or underground crossings of water bodies throughout system;
- Number of siphons used to convey waste throughout the sewer system;
- Miles of sewer system cleaned;
- Miles of sewer system video inspected, or comparable (i.e., video closed-circuit television or alternative inspection methods);
- System Performance Evaluation as specified in section 5.11 (System Performance Analysis) of this General Order;
- Major spill causes (for example, root intrusion, grease deposition);

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- System infrastructure failure points (for example, main, pump station, lateral, etc.);
- Ongoing spill investigations; and
- Actions taken to address system deficiencies.

3.10. Sewer System Management Plan Audit Reporting Requirements

The Enrollee shall submit its Sewer System Management Plan Audit and other pertinent audit information, in accordance with section 5.4 (Sewer System Management Plan Audits) of this General Order, to the online CIWQS Sanitary Sewer System Database **by six (6) months after the end of the 3-year audit period.**

If a Sewer System Management Plan Audit is not conducted as required: the Enrollee shall:

- Update the online CIWQS Sanitary Sewer System Database and select the justification for not conducting the Audit; and
- Notify its corresponding Regional Water Board (see Attachment F (Regional Water Quality Control Board Contact Information)) of the justification for the lapsed requirements.

The Enrollee's reporting of a justification for not conducting a timely Audit does not justify non-compliance with this General Order. The Enrollee shall:

- Submit the late Audit as required in this General Order; and
- Comply with subsequent Audit requirements and due dates corresponding with the original audit cycle.

3.11. Sewer System Management Plan Reporting Requirements

For an Existing Enrollee previously regulated by Order 2006-0003-DWQ: **Within every six (6) years after the required due date of its last Plan Update**, the Legally Responsible Official shall upload and certify a local governing entity-approved Sewer System Management Plan Update to the online CIWQS Sanitary Sewer System Database. If the electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its updated Sewer System Management Plan posted on its own website.

Order 2006-0003-DWQ required each enrollee to develop its initial Sewer System Management Plan per the following schedule, with required Plan updates at a frequency of 5-years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2009

Between 100,000 and 10,000: August 2, 2009

Between 10,000 and 2,500: May 2, 2010

Less than 2,500: August 2, 2010

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This Order carries forth the previously-required Plan Update schedule per Order 2006-0003-DWQ. Per the six-year Plan Update frequency required in this Order, the Enrollee shall upload and certify its first Plan Update, to the online CIWQS Sanitary Sewer System Database by the following due dates, with subsequent Plan Updates at the frequency of six years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2025

Between 100,000 and 10,000: August 2, 2025

Between 10,000 and 2,500: May 2, 2026

Less than 2,500: August 2, 2026

For a New Enrollee: **Within twelve (12) months of its Application for Enrollment Approval date**, the Legally Responsible Official of a new Enrollee shall upload and certify a local governing entity-approved Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database. If electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its Sewer System Management Plan posted on its own website. The due date for subsequent 6-year Plan updates, is six (6) years from the submittal due date of the new Enrollee's first Sewer System Management Plan.

4. RECORDKEEPING REQUIREMENTS

The Enrollee shall maintain records to document compliance with the provisions of this General Order, and previous General Order 2006-0003-DWQ as applicable, for each sanitary sewer system owned, including any required records generated by an Enrollee's contractor(s).

4.1. Recordkeeping Time Period

The Enrollee shall maintain records of documents required in this Attachment, including records collected for compliance with this General Order, and records collected in accordance with previous General Order 2006-0003-DWQ, for five (5) years.

4.2. Availability of Documents

The Enrollee shall make the records required in this General Order readily available, either electronic or hard copies, for review by Water Board staff during onsite inspections or through an information request.

4.3. Spill Reports

The Enrollee shall maintain records for each of the following spill-related events and activities:

- Spill event complaint, including but not limited to records documenting how the Enrollee responded to notifications of spills. Each complaint record must, at a minimum, include the following information:
 - Date, time, and method of notification,

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- Date and time the complainant first noticed the spill, if available,
- Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available,
- Complainant's contact information, if available, and
- Final resolution of the complaint;
- Records documenting the steps and/or remedial action(s) undertaken by the Enrollee, using all available information, to comply with this General Order, and previous General Order 2006-0003-DWQ as applicable;
- Records documenting how estimate(s) of volume(s) and, if applicable, volume(s) of spill recovered were calculated;
- All California Office of Emergency Services notification records, as applicable; and
- Records, in accordance with the Monitoring Requirements in this Attachment.

4.4. Recordkeeping of Category 4 Spills and Non-Category 1 Lateral Spills

An Enrollee must maintain the following records for each individual Category 4 spill and for each individual non-Category 1 Enrollee-owned and/or operated lateral spill, and report in accordance to section 3.6 (Annual Certified Spill Reporting of Category 4 and/or Lateral Spills) of this Attachment.

Recordkeeping of Individual Category 4 Spill Information:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Description and GPS coordinates for the system location where the spill originated;
4. Did the spill reach a drainage conveyance system? If Yes:
 - Description of drainage conveyance system location,
 - Estimated spill volume fully recovered within the drainage conveyance system, and
 - Estimated spill volume remaining within the drainage conveyance system;
5. Estimated total spill volume exiting the sanitary sewer system;
6. Spill date and start time;
7. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
8. System failure location (for example, main, pump station, etc.);
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of how the volume estimation was calculated, including, at minimum:

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- The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
 - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
11. Description of implemented system modifications and operating/maintenance modifications.

Recordkeeping of Individual Lateral Spill Information:

1. Date and time the Enrollee was notified of, or self-discovered, the spill;
2. Location of individual spill;
3. Estimated individual spill volume;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.); and
5. Description of how the volume estimations were calculated.

Total Annual Spill Information:

1. Estimated total annual spill volume;
2. Description of spill corrective actions, including at minimum:
 - Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable, and
 - System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

4.5. Sewer System Telemetry Records

The Enrollee shall maintain the following sewer system telemetry records if used to document compliance with this General Order, and previous General Order 2006-0003-DWQ as applicable, including spill volume estimates:

- Supervisory control and data acquisition (SCADA) system(s);
- Alarm system(s);
- Flow monitoring device(s) or other instrument(s) used to estimate sewage flow rates, and/or volumes;
- Computerized maintenance management system records; and
- Asset management-related records.

4.6. Sewer System Management Plan Implementation Records

The Enrollee shall maintain records documenting the Enrollee's implementation of its Sewer System Management Plan, including documents supporting its Sewer System Management Plan audits, corrections, modifications, and updates to the Sewer System Management Plan.

4.7. Audit Records

The Enrollee shall maintain, at minimum, the following records pertaining to its Sewer System Management Plan audits, and other internal audits:

- Completed audit documents and findings;
- Name and contact information of staff and/or consultants that conducted or involved in the audit; and
- Follow-up actions based on audit findings.

4.8. Equipment Records

The Enrollee shall maintain a log of all owned and leased sewer system cleaning, operational, maintenance, construction, and rehabilitation equipment.

4.9. Work Orders

The Enrollee shall maintain record of work orders for operations and maintenance projects.

ATTACHMENT E2 – SUMMARY OF NOTIFICATION, MONITORING AND REPORTING REQUIREMENTS

This Attachment provides a summary of notification, monitoring and reporting requirements, by spill category, and for Enrollee-owned and/or operated laterals as required in Attachment E1 of this General Order, for quick reference purposes only.

Table E2-1

Spill Category 1: Spills to Surface Waters

Spill Requirement	Due	Method
Notification	<p>Within two (2) hours of the Enrollee’s knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters:</p> <p>Notify the California Office of Emergency Services and obtain a notification control number.</p>	<p>California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)</p>
Monitoring	<ul style="list-style-type: none"> • Conduct spill-specific monitoring; • Conduct water quality sampling of the receiving water within 18 hours of initial knowledge of spill of 50,000 gallons or greater to surface waters. 	<p>(Section 2 of Attachment E1)</p>
Reporting	<ul style="list-style-type: none"> • Submit Draft Spill Report within three (3) business days of the Enrollee’s knowledge of the spill; • Submit Certified Spill Report within 15 calendar days of the spill end date; • Submit Technical Report within 45 calendar days after the spill end date for a Category 1 spill in which 50,000 gallons or greater discharged to surface waters; and • Submit Amended Spill Report within 90 calendar days after the spill end date. 	<p>(Section 3.1 of Attachment E1)</p>

Table E2-2

Spill Category 2: Spills of 1,000 Gallons or Greater That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	<p>Within two (2) hours of the Enrollee’s knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State:</p> <p>Notify California Office of Emergency Services and obtain a notification control number.</p>	<p>California Office of Emergency Services at: (800) 852-7550</p> <p>(Section 1 of Attachment E1)</p>
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	<ul style="list-style-type: none"> • Submit Draft Spill Report within three (3) business days of the Enrollee’s knowledge of the spill; • Submit Certified Spill Report within 15 calendar days of the spill end date; and • Submit Amended Spill Report within 90 calendar days after the spill end date. 	(Section 3.2 of Attachment E1)

Table E2-3

Spill Category 3: Spills of Equal or Greater than 50 Gallons and Less than 1,000 Gallons That Does Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	<ul style="list-style-type: none"> Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within 30 calendars days after the end of the month in which the spills occur; and Submit Amended Spill Reports within 90 calendar days after the Certified Spill Report due date. 	(Section 3.3 and 3.5 of Attachment E1)

Table E2-4

Spill Category 4: Spills Less Than 50 Gallons That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	<ul style="list-style-type: none"> If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred. Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. 	(Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1)

Table E2-5

Enrollee Owned and/or Operated Lateral Spills That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	<p>Within two (2) hours of the Enrollee’s knowledge of a spill of 1,000 gallons or greater, from an enrollee-owned and/or operated lateral, discharging or threatening to discharge to waters of the State:</p> <p>Notify California Office of Emergency Services and obtain a notification control number.</p> <p>Not applicable to a spill of less than 1,000 gallons.</p>	<p>California Office of Emergency Services at: (800) 852-7550</p> <p>(Section 1 of Attachment E1)</p>
Monitoring	<p>Conduct visual monitoring.</p>	<p>(Section 2 of Attachment E1)</p>
Reporting	<ul style="list-style-type: none"> • Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. • Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill. 	<p>(Sections 3.6, 3.7 and 4.4 of Attachment E1)</p>

ATTACHMENT F – REGIONAL WATER QUALITY CONTROL BOARD CONTACT INFORMATION

This Attachment provides a map, list of counties, and contact information to assist the Enrollee in identifying the corresponding Regional Water Quality Control Board office, for all Regional Water Board notification requirements in this General Order.



Region 1 -- North Coast Regional Water Quality Control Board:

Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity counties.

RB1SpillReporting@waterboards.ca.gov or (707) 576-2220

Region 2 -- San Francisco Bay Regional Water Quality Control Board:

Alameda, Contra Costa, San Francisco, Santa Clara (Northern most part of Morgan Hill), San Mateo, Marin, Sonoma, Napa, Solano counties.

RB2SpillReports@waterboards.ca.gov or (510) 622-2369

Region 3 -- Central Coast Regional Water Quality Control Board:

Santa Clara (most of Morgan Hill), San Mateo (Southern portion), Santa Cruz, San Benito, Monterey, Kern (small portions), San Luis Obispo, Santa Barbara, Ventura (Northern portion) counties.

CentralCoast@waterboards.ca.gov or (805) 549-3147

Region 4 -- Los Angeles Regional Water Quality Control Board:

Los Angeles, Ventura counties (small portions of Kern and Santa Barbara counties).

rb4-ssswdr@waterboards.ca.gov or (213) 576-6600

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Region 5 -- Central Valley Regional Water Quality Control Board:

Rancho Cordova (Sacramento) Office: Colusa, Lake, Sutter, Yuba, Sierra, Nevada, Placer, Yolo, Napa, (North East), Solano (West), Sacramento, El Dorado, Amador, Calaveras, San Joaquin, Contra Costa (East), Stanislaus, Tuolumne counties.

RB5sSpillReporting@waterboards.ca.gov or (916) 464-3291

Fresno Office: Fresno, Kern, Kings, Madera, Mariposa, Merced, and Tulare counties, and small portions of San Benito and San Luis Obispo counties.

RB5fSpillReporting@waterboards.ca.gov or (559) 445-5116

Redding Office: Butte, Glen, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Tehama counties.

RB5rSpillReporting@waterboards.ca.gov or (530) 224-4845

Region 6 -- Lahontan Regional Water Quality Control Board:

Lake Tahoe Office: Alpine, Modoc (East), Lassen (East side and Eagle Lake), Sierra, Nevada, Placer, El Dorado counties.

RB6sSpillReporting@waterboards.ca.gov or (530) 542-5400

Victorville Office: Mono, Inyo, Kern (East), San Bernardino, Los Angeles (North East corner) counties.

RB6vSpillReporting@waterboards.ca.gov or (760) 241-6583

Region 7 -- Colorado River Basin Regional Water Quality Control Board:

Imperial county and portions of San Bernardino, Riverside, San Diego counties.

RB7SpillReporting@waterboards.ca.gov or (760) 346-7491

Region 8 -- Santa Ana Regional Water Quality Control Board:

Orange, Riverside, San Bernardino counties.

RB8SpillReporting@waterboards.ca.gov or (951) 782-4130

Region 9 -- San Diego Regional Water Quality Control Board:

San Diego county and portions of Orange and Riverside counties.

RB9Spill_Report@waterboards.ca.gov or (619) 516-1990

End of Order 2022-0103-DWQ

Appendix B
Santa Clara Municipal Code Excerpts

13.05.100 Violation of this chapter or rules and regulations.

It shall be unlawful for any person to violate the provisions of this chapter or the provisions contained in the Silicon Valley Power rules and regulations, as may be subsequently adopted and amended in the future. (Ord. 1742 § 3, 10-26-99).

13.05.110 Reserved.

(Ord. 1742 § 3, 10-26-99).

13.05.120 Reserved.

(Ord. 1742 § 3, 10-26-99).

13.05.130 Costs of enforcement.

In any civil, criminal, or administrative hearing, appeal or action commenced by the City under this chapter, the City shall be entitled to recover from the defendant of such action reasonable attorney's fees, costs of suit and/or any other costs of enforcement, including, but not limited to, inspection and/or repair costs. (Ord. 1742 § 3, 10-26-99).

Chapter 13.10

SEWERS

Sections:

Article I. General Provisions

13.10.010 Purpose.

13.10.020 Definitions.

Article II. Sewer Connection Procedures and Service Charges

13.10.030 Duty to connect premises with sewer system.

13.10.040 Maintenance and inspection of sewer connections.

13.10.050 Permit required to connect with sanitary sewer system – Generally – Fees.

13.10.060 Purpose and use of funds received.

13.10.070 Connection fee schedule.

13.10.080 Outlet charge for connection to off-site sewer trunk lines, etc.

13.10.090 Rates – Users within the city.

13.10.100 Rates exclusive of taxes.

13.10.110 Users outside the city.

13.10.120 Users obtaining water supply from other than the City to install separate meters.

13.10.130 Purpose and use of funds received.

13.10.140 Issuance of bills – Information required.

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- 13.10.620 Emergency corrections, remedial or preventative action.
- 13.10.630 Notice of termination of service and/or permit revocation.
- 13.10.640 Penalties.
- 13.10.650 Appeals.
- 13.10.660 Publication of user in significant noncompliance.

Cross references – Buildings and Construction, SCCC Title 15; Storm Drains and Discharges, Chapter 13.20 SCCC; Water, Chapter 13.15 SCCC.

Article I. General Provisions

13.10.010 Purpose.

(a) Purpose.

(1) To provide for and regulate the disposal of sanitary sewage into the sanitary sewer system of the City in such manner and to such extent as is reasonably necessary to maintain and increase the ability of the sanitary sewer system to handle and dispose of sanitary sewage;

(2) To provide for and regulate the disposal of industrial wastes into the sanitary sewer system of the City in such manner and to such extent as may be reasonably necessary to maintain and increase the ability of such system to handle and dispose of industrial waste without decreasing the ability of said system to handle and dispose of all sanitary sewage;

(3) To prevent the introduction of pollutants into the sanitary sewer system that will pass through the treatment works of the San Jose/Santa Clara Water Pollution Control Plant (“plant”) or otherwise be incompatible with such works or interfere with the ability of the plant to treat, discharge, and recycle wastewater, or to use or dispose of plant biosolids;

(4) To improve opportunities to recycle and reclaim treated effluent and wastewater sludge;

(5) To protect the physical structures of the sanitary sewer system and the efficient functioning of its component parts;

(6) To protect the City and its personnel;

(7) To preserve and protect the health, safety, and property of the public;

(8) To enable the City to comply with all applicable and compatible laws, rules, regulations, and orders of the State of California and of the United States;

(9) To provide for the charging and collection of various fees and other charges reasonably necessary for the acquisition, construction, reconstruction, maintenance, and operation of the sanitary sewer system of the City;

(10) To protect the environmental health of San Francisco Bay.

(b) Conflicts with Other Chapters of This Code. In the event of any conflicts or inconsistencies between the provisions of this chapter and the provisions of any other chapter of this Code, the provisions of this chapter shall control.

(c) Responsibility for Enforcement. The primary responsibility for enforcement of the provisions of this chapter shall be vested in the City Manager or his/her designee. (Ord. 1901 § 2, 11-27-12).

13.10.020 Definitions.

The definitions set forth below shall govern the application and interpretation of this chapter.

(a) "A" definitions:

(1) "Amalgam separator" means a device that: employs filtration, settlement, centrifugation, or ion exchange to remove dental amalgam and its metal constituents from a dental office vacuum system before it discharges to the sanitary sewer; has been certified under the International Organization for Standardization's standard for amalgam separators as capable of removing a minimum of ninety-five percent (95%) of dental amalgam at flow rates comparable to the flow rate of the actual vacuum suction system in operation; and does not have any automatic flow bypass.

(2) "Ammonia" means the form of nitrogen that is chemically definable as NH_3 .

(3) "Audit protocols" means the procedures to be followed in performing flow and pollutant audit studies.

(4) "Average concentration" means the concentration of a pollutant in an industrial user's discharge that is calculated by adding the concentrations of the particular pollutant in all composite samples taken during a given time period, including, but not limited to, self-monitoring samples, and dividing the total by the number of samples taken.

(b) "B" definitions:

(1) "Batch discharge" means the discharge of wastewater resulting from an intermittent treatment process in which an identified amount of process wastewater is collected, treated to meet discharge standards, and released to the sanitary sewer system.

(2) "Best management practices" means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the introduction of pollutants to the sanitary sewer system that have been determined by the Director to be cost-effective for particular industry groups, business types, or specific industrial processes.

(3) "Biochemical oxygen demand" means the quantity of oxygen expressed in parts per million (ppm) by weight, utilized in the biochemical oxidation of organic matter under standard labora-

tory conditions for five days at a temperature of twenty degrees centigrade (20°C).

(c) "C" definitions:

(1) "Categorical industrial user" or "CIU" means a source performing any categorical process subject to Federal pretreatment standards, as described in 40 CFR Sections 405 through 471, as amended from time to time, that has any connection to the sanitary sewer system.

(2) "Categorical pretreatment standard" or "categorical standard" means any regulation containing pollutant discharge limits promulgated by EPA that apply to specific categories of users and which appear in 40 CFR Sections 405 through 471, as amended from time to time.

(3) "Code of Federal Regulations" (or "CFR") refers to the Code of Federal Regulations as published by the Office of the Federal Register National Archives and Records Administration. Whenever a reference is made to any portion of the CFR, or to any other Federal regulation, such reference shall apply to all amendments and additions to such portion of said regulations now or hereinafter enacted.

(4) "Composite sample" means a flow-proportional or time-proportional sample, which accurately represents the average pollutant concentration discharged during a continuous time period. A composite sample may be obtained manually or automatically, and it may be taken discretely or continuously. For manual composite sampling, at least six individual samples from each sample point shall be combined and mixed to obtain one composite sample; flow-proportion may be obtained either by varying the time interval between each discrete sample or the volume of each discrete sample.

(5) "Critical user" means a discharger whose wastewater contains priority pollutants, or who discharges any waste which has the potential to cause interference in concentration above those allowed in this chapter and/or who discharges in excess of one hundred thousand (100,000) gallons per day.

(d) "D" definitions:

(1) "Diluting waters" means noncontact cooling water, boiler blowdown, domestic sewage, groundwater, stormwater, surface drainage, reverse osmosis reject, water softener regeneration, potable waters, or any other waters that are not part of an industrial process and that do not contain priority pollutants but are combined with industrial wastewater prior to the monitoring point for industrial wastewater discharge. "Diluting

13.10.020

waters” also includes excess water used in production processes, such as rinse tanks or rinse water running when in production in excess of operational or quality requirements.

(2) “Director,” for purposes of this chapter, shall mean the Director of Water and Sewer Utilities or his/her designee.

(3) “Discharger” means any person discharging wastewater into the sanitary sewer system.

(4) “Domestic wastewater” means wastewater from private residences and other premises resulting from the use of water for personal washing, sanitary purposes and/or the elimination of human wastes and related matter.

(e) “E” definitions:

(1) “Existing source” means any source of discharge that is not a new source.

(f) “F” definitions:

(1) “Food service establishment” means a user that prepares and/or sells food for consumption either on or off the premises or washes utensils or dishes on premises that may contribute grease to the sewer system, including, but not limited to, restaurants, sandwich shops, delicatessens, bakeries, cafeterias, markets, bed and breakfast inns, motels, hotels, meeting halls, caterers, retirement and nursing homes or pizzerias. The term, as used in this chapter, does not refer to food stores or establishments that do not prepare food on premises and do not process food in a manner which may contribute grease to the sewer system.

(g) “G” definitions:

(1) “Garbage” means wastes from the preparation, cooking, and dispensing of foods, and from the handling, storage, and sale of produce.

(2) “Grab sample” means a single discrete sample collected at a particular time and place that represents the composition of the waste stream only at that time and place.

(3) “Grease” means liquid or other waste containing floatable and/or dispersed grease, vegetable oil, petroleum oil, nonbiodegradable cutting oil, or fat, oil or grease products of animal, vegetable or mineral origin which is detectable and measurable using analytical test procedures established in the United States Code of Federal Regulations, 40 CFR Section 136.

(4) “Grease control device” means a grease interceptor, grease trap, mechanical grease removal device or other device approved for use by the Director.

(5) “Grease interceptor” means a large tank installed underground and designed to collect and

control solid-food wastes and floating grease from wastewater prior to discharge into the sanitary sewer collection system. Grease interceptors are normally installed outside the building and use gravity to separate grease from the wastewater as it moves from one compartment of the interceptor to the next.

(6) “Grease trap” means a device placed under or in close proximity to sinks or other fixtures likely to discharge grease in an attempt to separate, trap and hold oil and grease substances.

(h) Reserved for future use.

(i) “I” definitions:

(1) “Industrial user” means any nonresidential user that discharges industrial wastes to the sanitary sewer system.

(2) “Industrial wastes” means the wastes from producing, manufacturing, and processing operations of every kind and nature.

(3) Interference.

(A) “Interference” means a discharge that, alone or in conjunction with a discharge or discharges from other sources, inhibits or disrupts the processes or operation of the sanitary sewer system, including the plant, or causes or significantly contributes to a violation of any requirement of the National Pollutant Discharge Elimination System (NPDES) permit, which is a permit issued to the City pursuant to Section 402 of the Clean Water Act.

(B) “Interference” also includes prevention of biosolids use or disposal by the plant in accordance with published regulations providing guidelines under Section 405 of the Federal Clean Water Act (33 U.S.C. Sections 1251 through 1387) or in regulations developed pursuant to the Solid Waste Disposal Act (SWDA) (42 U.S.C. Section 6901 et seq.), the Toxic Substances Control Act (15 U.S.C. Sections 2601 through 2654), or more stringent State regulations (including those contained in any State biosolids management plan prepared pursuant to Title IV of SWDA) applicable to the method of disposal or use employed by the plant.

(j) Reserved for future use.

(k) Reserved for future use.

(l) “L” definitions:

(1) “Low flow discharger” means an industrial discharger whose average process flow, as shown on the discharger’s application to discharge and as measured as a rolling six-month average, is less than one thousand (1,000) gallons per day.

(m) “M” definitions:

(1) “Maximum allowable concentration” means the highest permissible concentration or other measure of pollutant magnitude taken at a specific point in time.

(2) “Mechanical grease removal device” means a power operated device or combination of devices using electrical equipment to heat, filter, siphon, skim or otherwise separate and retain floating grease and solid food waste prior to the wastewater exiting the trap and entering the sanitary sewer collection system.

(n) “N” definitions:

(1) “New source” means:

(A) Any building, structure, facility or installation from which there is (or may be) a discharge of pollutants, the construction of which commenced after the publication of proposed pretreatment standards under Section 307(c) of the Clean Water Act that will be applicable to such source if such standards are thereafter promulgated in accordance with that section; provided, that:

(i) The building, structure, facility, or installation is constructed at a site at which no other source is located; or

(ii) The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

(iii) The production or wastewater generating processes of the building, structure, facility or installation are, in the sole judgment of the Director, substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source, should be considered.

(B) Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility, or installation meeting the criteria of subsection (n)(1)(A)(ii) or (iii) of this section but otherwise alters, replaces, or adds to existing process or production equipment.

(C) Construction of a new source as defined under this definition has commenced if the owner or operator has:

(i) Begun, or caused to begin, as part of a continuous on-site construction program:

a. Any placement, assembly or installation of facilities or equipment; or

b. Significant site preparation work, including clearing, excavating, or removal of existing buildings, structures, or facilities, which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

(ii) Entered into a contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this subsection.

(o) “O” definitions:

(1) “Owner” means any person who owns private premises that contain a source as defined in this section.

(2) “Operator” means any person who owns, leases, operates, controls, or supervises a source as defined in this section.

(p) “P” definitions:

(1) “Pass-through” means a discharge which exits the plant into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the plant’s NPDES permit, including an increase in the magnitude or duration of a violation.

(2) “pH” means the logarithm of the reciprocal of the concentration of hydrogen ions in moles per liter of solution.

(3) “Plant” means the San Jose/Santa Clara Water Pollution Control Plant.

(4) “Pretreatment standard” means prohibited discharge standards, categorical pretreatment standards, and local limits.

(5) “Priority pollutants” means all pollutants as defined by the “General Pretreatment Regulations” of the Environmental Protection Agency, found at Title 40, Chapter 1, Subchapter W, Parts 401 and 403 of the Code of Federal Regulations.

(6) “Process flow” means the daily, twenty-four (24)-hour flow of wastewater from any kind or nature of production, manufacturing, or processing operation, including industrial and commercial operations where water is used for the removal of any type of waste other than sanitary sewage. Process flow does not include diluting waters.

(q) Reserved for future use.

(r) "R" definitions:

(1) "Reasonable control measures" means control technologies, best management practices, source control practices, and waste-minimization procedures that prevent or reduce the introduction of pollutants to the sanitary sewer system and are determined by the Director to be cost-effective for particular industry groups, business types, or specific industrial processes.

(s) "S" definitions:

(1) "Sanitary sewage" means water-carried wastes from residences, business buildings, institutions, and industrial establishments, excluding ground, surface, and stormwaters, subsurface drainage, and also excluding industrial waste.

(2) "Sanitary sewer overflow" is any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system, including overflows or releases that reach waters of the United States, overflows or releases that do not reach waters of the United States, and backups into buildings and/or private property caused by conditions within the publicly owned portion of the sewer system.

(3) "Sanitary sewer system" means all sewers, treatment plants, and other facilities owned or operated by the City for carrying, collecting, pumping, treating, and disposing of sanitary sewage and industrial wastes.

(4) "Sewer" means a pipe or conduit for carrying sewage.

(5) "Sewer lateral" (same as "sewer service lateral") means the sewer connection piping used to convey sewage from a building or facility on a parcel (private or public property) to the City-owned sewer main. Each sewer lateral is owned by the entity that owns the property or facility from which that sewer lateral serves to convey sewage.

(6) "Significant change" means any change in an industrial user's operation that results in any of the following:

(A) A flow that exceeds the expected peak flow as shown in the sewage treatment plant connection allocation for the property on which the industrial user is located.

(B) An increase or decrease in annual average process flow of twenty-five percent (25%) over the standard discharger's average process flow for the discharger's most immediate preceding twelve (12) months.

(C) An increase or decrease in annual average process flow that results in a change from

low flow discharger to standard discharger or from standard discharger to low flow discharger.

(D) An increase or decrease in annual average process flow that results in a change from nonsignificant industrial user to significant industrial user or from significant industrial user to nonsignificant industrial user.

(E) An increase or decrease in annual production rate of twenty-five percent (25%) for any industrial user subject to production-based limits over the industrial user's production rate for the most immediate preceding twelve (12) months.

(F) Adding or deleting process discharge or sample points.

(7) "Significant industrial user" means:

(A) An industrial user that has processes subject to categorical pretreatment standards; or

(B) An industrial user that:

(i) Discharges an average of twenty-five thousand (25,000) gpd or more of process wastewater to the sanitary system (excluding sanitary, noncontact cooling and boiler blowdown wastewater); or

(ii) Contributes a process wastewater stream which makes up five percent or more of the average dry weather hydraulic or organic capacity of the plant; or

(iii) Is designated as such by the Director on the basis that it has a reasonable potential for adversely affecting the plant's operation or for violating any pretreatment standard or requirement.

(8) An industrial user is in "significant non-compliance" if it has a violation or violations meeting one or more of the following criteria:

(A) Chronic violations of wastewater discharge limits defined here as those in which sixty-six percent (66%) or more of all the measurements taken during a six-month period exceed (by any magnitude) a numeric pretreatment standard or requirement, including instantaneous limits, as defined by 40 CFR Section 403.3(l);

(B) Technical review criteria (TRC) violations, defined here as those in which thirty-three percent (33%) or more of all the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of the numeric pretreatment standard or requirement including instantaneous limits, as defined by 40 CFR Section 403.3(l), multiplied by the applicable TRC (TRC equals 1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants except pH);

(C) Any other violation of a pretreatment standard or requirement as defined by 40 CFR Sec-

tion 403.3(l) (daily maximum, long-term average, instantaneous limit, or narrative standard) that the Director determines has caused, alone or in combination with other discharges, interference or pass-through (including endangering the health of the Director personnel or the general public);

(D) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the plant's exercise of its emergency authority to halt or prevent such a discharge;

(E) Failure to meet, within ninety (90) days after the scheduled due date, a compliance schedule milestone contained in a discharge permit or enforcement order for starting construction, completing construction, or attaining final compliance;

(F) Failure to provide, within forty-five (45) days after the due date, required reports such as baseline monitoring reports, ninety (90)-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules;

(G) Failure to accurately report noncompliance; and

(H) Any other violation or group of violations, which may include a violation of reasonable control measures, which the Director determines will adversely affect the operation or implementation of the pretreatment program.

(9) "Slug load" or "slug discharge" means any discharge of a nonroutine, episodic nature, including but not limited to an accidental spill or noncustomary batch discharge, which has a reasonable potential to cause interference or pass-through or in any other way cause a violation of the provisions of this chapter or applicable permit conditions.

(10) "Source" means any building, structure, facility or installation from which there is or may be a potential as determined by the Director to discharge pollutants above the local limits included in this chapter or State or Federal limits or wastewater of such volume or strength that it may cause interference, pass-through or operational problems in the sanitary sewer system or at the San Jose/Santa Clara Water Pollution Control Plant.

(11) "Standard discharger" means any industrial discharger who is not a low flow discharger.

(12) Standard Methods.

(A) "Standard methods" means the procedures set forth in the Code of Federal Regulations, unless the use of another method for the

analysis of industrial wastewater has been approved in writing in advance by the Director.

(B) All analyses shall be performed by a laboratory certified by the State for the specific pollutants and matrix to be analyzed, unless otherwise approved in writing, by the Director, prior to performance of a sample analysis.

(13) "Stormwaters" means the flow across any surface or in storm sewers resulting from rainfall.

(14) "Suspended solids" means solids that either float on the surface of, or are in suspension in, water, sewage, or other liquids and that are removable by laboratory filtering.

(t) "T" definitions:

(1) "Total toxic organics (TTOs)" are the sum of the concentrations for each of the regulated toxic organic compounds listed at Title 40, Chapter 1, Subchapter W, Part 401, Section 401.15 CFR and are found in the discharge at a concentration greater than ten micrograms per liter. Some categorical standards (40 CFR Sections 405 through 471) list the specific toxic organic compounds that are to be included in the summation.

(2) "Trucked or hauled waste" means any waste discharged into the sanitary sewer system after being placed in a motorized vehicle for removal from the location where the waste was generated or produced.

(u) "U" definitions:

(1) "User" means any person responsible for payment of sewer service charges.

(v) Reserved for future use.

(w) Reserved for future use.

(x) Reserved for future use.

(y) "Y" definitions:

(1) "Yellow grease" means grease which is associated with food preparation or processing, which has not been contaminated with wash water or chemicals, or by being spilled or otherwise contaminated.

(z) "Z" definitions:

(1) "Zero discharger" or "ZDC" means an industrial facility that performs any categorical process subject to Federal pretreatment standards, as described in 40 CFR 405 through 471, that has any connection to the sanitary sewer system, but does not discharge wastewater from the categorical process to the sanitary sewer. (Ord. 1901 § 2, 11-27-12).

Article II. Sewer Connection Procedures and Service Charges

13.10.030 Duty to connect premises with sewer system.

No person owning any premises within the city, and no user of any premises within the city, where domestic or industrial waste is produced and on which premises the nearest outlet of the plumbing system is located within two hundred (200) feet from the point at which a connection can be made to the sewer system, or having no plumbing system, but in which a plumbing system could be installed with the nearest outlet located within two hundred (200) feet from the point at which a connection could be made to the sewer system, shall use any means of sewage waste disposal other than through the City sewer lines. Every person owning any premises or every use of any premises so located and upon or in which any such sewage waste is produced shall be required to connect such premises to the sewer system within sixty (60) days from the date when a main sewer or lateral sewer located within the distance specified in this section is completed and available for connection to such premises. There shall be a separate connection to the sewer system for each building or structure served. Pursuant to a written permit from the Director, any two or more buildings or structures on the same lot may be served by one sewer connection. (Ord. 1901 § 2, 11-27-12).

13.10.040 Maintenance and inspection of sewer connections.

Each user shall keep his/her sewer connections and sewer lateral(s) in good order at his/her own expense and shall be liable for all damages resulting from failure to do so. Each owner shall maintain their sewer lateral free from displaced joints, open joints, root intrusions, substantial deterioration of pipe material, cracks, leaks, inflow or infiltration of extraneous water, grease and sediment deposits or other similar conditions, defects, or obstructions likely to cause or increase the chance of blockage. A City inspector shall be admitted at all reasonable hours to any premises connected with the sewer system, for the purpose of checking plumbing fixtures, protecting the rights of the City, and determining facts relevant to the establishment, computation, and billing of the sewer service charges provided for in this chapter, including, in the case of industrial users, examination of the users' books for the purpose of checking the quan-

ties of industrial waste produced. (Ord. 1901 § 2, 11-27-12).

13.10.050 Permit required to connect with sanitary sewer system – Generally – Fees.

No person whose premises are not now connected with the sewer system shall connect any premises or cause any premises to be connected with the sewer system without first obtaining a written permit to do so from the City and paying the established connection fees. (Ord. 1901 § 2, 11-27-12).

13.10.060 Purpose and use of funds received.

All revenue collected pursuant to the provisions of this article shall be placed into the utilities fund as established by Section 1320 of the City Charter. Said revenue shall be used in accordance with the provisions of Section 1320 of the City Charter. (Ord. 1901 § 2, 11-27-12).

13.10.070 Connection fee schedule.

Wherever a property is initially connected, or requires an addition of a new connection to the sewer system, a sewage treatment plant expansion calculation fee ("sewer connection fee") shall be charged to and paid for by the property owner in accordance with SCCC 17.15.210. (Ord. 1901 § 2, 11-27-12).

13.10.080 Outlet charge for connection to off-site sewer trunk lines, etc.

In addition to the aforesaid sewer connection fee, each property owner or the developer of real property shall pay to the City an outlet charge as delineated in SCCC 17.15.210. (Ord. 1901 § 2, 11-27-12).

13.10.090 Rates – Users within the city.

(a) There is hereby levied and assessed against and upon all premises having (or required by this chapter or any ordinance of the City to have) any sewer connection with or discharging (or required thereby to discharge) into or through the sanitary sewer system of City, a monthly sewer service charge.

(b) The City Council may, by resolution, establish and amend the monthly sewer service charges. Said resolution(s) shall contain the effective date of any change in the monthly sewer service charge.

(c) The resolution(s) establishing and amending the monthly sewer service charges shall be kept

on file and made available to the public at the City Clerk's office. (Ord. 1901 § 2, 11-27-12).

13.10.100 Rates exclusive of taxes.

The rates herein are exclusive of the monthly utility excise tax prescribed in Chapter 3.30 SCCC and all other prescribed sewer-related fees and charges. (Ord. 1901 § 2, 11-27-12).

13.10.110 Users outside the city.

(a) The City Council may, by resolution, set and fix monthly sewer service charges for various types of users located outside the city that discharge sewage and other wastes into the sanitary sewer system of the City. Such charges will be effective upon adoption of such resolution(s).

(b) Notwithstanding any other provisions of this chapter, the City Council shall have power to establish, by resolution or by agreement with the user, the monthly sewer service charges applicable to any person or any user outside the city limits, at rates different from those set forth in this chapter, as long as the charges so established are fair and equitable under the circumstances. (Ord. 1901 § 2, 11-27-12).

13.10.120 Users obtaining water supply from other than the City to install separate meters.

Where any of the charges enumerated in SCCC 13.10.090 are based upon the consumption of water by any users, and any such water is furnished otherwise than from the City's water system, and no approved meter is installed in the sewer service connection, then such user shall at his/her own expense install a separate water meter for measurement of such water. Said water meter installation shall be made to comply with all requirements of the Director. (Ord. 1901 § 2, 11-27-12).

13.10.130 Purpose and use of funds received.

All revenue collected pursuant to the provisions of this article shall be placed into the utilities fund as established by Section 1320 of the City Charter.

Said revenue shall be used in accordance with the provisions of Section 1320 of the City Charter. (Ord. 1901 § 2, 11-27-12).

13.10.140 Issuance of bills – Information required.

All bills for sewer charges shall be issued by the City's Department of Finance. They shall be combined with bills or statements for water service rendered by the water system in all cases where the

premises in question are connected to the water system. The bills shall (a) state their purpose, (b) give the name and last known address of the person responsible for payment as provided in this chapter, and (c) list separately the charge for water service, for sewer service, and the total charge for both services. Neither charge may be paid separately from the other. If premises with sewer service are not connected with the water system, a separate bill shall be rendered. All bills shall be for monthly periods or for such other period as shall be determined by resolution of the City Council. (Ord. 1901 § 2, 11-27-12).

13.10.150 Delinquent accounts.

The City Manager shall ensure enforcement of this chapter by coordinating the actions of the Director of Finance, the Director, and the other City officers or departments concerned. (Ord. 1901 § 2, 11-27-12).

13.10.160 Notice – Disconnection from water system.

In the event of a violation of any provision of this chapter, or any rule or regulation established pursuant thereto, the Director, in writing, shall notify the person causing, allowing, or committing such violation, specifying the violation and, if applicable, the time after which, upon failure of such person to prevent or rectify the violation, the Director will exercise his/her authority to disconnect the premises from the water system or the sewer system. Such time shall not be less than five days after the deposit of such notice in a United States Post Office in the city, addressed to the person upon whom notice is given. In the event such violation results in a public hazard or menace, the Director or other authorized representative may enter upon the premises without notice and do such things and expend such sums as may be necessary to abate such hazard. The reasonable value of the things done and the amounts expended in so doing shall be a charge upon the person in violation. (Ord. 1901 § 2, 11-27-12).

Article III. Sewer Use Regulations

Part 1. Discharge Regulations and General Prohibitions

13.10.170 Limitations on point of discharge.

No person shall discharge any substances directly into a manhole or other opening in a City

13.10.180

sewer, other than through a City-approved sewer connection. (Ord. 1901 § 2, 11-27-12).

13.10.180 Discharge into storm drain prohibited.

It shall be unlawful to discharge any sewage, industrial waste, or other polluted waters into any storm drain or natural outlet or channel without a valid National Pollutant Discharge Elimination System (NPDES) permit. (Ord. 1901 § 2, 11-27-12).

13.10.190 Regulation of trucked or hauled waste.

No person shall discharge, cause, allow, or permit any trucked or hauled waste to be discharged into the sanitary sewer system, except at a site specifically designated in a wastewater discharge permit issued pursuant to this chapter. (Ord. 1901 § 2, 11-27-12).

13.10.200 Protection from accidental discharge.

(a) Each industrial user shall provide protection from accidental discharge of prohibited materials or other wastes regulated by this chapter into either the storm sewer or the sanitary sewer system.

(b) Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the industrial user's expense.

(c) All industrial users shall notify the City by telephone or in person within one hour of becoming aware of accidentally discharging wastes of reportable quantities as determined in Title 40, Chapter 1, Subchapter D, Part 117 CFR, or discharge of any substance which, if otherwise disposed to, would be hazardous waste under 40 CFR Part 261, to enable countermeasures to be taken by the City to minimize damage to the sanitary sewer system, the plant, the treatment processes, and/or the receiving waters. If hazardous waste is discharged, the industrial user shall be subject to all requirements in 40 CFR Section 403.12(p).

(d) Within five days of the date of occurrence a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrences shall be provided to City.

(e) Notification to the City will not relieve industrial users of notification requirements under any other Federal, State, or local law, nor of liability for any expense, loss, or damage to the sanitary sewer system, plant, or treatment process or receiving waters, or for any fines or penalties imposed on

the City on account thereof under applicable provisions of State or Federal law.

(f) All permitted facilities must maintain a spill control plan for protection against accidental discharges, including but not limited to berming of chemicals and waste materials. The review of such plans and procedures shall not relieve the industrial user from the responsibility of modifying the facility as necessary to provide the protection necessary to meet the requirements of this Code or other State or Federal regulations.

(g) This plan must be reviewed and revised as needed within thirty (30) days after an accidental discharge has occurred or as required by the Director. (Ord. 1901 § 2, 11-27-12).

13.10.210 Pretreatment by owner.

Each owner shall, at the owner's expense, provide such treatment or take such other measures, as the Director may require to prevent accidental discharge, reduce objectionable characteristics, contents, or rate of discharge of waters or waste being deposited in the sanitary sewer system, to prevent damage to or interference with the sanitary sewer system. (Ord. 1901 § 2, 11-27-12).

13.10.220 Monitoring facilities.

(a) The Director may require any industrial user of the sanitary sewer system to construct, at the industrial user's own expense and at an approved location, monitoring facilities to allow inspection, sampling and flow measurement of the building sewer or internal drainage systems.

(b) The monitoring facilities, sampling and measurement equipment, and access thereto, shall be maintained at all times in a safe and proper operating condition at the expense of the discharger.

(c) Any required monitoring facilities shall be specified in the wastewater discharge permit issued pursuant to this chapter.

(d) A sample box shall be designed in such a way as to retain sufficient wastewater in the sample box at all times to allow sample collection representative of the last wastewater discharge. (Ord. 1901 § 2, 11-27-12).

Part 2. Prohibited Discharges, Substances

13.10.230 Storm and other waters.

(a) No person shall discharge, cause, allow, or permit any stormwater, surface water, ground water, subsurface drainage or roof runoff to be discharged into the sanitary sewer system or any part thereof without a wastewater discharge permit.

(b) A wastewater discharge permit for the discharge of ground water, subsurface drainage, surface water, roof water or stormwater shall only be issued if there is no reasonable alternative method for disposal of such water.

(c) If permitted, discharge of ground water or subsurface drainage, surface water, roof water or stormwater shall be subject to all applicable requirements of this chapter, including, but not limited to, the payment of applicable permit fees and such terms and conditions as the Director may impose in the wastewater discharge permit. (Ord. 1901 § 2, 11-27-12).

13.10.240 Obstructing or injurious substances.

No person shall discharge, cause, allow, or permit to be discharged, thrown, or deposited into the sanitary sewer system, or any part thereof, or into any plumbing fixture or private sewer or drain connected either directly or indirectly to the sanitary sewer system, any substance of any kind whatsoever tending to obstruct or injure the sanitary sewer system, or to cause a nuisance or hazard, or which will in any manner interfere with the proper operation or maintenance of the sanitary sewer system. (Ord. 1901 § 2, 11-27-12).

13.10.250 Flammable or explosive substances.

No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any wastewater containing any flammable liquid, solid, vapor, or gas, or any other substance, including, but not limited to, any substance having a closed cup flashpoint of less than one hundred forty (140) degrees Fahrenheit or sixty (60) degrees Celsius, using the test methods specified in 40 CFR Section 261.21. (Ord. 1901 § 2, 11-27-12).

13.10.260 Hot substances.

No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any liquid, solid, vapor, gas, or thing having or developing a temperature of one hundred fifty (150) degrees Fahrenheit or more, or that may cause the temperature at the plant to exceed one hundred four (104) degrees Fahrenheit. (Ord. 1901 § 2, 11-27-12).

13.10.270 Grease, oils, fats.

(a) No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system any liquid or other waste containing grease in

excess of one hundred fifty (150) parts per million by weight.

(b) No person shall discharge, cause, allow, or permit any grease discharge from a food service establishment into the sanitary sewer system, unless such discharge has first been processed through an approved grease control device.

(c) No person shall discharge, cause, allow, or permit to be discharged any yellow grease, or any waste or material mixed with yellow grease, into the sanitary sewer system from a food service establishment. No yellow grease from a food service establishment shall be mixed with grease trap or grease interceptor waste. (Ord. 1901 § 2, 11-27-12).

13.10.280 Solid or viscous matter.

No person shall discharge, deposit, throw, or cause to be discharged, deposited, or thrown into the sanitary sewer system, or any part thereof, any ashes, cinders, pulp, paper, sand, cement, mud, straw, shavings, metal, glass, rags, feathers, tar, asphalt, resins, plastics, wood, animal hair, paunch manure, or any heavy solid or viscous substance capable of causing obstruction to the flow in the sanitary sewer system, or any part thereof, or that would interfere with the proper operation of the plant or the treatment of sanitary sewage or industrial waste. (Ord. 1901 § 2, 11-27-12).

13.10.290 Corrosive matter.

No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any liquid, solid, vapor, gas, or thing having a pH lower than 6.0 or equal to or greater than 12.5, or having any other corrosive property capable of causing damage or hazard to the sanitary sewer system, or any part thereof, or to any personnel operating, maintaining, repairing, or constructing said sanitary sewer system, or any part thereof, or working in or about the sanitary sewer system. (Ord. 1901 § 2, 11-27-12).

13.10.300 Toxic gases, vapors or fumes.

No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any substance of any kind whatsoever that results in the presence of toxic gases, vapors, or fumes within the sanitary sewer system in a quantity that may cause acute health and/or safety problems for workers in the sanitary sewer system. (Ord. 1901 § 2, 11-27-12).

13.10.310

13.10.310 Interfering substances.

(a) No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any industrial waste containing any of the following toxic substances exceeding the concentrations set forth in Table A.

(b) No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any toxic or poisonous substances or any other pollutant, including biochemical oxygen demand, in sufficient quantity to:

- (1) Injure or cause an interference with the sewage treatment process;
- (2) Constitute a hazard to humans or animals;
- (3) Create a hazard for humans or aquatic life in any waters receiving effluent from the sanitary sewer system; or
- (4) Create a hazard in the use or disposal of sewage sludge.

(c) All samples, both grab and composite, shall demonstrate compliance with the limits in Table A.

(d) Any industrial user that violates any of the interfering substances limits must resample and submit sample reports for all pollutants in violation of any applicable limits or any other pollutants as required by the Director within thirty (30) days of becoming aware of the violation.

**TABLE A
INTERFERING SUBSTANCES**

<u>Toxic Substance</u>	<u>Standard Discharger Maximum Allowable Concentration</u>		<u>Low Flow Discharger Maximum Allowable Concentration</u>	
Antimony	5.0	mg/l	5.0	mg/l
Arsenic	1.0	mg/l	1.0	mg/l
Beryllium	0.75	mg/l	0.75	mg/l
Cadmium	0.7	mg/l	0.7	mg/l
Chromium, total	1.0	mg/l	1.0	mg/l
Copper	2.3	mg/l	2.7	mg/l
Cyanides	0.5	mg/l	0.5	mg/l
Lead	0.4	mg/l	0.4	mg/l
Mercury	0.010	mg/l	0.010	mg/l
Nickel	0.5	mg/l	2.6	mg/l
Phenol and derivatives	30.0	mg/l	30.0	mg/l

TABLE A

INTERFERING SUBSTANCES (Continued)

<u>Toxic Substance</u>	<u>Standard Discharger Maximum Allowable Concentration</u>		<u>Low Flow Discharger Maximum Allowable Concentration</u>	
Selenium	1.0	mg/l	1.0	mg/l
Silver	0.7	mg/l	0.7	mg/l
Zinc	2.6	mg/l	2.6	mg/l

(Ord. 1901 § 2, 11-27-12).

13.10.320 Prohibition on use of diluting waters.

No industrial user shall ever increase the use of process water, or in any way use diluting waters as a partial or complete substitute for adequate treatment, or to meet local limits or achieve compliance with a discharge limitation unless expressly authorized by an applicable pretreatment standard or requirement. (Ord. 1901 § 2, 11-27-12).

13.10.330 Suspended solids – Dissolved matter.

No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any liquid containing suspended solids or dissolved matter of such character and quantity that unusual attention or expense is required to handle, process, or treat such matter at the plant. (Ord. 1901 § 2, 11-27-12).

13.10.340 Noxious or malodorous matter.

No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any solid, liquid, vapor, gas, or thing that is so malodorous or noxious that its discharge into the sanitary sewer system would cause a public nuisance. (Ord. 1901 § 2, 11-27-12).

13.10.350 Radioactive matter.

No person shall discharge, cause, allow, or permit to be discharged any radioactive waste into the sanitary sewer system, except that:

- (a) Persons authorized to use radioactive materials by the State Department of Health Services or other governmental agency empowered to regulate the use of radioactive materials may discharge, cause to be discharged, or permit to be discharged such wastes; provided, that such wastes are dis-

charged in strict conformance with the California radiation control regulations (California Code of Regulations, Title 17, Division 1, Chapter 5, Subchapter 4 (entitled "Radiation") et seq.) and Federal regulations and recommendations for safe disposal of such radioactive wastes; and

(b) The person so acting does so in compliance with all applicable rules and regulations of all other regulatory agencies having jurisdiction over such discharges. (Ord. 1901 § 2, 11-27-12).

13.10.360 Colored matter.

No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any wastewater with objectionable color not removed in the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions. (Ord. 1901 § 2, 11-27-12).

13.10.370 Garbage.

(a) No person shall discharge, deposit, throw, cause, allow, or permit to be discharged, deposited, or thrown into the sanitary sewer system, or any part thereof, (1) any garbage, (2) any fruit, vegetable, or animal material, and/or (3) any other solid material from any food-processing plant (or any other industrial plant or retail grocery store), irrespective of whether or not it shall have been first passed through a mechanical grinder.

(b) No person shall install, operate, use, or maintain upon the premises of any food-processing plant (or any other industrial plant or retail grocery store) any mechanical grinder or waste grinder that is connected directly or indirectly to the sanitary sewer system, or any part thereof.

(c) No person shall discharge, deposit, throw, or cause, allow, or permit to be discharged, deposited, or thrown into the sanitary sewer system, or any part thereof, any garbage, or fruit, vegetable, animal, or other solid kitchen waste material resulting from the preparation of any food or drinks in any dwelling, restaurant, or eating establishment, unless the same shall have first been passed through a mechanical garbage or waste grinder in conformance with the provisions of the Plumbing and Electrical Code of the City. (Ord. 1901 § 2, 11-27-12).

13.10.380 Oil and grease removal devices.

(a) Any food service establishment, or other type of business or establishment where grease or other viscous, obstructing, or objectionable materials may be discharged into a public or private sewage main or disposal system, shall have a grease

control device and related plumbing of a size and design approved by the Director.

(1) Grease interceptors shall meet the following minimum requirements:

(A) Designed retention time of no less than thirty (30) minutes.

(B) The effluent from the device must flow through an approved sample box.

(C) Installed per manufacturer's specifications.

(D) At least two manholes, situated so all standpipes can be fully observed, and all internal surfaces can be reached, without confined space entry.

(E) Double-sweep cleanouts, on the interceptor inlet, and sample box outlet.

(F) Shall meet the specifications and be constructed in accordance with the applicable provisions of Chapter 15.35 SCCC.

(2) Grease traps shall meet the following minimum requirements:

(A) No injection ports for chemicals or bacteria.

(B) Installed per manufacturer's specifications.

(C) Appropriate flow restrictors, whether integral or external to the device, must be installed.

(D) Shall meet the specifications and be constructed in accordance with the applicable provisions of Chapter 15.35 SCCC.

(3) Mechanical grease removal devices shall be installed in accordance with manufacturers' specifications.

(b) Each grease control device shall be so installed and connected that it shall be at all times easily accessible for visual inspection, sampling, cleaning and removal of grease and other matter from all surfaces.

(c) A grease control device shall be situated on the discharger's premises, except when such a location would be impractical or cause undue hardship on the discharger, the City may issue an encroachment permit to allow the grease control device to be installed in the public street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles.

(d) Waste discharged from fixtures and equipment in establishments which may contain grease or other objectionable materials including, but not limited to, scullery sinks, pot and pan sinks, dishwashers, food waste disposals, soup kettles, and floor drains located in areas where such objectionable materials may exist, may be drained into the

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sanitary sewer through the grease control device if approved by the Director; provided, however, that toilets, urinals, wash basins, and other fixtures containing fecal material shall not flow through the grease control device.

(e) Grease control devices shall be maintained in efficient operating condition by periodic removal of the accumulated grease. The use of chemicals, bacteria, enzymes, or other additives that have the effect of emulsifying or dissolving grease is prohibited unless specifically authorized by the Director in writing. No accumulated grease shall be introduced into any drainage piping or public or private sewer.

(f) Grease control devices shall be cleaned on a sufficient frequency to prevent objectionable odors, surcharge of the grease control device, or interference with the operation of the sanitary sewer system.

(1) Grease traps shall be cleaned at least once every thirty (30) days.

(2) Grease interceptors shall be cleaned once every ninety (90) days.

(3) Mechanical grease removal devices must be maintained in a manner and frequency consistent with manufacturer specifications and guidance.

(4) Grease control devices shall be cleaned when their last chamber is filled to twenty-five percent (25%) or more of capacity with grease or settled solids. Grease interceptors with a sample box shall be cleaned immediately when grease is evident in the sample box.

(5) Grease control devices shall be cleaned by being pumped dry and all accumulated sludge on all surfaces shall be removed by washing down the sides, baffles and tees. No water removed from the device during cleaning shall be returned to the grease control device.

(g) The Director may grant an exception to the requirements of subsections (f)(1) and (2) of this section where the Director finds, based on evidence presented by the discharger, that a less frequent cleaning schedule will be sufficient to assure that not more than twenty-five percent (25%) of the capacity of the grease control device will be filled with grease or settled solids.

(h) All dischargers shall implement best management practices in their operations to minimize the discharge of grease to the sanitary sewer system.

(i) Dischargers shall maintain records on site for a period of at least three years as follows:

(1) Dischargers with an installed grease control device shall maintain records showing that the grease control device has been properly maintained and cleaned as required by subsections (e) and (f) of this section; and

(2) Food service establishments shall maintain records showing the following related to all grease hauled off site: date and time material removed off site, volume removed, hauler name, truck license number, type of grease removed, and final destination of material collected.

(j) Abandoned grease control devices shall be emptied and filled as required for abandoned septic tanks. (Ord. 1901 § 2, 11-27-12).

13.10.390 Installation and maintenance of amalgam separators.

(a) Except as provided in subsections (b) and (c) of this section, no person shall discharge, cause, allow or permit any discharge to the sanitary sewer system from a dental vacuum system, unless such discharge has first been processed through an amalgam separator.

(b) For each dental vacuum system installed prior to July 1, 2009, an amalgam separator shall be installed on or before December 31, 2010. No dental vacuum system shall be installed on or after January 31, 2009, without an amalgam separator. Proof of certification and installation records shall be submitted to the Director within thirty (30) days of installation.

(c) A dental vacuum system may be operated without an amalgam separator; provided, that the system is not used in connection with the removal or placement of fillings that contain dental amalgam more than three days per calendar year and the system is used exclusively by the following types of dental practices: (1) orthodontics; (2) periodontics; (3) oral and maxillofacial surgery; (4) radiology; (5) oral pathology or oral medicine; and (6) endodontistry and prosthodontistry.

(d) Amalgam separators shall be maintained in accordance with manufacturer recommendations. Installation, certification, and maintenance records shall be maintained for a minimum of five years and available for immediate inspection upon request therefor by the Director or designee during normal business hours. (Ord. 1901 § 2, 11-27-12).

13.10.400 Screened industrial waste.

(a) No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any garbage, or any fruit, vegetable, animal, or other solid industrial waste

resulting from the processing, packaging, or canning of fruits, vegetables, or other foods or products, unless such waste has first been passed through screens having openings not exceeding one thirty-second (1/32) of an inch in dimension.

(b) The Director may authorize, in writing, the discharge into the sanitary sewer system of such waste if it is first passed through screens having larger openings, if the Director is satisfied that such larger openings will provide screening efficiency and effectiveness equal to or better than that provided by the above-specified openings of one thirty-second (1/32) of an inch in dimension.

(c) Each person who discharges, causes, allows, or permits to be discharged into the sanitary sewer system, or any part thereof, any such waste shall install and maintain in good operating order, screens as hereinabove specified and appurtenances thereto, including, but not limited to, all necessary conveyors and elevators, all in sufficient quantity and of sufficient size and quality to continuously and effectively screen not less than one hundred percent (100%) of the peak hydraulic and solids loading imposed on such screens and appurtenances during any processing period.

(d) No person shall discharge any such screened waste into the sanitary sewer system, or any part of the system, unless and until he/she has obtained a wastewater discharge permit pursuant to this chapter granting approval to do so. Before a wastewater discharge permit is granted, the Director may require that such person provide to the Director a report prepared by a registered professional engineer verifying, to the satisfaction of the Director, that the provisions of this section have been fully complied with. (Ord. 1901 § 2, 11-27-12).

13.10.410 Use of City's facilities by others.

No person shall enter or remain upon any sanitary sewer manholes, cleanouts, or any appurtenances thereto, or any other property owned or controlled by the Water and Sewer Utilities Department without the consent of the Director. (Ord. 1901 § 2, 11-27-12).

Article IV. Wastewater Discharge Permits – Reports

13.10.420 Mandatory wastewater discharge permits.

No critical user or significant industrial user shall connect, discharge, cause, allow, or permit any discharge into the sanitary sewer system

except in accordance with a discharge permit issued by the Director. (Ord. 1901 § 2, 11-27-12).

13.10.430 Permit duration and amendment.

(a) Wastewater discharge permits shall be issued for a specific duration, not to exceed five years.

(b) Permits shall be subject to amendment by the City as limitations or requirements for wastewater discharge are modified and changed.

(c) The holder of a discharge permit shall be informed of any proposed amendment to its permit at least thirty (30) days prior to the effective date of the amendment.

(d) The Director may include a compliance schedule in an amended permit. (Ord. 1901 § 2, 11-27-12).

13.10.440 Permit application.

(a) All persons requiring a discharge permit shall file a complete application, in the form prescribed by the Director, and accompanied by the applicable fees, as established by resolution of the City Council.

(b) For new construction, permit applications shall be filed with the Director at the time that an application for a building permit for a new building or structure is made.

(c) All persons discharging wastewater into the sanitary sewer system for which a wastewater discharge permit has been issued must apply for a new permit prior to making a significant change in the operations affecting their discharge. (Ord. 1901 § 2, 11-27-12).

13.10.450 Delinquent fees.

(a) Permit applications are due ninety (90) days prior to commencing discharge to the sanitary sewer system or expiration of the existing discharge permit. Any person who fails to file an application for a discharge permit prior to discharge shall be assessed a penalty for delinquent filing as follows:

(1) Up to and including a thirty (30) day delinquency, the penalty shall be fifty percent (50%) of the permit fee.

(2) More than a thirty (30) day delinquency, but less than a one-year delinquency, the penalty shall be one hundred percent (100%) of the permit fee.

(3) More than a one-year delinquency, the penalty shall be one thousand percent (1,000%) of the permit fee.

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(b) Such penalties shall be in addition to any other penalties or fines that may be levied, and they are in addition to any other remedies that the City may have with respect to the discharge. (Ord. 1901 § 2, 11-27-12).

13.10.460 Signature requirements.

(a) Permit applications, discharge reports, and any other reports required by the Director to be signed shall be signed by an executive officer of the business filing the application.

(b) Such executive officer shall be at least of the level of vice president, general partner, president, or an individual responsible for the overall operation of the facility applying for said permit, or meet Federal requirements for NPDES applications as contained in Title 40 CFR.

(c) Reports subject to the requirements of Title 40 CFR shall include the certifications statement as contained in Title 40 CFR. (Ord. 1901 § 2, 11-27-12).

13.10.470 Additional information.

(a) If the Director is not satisfied that the permit application has sufficient information to determine whether the permit should be issued, the Director may refuse to issue the permit or request that the applicant submit further information.

(b) The applicant shall have thirty (30) working days, or such longer period of time as allowed by the Director, after reviewing a request for information, to complete the application.

(c) If the returned application is not resubmitted within the specified time period, then a new application for a discharge permit must be submitted along with the application fees and any delinquent fees for a new permit. (Ord. 1901 § 2, 11-27-12).

13.10.480 No transfer of permit.

Discharge permits are issued to a specific user for a specific operation at a specific location. No user shall assign, transfer, or sell a discharge permit; nor shall any user attempt to use the permit for premises, facilities, or operations not covered by the permit. (Ord. 1901 § 2, 11-27-12).

13.10.490 Denial of permit.

The Director may deny a wastewater discharge permit if any one or more of the following conditions exist:

(a) The application is not accompanied by the required fee(s).

(b) The application contains false or misleading information.

(c) The issuance of the permit would result in the discharge of industrial wastes of such quantity or strength that the public health or safety, or public or private property are endangered.

(d) The issuance of the permit would cause the plant to violate any permit conditions, laws, or regulations of the State and/or Federal government.

(e) The applicant has not provided adequate information to establish that its discharge will comply with all requirements of this chapter and with such other terms and conditions as the Director may deem necessary to include in the discharger's permit.

(f) The applicant has not provided plans for sufficient protection from accidental discharges to the land, storm sewer system, and sanitary sewer system.

(g) If the Director refuses to issue a permit, the application fees shall not be returned to the applicant unless the Director has ascertained that a permit is not required to discharge the wastewater for which the permit application is made. (Ord. 1901 § 2, 11-27-12).

13.10.500 Permit conditions.

(a) Discharge permits shall be expressly subject to all provisions of this chapter and all other regulations, user charges, discharge limitations, and fees established by the City and all applicable local, State, and Federal law and regulations.

(b) The permit may include such terms and conditions as the Director may deem necessary to implement this chapter, or any other applicable local, State, or Federal law and regulations, including, but not limited to:

(1) Limits on the average and maximum wastewater volume, constituents and characteristics;

(2) Requirements for installation and maintenance of flow monitoring, inspection, and sampling facilities;

(3) Specifications and pretreatment requirements for monitoring programs which may include sampling locations, frequency of sampling, number, types and standards for tests, and reporting schedule;

(4) Compliance schedules;

(5) Requirements for submission of technical reports or discharge reports;

(6) Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by the City and affording the City access thereto;

(7) Requirements for notification to the City of any new introduction of wastewater constituents or any significant change in the volume or character of the wastewater constituents being introduced into the wastewater stream;

(8) Requirements and plans for protection against accidental discharges, including, but not limited to, berming of chemicals and waste materials. The review and approval of such plans and operating procedures shall not relieve the user of the responsibility of modifying the facility as necessary to provide the protection necessary to meet the requirements of this Code or other State or Federal regulations;

(9) Requirements for notification of accidental discharges. (Ord. 1901 § 2, 11-27-12).

13.10.510 Permit appeals.

(a) Any permittee or permit applicant may appeal a notice of revocation of a wastewater discharge permit, notice of denial of a permit, any term or condition of a permit, amendment of a permit, or notice of termination of service to the Director.

(b) A request for hearing on a decision to revoke a permit or terminate service shall be filed, in writing, with the Director within ten calendar days after the date the notice of revocation or termination of service is served on the permittee. A request for hearing on a decision to revoke a permit or terminate service shall, except in the case of immediate permit revocation or suspension of service for the preservation of public health or safety or for the protection of public or private property, stay the effect of the notice of revocation or termination of service during the pendency of the appeal.

(c) A request for hearing on a decision to deny a permit, on the terms or conditions in a permit, or on an amendment to a permit, shall be filed, in writing, with the Director within thirty (30) calendar days after the date the notice of decision is served on the applicant.

(d) Failure of a permittee or applicant to request a hearing within ten calendar days shall be deemed acceptance of the Director's decision, and the Director's decision shall be deemed final.

(e) At the hearing before the Director, the applicant shall be given an opportunity to present witnesses and documentary and other evidence.

(f) The hearing will be conducted informally and technical rules of evidence shall not apply. Any and all evidence that the Director deems reli-

able, relevant, and not unduly repetitious may be considered.

(g) The applicant may be represented at the hearing by any other person.

(h) The Director shall provide written notice of decision on the appeal to the permittee or applicant. The decision of the Director on the appeal shall be deemed final and effective three calendar days after notice of the decision on appeal is served on the permittee or applicant.

(i) Filing of a request for hearing shall not entitle any person to discharge in violation of any of the provisions of the City Code.

(j) Any permittee or permit applicant may appeal the Director's decision on the appeal to the City Council by the procedure for revocation and permit denials and appeals therefrom as set forth in Chapter 2.115 SCCC. (Ord. 1901 § 2, 11-27-12).

13.10.520 Record keeping.

All industrial users subject to the reporting requirements of this chapter shall retain and make available for inspections and copying all records of information obtained pursuant to any monitoring activities required by this chapter, and additional records of information obtained pursuant to monitoring activities undertaken by the industrial user independent of such requirements. These records shall remain available for a period of at least three years. This period shall be automatically extended for the duration of any enforcement action concerning the industrial user, or where the industrial user has been specifically notified of a longer retention period by the Director. (Ord. 1901 § 2, 11-27-12).

Article V. Enforcement

13.10.530 Responsibility.

The primary responsibility for enforcement of the provisions of this chapter shall be vested in the Director or such agents of the City as he/she shall designate; and provided further, that field inspectors or other employees of the City are hereby authorized to act as agents of the City or of the sewage treatment plant for and on behalf of the Director, with the power to inspect and issue notices for violations of this chapter. (Ord. 1901 § 2, 11-27-12).

13.10.540 Federal pretreatment regulations.

No industrial user shall discharge, cause, allow, or permit a discharge into the sanitary sewer system in violation of any Federal or State regulation

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regulating discharges by such users, including, but not limited to, the Federal pretreatment regulations found in Title 40 CFR. (Ord. 1901 § 2, 11-27-12).

13.10.550 Public nuisance.

Waste or wastewater discharge, threatened waste or wastewater discharge, or any condition or act in violation of any provision of this chapter, or any provision of any permit issued pursuant to this chapter, or any directive or order of the Director authorized by this chapter or applicable law is hereby declared to be a public nuisance. Such nuisance may be abated, removed, or enjoined and damages assessed therefor, in any manner provided by law. (Ord. 1901 § 2, 11-27-12).

13.10.560 Falsification of information.

(a) It shall be unlawful to make any false statement, representation, record, report, plan, or other document; to tamper with or render inaccurate any monitoring device or equipment; or to divert flow from any monitoring device or equipment installed or operated to further the purpose of this chapter or the purpose of any permit issued under this chapter.

(b) In addition to any other punishment or remedy provided by law, any such falsification or tampering shall be grounds for revocation of any permit issued under this chapter. (Ord. 1901 § 2, 11-27-12).

13.10.570 Power to inspect.

(a) The Director and other duly authorized employees and agents of the City bearing credentials and identification shall have the right to access upon all properties for the purpose of inspecting any sewer or storm drain connection, including, but not limited to, all discharge connections of roof and surface drains and plumbing fixtures; inspecting, observing, measuring, photographing, sampling, and testing the quality, consistency, and characteristics of sewage and industrial wastewaters being discharged into any public sewer or natural outlet; and inspecting and copying any records relating to quantity and quality of wastewater discharges, including, but not limited to, water usage and effluent discharge, chemical usage, and hazardous waste records.

(b) The Director may terminate service or revoke the permit of any person who has discharged wastewater to the sanitary sewer system and/or has unreasonably refused access to the City. (Ord. 1901 § 2, 11-27-12).

13.10.580 Discharge reports.

(a) Dischargers are subject to the reporting requirements as contained in Title 40 CFR. The Director may require that any person connected to or discharging wastewater into the sanitary sewer system file additional periodic discharge reports or a zero discharge report.

(b) The periodic discharge report may be required to include, but need not be limited to, nature of process, volume, rates of flow, mass emission rate, hours of operation, number of employees, hauling record, potential slug discharge, or other information which relates to the generation of waste, including wastewater constituents and characteristics in the wastewater discharge and the ability of the discharger to meet applicable discharge limits.

(c) The zero discharge report shall certify that the zero discharger user does not discharge any process water to sanitary sewer system, or for a zero discharge categorical user, discharge any categorical process water or ancillary process water to the designated zero discharge categorical sample point or into the sanitary sewer system. This report may be required to include, but need not be limited to, the nature of the process, hours of operation, number of employees, hauling records, or other information that relates to the generation of wastes.

(d) The Director may also require such periodic discharge reports and zero discharge reports to include information concerning the chemical constituents and quantity of chemicals stored on site, including waste hauling records or other information, which relates to the generation of wastes even though they may not normally be discharged.

(e) In addition to discharge reports, the Director may require dischargers to submit such additional reports as may be necessary to allow the City to evaluate the discharger's ability to comply with this chapter, including but not limited to best management practice or self-monitoring reports.

(f) It shall be unlawful for any person who has discharged wastewater to the sanitary sewer system to refuse to file any report requested by the Director.

(g) Sampling and analysis shall be performed in accordance with 40 CFR Section 136 and amendments thereto. Where 40 CFR Section 136 does not contain sampling or analytical methods for the pollutant in question, or where the Director determines that the application of 40 CFR 136 is inappropriate for the pollutant in question, sampling and analysis shall be performed by using ana-

lytical methods validated by the Director. (Ord. 1901 § 2, 11-27-12).

13.10.590 Termination of service.

(a) The Director may revoke any wastewater discharge permit, and/or terminate, or cause to be terminated, wastewater service to any premises:

(1) If a discharge of wastewater from the premises causes or threatens to cause a violation of any provision of this chapter or applicable local, State, or Federal regulations; or

(2) If a discharge of wastewater from the premises causes or threatens to cause a condition of contamination, pollution, or nuisance.

(b) This provision is in addition to other statutes, rules or regulations authorizing termination of service for delinquency in payment. (Ord. 1901 § 2, 11-27-12).

13.10.600 Permit revocation.

Wastewater discharge permits may be revoked for one or more material violations of this chapter, including but not limited to:

(a) Failure to notify the City of changes to the user's operations or systems as described in the wastewater discharge permit application;

(b) Misrepresentation of or failure to fully disclose all relevant facts in the wastewater discharge permit application;

(c) Falsifying self-monitoring reports;

(d) Tampering with monitoring facilities or equipment;

(e) Refusing to allow the City timely access to the facility premises and records;

(f) Failure to meet the prohibitions on discharge according to applicable State, Federal and local law;

(g) Failure to meet compliance time schedules or any wastewater discharge permit conditions or requirements;

(h) Failure to pay fines and/or penalties;

(i) Failure to pay sewer charges;

(j) Failure to complete a wastewater discharge permit application or submit a discharge report;

(k) Violation of any pretreatment standard or requirement. (Ord. 1901 § 2, 11-27-12).

13.10.610 Issuance of cease and desist orders.

When the Director finds that a discharge of wastewater has taken place or is likely to take place in violation of this chapter or the provisions of any wastewater discharge permit, the Director may issue an order to cease and desist such discharge, or practice, or operation likely to cause such dis-

charge and direct those persons not complying with such prohibitions, limits, requirements, or provisions to:

(a) Comply immediately; or

(b) Comply in accordance with a time schedule; and/or

(c) Take appropriate remedial or preventative action. (Ord. 1901 § 2, 11-27-12).

13.10.620 Emergency corrections, remedial or preventative action.

In the event cleanup, repairs, construction, or other work is performed on any premises pursuant to any provision of law relating to an emergency or that authorizes public work on private property to correct, eliminate or abate a condition that threatens to cause, causes, or has caused a violation of any provision of this chapter or the provisions of a wastewater discharge permit, the user or persons responsible for the occurrence or condition giving rise to such work and/or the owner and/or occupant of the premises shall be liable, jointly and severally, to the City for such public expenditures, and subject to all enforcement and administrative penalty provisions of this Code. (Ord. 1901 § 2, 11-27-12).

13.10.630 Notice of termination of service and/or permit revocation.

(a) Written notice of the permit revocation or service termination, and a statement of the grounds therefor, shall be delivered to the discharger. The notice shall be effective ten calendar days after it is served on the discharger unless the Director determines that immediate permit revocation or suspension of service is necessary for the preservation of public health or safety or for the protection of public or private property. If the Director determines that immediate permit revocation or suspension of service is necessary, the Director may act to revoke the permit or suspend service immediately after written notice is delivered to the discharger.

(b) It shall be unlawful for any person to discharge any material into the sanitary sewer system from any premises for which the permit has been revoked or wastewater service has been suspended or terminated. (Ord. 1901 § 2, 11-27-12).

13.10.640 Penalties.

(a) Pursuant to Chapters 1.05 and 1.10 SCCC, the City, in its prosecutorial discretion, may enforce violations of the provisions of this chapter as a criminal, civil, and/or administrative action. All penalties and citations pursuant to applicable

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law, including but not limited to Government Code Section 54740.5 and Chapters 1.05 and 1.10 SCCC, shall apply to violations of this chapter.

(b) In addition to the provisions of Chapters 1.05 and 1.10 SCCC, and due to the significant potential harm caused to the environment by violation of provisions of this chapter, any person who intentionally, accidentally, or negligently violates any provisions of this chapter or any provision of any permit issued pursuant to this chapter, or who intentionally, accidentally, or negligently discharges waste or wastewater that causes pollution or violates any effluent limitation, standard of performance, or pretreatment or toxicity standard shall be civilly liable to the City in a sum up to ten thousand dollars (\$10,000.00) for the first day in which such violation occurs, up to twenty-five thousand dollars (\$25,000.00) for the second day in which such violation occurs, and fifty thousand dollars (\$50,000.00) for each additional day. The City may petition a court of appropriate jurisdiction to impose, assess, and recover such sums. Funds collected pursuant to this section shall be paid to City's environmental compliance fee account.

(c) Any assessed penalty shall be paid within ten days from the date of notice of such penalty. Interest shall accrue at the rate of the United States government T-Bills sold at the latest sale prior to the date of the delinquency plus three percent prorated per month or fraction thereof on the amount of penalty from the date of delinquency.

(d) The amount of any penalties imposed under this chapter which have remained delinquent for a period of sixty (60) days shall constitute a lien against the real property of the discharger from which the violation occurred resulting in imposition of the penalty. The Director shall cause the amount of uncollected penalty to be recorded with the County Recorder, in accordance with Government Code Section 54740.5.

(e) Any and all remedies for violations of this chapter are cumulative and not exclusive, and shall be in addition to all other remedies available to the City under State and Federal law and local ordinances. Funds collected pursuant to this section shall be paid to City's environmental compliance fee account. (Ord. 1901 § 2, 11-27-12).

13.10.650 Appeals.

(a) Any user, permittee, applicant or other person aggrieved by any decision, action, finding, determination, order or directive of the Director, made or authorized pursuant to this chapter, or relating to any permit issued pursuant to this chap-

ter, or interpreting or implementing the same, may file a written request with the Director for reconsideration thereof within ten days of such decision, action, finding, determination, order or directive. Such request for reconsideration must set forth in detail all supporting facts. No meeting or hearing shall be convened for such request for reconsideration. The Director shall render a final written decision within ten days of the receipt of such request.

(b) Any user, permittee, applicant or other person aggrieved by any final determination of the Director may appeal such decision to the City Manager within ten days of the Director's final determination. Written notice of such appeal must be filed with the City Clerk within that ten-day period, and shall set forth all supporting facts. The appeal shall be heard by the City Manager within thirty (30) days from the filing of the notice of appeal. The appellant, the Director, and such other persons as the Director and/or the City Manager may deem appropriate shall be heard at the hearing on such appeal. Upon conclusion of the hearing, the City Manager may affirm, reverse or modify the final determination of the Director in furtherance of the provisions of this chapter. The City Manager's determination on the appeal shall be final.

(c) Any decision, action, finding, determination, order or directive of the Director which is subject to a request for reconsideration or appeal shall remain in effect during the pendency of any request for reconsideration and/or appeal.

(d) All monetary penalties shall be due and payable during the pendency of any request for reconsideration or appeal. If a determination is not affirmed and the penalty is modified, the Director shall cause any overpayment of penalty to be reimbursed to the payor within thirty (30) days of the final determination.

(e) Any administrative citation issued for any violation shall be appealed pursuant to Chapters 1.05 and 1.10 SCCC. (Ord. 1901 § 2, 11-27-12).

13.10.660 Publication of user in significant noncompliance.

The Director is authorized to publish annually a list of the significant industrial users which, at any time during the previous twelve (12) months, were in significant noncompliance with applicable pretreatment standards and requirements. The term "significant noncompliance" is defined in 40 CFR Section 403.8. (Ord. 1901 § 2, 11-27-12).

Chapter 13.20

STORM DRAINS AND DISCHARGES

Sections:

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Article I. Purpose of Chapter and Definitions

13.20.010 Purpose.

This chapter is enacted for the protection of health, life, resources, and property through prevention and control of unauthorized discharges into watercourses, pursuant to a Federal mandate under (i) what is commonly referred to as the Clean Water Act (33 U.S.C. 1251 et seq.) and in accord with (ii) the California Water Code, Division 7 (entitled “Water Quality” – Section 13020 et seq. and commonly referred to as the “Porter-Cologne Water Quality Control Act”), and (iii) the City’s

National Pollution Discharge Elimination System (NPDES) permit issued by the California Regional Water Quality Control Board, San Francisco Bay Region. The primary goal of this chapter is the cleanup of stormwater pollution from urban runoff that flows to creeks and channels, eventually discharging into the South San Francisco Bay. (Ord. 1655 § 1, 4-26-94. Formerly § 24-1).

13.20.020 Definitions.

For the purposes of this chapter, the following words and phrases shall have the meanings ascribed to them by this section, unless the context or the provision clearly requires otherwise.

- (a) Reserved for future use.
- (b) “B” definitions:
 - (1) “Best management practice (BMP)” means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff spillage or leaks, sludge, or waste disposal, or drainage from raw material storage.
- (c) “C” definitions:
 - (1) “City” means and includes all the territory lying within the municipal boundaries of the City of Santa Clara, as presently existing, plus all territory which may be added thereto during the effective term of the ordinance codified herein.
 - (2) “City Code” means the municipal code of the City of Santa Clara, California.
 - (3) “City Manager” means the City of Santa Clara’s City Manager and his/her duly authorized agents and representatives.
- (d) “D” definitions:
 - (1) “Director of Public Works” means the Director of Public Works and his/her duly authorized agents and representatives.
 - (2) “Discharger” means any person who discharges, causes, or permits the discharge of industrial waste into a City sewer or storm drain.
- (e) “E” definitions:
 - (1) “Environmental compliance fee” means a program established by the City to assess the fees necessary to cover the costs of the City’s federally mandated nonpoint source control and stormwater management program pursuant to City’s NPDES permit, such fees shall be paid to the City’s storm drain environmental compliance fee account.
- (f) Reserved for future use.
- (g) Reserved for future use.
- (h) Reserved for future use.

(i) "I" definitions:

(1) "Illicit connection" means the unauthorized connection of a wastewater stream to storm drains or storm sewers.

(2) "Illegal discharge" means any discharge to a City storm drain or storm sewer that is not composed entirely of stormwater except discharges authorized by a NPDES permit (other than the NPDES permit for discharges from the City's separate storm drain or storm sewer) and discharges resulting from firefighting emergencies and activities.

(j) Reserved for future use.

(k) Reserved for future use.

(l) Reserved for future use.

(m) Reserved for future use.

(n) "N" definitions:

(1) "Nonpoint source pollution discharge" means any discharge from land that results or likely will result in a discharge into watercourses. Nonpoint source pollution originates from aerial diffuse sources that are mostly related to land use. Nonpoint discharges represent a process whereby pollutants, debris, and chemicals generated from various land uses accumulate on streets, construction sites, parking lots, and other exposed surfaces and are washed off and carried away by stormwater runoff into watercourses. The major pollutants of concern in these discharges are heavy metals, sediments, petroleum hydrocarbons, organochlorine, pesticides, toxins, or any other substance or material deleterious to fish, plant life, or bird life.

(2) "NPDES permit" means a National Pollution Discharge Elimination System permit issued by the Regional Water Quality Control Board, San Francisco Bay Region.

(o) Reserved for future use.

(p) "P" definitions:

(1) "Person" includes any person, firm, association, organization, partnership, business trust, joint venture, corporation, or company, and includes the United States, the State of California, the County of Santa Clara, special purpose districts, and any officer or agency thereof.

(2) "Process wastewater" means wastewater that has been used in one or more industrial processes.

(q) Reserved for future use.

(r) Reserved for future use.

(s) "S" definitions:

(1) "Stormwater" means rainfall runoff, snow melt runoff, surface runoff, and drainage from natural sources, and excludes infiltration.

(2) "Storm drain system," sometimes termed "storm sewer," means any pipe, conduit (including but not limited to streets, curbs, and gutters), or sewer of the City, designed or used for the disposal of stormwaters, surface waters, and natural drainage, including expressly authorized unpolluted water, but excluding any community sanitary sewer system.

(t) Reserved for future use.

(u) "U" definitions:

(1) "Unpolluted water" means water to which no constituent has been added, either intentionally or accidentally, that would render such water unacceptable for disposal to storm systems, natural drainage, or directly to surface waters.

(2) "Urban runoff pollution prevention" means prevention of nonpoint source pollution.

(v) Reserved for future use.

(w) "W" definitions:

(1) "Waste" includes sewage and soil from erosion and any and all other waste substances, liquid, solid, gaseous or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

(2) "Watercourse" means a channel in which a flow of water occurs, either continuously or intermittently.

(3) "Wastewater" means water that contains any waste.

(x) Reserved for future use.

(y) Reserved for future use.

(z) Reserved for future use. (Ord. 1655 § 1, 4-26-94; Ord. 1771 § 2, 8-20-02. Formerly § 24-2).

Article II. Storm Drain Discharge, Procedure, Use Regulations, and Prohibited Substances

13.20.030 Discharge into the storm drain prohibited.

(a) It shall be unlawful to discharge, or cause, allow, or permit to be discharged into any storm drain, storm sewer, or natural outlet or channel any waste, including, but not limited to, sewage, industrial wastes, petroleum products, coal tar, or any refuse substance arising from the manufacture of gas from coal or petroleum, chemicals, detergents, solvents, paints, contaminated water, or chlorinated swimming pool water, pesticides, herbicides, fertilizers, or other process wastewater.

(b) No person shall discharge any substance directly into a manhole or other opening in a City

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storm drain or storm sewer other than through a City-approved storm drain connection.

(c) Upon permit application and approval by the Director of Streets and Automotive Services, unpolluted water may be discharged into the City's storm drain system or into a natural outlet. No discharge other than rainfall runoff shall be allowed, except for such discharge as is expressly permitted by the City's permit and the National Pollution Discharge Elimination System (NPDES) and will not cause any impairment in the beneficial uses or quality of water of the State as defined in the California Water Code, or any special requirements of the Regional Water Quality Control Board, San Francisco Bay Region, or injure or interfere with the City's storm drain system or the operation of the State's watercourses.

(d) The City may, from time to time, by resolution of the City council, adopt supplementary rules and regulations on discharge into any storm drain or natural outlet or channel that shall have the same force and effect as if set forth herein and for which the remedies herein for violation shall be applicable. (Ord. 1655 § 1, 4-26-94; Ord. 1771 § 3, 8-20-02. Formerly § 24-3).

13.20.040 Suspension of service.

When found necessary by the City Manager or his/her duly authorized agents and representatives to prevent violation of, or nonconformance with, any provision of this chapter or resolution adopted pursuant thereto, he/she shall refuse to allow, and shall suspend service connections with, the storm drain system to any person not complying with allowable storm drain discharges or regulations. (Ord. 1655 § 1, 4-26-94. Formerly § 24-4).

13.20.050 Monitoring of discharge into the storm drain system.

(a) When deemed necessary by the City Manager or his/her duly authorized agents and representatives, he/she shall require any person to monitor their storm drain discharges to ensure compliance with allowable discharges.

(b) Where BMP guidelines or requirements have been adopted by any Federal, State, regional, County, or local agency, for any activity, operation, or facility that may cause or contribute to stormwater pollution or contamination, illicit discharges, discharges of non-stormwater 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 City Man-

ager or his/her duly authorized agents and representatives. (Ord. 1655 § 1, 4-26-94. Formerly § 24-5).

13.20.060 Public nuisance.

The discharge of unscreened garbage, fruit, vegetable, animal, or other solid industrial wastes into any storm drain or natural outlet or channel, in violation of any provision of this chapter, is hereby declared to be a public nuisance. The City Manager or his/her duly authorized agents and representatives may order cleanup of the waste or abatement of the effects of the waste. In the case of threatened pollution or nuisance as determined by the City Manager or his/her duly authorized agents and representatives, the City may take other remedial action, including, but not limited to, the overseeing of the cleanup and abatement efforts, or the City may seek the issuance of a preliminary or permanent injunction, or both, as may be appropriate, restraining any person from the continued violation of this chapter. Any person who violates the cleanup or abatement may be civilly, criminally, or administratively liable pursuant to SCCC 13.20.090. (Ord. 1655 § 1, 4-26-94. Formerly § 24-6).

13.20.070 Protection from accidental discharge – Accidental discharge notification.

(a) Each person shall provide protection from accidental or negligent discharge of prohibited substances, materials, or other wastes regulated by this chapter into any storm drain, storm sewer, natural outlet, or channel. Liability for any such discharge shall be the responsibility of the person causing or responsible for the discharge, and equipment and facilities used to prevent accidental or negligent discharge of prohibited materials shall be provided and maintained at the user's expense.

(b) All persons shall notify the City of Santa Clara Public Works Department by telephone immediately upon negligent or accidental discharge of nonpermitted substances or wastes to enable mitigation or countermeasures to be taken by the City to minimize damage to storm drains and the receiving waters.

(c) This notification shall be followed, within five days of the date of occurrence, by a detailed written statement describing the cause of the negligent or accidental discharge and the measures being taken to prevent future occurrences. Such notification will not relieve the person of liability for violations of this chapter or for any fines or pen-

alties imposed on the City on account thereof under Section 13350 of the California Water Code, or for violation of Section 5650 of the California Fish and Game Code, or any other applicable provisions of State or Federal laws, or local ordinances. (Ord. 1655 § 1, 4-26-94. Formerly § 24-7).

13.20.080 Discharge pursuant to City and/or NPDES permit.

(a) Subject to review and approval under SCCC 13.20.020, the provisions of this chapter shall not prohibit any discharge in compliance with a valid NPDES permit issued to the discharger.

(b) Any discharge that would result in or contribute to a violation of the City-issued permit and the City's NPDES permit (this permit is available for viewing at the City of Santa Clara, Office of the City Clerk, 1500 Warburton Avenue, Santa Clara, California) and any amendment, revision, or reissuance thereof, either separately considered or when combined with other discharges, is prohibited. Liability for any such discharge shall be the responsibility of the person causing or responsible for the discharge, and such person shall protect, defend, indemnify and hold harmless the City in any administrative or judicial enforcement action relating to such action. (Ord. 1655 § 1, 4-26-94. Formerly § 24-8).

Article III. Enforcement

13.20.090 Criminal or civil penalty for violation, payment of funds to account.

(a) Enforcement. See SCCC 13.25.010.

(b) Citation Authority. The following designated employee positions may enforce the provisions of this chapter by issuance of citations. Persons employed in such positions are authorized to exercise the authority provided in Penal Code Section 836.5 and are authorized to issue citations for violations of this chapter. The designated employee positions are the City Manager, or his/her duly authorized agents and representatives. (Ord. 1655 § 1, 4-26-94; Ord. 1771 § 4, 8-20-02. Formerly § 24-9).

13.20.100 Emergency cleanup or abatement.

In order to enforce the provisions of this chapter, when the City Manager (or his/her duly authorized agents and representatives) finds and determines that the severity of the violation warrants immediate action, he/she shall clean up or abate violation thereof. The cost of such cleanup or abatement

shall be recovered by the City in a civil action. Such emergency cleanup or abatement will not relieve the person of further action, which may be taken by the City Manager (or his/her duly authorized agents and representatives), including but not limited to, suspension, revocation, or modification of the discharger's permit, liability for any violations of this chapter, or any other applicable provisions of State or Federal laws, or local ordinances. (Ord. 1655 § 1, 4-26-94. Formerly § 24-10).

13.20.110 Administrative penalties.

Whenever the City Manager (or his/her duly authorized agents and representatives) finds that any person has violated any notice of violation requiring compliance with any provision of this chapter, or has violated any provision of this chapter, he/she may assess an administrative penalty in a sum not to exceed one thousand dollars (\$1,000.00) per day, excluding inspection costs, or cleanup or abatement costs. The remedy provided in this section shall be pursuant to administrative procedures and is cumulative and not exclusive, and shall be in addition to all other remedies available to the City under State and Federal law and local ordinances. Funds collected pursuant to this section shall be paid to City's storm drain environmental compliance fee account. (Ord. 1655 § 1, 4-26-94. Formerly § 24-11).

13.20.120 Costs of enforcement.

In any civil, criminal, or administrative appeal, hearing, or action commenced by the City under this chapter, the City shall be entitled to recover from the defendant of such action reasonable attorneys' fees, costs of suit, and any other costs of enforcement, including, but not limited to, inspection costs and cleanup or abatement costs. (Ord. 1655 § 1, 4-26-94. Formerly § 24-12).

Article IV. Storm Drain Environmental Compliance Fee

13.20.130 Definitions.

(a) "Commercial, industrial, or miscellaneous premises" means a premises designed, improved, or used for a commercial or industrial purpose, other than multifamily or single-family residential purpose, and includes, but is not limited to, private schools and churches.

(b) "Multifamily residential premises" means a premises designed, improved, or used as a residence for five or more families, including apartments and condominiums, and that is not designed,

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improved, or used for a commercial, industrial, or miscellaneous purpose.

(c) "Premises" means a separate lot or parcel of land, improved or unimproved, which is connected to, or benefits from, directly or indirectly, the storm drain system, or any portion thereof, or from which any water runoff is discharged directly or indirectly into the City's storm drain system.

(d) "Single-family residential premises" means a premises that is designed, improved, or used as a residence for one family only, which includes but is not limited to, individual duplex, triplex, and fourplex residential dwelling units, and that is not designed, improved, or used for a commercial, industrial, multifamily residential, or miscellaneous purpose. (Ord. 1655 § 1, 4-26-94. Formerly § 24-13).

13.20.140 Rates – Users within the city.

There is hereby levied and assessed against and upon all premises having storm drain discharges into or through the storm drain system a monthly storm drain service charge. The City may, by resolution, establish and amend the monthly storm drain charge and define how such charge will be applied to various types of premises within the city. Said resolution shall contain the effective date of any change in the monthly storm drain charge. (Ord. 1655 § 1, 4-26-94. Formerly § 24-14).

13.20.150 Rates – Issuance of bills – Information required.

All bills for storm drain charges shall be issued by the City Department of Finance. Storm drain charge amounts shall be combined with bills or statements for water and sewer service provided by the City. Storm drain charges shall be assessed in all cases where the premises in question is connected to the City's water system, sewer system, or storm drain system.

The bills shall state their purpose and the name and last known address of the person responsible for payment, and list separately each charge for water service, sewer service, and storm drain service. None of these charges shall be paid separately from the other. All bills shall be for monthly periods or for such other period as shall be determined by resolution of the City. (Ord. 1655 § 1, 4-26-94. Formerly § 24-15).

Chapter 13.25

ENFORCEMENT OF TITLE

Sections:

13.25.010 Enforcement of SCCC Title 13.

13.25.010 Enforcement of SCCC Title 13.

Except when more specific provisions contained in this Title 13 [entitled "Public Services"] are intended to supersede the provisions of SCCC 1.05.070, the following shall apply:

(a) Pursuant to SCCC 1.05.070, the City, in its prosecutorial discretion, may enforce violation(s) of the provisions of this Title 13 as a criminal, civil, and/or administrative action. (Added at request of city during 2003 recodification).

collection system as required by Chapter 13.10 SCCC, unless an individual system is permitted thereunder.

(e) Water Supply. Each unit or lot within the subdivision shall be served by an approved domestic water system.

(f) Utilities. Each unit or lot within the subdivision shall be served by gas (if required), electric, telephone and cable television facilities.

(1) Underground Utilities. All existing and proposed utilities within the subdivision and along either side of peripheral streets shall be placed underground except those facilities exempted by the Public Utilities Commission Regulations and as otherwise provided below.

(A) If the subdivision is in the Underground District, as designated in the General Plan, all utility lines along peripheral streets shall be undergrounded or an in lieu of undergrounding fee shall be paid. Undergrounding shall be required for overhead lines on either side of the peripheral street.

(B) If the subdivision is outside the Underground District, undergrounding overhead utilities on peripheral streets shall not be required unless the City Engineer finds that undergrounding of such utilities is likely to occur within the ten-year period following approval of the tentative map. (Ord. 1780 § 3, 4-8-03).

17.05.620 Deferred improvement agreements.

(a) Subdivisions. The frontage improvements along existing peripheral streets may be deferred when deemed necessary by the City Engineer. Deferral will be allowed when the City Engineer finds that construction is impractical due to physical constraints, or the surrounding neighborhood is absent of similar improvements. When improvements are deferred, the subdivider and/or owner of the real property shall enter into an agreement with the City in a form acceptable to the City Attorney for the installation of all frontage improvements at such time in the future as required by the City. The agreement shall provide:

(1) Construction of improvements shall commence within ninety (90) days of the receipt of the notice to proceed from the City;

(2) That in event of default by the subdivider and/or owner, the City is hereby authorized to cause said construction to be done and charge the entire cost and expense to the subdivider and/or owner, including interest from the date of notice of said cost and expense until paid;

(3) That this agreement shall be recorded in the office of the County Recorder of Santa Clara County, California, at the expense of the subdivider and/or owner, and shall constitute notice to all successors and assigns of the title to such real property of the obligation set forth, and also a lien in an amount to fully reimburse the City, including interest as above, subject to foreclosure in event of default in payment;

(4) That in event of litigation occasioned by any default of the subdivider and/or owner, the subdivider and/or owner, agree to pay all costs involved, including reasonable attorney's fees, and that the same shall become a part of the lien against the real property;

(5) That the terms "subdivider" and "owner" shall include, respectively, not only the subdivider and the present owner but also heirs, successors, executors, administrators and assigns, it being the intent of the parties hereto that the obligations undertaken shall run with the real property and constitute a lien against it;

(6) Any other provisions required by the City Engineer as reasonably necessary to effectuate this code and the Subdivision Map Act;

(7) The agreement shall not relieve the owner from any other specific requirements. The construction of deferred improvements shall conform to the provisions of this chapter and all applicable articles of the municipal code in effect at the time of construction.

(b) Remainders. Where a remainder is made part of a final or parcel map, the subdivider may enter into an agreement with the City to construct improvements within the remainder at some future date and prior to the issuance of a permit or other grant of approval for the development of a remainder parcel. The improvements shall be at the subdivider's expense. In the absence of an agreement, the City may require fulfillment of the construction requirements within a reasonable time following approval of the map, upon a finding that fulfillment of the construction requirements is necessary for reasons of:

(1) The public health and safety; or

(2) The required construction is a necessary prerequisite to the orderly development of the surrounding area. (Ord. 1780 § 3, 4-8-03).

17.05.630 Design.

General. The design and layout of all required improvements both on and off site, private and public, shall conform to generally acceptable engineering standards, to the City's Standard Design

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provided for in subsection (h) of Table II per front foot of street frontage; where the development is in excess of ten net acres, developer shall pay the amount provided for in subsection (h) of Table II per net acre. For existing street lights served underground, developer shall pay the amount provided for in subsection (h) of Table II per front foot of street frontage.

(e) The character of electric and water service to all classes of property shall conform to the requirements of the rules and regulations for electric and water service, respectively, except as modified from time to time by resolution of the City Council. Three copies of such rules and regulations for electric and water service are on file for use and examination by the public in the office of the City Clerk and are hereby adopted and made a part of this chapter, the same as if fully set forth in this chapter. They are subject to modification from time to time by resolution of the City Council.

(f) The developer shall pay to the City the charges shown in Table II-A. (See also Table II, item (h), which is generally based upon the on-site costs of supplies and materials furnished and installed by the City). (Ord. 1542 §§ 2, 3, 5-27-86; Ord. 1581 § 7, 3-1-88. Formerly § 21A-20).

17.15.220 Sanitary sewer and storm drains.

(a) On-Site Sanitary and Storm Drains. On-site sanitary sewers and storm drains shall be installed by the developer and shall in no event be less than the minimum sizes shown in Table II, unless a lesser size is authorized as hereinafter provided. Whenever engineering studies and investigations of the City indicate that the minimum sizes shown in Table II are larger than required to serve the development and area, the Director of Public Works/City Engineer shall have the power to waive such minimum sizes and approve sizes compatible with aforementioned engineering studies and investigations.

The developer shall, at his/her sole expense, install all public facilities including any oversizing as required by the City. The developer shall be reimbursed by the City in accordance with unit prices established from time to time by resolution of the City Council, which reimbursement shall be set forth in the development agreement, if any, entered into between the developer and the City. There shall be no reimbursement for laterals.

(b) Storm Drainage Outlet Charge. The developer shall pay the City a storm drainage outlet charge. The revenue from the drainage fee shall be used for the purpose of defraying the estimated

costs of constructing planned drainage facilities for removal of surface and storm waters from the herein referenced local drainage areas. The base charge for all classes of property shall be as set forth in subsection (o) of Table II.

(1) Reference is hereby made to the drainage plan adopted for the City of Santa Clara, which contains an estimate of twenty million dollars (\$20,000,000.00) as the total cost of constructing the local drainage facilities required by the plan, and a map of the drainage area, showing boundaries and the location of major planned drainage facilities, which is on file in the office of the Director of Public Works/City Engineer. The drainage fee which the developer shall pay is based on this drainage plan, using the estimates compiled at current prices.

(2) The drainage plan has been determined by resolution of the Board of Supervisors and Flood Control District of Santa Clara County to be in conformity with the County-wide general drainage plan of said County.

(3) The City Council finds that development of property within the planned local drainage area will require construction of the facilities described in the drainage plan, and that the fees are fairly apportioned within the local drainage area on the basis of the benefits conferred on property available for development and on the need for local drainage facilities created by the proposed development of other property within the local drainage area. The estimated costs are based upon these findings.

(4) The fee as to any property proposed for development within the local drainage area does not exceed the pro rata share of the amount of the total estimated costs of all facilities within the local drainage area which would be assessable on such property if such costs were apportioned uniformly on a per-acre basis paid.

(5) The drainage facilities planned are in addition to existing local drainage facilities serving the area at the time of the adoption of the drainage plan for the area.

(6) The drainage fees required by this section shall be paid into a "planned local drainage facilities fund." Moneys in this fund shall be expended solely for the construction or reimbursement for construction of local drainage facilities within the planned local drainage area, from which the fees comprising the fund were collected, and to reimburse the City for the cost of engineering and administrative services to form the district and design and construct the facilities.

(c) Sanitary Sewer Outlet Charge. The developer shall pay the City a sanitary sewer outlet charge. The revenue from the sanitary sewer outlet charge shall be used for the acquisition, construction, reconstruction, replacement and debt retirement of off-site sewerage facilities. The City Council shall determine the amounts and rate schedules for the sewer outlet charge authorized hereunder.

(d) Institutional "In Lieu" Sanitary and Storm Outlet Charge. In lieu of the foregoing storm and sanitary sewer outlet charges, provided for in subsections (b) and (c) of this section, at the sole option of the City, developers of institutional property may pay a flat fee of the lesser amounts shown in subsections (m) and (o) of Table II (Institutional fee schedule) per net acre for each item. Said payments shall be treated as the equivalent of the storm drain and sanitary sewer outlet charges, but the developer shall install the required facilities without receiving on-site credits therefor and reimburse the City by payment of the charges set forth in SCCC 17.15.260 for any existing sanitary sewer and storm drain facilities.

(e) Sanitary Sewer Connection Charge (Sewage Treatment Plant Expansion Connection Charge). In addition to the above charges, there shall be a sanitary sewer connection charge whenever property is either (1) initially connected to the sewer system or (2) requires a new connection to the sanitary sewer system or (3) involves a change in land use or development on the real property that results in an increase of sewage to the City sewer system. The purpose of this connection charge is to finance capital and debt retirement costs associated with the sewage treatment facilities which are allocated to unused or future capacity. The charges shall be in accordance with Paragraph A of Table V.

(f) Alternative Method of Collecting a Flow Component of the Sanitary Sewer Outlet Charge (for Sewer Conveyance) and the Sanitary Sewer Connection Charge (Sewage Treatment Plant Expansion Connection Charge).

(1) Applicability.

(A) The Director of Water and Sewer Utilities may periodically review water usage and/or wastewater discharge volume as recorded by the Finance Department for nonresidential or industrial customers. Based on such review, if the actual daily average wastewater discharge volume exceeds the assigned sewer capacity, the payment of an excess use fee will be required.

(B) Only nonresidential sewer users with water use greater than a monthly average of ten thousand (10,000) gallons per day or, by approval of the Director of Water and Sewer Utilities, those sewer users that submit a written request to use this method, will be subject to additional purchased capacity fee, capacity rental fee and/or incremental purchased capacity fee.

(2) Assigned Sewer Capacity (Assigned Capacity).

(A) The amount of assigned capacity shall be either the sewer capacity that is recorded by the City of Santa Clara Engineering Department for sewer capacity purchased since 1983, or shall be calculated based on the building square footage of record that exists on a single parcel of land represented by an assessors parcel number (APN) on the effective date of the ordinance codified in this section. The square footage of record multiplied by the City's estimated discharge factor for the use shall yield a calculated assigned capacity.

(B) Assigned capacity will reside with the parcel and is not transferable other than by conveyance to a new owner through the sale or transfer of the parcel.

(C) In the event that the parcel owner disputes the calculated assigned capacity the parcel owner may appeal the assigned capacity to the Director of Water and Sewer Utilities by written notification to the City of Santa Clara no later than one hundred twenty (120) days after notification of determination of an assigned capacity. If the Director of Water and Sewer Utilities finds that the property owner's appeal has merit based on data and information presented, the Director of Water and Sewer Utilities has authority to adjust the assigned capacity in accordance with the findings.

(D) In instances where multiple sewer uses or users exist on a single parcel (as represented by a single assessors parcel number), the assigned capacity for the parcel will be equal to the sum of the assigned capacities (either per City records or by calculation) for each use.

(3) Capacity Rental Fee. The capacity rental fee shall be calculated based on the amount of average daily wastewater discharge in excess of the assigned capacity for a property using the following formula: Capacity Rental Fee = $(0.03/12) \times (\text{Average Discharge Volume} - \text{Assigned Capacity}) \times \text{Capacity Fee}$.

(4) Additional Sewer Capacity Fee. Additional sewer capacity fee shall be calculated based on the amount of the average daily wastewater discharge in excess of the assigned capacity for a par-

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cel using the following formula: Additional Sewer Capacity Fee = (Average Discharge Volume - Assigned Capacity) x (Capacity Fee).

(A) In lieu of purchasing the additional sewer capacity, an incremental sewer capacity fee (incremental fee) may be paid to allow for payment of the additional sewer capacity fee over ten years. The incremental fee shall be calculated at one-one hundred twentieth (1/120th) of the additional sewer capacity fee; or using the following formula: Incremental Sewer Capacity Fee = (Average Discharge Volume - Assigned Capacity) x (Capacity Fee/120).

(B) When an additional sewer capacity fee or an incremental fee is paid, the assigned sewer capacity for the parcel will be increased by an amount equal to the additional or incremental purchased capacity.

(C) A sewer user may at any time elect to pay all or part of an additional sewer capacity fee to obtain a desired assigned capacity. However, at a minimum, all who are covered by this section must pay the monthly incremental sewer capacity fee.

(D) Capacity rental fees, additional sewer capacity fees or incremental fees shall not be refunded if the discharge volume decreases to less than the assigned capacity. The assigned capacity for each APN shall remain on record with the City.

(5) Request for Waiver of Excess Use Fee. Upon application of the parcel owner or sewer user, the Director of Water and Sewer Utilities may waive all or part of a capacity rental fee and/or incremental sewer capacity fee if it is found that the excessive usage was the result of a temporary condition that has been eliminated or reduced. The property owner must submit a written request with adequate documentation for a waiver within thirty (30) days of notification that excess use fees have been incurred.

(g) Reimbursement for Off-Site Construction. The developer shall construct all off-site sanitary sewers and storm drains required to properly service his/her lands. The developer shall be reimbursed by the City in accordance with the standard unit prices established from time to time by resolution of the City Council if the construction complies with the plans and specifications and is accepted as a part of the permanent system approved by the City. Reimbursement shall be set forth in the development agreement, if any, and in accordance with SCCC 17.15.090, this section, and SCCC 17.15.250, as applicable. The design of all sanitary sewers and storm drains shall be subject to

the approval of the Director of Public Works/City Engineer. (Ord. 1778 § 3, 12-3-02; Ord. 1819 §§ 1, 2, 7-10-07; Ord. 1881 § 2, 5-10-11).

17.15.230 Residual parcels.

The developer shall, concurrently with the development of any lands, construct all required public works facilities and pay all fees and charges set forth in this chapter for any residual parcel created by the development of such lands. For the purposes of this section, a residual parcel is any parcel of land having street frontage of less than one hundred fifty (150) feet along any street within or abutting such development, or comprising an area of less than 18,000 square feet. (Ord. 1312 § 1, 5-6-75. Formerly § 21A-22).

17.15.240 Deferred charges.

Whenever any property or parcel of land not under development is directly benefited by the installation of any of the required facilities, utilities or public works improvements, the City may advance the costs of same and defer the collection of such charges until such time as said property is developed. Said charges shall be satisfied before any parcel map, tract map, building permit or service connection for such property is granted or accepted by the City. Engineering diagrams showing property benefited shall be furnished the building inspection and accounting divisions of the City, showing the amounts of such deferred charges. (Ord. 1312 § 1, 5-6-75. Formerly § 21A-23).

17.15.250 Deferred credits.

If for any reason, the City is not in a position to advance the costs of the required rights-of-way, facilities, utilities or public works improvements for intervening properties or parcels of land, the developer shall advance such costs for which the City will enter a deferred credit upon its books and records in favor of the developer advancing such costs, to be repaid to the developer (less ten percent) for handling, clerical, billing and collection costs), payable upon collection by the City of the charges prescribed by SCCC 17.15.240. In the event that the City is unable to collect such funds within ten years after the date of advancement, the right of reimbursement of the funds not collected shall lapse at the end of such ten-year period. (Ord. 1312 § 1, 5-6-75. Formerly § 21A-24).

Appendix C

Enforcement Response Plan

**City of Santa Clara
Fats, Oils & Grease (FOG) and
Sanitary Sewer Inspection Program
Enforcement Response Plan (ERP)**

November 2019

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Fats, Oils & Grease (FOG) and Sanitary Sewer Inspection Program Enforcement Response Plan (ERP)

Definitions

Best Management Practice (BMP)

Schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the introduction of pollutants to the sanitary sewer system which have been determined by the director to be cost effective for particular industry groups, business types, or specific industrial processes.

Citation, Administrative

A civil financial penalty imposed by the City of Santa Clara for a violation of a municipal code. It carries no criminal charges. Fine amounts are set in the schedule of fines by Council resolution.

Compliance Meeting

A meeting with the Site Contact to discuss the causes of violation, the corrective actions required to achieve compliance, and to establish the timeline for the implementation of corrective actions.

Notice of Violation (NOV)

An Inspection Report that lists observed violation(s). It details what remedial actions are required of the Site Contact to correct the violation(s), along with a timeline for completion.

Food Service Establishment (FSE)

A facility that prepares and/or sells food for consumption either on or off the premises or washes utensils or dishes on premises that may contribute grease to the sewer system, including, but not limited to, restaurants, sandwich shops, delicatessens, bakeries, cafeterias, markets, bed and breakfast inns, motels, hotels, meeting halls, caterers, retirement and nursing homes or pizzerias. The term, as used in this chapter, does not refer to food stores or establishments that do not prepare food on premises and do not process food in a manner which may contribute grease to the sewer system.

Grease

Liquid or other waste containing floatable and/or dispersed grease, vegetable oil, petroleum oil, non-biodegradable cutting oil, or fat, oil or grease products of animal, vegetable or mineral origin which is detectable and measurable using analytical test procedures established in the United States Code of Federal Regulations, 40 C.F.R. 136.

Grease Control Device (GCD)

A grease interceptor, grease trap, mechanical grease removal device, or other device approved for use by the director.

Grease Interceptor

A large tank installed underground and designed to collect and control solid- food wastes and floating grease from wastewater prior to discharge into the sanitary sewer collection system. Grease interceptors are normally installed outside the building and use gravity to separate grease from the wastewater as it moves from one compartment of the interceptor to the next.

Grease Trap

A device placed under or in close proximity to sinks or other fixtures likely to discharge grease in an attempt to separate, trap and hold oil and grease substances.

Good Faith Effort

The prompt and vigorous pollution control measures undertaken by the Site Contact which show that extraordinary efforts have been made to achieve compliance. Good faith may also be defined as the person's honest intention to remedy the violation(s) coupled with corrective actions supporting this intention. However, good faith does not eliminate the possibility of enforcement escalation for the Site Contact.

Inspection Warrant

A bench order, issued by a judge, directing a private property owner to provide unimpeded access for conducting investigations inspections. An inspection warrant is needed when an inspector is repeatedly denied access or is otherwise prevented from entering private property.

Pre-Citation

A written notice explaining the municipal code violation and the corresponding corrective measures that needs to be taken by the site contact, or that has been completed notify if same or similar violation is identified in the future, the case may escalate to heavier enforcement to initiate compliance.

Person

Any individual, group of individuals, occupant, property owner, firm, association, organization, partnership, business trust, company, corporation, public agency, school district, any other governmental or public district or entity, or any combination of the forgoing persons.

Regional Water Board

The California Regional Water Quality Control Board, San Francisco Bay Region; the State agency with primary responsibility for the protection and maintenance of water quality.

Site Contact

The person who is managing or responsible for activities associated with the site, affiliated business, property owner, and/or the person who causes the violation.

Background

The FOG and Sewer Investigations Enforcement Response Plan (ERP) was developed to provide staff with guidance on the procedures to identify, document, and respond to violations of municipal and agency codes relating to discharges to the sanitary sewer collection systems. The FOG ERP implements requirements of the Sanitary Sewer Management Plan (SSMP), Element 7: FOG Control Program through education, identification, and controlling sources of FOG that could contribute to sanitary sewer maintenance issues. The City's Water & Sewer Utilities Department is the lead department for conducting inspections to ensure compliance with the Santa Clara City Code (SCCC).

The ERP serves as a reference document for inspection staff to take consistent actions to achieve timely and effective compliance. The specific codes are listed in the Codes/Ordinances section of this ERP.

The Enforcement Timelines section of this ERP incorporate specific criteria to aid City staff in determining the level of enforcement most appropriate to the nature of the violation and the enforcement timelines. The ERP describes the criteria used to determine the level of enforcement action and provides guidance on when and how to use them. The ERP includes guidance on:

- Roles and Responsibilities
- Recordkeeping
- Enforcement Actions
- Timely Correction of Violations
- Referral and Coordination Guidelines

The ERP is periodically reviewed and revised as needed to more efficiently and effectively issue enforcement actions and administrative penalties to prevent sanitary sewer overflows and further protect the sanitary sewer collection system, the Regional Wastewater Facility, and the Bay.

Legal Authority

The Santa Clara City Code (SCCC) Title 13, Section 10 provides the City with the authority to manage and/or prohibit discharges to the sanitary sewer collection system, and grants authority to inspect facilities connected to the sanitary sewer collection system.

SCCC states the Water and Sewer Utilities Director, and other duly authorized employees and agents bearing credentials and identification shall have the right to access upon all properties for the purpose of inspecting any sanitary sewer connection, including all discharge connections of roof and surface drains and plumbing fixtures; inspecting, observing, measuring, photographing, sampling, and testing the quality, consistency, and characteristics of sewage and industrial wastewaters being discharged into any public sewer or natural outlet; and inspecting and copying any records relating to quantity and quality of wastewater discharges, including but not limited to water usage and effluent discharged, chemical usage, and hazardous waste records. Excerpts of pertinent ordinances and associated administrative penalties (if any) are included in Appendix A.

Enforcement Roles and Responsibilities

The FOG Control Program has Water & Sewer Utilities Department staff conduct Food Service Establishment (FSE) inspections, Grease Investigations, and Grease Control Device (GCD) Inspections. Violations that are continuous or severe enough to warrant enforcement remedies may be referred to the City Attorney. The following describes the specific enforcement responsibilities for each:

Code Enforcement Technician

The Code Enforcement Technician position is responsible for the day-to-day implementation and enforcement of the FOG Inspection Program. The Code Enforcement Technician position is authorized to issue up to Administrative Citations for violations of the SCCC. The Code Enforcement Technician(s) duties related to enforcement are to inspect the assigned cases, provide compliance information, recommend and issue the appropriate level of enforcement action based on the type of violation observed using established guidelines, and to process enforcement actions in a timely manner. The following summarizes the duties for all levels of Code Enforcement Technician:

- Reviews inspection history.
- Inspects assigned facilities.
- Documents all work associated with inspecting a site.
- Collects samples as needed.
- Prepares and issues routine enforcement actions.
- Generates and prints out enforcement documents and forms.
- Enters and tracks all inspection and enforcement actions into the Enforcement Database.
- Tracks and reviews the site contact's response to enforcement actions to ensure compliance issues are adequately addressed.
- Schedules and arranges compliance meetings.
- Prepares for Compliance Meetings, enters record of compliance meeting.
- Coordinates with Code Enforcement Officer when recommending escalating enforcement.

Please refer to relevant Inspection SOPs for guidance and details for each inspection type.

Code Enforcement Officer

The primary roles of the Code Enforcement Officer are to oversee daily enforcement activities of Code Enforcement Technician and to ensure that the ERP is followed in a timely and consistent manner. The Code Enforcement Officer performs the following:

- Reviews inspection reports, sample data, and other relevant case documents.
- Coordinates with Code Enforcement Technician when recommending escalating enforcement.
- Takes Administrative Citations (AC) to Compliance Manager for approval, signs the AC upon approval.
- Audits case files for consistency, accuracy, and adherence to the ERP.
- Performs QC Inspections of Code Enforcement Technicians cases.
- Moderates Compliance Meetings.
- Compiles data for program reports.
- Ensures Code Enforcement Technicians are adequately trained to perform their duties.

Compliance Manager

The primary role of the Compliance Manager is to oversee the City's Enforcement Programs and to ensure that the ERP is followed in a timely and consistent manner.

The Compliance Manager performs the following duties:

- Reviews and approves Administrative Citations and Inspection Warrants.
- Coordinates with Code Enforcement Officer on escalated enforcement involving City Attorney, Santa Clara County, District Attorney, or other agency referrals.
- Ensures that compliance actions taken are consistent and timely.
- Approves and signs the ERP, SOPs and other related documentation.
- Approves data for program reports.
- Ensures Code Enforcement Officer is adequately trained to perform their duties.

Director/Assistant Director of Water & Sewer Utilities

The Director and Assistant Director perform the following duties:

- Approves and signs program reports and related policies.
- Delegates enforcement authority from the SCCC and other municipal rules and regulations to designated personnel.

City Attorney

The City Attorney will:

- Become enforcement lead if the responsible party continues to violate Title 13.10 of the SCCC after Administrative Citations or Pre-Citations are issued.
- Advise staff during enforcement matters as required
- Manage civil and criminal litigation on behalf of the City.

Public Works/Public Safety Department

Nonpoint source discharges requiring an emergency response fall under the authority of the Public Works (Streets Division) or Fire Department. If the nonpoint source discharge is a potentially hazardous material or poses a threat to health and safety, the Fire Department is notified by calling 911.

Enforcement Actions

A range of enforcement mechanisms are available. The appropriate enforcement action for FOG control measures can be found in this section.

Enforcement Philosophy

City staff gives the Site Contact every reasonable opportunity to comply with directives issued to them. City staff acknowledges that education plays a vital role in enforcement. The use of verbal education, outreach materials, and recommendations in coordination with more formal enforcement assists City staff in ensuring compliance.

Distribution of Educational Materials

The Code Enforcement Staff has BMPs available to distribute to businesses during inspections. The distribution of applicable BMP's is encouraged to help Site Contacts to control FOG discharges to the sanitary sewer system.

Enforcement Timelines

The Code Enforcement Technician or Code Enforcement Officer gives the Site Contact every reasonable opportunity to comply with directives issued to them. Compliance deadlines issued during inspections and provided on the NOV/Inspection Report, typically give 5 business days to complete most corrective actions. Specific violations may be given more or less time to correct based on site-specific conditions.

The enforcement timelines table included in Appendix B list violations along with applicable compliance deadlines. Unique situations may require a more strict or less strict timeline. Several unique situations include but are not limited to:

- Violations involving the repair of GCD components not associated with the effluent (i.e.: inlet standpipe, baffle plates) may be given a due date that coincides with the next scheduled cleaning (e.g.: up to 30 days for a trap, up to 90 days for an interceptor).
- Violations involving the repair of GCD components associated with the effluent (i.e.: effluent standpipe, outlet shroud) should be given a due date of no more than 5 business days, due to the potential threat of a sanitary sewer overflow or backup.
- Violations involving replacement or installation of equipment, or modifications of plumbing may be given a due date of 30 calendar days. Extensions may be

granted if the Site Contact is making progress on correcting the violations but needs more time (i.e.: going through the Plan Check process, obtaining necessary permits, purchasing a new a grease trap, etc.).

- All other violations should be given a due date of no more than 5 business days.

Enforcement Response Guide

The Enforcement Response Guide (ERG) provides a tiered approach to issuing enforcement actions to violations. All violations and corrective actions from enforcement responses require follow-up by City staff to ensure appropriate compliance. These enforcement actions include Notice of Violations, Pre-Citations, Compliance Meetings, Administrative Citations, and Inspection Warrants. When considering the type of enforcement action to be taken, the ERG serves as a minimum standard. Enforcement action may also be escalated by evaluating the violation based on: magnitude of the violation, timely resolution of violation, compliance history, and/or good faith efforts of the Site Contact. Mitigating factors, such as site-specific conditions, may be used to decide the magnitude of the enforcement and requirements for a timely response to a violation. Any escalation involving a penalty application requires Code Enforcement Officer and Compliance Manager approval. The Code Enforcement Officer ensures that the penalty proposed is consistent and appropriate to the nature of the violation.

The City's general approach is to first educate the Site Contact and provide them an opportunity to comply (Level 1). Where a Site Contact fails or refuses to respond to an educational approach or the circumstances of a violation call for it, enforcement actions are escalated in steps (Levels 2-4).

The tiered enforcement approach used by City staff to reach compliance is set forth in this guide. The guide is intended to ensure consistent application of enforcement actions to parties responsible for violations of applicable codes.

Enforcement Levels

LEVEL 1: Notice of Violation (Inspection Report listing observed violations)

An Inspection Report that lists observed violations serves as a Notice of Violation. NOV's are a Level 1 enforcement action and are generally issued when an FSE has no previous history of the same or similar violation. It details what remedial actions are required of the Site Contact to correct the violation, along with a timeline for completion. Code Enforcement staff will provide relevant educational outreach materials that address the violation. Code Enforcement staff notifies the Site Contact of future enforcement escalation if violations are not addressed.

Code Enforcement staff Action: Provide information on grease control BMPs and issue a NOV. Multiple violations will be consolidated into one NOV.

- Identify violation.
- Determine magnitude of violation.
- Confirm that same or similar violation was not previously documented.
- Issue NOV, listing violations, corrective actions, and enforcement deadlines.
- Provide instruction and educational information on grease control.
- Verbally warn Site Contact of possible escalated enforcement.

Applicable Situations: Level 1 enforcement action is commonly used when a site has no previous history of the same or similar violation. Specific examples include:

- Site lacks maintenance records
- GCD has not been serviced at the required minimum frequency
- No strainers in sinks plumbed to GCDs
- Grease Trap is missing a baffle wall
- Grease Interceptor has a downed standpipe
- A facility is using chemicals, enzymes, or bacteria in their GCD
- Facility did not install GCD as required by Plan Check

LEVEL 2: PRE-CITATION

A Pre-Citation is generally issued when previous violations were not corrected by completion due dates, or when the Site Contact has a history of repeating the same or similar violation. A Pre-Citation is a Level 2 enforcement action that serves as written documentation of the violation that has occurred and directs the Site Contact in writing to take immediate corrective action. Code Enforcement staff also distributes any relevant educational outreach materials that address the violation. Code Enforcement staff notifies the Site Contact of future enforcement escalation if violations are not addressed.

Code Enforcement staff Action: Issuing a Pre-Citation indicates the magnitude of the violation while providing information and an opportunity to remedy the violation. Multiple violations meriting Level 2 enforcement will be documented on one Pre-Citation. A NOV should accompany the Pre-Citation, listing all violations at all levels of enforcement, including those that have been documented on the Pre-Citation.

- Identify violation and document violation, corrective action, and response due date in the Inspection Report.
- Determine the magnitude of the violations.
- Confirm that same or similar violation was previously documented.
- Issue Pre-Citation and NOV.
- Provide instruction and educational information on grease control.
- Verbally warn Site Contact of possible escalated enforcement.

The Level 2 Pre-Citation enforcement action is commonly used to escalate enforcement for the following situations:

- Previous violations at the NOV enforcement level have not been corrected before the due date.
 - Failure to complete the corrective actions may include not completing the corrective actions to the satisfaction of Code Enforcement staff, or failure to take any action by the due date.
- Site Contact has received a NOV enforcement level of the same or similar violation in the last three years.

LEVEL 3: COMPLIANCE MEETING REFERRAL (CMR)

Compliance Meeting Referrals (CMR) are generally issued when previous violations were not corrected by completion due dates, or when the Site Contact has a history of repeating the same or similar violation. A CMR may also be issued for a failure to resolve a violation by the due date in a Pre-Citation, or a similar violation was issued on a Pre-Citation in a previous inspection. A CMR gives the Site Contact notice that they have been referred for a Compliance Meeting. Multiple violations of the same code meriting CMR enforcement will be documented on one CMR. A NOV accompanies the CMR and lists all violations noted during the inspection, including those that have been documented on the CMR.

In the Compliance Meeting, the Site Contact(s) are called in to discuss the violations and agree upon actions needed to resolve the violations. Code Enforcement staff will schedule and sets up the compliance meeting with the Site Contact and any necessary stakeholders. During the meeting, timelines and a schedule for compliance are established. The agreed-upon Compliance Agreement is signed by the Site Contact(s) as a commitment to meet the compliance timelines or future enforcement escalation will be pursued. Progress on the Compliance Agreement is tracked by the Code Enforcement Technician and reported to the Code Enforcement Officer. If the violations are not corrected, Level 4 enforcement should be considered in coordination with the Code Enforcement Officer and Compliance Manager.

Code Enforcement staff Action: Indicate magnitude of violation or discharge by issuing a CMR.

- Identify and document violation, corrective action (including any necessary clean-up activities), and compliance due date in the NOV.
- Confirm that repeat violation(s) and/or serious violation(s) exists.
- Issue CMR as appropriate.

The CMR enforcement action is commonly used to escalate enforcement when:

- Previous violations at the Level 2 enforcement level have not been corrected before e due date,
- Site Contact has a history at the Level 2 enforcement level or higher for the same or similar violation in the last three years.

- Significant capital resources/ construction time required for more permanent solution.
- Multiple responsible parties are involved (e.g.: tenant and property manager)
- Compliance issues are numerous and complex.

Certain situations merit foregoing Level 3 enforcement and going directly to Level 4 enforcement. These include, but are not limited to:

- Site has a history of Level 3 enforcement actions for the same or similar violation in the last three years.
- Site has a history of Level 4 enforcement actions for the same or similar violation in the last three years.

LEVEL 4 ADMINISTRATIVE CITATION (AC)

An Administrative Citation (AC) is generally issued for serious violation or for unresolved repeat violations. An AC is a Level 4 enforcement action issued after a Pre-Citation that notes the type of violation and directs the Site Contact to implement corrective measures to return to compliance. An AC may be issued based on an inspection and/or observation of other City employees, so long as documentation meets the standards set forth in SCCC Section 1.10.030. Additional ACs may be issued to different Site Contacts for the same violation (e.g., the owner, tenant, property manager, etc.). An AC carries a monetary penalty and always requires approval from the Code Enforcement Officer and Compliance Manager.

Code Enforcement staff Action: Indicate magnitude of violation or discharge by issuing an Administrative Citation Referral (ACR).

- Review case with Code Enforcement Officer and/or the Compliance Manager. Case includes Inspection report(s), any photos or other evidence, and pre-inspection report detailing facility's enforcement history.
- Issue Administrative Citation if approved by Code Enforcement Officer and/or the Compliance Manager.
- Pursue Compliance Meeting if appropriate.

The AC enforcement action is commonly used to escalate enforcement when:

- Previous violations at the Level 2 or Level 3 enforcement level have not been corrected before the due date.
- Site Contact has a history at the Level 2 or Level 3 enforcement level or higher for the same or similar violation in the last three years.
 - Significant problems that cannot be addressed promptly or fully using the enforcement tools discussed above will be referred to the City Attorney. A second AC for deliberate or gross negligence should be referred to the City Attorney. Code Enforcement staff will work cooperatively and make available all completed inspection reports and previous enforcement actions so the City Attorney can determine how best to proceed.

ALL REFERRALS TO INTERNAL OR EXTERNAL AGENCIES

Code Enforcement staff Action: Referral to and Coordination with internal or external agencies including not limited to City of Santa Clara Public Works, Community Development or Public Safety Departments, Santa Clara County Department of Environmental Health, etc.

- Significant problems that cannot be addressed promptly or fully using the enforcement tools discussed above will be referred to internal or external agencies for assistance to achieve site compliance. Code Enforcement staff will work cooperatively and make available all completed inspection reports and previous enforcement actions so the assisting agency can determine how best to proceed.

Appendix A: Codes/Ordinances

Santa Clara City Code (SCCC)	City Code Full Text
California Plumbing Code (CPC) 1014.1.3	<p>Food Waste Disposers and Dishwashers.</p> <p>No food waste disposer or dishwasher shall be connected to or discharge into a grease interceptor. Commercial food waste disposers shall be permitted to discharge directly into the building's drainage system.</p> <p>Exception: Food waste disposers shall be permitted to discharge to grease interceptors that are designed to receive the discharge of food waste.</p>
SCCC 13.10.040	<p>Maintenance and inspection of sewer connections.</p> <p>Each user shall keep his/her sewer connections and sewer lateral(s) in good order at his/her own expense and shall be liable for all damages resulting from failure to do so. Each owner shall maintain their sewer lateral free from displaced joints, open joints, root intrusions, substantial deterioration of pipe material, cracks, leaks, inflow or infiltration of extraneous water, grease and sediment deposits or other similar conditions, defects, or obstructions likely to cause or increase the chance of blockage. A City inspector shall be admitted at all reasonable hours to any premises connected with the sewer system, for the purpose of checking plumbing fixtures, protecting the rights of the City, and determining facts relevant to the establishment, computation, and billing of the sewer service charges provided for in this chapter, including, in the case of industrial users, examination of the users' books for the purpose of checking the quantities of industrial waste produced. (Ord. 1901 § 2, 11-27-12).</p>
SCCC 13.10.170	<p>Limitations on point of discharge.</p> <p>No person shall discharge any substances directly into a manhole or other opening in a City sewer, other than through a City-approved sewer connection. (Ord. 1901 § 2, 11-27-12).</p>

<p>SCCC 13.10.200</p>	<p>Protection from accidental discharge.</p> <p>(a) Each industrial user shall provide protection from accidental discharge of prohibited materials or other wastes regulated by this chapter into either the storm sewer or the sanitary sewer system.</p> <p>(b) Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the industrial user’s expense.</p> <p>(c) All industrial users shall notify the City by telephone or in person within one hour of becoming aware of accidentally discharging wastes of reportable quantities as determined in Title 40, Chapter 1, Subchapter D, Part 117 CFR, or discharge of any substance which, if otherwise disposed to, would be hazardous waste under 40 CFR Part 261, to enable countermeasures to be taken by the City to minimize damage to the sanitary sewer system, the plant, the treatment processes, and/or the receiving waters. If hazardous waste is discharged, the industrial user shall be subject to all requirements in 40 CFR Section 403.12(p).</p> <p>(d) Within five days of the date of occurrence a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrences shall be provided to City.</p> <p>(e) Notification to the City will not relieve industrial users of notification requirements under any other Federal, State, or local law, nor of liability for any expense, loss, or damage to the sanitary sewer system, plant, or treatment process or receiving waters, or for any fines or penalties imposed on the City on account thereof under applicable provisions of State or Federal law.</p> <p>(f) All permitted facilities must maintain a spill control plan for protection against accidental discharges, including but not limited to berming of chemicals and waste materials. The review of such plans and procedures shall not relieve the industrial user from the responsibility of modifying the facility as necessary to provide the protection necessary to meet the requirements of this Code or other State or Federal regulations.</p> <p>(g) This plan must be reviewed and revised as needed within thirty (30) days after an accidental discharge has occurred or as required by the Director. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.210</p>	<p>Pretreatment by owner.</p> <p>Each owner shall, at the owner’s expense, provide such treatment or take such other measures, as the Director may require to prevent accidental discharge, reduce objectionable characteristics, contents, or rate of discharge of waters or waste being deposited in the sanitary sewer system, to prevent damage to or interference with the sanitary sewer system. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.240</p>	<p>Obstructing or injurious substances.</p> <p>No person shall discharge, cause, allow, or permit to be discharged, thrown, or deposited into the sanitary sewer system, or any part thereof, or into any plumbing fixture or private sewer or drain connected either directly or indirectly to the sanitary sewer system, any substance of any kind whatsoever tending to obstruct or injure the sanitary sewer system, or to cause a nuisance or hazard, or which will in any manner interfere with the proper operation or maintenance of the sanitary sewer system. (Ord. 1901 § 2, 11-27-12).</p>

<p>SCCC 13.10.260</p>	<p>Hot substances. No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any liquid, solid, vapor, gas, or thing having or developing a temperature of one hundred fifty (150) degrees Fahrenheit or more, or that may cause the temperature at the plant to exceed one hundred four (104) degrees Fahrenheit. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.270</p>	<p>Grease, oils, fats. (a) No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system any liquid or other waste containing grease in excess of one hundred fifty (150) parts per million by weight. (b) No person shall discharge, cause, allow, or permit any grease discharge from a food service establishment into the sanitary sewer system, unless such discharge has first been processed through an approved grease control device. (c) No person shall discharge, cause, allow, or permit to be discharged any yellow grease, or any waste or material mixed with yellow grease, into the sanitary sewer system from a food service establishment. No yellow grease from a food service establishment shall be mixed with grease trap or grease interceptor waste. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.280</p>	<p>Solid or viscous matter. No person shall discharge, deposit, throw, or cause to be discharged, deposited, or thrown into the sanitary sewer system, or any part thereof, any ashes, cinders, pulp, paper, sand, cement, mud, straw, shavings, metal, glass, rags, feathers, tar, asphalt, resins, plastics, wood, animal hair, paunch manure, or any heavy solid or viscous substance capable of causing obstruction to the flow in the sanitary sewer system, or any part thereof, or that would interfere with the proper operation of the plant or the treatment of sanitary sewage or industrial waste. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.370</p>	<p>Garbage. (a) No person shall discharge, deposit, throw, cause, allow, or permit to be discharged, deposited, or thrown into the sanitary sewer system, or any part thereof, (1) any garbage, (2) any fruit, vegetable, or animal material, and/or (3) any other solid material from any food-processing plant (or any other industrial plant or retail grocery store), irrespective of whether or not it shall have been first passed through a mechanical grinder. (b) No person shall install, operate, use, or maintain upon the premises of any food-processing plant (or any other industrial plant or retail grocery store) any mechanical grinder or waste grinder that is connected directly or indirectly to the sanitary sewer system, or any part thereof. (c) No person shall discharge, deposit, throw, or cause, allow, or permit to be discharged, deposited, or thrown into the sanitary sewer system, or any part thereof, any garbage, or fruit, vegetable, animal, or other solid kitchen waste material resulting from the preparation of any food or drinks in any dwelling, restaurant, or eating establishment, unless the same shall have first been passed through a mechanical garbage or waste grinder in conformance with the provisions of the Plumbing and Electrical Code of the City. (Ord. 1901 § 2, 11-27-12).</p>

<p>SCCC 13.10.380</p>	<p>Oil and grease removal devices.</p> <p>(a) Any food service establishment, or other type of business or establishment where grease or other viscous, obstructing, or objectionable materials may be discharged into a public or private sewage main or disposal system, shall have a grease control device and related plumbing of a size and design approved by the Director.</p> <p>(1) Grease interceptors shall meet the following minimum requirements:</p> <p>(A) Designed retention time of no less than thirty (30) minutes.</p> <p>(B) The effluent from the device must flow through an approved sample box.</p> <p>(C) Installed per manufacturer's specifications.</p> <p>(D) At least two manholes, situated so all standpipes can be fully observed, and all internal surfaces can be reached, without confined space entry.</p> <p>(E) Double-sweep cleanouts, on the interceptor inlet, and sample box outlet.</p> <p>(F) Shall meet the specifications and be constructed in accordance with the applicable provisions of Chapter 15.35 SCCC.</p> <p>(2) Grease traps shall meet the following minimum requirements:</p> <p>(A) No injection ports for chemicals or bacteria.</p> <p>(B) Installed per manufacturer's specifications.</p> <p>(C) Appropriate flow restrictors, whether integral or external to the device, must be installed.</p> <p>(D) Shall meet the specifications and be constructed in accordance with the applicable provisions of Chapter 15.35 SCCC.</p> <p>(3) Mechanical grease removal devices shall be installed in accordance with manufacturers' specifications.</p> <p>(b) Each grease control device shall be so installed and connected that it shall be at all times easily accessible for visual inspection, sampling, cleaning and removal of grease and other matter from all surfaces.</p> <p>(c) A grease control device shall be situated on the discharger's premises, except when such a location would be impractical or cause undue hardship on the discharger, the City may issue an encroachment permit to allow the grease control device to be installed in the public street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles.</p> <p>(d) Waste discharged from fixtures and equipment in establishments which may contain grease or other objectionable materials including, but not limited to, scullery sinks, pot and pan sinks, dishwashers, food waste disposals, soup kettles, and floor drains located in areas where such objectionable materials may exist, may be drained into the sanitary sewer through the grease control device if approved by the Director; provided, however, that toilets, urinals, wash basins, and other fixtures containing fecal material shall not flow through the grease control device.</p> <p>(e) Grease control devices shall be maintained in efficient operating condition by periodic removal of the accumulated grease. The use of chemicals, bacteria, enzymes, or other additives that have the effect of emulsifying or dissolving grease is prohibited unless specifically authorized by the Director in writing. No accumulated grease shall be introduced into any drainage piping or public or private sewer.</p>
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(f) Grease control devices shall be cleaned on a sufficient frequency to prevent objectionable odors, surcharge of the grease control device, or interference with the operation of the sanitary sewer system.

(1) Grease traps shall be cleaned at least once every thirty (30) days.

(2) Grease interceptors shall be cleaned once every ninety (90) days.

(3) Mechanical grease removal devices must be maintained in a manner and frequency consistent with manufacturer specifications and guidance.

(4) Grease control devices shall be cleaned when their last chamber is filled to twenty-five percent (25%) or more of capacity with grease or settled solids. Grease interceptors with a sample box shall be cleaned immediately when grease is evident in the sample box.

(5) Grease control devices shall be cleaned by being pumped dry and all accumulated sludge on all surfaces shall be removed by washing down the sides, baffles and tees. No water removed from the device during cleaning shall be returned to the grease control device.

(g) The Director may grant an exception to the requirements of subsections (f)(1) and (2) of this section where the Director finds, based on evidence presented by the discharger, that a less frequent cleaning schedule will be sufficient to assure that not more than twenty-five percent (25%) of the capacity of the grease control device will be filled with grease or settled solids.

(h) All dischargers shall implement best management practices in their operations to minimize the discharge of grease to the sanitary sewer system.

(i) Dischargers shall maintain records on site for a period of at least three years as follows:

(1) Dischargers with an installed grease control device shall maintain records showing that the grease control device has been properly maintained and cleaned as required by subsections (e) and (f) of this section; and

(2) Food service establishments shall maintain records showing the following related to all grease hauled off site: date and time material removed off site, volume removed, hauler name, truck license number, type of grease removed, and final destination of material collected.

(j) Abandoned grease control devices shall be emptied and filled as required for abandoned septic tanks. (Ord. 1901 § 2, 11-27-12).

SCCC
13.10.380
(Continued)

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(2) Grease interceptors shall be cleaned once every ninety (90) days.

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(5) Grease control devices shall be cleaned by being pumped dry and all accumulated sludge on all surfaces shall be removed by washing down the sides, baffles and tees. No water removed from the device during cleaning shall be returned to the grease control device.

(g) The Director may grant an exception to the requirements of subsections (f)(1) and (2) of this section where the Director finds, based on evidence presented by the discharger, that a less frequent cleaning schedule will be sufficient to assure that not more than twenty-five percent (25%) of the capacity of the grease control device will be filled with grease or settled solids.

(h) All dischargers shall implement best management practices in their operations to minimize the discharge of grease to the sanitary sewer system.

(i) Dischargers shall maintain records on site for a period of at least three years as follows:

(1) Dischargers with an installed grease control device shall maintain records showing that the grease control device has been properly maintained and cleaned as required by subsections (e) and (f) of this section; and

(2) Food service establishments shall maintain records showing the following related to all grease hauled off site: date and time material removed off site, volume removed, hauler name, truck license number, type of grease removed, and final destination of material collected.

<p>SCCC 13.10.400</p>	<p>Screened industrial waste.</p> <p>(a) No person shall discharge, cause, allow, or permit to be discharged into the sanitary sewer system, or any part thereof, any garbage, or any fruit, vegetable, animal, or other solid industrial waste resulting from the processing, packaging, or canning of fruits, vegetables, or other foods or products, unless such waste has first been passed through screens having openings not exceeding one thirty-second (1/32) of an inch in dimension.</p> <p>(b) The Director may authorize, in writing, the discharge into the sanitary sewer system of such waste if it is first passed through screens having larger openings, if the Director is satisfied that such larger openings will provide screening efficiency and effectiveness equal to or better than that provided by the above-specified openings of one thirty-second (1/32) of an inch in dimension.</p> <p>(c) Each person who discharges, causes, allows, or permits to be discharged into the sanitary sewer system, or any part thereof, any such waste shall install and maintain in good operating order, screens as hereinabove specified and appurtenances thereto, including, but not limited to, all necessary conveyors and elevators, all in sufficient quantity and of sufficient size and quality to continuously and effectively screen not less than one hundred percent (100%) of the peak hydraulic and solids loading imposed on such screens and appurtenances during any processing period.</p> <p>(d) No person shall discharge any such screened waste into the sanitary sewer system, or any part of the system, unless and until he/she has obtained a wastewater discharge permit pursuant to this chapter granting approval to do so. Before a wastewater discharge permit is granted, the Director may require that such person provide to the Director a report prepared by a registered professional engineer verifying, to the satisfaction of the Director, that the provisions of this section have been fully complied with. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.520</p>	<p>All industrial users subject to the reporting requirements of this chapter shall retain and make available for inspections and copying all records of information obtained pursuant to any monitoring activities required by this chapter, and additional records of information obtained pursuant to monitoring activities undertaken by the industrial user independent of such requirements. These records shall remain available for a period of at least three years. This period shall be automatically extended for the duration of any enforcement action concerning the industrial user, or where the industrial user has been specifically notified of a longer retention period by the Director. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.530</p>	<p>Responsibility.</p> <p>The primary responsibility for enforcement of the provisions of this chapter shall be vested in the Director or such agents of the City as he/she shall designate; and provided further, that field inspectors or other employees of the City are hereby authorized to act as agents of the City or of the sewage treatment plant for and on behalf of the Director, with the power to inspect and issue notices for violations of this chapter. (Ord. 1901 § 2, 11-27-12).</p>

<p>SCCC 13.10.540</p>	<p>Federal pretreatment regulations. No industrial user shall discharge, cause, allow, or permit a discharge into the sanitary sewer system in violation of any Federal or State regulation regulating discharges by such users, including, but not limited to, the Federal pretreatment regulations found in Title 40 CFR. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.550</p>	<p>Public nuisance. Waste or wastewater discharge, threatened waste or wastewater discharge, or any condition or act in violation of any provision of this chapter, or any provision of any permit issued pursuant to this chapter, or any directive or order of the Director authorized by this chapter or applicable law is hereby declared to be a public nuisance. Such nuisance may be abated, removed, or enjoined and damages assessed therefor, in any manner provided by law. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.560</p>	<p>Falsification of information. (a) It shall be unlawful to make any false statement, representation, record, report, plan, or other document; to tamper with or render inaccurate any monitoring device or equipment; or to divert flow from any monitoring device or equipment installed or operated to further the purpose of this chapter or the purpose of any permit issued under this chapter. (b) In addition to any other punishment or remedy provided by law, any such falsification or tampering shall be grounds for revocation of any permit issued under this chapter. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.570</p>	<p>Power to Inspect. (a) The Director and other duly authorized employees and agents of the City bearing credentials and identification shall have the right to access upon all properties for the purpose of inspecting any sewer or storm drain connection, including, but not limited to, all discharge connections of roof and surface drains and plumbing fixtures; inspecting, observing, measuring, photographing, sampling, and testing the quality, consistency, and characteristics of sewage and industrial wastewaters being discharged into any public sewer or natural outlet; and inspecting and copying any records relating to quantity and quality of wastewater discharges, including, but not limited to, water usage and effluent discharge, chemical usage, and hazardous waste records. (b) The Director may terminate service or revoke the permit of any person who has discharged wastewater to the sanitary sewer system and/or has unreasonably refused access to the City. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.610</p>	<p>Issuance of cease and desist orders. When the Director finds that a discharge of wastewater has taken place or is likely to take place in violation of this chapter or the provisions of any wastewater discharge permit, the Director may issue an order to cease and desist such discharge, or practice, or operation likely to cause such discharge and direct those persons not complying with such prohibitions, limits, requirements, or provisions to: (a) Comply immediately; or (b) Comply in accordance with a time schedule; and/or</p>

	(c) Take appropriate remedial or preventative action. (Ord. 1901 § 2, 11-27-12).
SCCC 13.10.620	Emergency corrections, remedial or preventative action. In the event cleanup, repairs, construction, or other work is performed on any premises pursuant to any provision of law relating to an emergency or that authorizes public work on private property to correct, eliminate or abate a condition that threatens to cause, causes, or has caused a violation of any provision of this chapter or the provisions of a wastewater discharge permit, the user or persons responsible for the occurrence or condition giving rise to such work and/or the owner and/or occupant of the premises shall be liable, jointly and severally, to the City for such public expenditures, and subject to all enforcement and administrative penalty provisions of this Code. (Ord. 1901 § 2, 11-27-12).
SCCC 13.10.640	Penalties. (a) Pursuant to Chapters 1.05 and 1.10 SCCC, the City, in its prosecutorial discretion, may enforce violations of the provisions of this chapter as a criminal, civil, and/or administrative action. All penalties and citations pursuant to applicable law, including but not limited to Government Code Section 54740.5 and Chapters 1.05 and 1.10 SCCC, shall apply to violations of this chapter. (b) In addition to the provisions of Chapters 1.05 and 1.10 SCCC, and due to the significant potential harm caused to the environment by violation of provisions of this chapter, any person who intentionally, accidentally, or negligently violates any provisions of this chapter or any provision of any permit issued pursuant to this chapter, or who intentionally, accidentally, or negligently discharges waste or wastewater that causes pollution or violates any effluent limitation, standard of performance, or pretreatment or toxicity standard shall be civilly liable to the City in a sum up to ten thousand dollars (\$10,000.00) for the first day in which such violation occurs, up to twenty-five thousand dollars (\$25,000.00) for the second day in which such violation occurs, and fifty thousand dollars (\$50,000.00) for each additional day. The City may petition a court of appropriate jurisdiction to impose, assess, and recover such sums. Funds collected pursuant to this section shall be paid to City's environmental compliance fee account. (c) Any assessed penalty shall be paid within ten days from the date of notice of such penalty. Interest shall accrue at the rate of the United States government T-Bills sold at the latest sale prior to the date of the delinquency plus three percent prorated per month or fraction thereof on the amount of penalty from the date of delinquency. (d) The amount of any penalties imposed under this chapter which have

	<p>remained delinquent for a period of sixty (60) days shall constitute a lien against the real property of the discharger from which the violation occurred resulting in imposition of the penalty. The Director shall cause the amount of uncollected penalty to be recorded with the County Recorder, in accordance with Government Code Section 54740.5.</p> <p>(e) Any and all remedies for violations of this chapter are cumulative and not exclusive, and shall be in addition to all other remedies available to the City under State and Federal law and local ordinances. Funds collected pursuant to this section shall be paid to City's environmental compliance fee account. (Ord. 1901 § 2, 11-27-12).</p>
<p>SCCC 13.10.650</p>	<p>Appeals.</p> <p>(a) Any user, permittee, applicant or other person aggrieved by any decision, action, finding, determination, order or directive of the Director, made or authorized pursuant to this chapter, or relating to any permit issued pursuant to this chapter, or interpreting or implementing the same, may file a written request with the Director for reconsideration thereof within ten days of such decision, action, finding, determination, order or directive. Such request for reconsideration must set forth in detail all supporting facts. No meeting or hearing shall be convened for such request for reconsideration. The Director shall render a final written decision within ten days of the receipt of such request.</p> <p>(b) Any user, permittee, applicant or other person aggrieved by any final determination of the Director may appeal such decision to the City Manager within ten days of the Director's final determination. Written notice of such appeal must be filed with the City Clerk within that ten-day period, and shall set forth all supporting facts. The appeal shall be heard by the City Manager within thirty (30) days from the filing of the notice of appeal. The appellant, the Director, and such other persons as the Director and/or the City Manager may deem appropriate shall be heard at the hearing on such appeal. Upon conclusion of the hearing, the City Manager may affirm, reverse or modify the final determination of the Director in furtherance of the provisions of this chapter. The City Manager's determination on the appeal shall be final.</p> <p>(c) Any decision, action, finding, determination, order or directive of the Director which is subject to a request for reconsideration or appeal shall remain in effect during the pendency of any request for reconsideration and/or appeal.</p> <p>(d) All monetary penalties shall be due and payable during the pendency of any request for reconsideration or appeal. If a determination is not affirmed and the penalty is modified, the Director shall cause any overpayment of penalty to be reimbursed to the payor within thirty (30) days of the final determination.</p> <p>(e) Any administrative citation issued for any violation shall be appealed pursuant to Chapters 1.05 and 1.10 SCCC. (Ord. 1901 § 2, 11-27-12).</p>

SCCC 15.35.010	Adoption of Plumbing Code. The 2016 California Plumbing Code, published and copyrighted by the International Association of Plumbing and Mechanical Officials and the California Building Standards Commission in Part 5 of Title 24 of the California Code of Regulations, is hereby adopted and referred to, and by this reference expressly incorporated and made a part of this chapter as though fully set forth herein. The adoption includes Appendices A, B, C, D, G, H, I, and J. The 2016 California Plumbing Code shall be designated and referred to as the “Plumbing Code” for the City of Santa Clara. (Ord. 1960 § 5, 11-22-16).
SCCC 8.30.040	Responsibility for property maintenance. The owner, occupant, lessee, or tenant of any property within the city shall be responsible for the maintenance of property and premises in a manner consistent with the provisions of this chapter and this Code. (Ord. 1663 § 1, 11-1-94. Formerly § 22A-4).

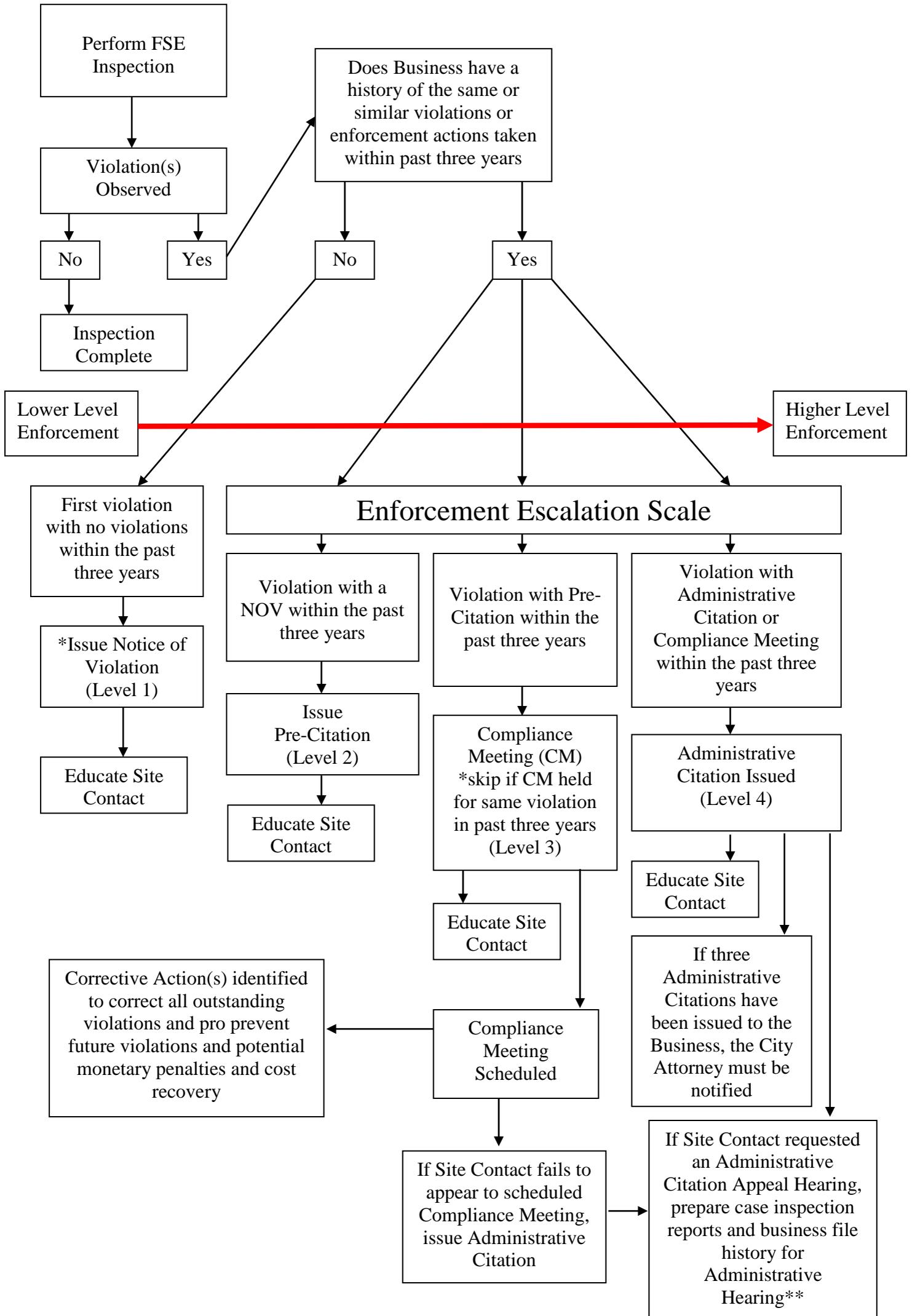
Appendix B: Enforcement Timelines Table

Compliance Deadline (Business Days)	Violation Full Title	Violation Description	Corrective Action	City Code
5	GCD maintenance records.	Partial or no GCD maintenance records were available during inspection.	Obtain GCD maintenance records and keep available onsite for three years.	SCCC 13.10.380(i)
5	GCD exceeded 25% combined solids.	GCD maintenance records noted the combined FOG and bottom solids exceeded 25% at pump out.	Increase GCD pump out frequency within required intervals when the GCD becomes 25% full of FOG and bottom solids.	SCCC 13.10.380(f)(4)
5	Grease trap exceeded 30 day pump out frequency.	The Grease Trap pump out frequency exceeded the required 30 day minimum interval.	Immediately contact a licensed grease hauler to pump out the GCD. Increase Grease Trap pump out frequency within required intervals of a minimum of every 30 days.	SCCC 13.10.380(f)(1)
5	Grease interceptor exceeded 90 day pump out frequency.	The Grease Interceptor pump out frequency exceeded the required 90 day minimum interval.	Immediately contact a licensed grease hauler to pump out the GCD. Increase Grease Interceptor pump out frequency within required intervals of a minimum of every 90 days.	SCCC 13.10.380(f)(2)
5	Powered GCD exceeded required maintenance frequency.	The Power Operated GCD required maintenance specified by the manufacturer has not been maintained.	Immediately contact a licensed grease hauler to pump out the GCD. Increase GCD cleaning frequency within required intervals.	SCCC 13.10.380(f)(3)
5	GCD baffle, standpipes or components damaged, missing or not functioning properly.	GCDs shall be kept in working order according to the manufacturers' specifications.	Repair GCD to the manufacturer's designed specifications, hire a licensed plumber or grease hauler to conduct repairs.	SCCC 13.10.380(a): (1)(C), (2)(B), & (3)
5	GCD not accessible for inspection.	Provide and maintain adequate accessibility to GCD.	Move items away from GCD, maintain access for maintenance and inspections.	SCCC 13.10.380(b)
5	FOG build-up/Excessive build-up/Obstruction identified in the sanitary sewer.	Excessive FOG identified in downstream sanitary sewer or sample box.	Hire a licensed plumber to hydro-flush or hydro-jet and inspect the facility's sanitary sewer from the GCD to the City's main sanitary sewer pipe. Repair any deficiencies immediately if found.	SCCC 13.10.040
5	FOG generating activity not plumbed or discharged to a GCD.	One or more grease generating activities found not plumbed or discharging to a GCD.	Hire a licensed plumber to install an adequately sized GCD, replumb drains or improve activity. Obtain necessary permits for construction. Provide FOG control plan to Water & Sewer Utilities.	SCCC 13.10.270(b)
5	Plumbing of grease generating drain fixtures.	One or more grease generating drain fixtures found not plumbed to a GCD.	Hire a licensed plumber to install an adequately sized GCD, replumb drains or improve activity. Obtain necessary permits for construction. Provide FOG control plan to Water & Sewer Utilities.	SCCC 13.10.380(d)
5	Prohibited drain fixture plumbed to a GCD.	One or more prohibited or non-grease generating drain fixtures found plumbed to a GCD.	Plumb non-grease generating drain fixture to the sanitary sewer to bypass the GCD.	SCCC 15.35.010 & CPC 1014.1.3
5	Best management practices (BMPs).	Facility staff observed conducting poor practices that could lead to excessive FOG buildup.	Implement and train all applicable staff BMPs to reduce FOG discharges to the sanitary sewer and GCD.	SCCC 13.10.380(h)
0	Fats, oils and grease (FOG) disposal.	No person shall dispose of FOG unless it has been discharged through a GCD or to an adequate container for contractor collection.	Implement and train all applicable staff BMPs to reduce FOG discharges to the sanitary sewer and GCD or maintain tallow container.	SCCC 13.10.270
0	Prohibited additive to sewer system.	The use of chemicals, bacteria, enzymes, or other additives that have the effect of emulsifying or dissolving grease is prohibited.	Immediately cease the use of the unauthorized product that emulsify or dissolve FOG.	SCCC 13.10.380(e)
5	Screens missing at drains.	Screens are required to be installed at drains to prevent build-up or obstructions from interfering with the sanitary sewer system.	Immediately install adequate screens not to exceed 1/32 of an inch at necessary drains and train staff to maintain.	SCCC 13.10.400
5	Improper disposal of food or drinks through a grinder, disposer and sanitary sewer.	Food garbage grinders, disposers or disposal of solids to the sanitary sewer are prohibited to prevent build-up or obstructions from interfering with the sanitary sewer system.	Immediately cease improper disposal activity and remove unauthorized equipment. Train staff to proper BMPs.	SCCC 13.10.370(a)
0	Accidental discharge to sewer system.	Facility shall provide protection from accidental discharges of prohibited materials or wastes to the sanitary sewer system.	Immediately provide training to staff or engineering control to protect the sanitary sewer system.	SCCC 13.10.200(a)
30	Abandoned GCD.	Abandoned GCDs shall be emptied and filled as required for septic tanks.	Properly decommission the abandoned GCD, hire a licensed plumber or grease hauler to conduct work.	SCCC 13.10.380(j)

Appendix B: Enforcement Timelines Table

Compliance Deadline (Business Days)	Violation Full Title	Violation Description	Corrective Action	City Code
0	City employee right to inspect.	The Director and other duly authorized employees and agents of the City bearing credentials and identification shall have the right to access upon all properties for the purpose of inspecting any sewer or storm drain connection, including, but not limited to, all discharge connections of roof and surface drains and plumbing fixtures; inspecting, observing, measuring, photographing, sampling, and testing the quality, consistency, and characteristics of sewage and industrial wastewaters being discharged into any public sewer or natural outlet; and inspecting and copying any records relating to quantity and quality of wastewater discharges, including, but not limited to, water usage and effluent discharge, chemical usage, and hazardous waste records.	Please provide authorized City employee access to the facility to complete inspection.	SCCC 13.10.570
0	Solid or viscous matter to the sewer system.	Unauthorized discharge of solid or viscous substance capable of causing obstruction to the flow in the sanitary sewer system or would interfere with the system.	Cease discharge of prohibited solids or viscous substances to the sanitary sewer.	SCCC 13.10.280
5	Pretreatment protection.	Each owner shall, at the owner's expense, provide such treatment or take such other measures, as the Director may require to prevent accidental discharge, reduce objectionable characteristics, contents, or rate of discharge of waters or waste being deposited in the sanitary sewer system, to prevent damage to or interference with the sanitary sewer system.	Hire a licensed plumber to install an adequately sized GCD, replumb drains or improve activity. Obtain necessary permits for construction. Provide FOG control plan to Water & Sewer Utilities.	SCCC 13.10.210
0	Hot substances.	Prohibited materials discharged to the sanitary sewer system having a temperature of one hundred fifty (150) degrees Fahrenheit or more.	Replumb equipment with hot substances to bypass GCD. Cease discharge if unable to reduce to below 150 degrees Fahrenheit.	SCCC 13.10.260
0	Obstructing or injurious substances.	Prohibited materials discharged to the sanitary sewer system that obstruct flow or are injurious substances to the system.	Cease discharge of substances to the sanitary sewer system that obstruct flow or are injurious substances to the system.	SCCC 13.10.240
0	Limitations on point of discharge.	Materials discharged to unauthorized point into the sanitary sewer system.	Cease discharge of materials into unauthorized discharge point. Discharge material to approved sewer connection.	SCCC 13.10.170

Appendix C: ERP Flow Chart



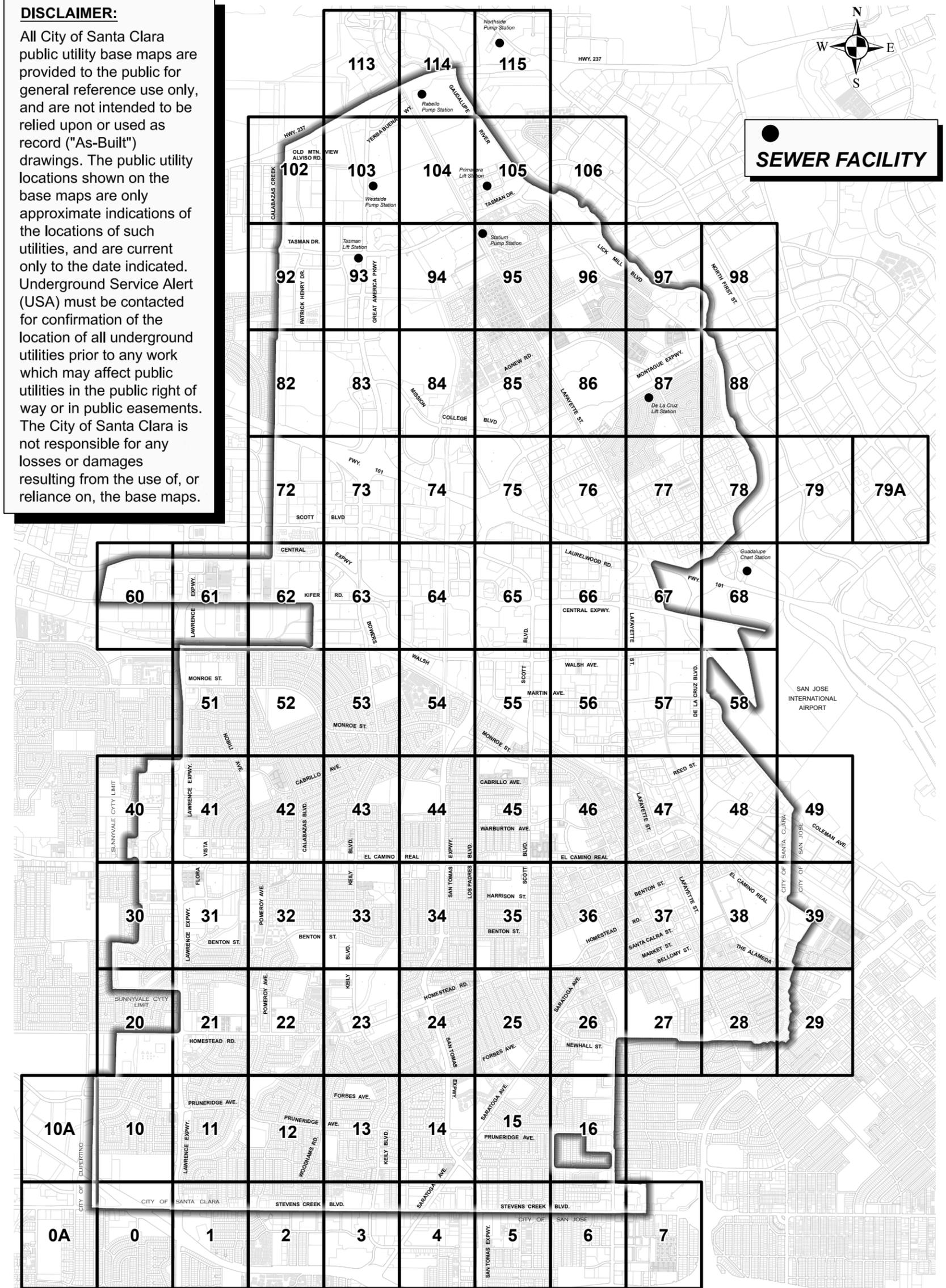
*Code Enforcement Technician or Code Enforcement Officer have discretion to issue NOV during initial or follow up inspections without having to escalate enforcement if situation is reasonable or Site Contact has acted to correct violation although more time was needed.

** Administrative Hearing to be processed per SCCC Chapter 1.10

Appendix D
Sanitary Sewer System Index Map

DECEMBER 2023 CITY OF SANTA CLARA SANITARY SEWER SYSTEM - INDEX MAP

DISCLAIMER:
 All City of Santa Clara public utility base maps are provided to the public for general reference use only, and are not intended to be relied upon or used as record ("As-Built") drawings. The public utility locations shown on the base maps are only approximate indications of the locations of such utilities, and are current only to the date indicated. Underground Service Alert (USA) must be contacted for confirmation of the location of all underground utilities prior to any work which may affect public utilities in the public right of way or in public easements. The City of Santa Clara is not responsible for any losses or damages resulting from the use of, or reliance on, the base maps.



SANITARY SEWER LEGEND

	MAIN (FORCE MAIN)		LATERAL	The location of each lateral will be shown and dimensioned from the furthest away line of the parcel, a manhole, or end of return, whichever is readily available. Sp indicates Septic.
	PRIVATE MAIN		DEPTH OF MANHOLE	The depth shown will be from rim of manhole to invert.
	MANHOLE (STANDARD TYPE)		PIPE - DIMENSIONS	The first element of the dimension grouping will express the size of the pipe and the second element will be the distance between each manhole. Note a "P" after the size indicates P.V.C., a "RCP" after the size indicates Reinforced Concrete Pipe, a "PE" after the size indicates Polyethylene Pipe, a "PP" after the size indicates SaniTite HP (High Performance) Pipe, lines where there is no indication are Vitrified Clay Pipe (VCP).
	MANHOLE (CAPPED TYPE)		PIPE - DESIGNATION	The first element of the pipe designation grouping will be the tract, tracing or job number and the second element will be the year of installation.
	FLUSHING INLET		CASING WITH DIMENSIONS	The first element of the casing designation grouping will be the casing length, and the second element will diameter of casing and casing material.
	MANHOLE (N/A TYPE)		CLEANOUT	CLEANOUT.
	MANHOLE NUMBER			
	DIRECTION OF FLOW			
	SPOT REPAIR (CLAMP SEAL TYPE)			
	SPOT REPAIR (ALL OTHER TYPES)			

BLOCK BOOK STREET NAME INDEX 2023

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Appendix E

Sewer Equipment Inventories

Appendix E

SEWER UTILITY INVENTORY

A. VEHICLES:

1. LEAD TRUCKS (3)
2. VAC-CON (2)
3. CCTV TRUCK (1)
4. JET TRUCK (1)
5. CRANE TRUCK (1)
6. DUMP TRUCK (1)
7. PUMP TRUCK (1)
8. UTILITY VAN (1)
9. BACK HOE
(PAVEMENT BREAKER)
10. TANKER – shared
11. EMERGENCY RESPONSE TRAILER

B. EQUIPMENT:

1. GENERATORS (6)
2. COMPRESSOR (1)
3. JACKHAMMER (1)
4. CHIPPING GUN (1)
5. TAMPER (1)
6. WHACKER (1)
7. SHORING JACKS – shared
8. SHORING PUMPS – shared
9. GAS DETECTION DEVICES (5)
10. BLOWERS (2)
11. TRIPOD+WINCH (2)
12. HARNESS (4)
13. LADDERS (6)
14. VARIOUS EMERGENCY LIGHTS (5)
15. LARGE CONCRETE SAW – shared
16. SMALL CONCRETE SAW (1)
17. CHOP SAW (2)
18. SAWSALL (3)
19. PARTNER SAW
20. SNAP CUTTERS (1 in each truck)
21. ARROWBOARDS – shared 2
22. FLAGSTANDS (8)
23. WARNING SIGNS (8)
24. CONES (125)
25. VACCUUMS (2)
26. ELECTRIC EELS (5)
27. TV CAMERAS
 - a. Hand push (2)
 - b. Tractor feed (2)
28. METAL DETECTORS (1)
29. METROTECH (1)

- 30. 6" TRASH PUMPS (1)
- 31. 2" PUMPS (2)
- 32. 2" SUBMERSIBLE PUMP (1)
- 33. 10HP FLYGT SEWER PUMP (SPARE) 240v/3PH (1)

ON HAND
MINIMUM:

C. PARTS:

1. CAST IRON:

- A. WYES 25
- B. 8 BENDS 50
- C. 16 BENDS 50
- D. 4" PIPE (100'+) 120 FT.
- E. COUPLINGS 50

2. V.C.P.:

- A. WYES 50
- B. 8 BENDS 25
- C. 16 BENDS 25
- D. 4" PIPE 120 FT.
- E. COUPLINGS 100
- F. 8" SADDLE
- G. 6 X6 WYE (2)
- H. 10 X 4 WYE
- I. 4" ANGLE SADDLE
- J. 4' STRAIGHT SADDLE
- K. 6 X 4 WYE
- L. 8" BEND (2)
- N. 8" 45

3. PLASTIC:

- A. 6" PIPE 100 FT.
- B. 8" PIPE 100 FT.
- C. 10" PIPE 100 FT.
- D. 12" PIPE 100 FT.

4. OTHER:

- A. BOX/CLEAN-OUT 50
- B. LID for 50
- C. STOPPER – ABS 4" 60
- D. BUSHING/CI to VCP 50
- E. LID, METAL for G-5 BOX 6
- F. COUPLING, REDUCING 4" 15

SSO TRAILER INVENTORY

- 1 – Folding Ladder
- 1 – Utility Ladder
- 1 – Tripod
- 2 – Emergency Lights w/Stands
- 2 – FM Light
- 1 – Garden Hose
- 2 – Flag Stands
- Plastic Sheeting
- 1 – Wheel Walker
- 1 – Sample Cup w/extension pole
- Large paper bags
- 2 – Barricades
- 4 – rolls of Fire Hose
- 1 – Shop Vacuum
- 1 – 2” Trash Pump
- 1 – Generator (portable)
- 1 – Generator (mounted)
- 1 – Gas Can
- 5 – Harnesses
- 1 – Bolt Cutter
- 2 – Push Brooms
- 2 – Shovels – round point
- 2 – Shovels – flat
- 3 – Large Debris Shovels
- 2 – Road Signs
- 1 – multi-drawer Tool Box
- 1 – SSO Sampling Kit

Appendix F
City of Santa Clara Design Criteria

Appendix F

DESIGN CRITERIA

for Improvements in
Public Right-of-Ways
and City Easements



City of Santa Clara

Public Works Department

April 2015

City of Santa Clara
Public Works Department

DESIGN CRITERIA



APPROVED BY:

Rajeev Batra

RAJEEV BATRA
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

DATE: *Sept. 17, 2014*



Acknowledgement of contributions

Our sincere thanks to the staffs of the
Public Works Department, Water and Sewer Utilities Department, and Electric
Department for their contributions.



CITY OF SANTA CLARA
PUBLIC WORKS DEPARTMENT

DESIGN CRITERIA

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Design Criteria
City of Santa Clara Public Works Department

1. SCOPE

This Design Criteria has been prepared by the City of Santa Clara (City) to aid Consulting Engineers and/or Developers (referred to herein as Consulting Engineer) in preparing plans for construction of City public improvements in the public right-of-way and City easements. This Design Criteria is not intended to be a textbook nor a substitute for engineering knowledge, experience, or judgment. This Design Criteria sets forth minimum design standards and other requirements of the City. This Design Criteria is not meant to limit the Consulting Engineer in exercising good judgment where higher design standards would be appropriate. It shall be the Consulting Engineer's responsibility to determine the design necessary to fulfill his/her obligation to safeguard the public's health, safety, and welfare.

Deviations, if any, from this Design Criteria, and the reasons for the deviations, shall be noted in writing when plans are submitted. Approval of deviations from this Design Criteria may be applied for and will be reviewed prior to submittal of the plans.

Note: This Design Criteria is to be considered minimum requirements. The City continues to review its design requirements and will make amendments to this Design Criteria from time to time as required. At the discretion of the City, individual projects may be subject to additional requirements.

2. PROCEDURE

Prior to the first plan submittal, the Consulting Engineer shall contact the appropriate Principal Engineer to arrange a "pre-design coordination meeting". The meeting will be with the Consulting Engineer and appropriate City staff from the Land and Property Development Division (LPD), Traffic Division, Street Maintenance Division, Water and Sewer Utilities Department, Electric Department, and Fire Department to review conceptual plans, summarize the project design requirements, and answer questions before actual design begins.

For an established fee, the City will provide the Consulting Engineer with copies of any available prints of existing sanitary sewer and storm drain lines and established street grades (i.e., Block Books and Record Drawings), Bench Marks, Standard Details, and this Design Criteria. Design standards for electric facilities and street lighting, as well as improvement plans of existing electric utilities, street lighting, and City fiber optic systems, may be obtained from the City Electric Department. Design standards, Standard Details, and specifications for water facilities, as well as improvement plans of existing water facilities, may be obtained from the City Water and Sewer Utilities Department. Most of the documents noted above, except for the Record Drawings, may be viewed or downloaded from the City's website. Location of all other utilities may be obtained from the appropriate utility company or facility owner.

The location and elevation of existing utilities shall be verified (potholing may be required) in the field by the Consulting Engineer and shown on the plans.



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The on-site drainage, drainage design calculations, and grading plan shall be submitted as part of the storm drain analysis (not as part of the public improvement plans). This plan shall show the overland release of storm water without flooding the buildings. This plan shall also show the building pad elevations on the same datum as the public improvement plans.

The plans and design calculations are subject to the review and approval of various City departments. The Consulting Engineer shall submit the required number of 100% complete plan sets, currently eight (8) sets, and design calculations, currently two (2) sets. The plans submitted for review shall be stamped with the seal of the Engineer-of-Record or Architect-of-Record and the "FOR PLAN CHECK ONLY" notation on each plan sheet. The design calculations submitted for review shall be stamped with the seal of the Engineer-of-Record or Architect-of-Record and the "FOR REVIEW ONLY" notation on the cover sheet. The submittal shall also include the construction cost estimate for the work in the public right-of-way and City easements and a cover letter stating the deviation(s) from this Design Criteria and the City's Standard Details (if any), purpose of the submittal, and the location of the project. Submittal shall be directed to the Principal Engineer of LPD. Incomplete plans or design calculations will be returned to the Consulting Engineer without review. The various City departments will review the plans and design calculations and identify needed changes (if any). The Consulting Engineer shall revise the plans and design calculations accordingly and re-submit the plans and design calculations for further City review.

When the plans and design calculations are completed, reviewed, approved, stamped with the seal, signed, and dated by the Consulting Engineer or Architect-of-Record and the plans are signed by the appropriate City Departments, the required number of plan sets, currently twenty-two (22) full size sets, and the required number of design calculations, currently two (2) sets, shall be submitted to the Principal Engineer of LPD. The reproducible plans shall be printed on bond paper with a minimum bond weight of 20 pounds. These prints shall be used as the construction drawings.

Once the required numbers of plan sets and design calculations have been submitted, the Contractor shall contact the Engineering Department - Field Services Division to schedule the pre-construction meeting.

After the pre-construction meeting, the Contractor must obtain an Encroachment Permit before starting any work. The Encroachment Permit is issued once the following requirements have been met and the plans have been signed by the appropriate City departments.

- A. Development fees and Encroachment Permit fees are paid and Bonds are posted.
- B. Proper Contractor's Insurance with Endorsements is approved and City Business License is filed.



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Upon completion and acceptance of the construction project, the Consulting Engineer shall supply the City with Record Drawings that reflect "as-built" conditions in both hardcopy and electronic PDF format. The hardcopy drawings shall be reproduced on quality 20-pound bond paper with a minimum brightness of 92 and produce good quality prints. The Record Drawings shall become the property of the City.

3. PLANS

Plans shall comply with the following requirements:

- 3.1 All plans shall be on 24-inch by 36-inch sheets (D-size) with a 1-1/2-inch margin on the left side and a 1/2-inch margin on the top, bottom and right sides. No information shall be placed outside of the border lines, except the drawing's plot stamp along the left border. Plans with a profile shall have only a single profile. The profile shall be placed below the corresponding plan view with matching stations.
- 3.2 Plans shall be good quality prints produced from the original. At the discretion of the Director of Public Works/City Engineer, plans may be rejected for poor quality. Plans that are illegible or difficult to read will be rejected.
- 3.3 The scale for improvement plans (plan and profile) shall be in English units and shall generally be a scale of 1" = 20' for the horizontal and 1" = 2' for the vertical. For street improvement plans encompassing more than 500 linear feet of work, a scale of 1" = 40' for the horizontal is allowable if an acceptable plan clarity is maintained. Scales other than 1" = 20' and 1" = 40' may be allowed with prior approval from the Director of Public Works/City Engineer. The Consulting Engineer/Architect and Developer should carefully consider the scale chosen for a plan such that the necessary plan details are not crowded. Plans with crowded notes and details may be rejected by the City and may be required to be redrawn to a larger scale.
- 3.4 All lettering shall have a minimum height of 0.1 inch. Letter style shall be clear, legible and uniform. Lettering should closely conform to the ANSI Y14.2-1980 standards. Extreme styling of lettering and fonts, such as architectural scripts, are not acceptable. Plans may be rejected for inappropriate lettering.
- 3.5 In general, new improvements shall be shown with bold unbroken lines and existing improvements be shown with lighter, broken, dashed or screened lines.
- 3.6 In general, work shown in plan view on sheets shall be oriented so that North is either at the top or left of the sheet.
- 3.7 Generally, centerline stationing shall increase North to South and West to East (left to right on the sheet).
- 3.8 The following shall be shown on all sheets:
 - A. Sheet number and total number of sheets in project (i.e., Sheet 1 of 6);



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- B. Initials of persons drawing, designing, and checking;
 - C. Scale (horizontal and vertical);
 - D. Title Block;
 - E. Responsible Registered Engineer's stamp with name, license number, signature, and the date of signing. This is required on the final plans before the plans are signed by the various City departments;
 - F. Date of plan preparation;
 - G. The City Tracing Number as provided by the Engineering Department for developer projects. This number shall be placed on the lower right hand corner of each sheet, inside the border line, lettered in bold print, and at least 3/10ths of an inch in height; and
 - H. No information shall be placed outside of the border lines, except the drawing's plot stamp along the left border.
- 3.9 The first sheet shall be a title sheet and shall contain the following:
- A. Location map: a line drawing showing project within a generally larger area of the City. Note: electronic map copies and photocopies of common road maps are not acceptable;
 - B. Title, descriptive of proposed improvements (both in large print on top center of the sheet and in the title box);
 - C. Sheet Index;
 - D. Legend: show only those legend symbols that apply to the plans. See Exhibit "A" for a sample set of "Typical Legend Symbols";
 - E. Abbreviations: Show only those abbreviations that apply to the plans. Use "Typical Abbreviations" shown on Exhibit "B";
 - F. Applicable items of the latest revised "General Notes" shown on Exhibit "C" and other appropriate notes;
 - G. City Bench Mark number, description, elevation, and current datum year. All elevations on plan shall be on the current City bench system. Contact the Engineering Department to obtain the current Bench Mark description, location, and elevation for the Bench Mark(s) near the project site. City Bench Mark information is also available on the City website, <http://santaclaraca.gov>. Go to "Government", then "Departments", then "Public Works", then "Technical Documents";



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H. The City "Site Number" as provided by the Engineering Department for developer projects. This number shall be the same size as and be placed near the City Tracing Number;

I. Certificate of Approval:

APPROVED: Rajeev Batra
Director of Public Works/City Engineer
City of Santa Clara

_____ Date: _____
Public Works Department

REVIEWED:

_____ Date: _____
Land and Property Development Division

_____ Date: _____
Traffic Engineering Division

_____ Date: _____
Street Maintenance Division

_____ Date: _____
Silicon Valley Power

_____ Date: _____
Water and Sewer Utilities Department

The following statement shall appear with the Certificate of Approval:

“This approval does not mean the Director of Public Works/City Engineer nor the City can accept any part or parts of the work done under or in conjunction with these plans that have not been properly indicated.”

Note: Signatures of additional Department/Division Heads are required if their respective facilities are being designed within a proposed public works project;



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- J. A Key Map is required for large projects. The Key Map, large enough in scale (1" = 100' is desirable) to show the entire project area with existing ground contours; general layout of existing and proposed streets; lot lines and numbers; direction of gutter flow; pipe sizes of existing and proposed storm drain and sanitary sewer systems, including manholes and catch basins; electroliers; poles; fire hydrants; indexed sheet numbers; Bench Mark location(s); and any other pertinent features or proposed improvements which can be reasonably shown. The Key Map shall be on a separate sheet or in multiple sheets for very large project areas.

For Assessment Districts the Key Map shall, in addition to the above, show the District Boundary and Parcel Numbers within the District; and

- K. The following Developer information:

Contact Person: _____

Company Name: _____

Address: _____

Telephone No.: _____

Fax No.: _____

E-mail: _____

- 3.10 Cross sections showing both existing and proposed grades, at least within the public right-of-way and City easements, shall be provided if required by the Engineering Department. Some cross sections such as conforms and at driveway centerlines may need to extend beyond the right-of-way lines. The cross sections are to be clear and legible. Cross sections shall be provided for the following locations:

- A. At all stations (100 foot intervals);
- B. At the beginning and end of the improvements;
- C. At existing driveway centerlines;
- D. At conform sections; and
- E. At other locations necessary for design.



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- 3.11 All new improvements shall be referenced to the centerline stationing. Stationing shall be shown for the following:
- A. Beginning and end of improvements;
 - B. Centerline intersections;
 - C. Curb returns;
 - D. Beginning (BC) and end (EC) of horizontal curves;
 - E. Grade breaks;
 - F. Manholes, clean-outs, and inlets;
 - G. Sewer laterals;
 - H. Beginning and end of curb, gutter and/or sidewalk removal and installation;
 - I. All water service structures (water valves, hydrants, blow offs, air reliefs, services, etc.);
 - J. All electrical system structures (street lights, junction boxes, vaults, transformers, poles, etc.);
 - K. All other utility and private system structures (telephone, cable, gas, communication companies, etc.);
 - L. Driveway centerlines;
 - M. Traffic signals and controllers; and
 - N. Beginning (BVC) and end (EVC) of vertical curves and point of intersection (PI).

This is not meant to be a complete list; other pertinent features shall also be stationed.

For work on existing streets, or for the extension of existing streets, the Consulting Engineer shall use the established centerline stationing. For work on new streets, or work on existing streets without established stationing, the Consulting Engineer shall begin centerline stationing from a City standard monument beyond the limits of the work. Wherever possible, the start of the centerline stationing shall be at a monument at the intersection of the centerlines of two streets.

Stationing of facilities shall require full station identification. For example, a proposed driveway centerline at station 5+32.00 should be noted as "5+32.00" not just "+32.00" nor "5+32".



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In general, new facilities and design features shall be stationed to the nearest one-hundredth of a foot. Existing facilities and design features shall be surveyed and stationed to the nearest one-tenth of a foot. Elevations for both new and existing facilities and design features shall be indicated to the nearest one-hundredth of a foot.

3.12 The following shall be shown on the plans where applicable:

- A. Names of all proposed and existing streets;
- B. Plan and profile of street and underground improvements;
- C. Street right-of-way width, curb face to curb face dimension, centerline to curb face dimension, property line to curb face dimension, and easement lines, if any;
- D. Street centerline with full station identification. Station identification should stand out on the plan. Lettering should be bold and/or larger than standard plan lettering. Use full station identification (i.e., "5+00" rather than "5");
- E. Curve data (delta, tangent, radius, and length);
- F. Elevations of existing and proposed top of curbs at all grade breaks, BC, EC, beginning and end of improvements, and every half station (50-foot intervals);
- G. Elevation of all inverts at all catch basins, ends of pipes, and manholes on both storm drain and sanitary sewer systems;
- H. The slope of street centerlines, top of curbs (where top of curb slope is different than centerline slope), storm drains, and sanitary sewers shall be shown on the profile view. Top of curb slopes and flow lines at curb cuts (i.e., driveways, curb ramps, etc.) shall also be shown on the plan view. All slope indications shall include an arrow denoting the direction of flow. Use of "+" and "-" signs to denote direction is not acceptable;
- I. Existing pipe lines (note material type and size), utilities, irrigation systems, poles, trees, pull boxes, manholes, obstacles, edges of existing pavement, monuments, pavement types, etc.;
- J. Lot numbers corresponding to the tract map on new subdivision work, Assessor's Parcel Number and owner's name on lots in existing developed areas, and Assessment Number on Assessment District Projects;
- K. In general, new improvements shall be shown with bold unbroken lines and existing improvements be shown with lighter broken, dashed or screened lines. See Exhibit "A" for "Typical Legend Symbols";
- L. Trench sections for joint trenches;



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- M. Detail of material, thicknesses and method of backfill for all trenches within pavement areas (including slurry seal) if different than City Standard Details; and
 - N. City limits and other jurisdictions' right-of-way lines.
- 3.13 The following profile information shall be shown on the plans where applicable:
- A. Horizontal and vertical scales shall be noted on the profile view;
 - B. Horizontal stationing above and below profile view, as well as datum elevations on each end of sheet. It must be clear which profile grid line represents which datum elevation. All full stations shall align with major grid lines. Datum elevations (at least every other foot if not every foot) shall align with major grid lines. Stationing of corresponding plan and profile views shall align vertically for straight station line alignments;
 - C. Size (diameter and length), slope, and material of all pipes, culverts, etc;
 - D. Label all profiles shown;
 - E. Slope and direction of fall of all grade lines (use arrow indications);
 - F. All utilities shall be shown in the profile view with stationing and elevations for catch basin inverts, top of curbs, manhole rims and inverts, and clean-out rims and inverts. Flow lines and top of pipes shall be shown;
 - G. Stationing and elevation of the following: Beginning (BC) and end (EC) of horizontal curve, beginning of vertical curve (BVC), end of vertical curve (EVC), point of intersection of vertical curve (PIVC), transitional sections, grade breaks, beginning and end of improvements;
 - H. The slope of street centerlines, top of curbs (where top of curb slope is different from centerline slope), storm drains and sanitary sewers. All slope indications shall include an arrow denoting the direction of flow. Use of "+" and "-" signs to denote direction is not acceptable;
 - I. Elevations at 25-foot intervals on vertical and horizontal curves; and
 - J. Extension of profiles 100 feet past each end of improvements.
- 3.14 A "typical section" shall be shown for each street width and pavement section. Transverse conforms shall be shown in the typical section. The typical section shall show the conform between the back of walk and property line. The design R-value(s) for all materials used to develop the structural pavement section and Traffic Indices (T.I.) shall be placed directly below the typical section. The installation of slurry seal shall be indicated for all trench work, potholes, asphalt concrete repairs, and street widenings.



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- 3.15 In lieu of some details, the Consulting Engineer/Architects or Developer may reference, on the plans, individual City Standard Details. These details should not be included on the plans. City Standard Details are available from the Engineering Department for a nominal fee, or can be accessed on the City website.
- 3.16 Provide design calculations for storm drain and sanitary sewer systems.

4. STREET DESIGN

- 4.1 Minimum standard right-of-way and roadway widths (face of curb to face of curb) shall be as follows:

	<u>Residential</u>	<u>Industrial</u>	<u>Commercial</u>
Right-of-Way	60 Feet	68 Feet	84 Feet
Roadway Width	40 Feet	48 Feet	64 Feet

- 4.2 Property line radii at intersecting streets shall be as follows:
 - A. If one of the intersecting street right-of-way widths is 70 feet or less in width, the property line radius shall be a minimum of 20 feet.
 - B. If both intersecting street right-of-way widths are greater than 70 feet, the property line radius shall be a minimum of 40 feet.
 - C. In special situations, the property line radius shall be subject to individual design contingent on approval by the Director of Public Works/City Engineer.
- 4.3 Structural pavement sections shall be designed to conform to Topic 633, Engineering Procedures for New and Reconstruction Projects, of Chapter 630, FLEXIBLE PAVEMENT, of the State of California Highway Design Manual. The safety factor needed for gravel equivalent increase shall be 0.07 feet for a base type of Aggregate Base. The asphaltic concrete layer of a structural pavement section shall be designed such that it will accommodate at least 40 percent of the total required Gravel Equivalent. The structural pavement sections shall not be less than 3 inches of asphalt concrete over 12 inches of Class 2 aggregate base or 8 inches of full depth asphalt concrete.

A soils report of the subgrade or basement soil, along with calculations for structural pavement sections, shall be submitted by the Consulting Engineer. In lieu of a soils report, and with the permission of the Engineering Department, the Consulting Engineer may assume an R-value of 5 for native soil (i.e., subgrade or basement soil).

- 4.4 Traffic Indices (TI) are to be supplied by the Director of Public Works/City Engineer. Minimum typical TI shall be as follows:

Residential cul-de-sacs & loop streets:	4
Residential collector streets:	5



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Industrial streets:	6
Major streets:	6-9

Streets with bus traffic or substantial truck traffic will have significantly greater TI values than otherwise similar streets.

The design of the structural pavement section for trenches shall use a TI value that is 0.5 higher than the TI value for the street as supplied by the Director of Public Works/City Engineer (i.e., TI value for trench pavement replacement = TI value for street plus 0.5).

4.5 Minimum allowable street grades:

South of State Highway 101:	0.3%
North of State Highway 101:	0.25%
Around Curb Returns:	0.5%

Undulated street grades shall have a favorable fall to the low point of the drainage basin such that a grade line drawn through the high points of the undulation would not be less than 0.05% grade. The elevation at any low point must not be more than six (6) inches below the lower adjacent high point elevation.

Cul-de-sacs shall drain toward the intersecting street.

- 4.6 In areas of street widening, the cross slope shall be designed between 2% and 4%. Greater cross slopes may be allowed only with the permission of the Director of Public Works/City Engineer.
- 4.7 When the vehicle travel way of an existing street is being reduced (i.e., installation of “traffic calming” features) the effect of grade changes to the street must be investigated and clearly indicated on the plans. The cross slope shall be designed between 2% and 4%.
- 4.8 Vertical curves shall be used whenever a 1.5% grade differential or more occurs. Vertical curves shall be 200 feet minimum.
- 4.9 Existing street monuments shall not be disturbed and shall be protected during construction. If the plans show an existing street monument is to be disturbed or has the potential of being disturbed, a Corner Record shall be filed with the Santa Clara County Recorder’s Office as required by the Subdivision Map Act to preserve the location of said street monument.
- 4.10 Standard City Monuments shall be placed on the street centerline at every street intersection, angle point, center of cul-de-sac, and beginning and ending of all horizontal curves.



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- 4.11 The centerline profile of the through street shall be continuous through the intersection. The cross street centerline profile shall meet the through street cross slope at the centerline except when the through street pavement width is 60 feet or more. In this case, the cross street centerline profile shall meet the through street cross slope at 10 feet from the face of curb of the through street with the cross street profile sloping away from the through street.
- 4.12 Medians with landscaping shall require curbing. The top of curbs shall be constructed 8.5 inches above street surface grade, or in areas of median extension, match the existing curbing height as allowed by the Director of Public Works/City Engineer. Depending on the scope of the project root barriers and/or median subdrains may be required by the Director of Public Works/City Engineer.
- 4.13 Slurry seal shall be required on newly paved streets, trenches, potholes, and street widenings. The slurry seal shall extend 12 inches beyond the limits of pavement reconstruction.

5. SANITARY SEWER DESIGN

- 5.1 Pipe material shall conform to Section 02062, FURNISHING AND INSTALLING OF PIPE, of the City's Technical Provisions. For pipe sizes 24 inches in diameter or less, use vitrified clay pipe. For pipe sizes greater than 24 inches in diameter, fully lined reinforced concrete pipe may be used. Polyvinyl Chloride (PVC) SDR 26 pipe 12 inches or less may be used. PVC pipe larger than 12 inches in diameter may be used upon approval by the Director of Public Works/City Engineer.
- 5.2 In general, sanitary sewers shall be placed in every street with a 5-foot offset from street centerline on the side opposite the storm drain.
- 5.3 Minimum cover over mains shall be 6 feet from finished grade.
- 5.4 Design:
 - A. Coefficient of friction "n":

Vitrified Clay Pipe:	0.013
Reinforced Concrete Pipe:	0.013
Polyvinyl Chloride Pipe:	0.011
 - B. Minimum pipe diameter:

Residential:	8"
Commercial:	10"
Industrial:	12"
 - C. Sufficient slope shall be used to provide a minimum flow velocity of 2 feet per second when flowing full or half full.



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D. Minimum average design flows:

Residential:	245 gallons / unit / day
Commercial:	Based on predicted use. *
Industrial:	Based on predicted use. *
Hospital:	150 gallons / bed / day

* See San Jose – Santa Clara Water Pollution Control Plant Sewage Coefficient List available in the Engineering Department – Land and Property Development Division.

The above flows were used to design the present trunk system. For developments with substantially higher flows (electronics manufacture, data centers, high-rise developments, canning plants, etc.) the anticipated flows shall be used in both the design of the sanitary sewer lateral and in supplementing the existing sanitary sewer system.

E. For design of pipes, the Proposed Development Peak Flow shall not be less than 2.5 times the computed average flow as determined in Subsection 5.4D above. The Design Flow (total peak flow) shall be as determined in Subsection 5.4G below. Sanitary sewers shall be considered full at a d/D (ratio of liquid depth to pipe diameter) value of 0.75 or greater.

F. Sanitary Sewer Hydraulic Model Run:

If required by the City, developer shall submit complete sanitary sewer (SS) information (i.e., building use, square footage, point of connection to the public system, and 24-hour average and peak SS flow graphs for the peak day, showing average daily and peak daily SS flows). Developer shall also provide seasonal peak, if it differs from daily peak. For a fee, the proposed development impact to the modeled trunk sanitary sewer system will be evaluated using the City's Sanitary Sewer Hydraulic Model for the trunk sanitary sewer system. If there is not enough capacity in the existing modeled trunk sanitary sewer system, the developer will be required to upgrade the sanitary sewer system as determined by the City. The required sanitary sewer upgrades will be at developer's expense.

G. Field Monitoring for Non-modeled Sanitary Sewer Lines:

If required by the City, the sanitary sewer mains serving the site not included in the City's Sanitary Sewer Hydraulic Model shall be monitored in the field by the developer at developer's expense to evaluate proposed development impact to said sanitary sewer mains. If there is not enough capacity in the sanitary sewer system, the developer will be required to upgrade the sanitary sewer system as determined by the City. The required sanitary sewer upgrades will be at developer's expense.



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Prior to any flow monitoring work, the proposed monitoring location(s) shall be reviewed and approved by the Director of Public Works/City Engineer. Flow monitoring measurements to determine average and peak flows, in existing pipes, shall be done over a period of at least seven (7) consecutive days with continuous mechanical/electronic measurements in a manner acceptable to the Director of Public Works/City Engineer.

An Encroachment Permit (EP) is required to allow developer to monitor the sanitary sewer flows.

Design flow determination shall be as follows:

$$Q_D = Q_M + Q_{WWGWI} + Q_{RDI/I} + Q_{PD}$$

Where:

Q	=	Flow
D	=	Design
M	=	Monitored
WWGWI	=	Wet Weather Groundwater Infiltration
RDI/I	=	Rainfall-Dependent Infiltration and Inflow
PD	=	Proposed Development

Q_D	=	Design Flow
Q_M	=	The Monitored Peak Flow or 2.5 times the Monitored Average Flow, whichever is greater.
Q_{WWGWI}	=	The gpd/acre value is obtained by using Figure 3-3 on page 3-5 (see Exhibit “D” of this Design Criteria) and Table 3-2 on page 3-11 (see Exhibit “E” of this Design Criteria) of the Sanitary Sewer Capacity Assessment Report, May 2007. Multiply the factor by the Tributary Area served by the sanitary sewer main being monitored.
$Q_{RDI/I}$	=	Same as Q_{WWGWI} above. For now, use 1,000 gpd/acre.
Q_{PD}	=	Proposed Development Peak Flow.

5.5 At all changes of direction, a drop in flow line shall be installed equal to the velocity head times the ratio of angular change to 90 degrees.

$$\frac{V^2}{2g} \times \frac{A^\circ}{90^\circ} = \text{Head Loss} = \text{drop in flow line}^*$$



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Where:

- V = velocity in ft./sec
g = acceleration of gravity (32.17 ft./sec²)
A° = the angular change in degrees

*If junction is fully shaped, this value may be reduced by 30%. This value shall not be less than 0.1 foot.

- 5.6 Where minor mains connect to trunk main, the crown of the minor main shall match the crown of the trunk main.
- 5.7 A drop in hydraulic grade line (HGL) shall be provided for head losses due to transitions such as bends, pipe size changes, grade changes, and at drainage structures (e.g., manholes).
- 5.8 The sanitary sewer system shall be designed as a complete grid system.
- 5.9 In general, sanitary sewer main lines should be designed such that all other parallel facilities have at least an eight-foot clear distance separation. Sanitary sewer main lines that have large diameters or are deeper/shallower in elevation may require greater separation from other facilities as determined by the Director of Public Works/City Engineer.
- 5.10 Curved sanitary sewer conduit shall not be used except when written permission is obtained from the Director of Public Works/City Engineer.
- 5.11 Cross connections between the storm drainage system and the sanitary sewer system are prohibited.
- 5.12 Drainage structures (e.g., manholes) shall be located at the following points:
- A. Change in direction;
 - B. Change in slope;
 - C. Change in size;
 - D. Intersection of mains;
 - E. Changes in pipe material;
 - F. A nominal spacing of 450 feet with a maximum spacing of 500 feet;
 - G. Upstream end of lines; and
 - H. Where laterals are the same size as the main or are 8 inches or larger.



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5.13 The Standard Manhole (as shown in the City Standard Details) is applicable in most cases where a drainage structure is required. However, the drainage structure shall be individually designed for any of the following conditions:

- A. Through mains larger than 39" with less than a 5 degree change in alignment;
- B. 27" or larger through mains with a 5 degree or larger change in alignment;
- C. Side mains larger than 24"; and
- D. Other special conditions as identified by the Director of Public Works/City Engineer.

5.14 Laterals:

- A. Laterals for residential dwellings up to four (4) units shall be at least 4 inches in diameter. All others will be 6 inches or larger;
- B. Laterals shall have a minimum slope of 2% and be installed at right angles or radial to street right-of-way;
- C. Laterals with clean-outs shall be provided to every lot and known future developments; and
- D. Lateral to main connections:
 - 1. Connection to a manhole shall be made wherever possible. Manhole connections shall be as follows:
 - i. When lateral and main are constructed at the same time, the lateral and main crowns shall have the same elevation.
 - ii. When connecting to an existing manhole, the outside bottom of lateral pipe shall be at or above the manhole shelf. The maximum height of lateral flow line above the manhole shelf floor shall be one and one half feet (see City Standard Details).
 - 2. When main and lateral are constructed at the same time, and a manhole connection is not possible, a wye connection is to be used as shown in the City Standard Details.
 - 3. A 4" or 6" lateral connection to an existing larger main shall be made by the "Tap-tite" method as shown in the City Standard Details.
 - 4. Lateral cover measured from top of curb shall not be less than 4.5 feet.
 - 5. Siphon connections to main are prohibited;



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- E. Clean-outs shall be installed on all sanitary sewer laterals at the street right-of-way or easement line as shown in the City Standard Details. If the sanitary sewer lateral is 8 inches or larger, a manhole shall be used in place of a clean-out; and
- F. On-site sanitary sewer pump system force mains shall not discharge directly into the City's sanitary sewer system.

5.15 Grit Traps:

- A. Grit traps shall be placed just upstream of siphons and at other locations as determined by the Director of Public Works/City Engineer.
- B. Grit traps shall be designed with adequate capacity to accommodate the peak flow(s) of the sanitary sewer main(s) discharging into the grit trap.

6. STORM DRAINAGE DESIGN

- 6.1 The storm drain pipe system shall be designed to convey the 10-year event flow. The storm drain pipe system near storm drain pump stations, as determined by the Director of Public Works/City Engineer, shall be designed to convey the 100-year event flow.
- 6.2 When a proposed development increases the storm discharge such that it will surcharge the existing storm drain system and/or breach the discharge capacity limit of the existing pump station, the developer shall upgrade/supplement the existing storm drain system and/or existing pump station to accommodate the proposed development.
- 6.3 For runoff calculations, use the Rational Method of Design ($Q = CIA$) where:

- Q = Runoff in cubic feet per second (CFS)
- C = Runoff coefficient or percentage of rainfall running off a given drainage area. In general: Parks 0.3; Residential 0.4 to 0.5; Industrial 0.6 to 0.9; Commercial 0.6 to 0.8. The Consulting Engineer shall determine and submit the backup information used to calculate the C factor(s) along with the storm drain pipe design calculation.
- I = Intensity of rainfall in inches per hour as determined by time of concentration (T_c). Use the Intensity-Duration-Frequency (IDF) Graph for a mean annual precipitation of 14 inches (see Exhibit "F" for Graph) as published in the Santa Clara County Drainage Manual 2007 (Figure B-2).
- A = Drainage area in acres
- T_c = Time required for water to flow from the most remote part of the drainage area to the outlet point under consideration. Use ten minutes start time plus 0.5 ft./sec overland plus 1 ft./sec in gutters plus pipe flow time or formulas found in Santa Clara County Drainage Manual 2007.



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- 6.4 Use County of Santa Clara Standard Form DM-2 (see Exhibit “G”) found in the Santa Clara County Drainage Manual 2007 for tabulating design calculation and pipe size selection. Submit completed form DM-2 and tributary area drainage map with improvement plans. Hydrology software providing similar inputs and outputs may be used, if accepted by the Director of Public Works/City Engineer.
- 6.5 Pipe slope shall generally be parallel with the ground gradient of the drainage basin.
- 6.6 Roughness coefficient (n) for Reinforced Concrete Pipe shall be 0.013.
- 6.7 A drop in hydraulic grade line (HGL) shall be provided for head losses due to transitions such as bends, pipe size changes, grade changes, and at drainage structures (e.g., manholes).
- 6.8 Curved storm drain conduit shall not be used except when written permission is obtained from the Director of Public Works/City Engineer.
- 6.9 Full flow velocity shall not be less than 2 fps.
- 6.10 Maximum flow velocity shall be 10 fps.
- 6.11 Minimum size of conduit shall be 12-inch inside diameter.
- 6.12 Storm conduit generally shall be located 5 feet from the street centerline on the side opposite the sanitary sewer.
- 6.13 Pipe material shall be reinforced concrete pipe with minimum strength of Class III (1350-D). Pipe shall be Class V in areas of high electrolysis (e.g., north of Highway 101).
- 6.14 Minimum cover over pipe shall be 2 feet to street subgrade for mains, and 2 feet to lip of gutter for catch basin laterals.
- 6.15 In general, storm drain main lines should be designed such that all other parallel facilities have at least an eight-foot clear distance separation. Pipelines that have large diameters or are deeper/shallower in elevation may require greater separation from other facilities as determined by the Director of Public Works/City Engineer.
- 6.16 Drainage structures (e.g., manholes) shall be located at the following points:
 - A. Changes in direction;
 - B. Changes in slope;
 - C. Changes in size;



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- D. Intersections of mains and laterals (unless a concrete lug connection is permitted by the Director of Public Works/City Engineer as shown in the City Standard Details);
 - E. Changes in pipe material; and
 - F. A nominal spacing of 450 feet with a maximum spacing of 500 feet.
- 6.17 The Standard Manhole (as shown in the City Standard Details) is applicable in most cases where a drainage structure is required. However, the drainage structure shall be individually designed for any of the following conditions:
- A. Through mains larger than 39" with less than a 5 degree change in alignment;
 - B. 27" or larger through mains with a 5 degree or larger change in alignment;
 - C. Side mains larger than 24"; and
 - D. Other special conditions as identified by the Director of Public Works/City Engineer.
- 6.18 Street pickup points shall not exceed 1,000-foot intervals. Use City standard curb inlet catch basins; or Type "A" catch basins, with approval of the Director of Public Works/City Engineer.
- 6.19 Maximum depth of City standard catch basins shall be eight feet. Deeper inlet structures require individual designs and approval by the Director of Public Works/City Engineer.
- 6.20 Backflow protection devices shall be provided whenever the pipe system discharges into a flood control channel in which the 100-year event water surface elevation is higher than the lowest natural ground elevation of the drainage basin. Whenever this occurs, an overflow release protection system, such as culvert, channel, or drainage swale, shall be provided for the ultimate delivery of water to a flood control facility.
- 6.21 A backflow preventive device shall be provided for on-site storm drain laterals when an on-site elevation of a pick-up point is more than 6 inches below the lowest top of curb on the fronting street(s). The backflow device shall be located in a private structure outside the street right-of-way and maintained by the property owner.
- 6.22 Private property connections to the City storm system shall be first authorized by proper permits and then connected to the City's storm drain system either directly at an existing or new manhole or to the back of an existing catch basin or, if no storm drain exists, by means of curb face drainage, if permitted by the Director of Public Works/City Engineer.
- 6.23 Force main delivery from on-site pump systems shall not flow directly through curb face, nor into City storm drain system.



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- 6.24 Cross connections between the sanitary sewer system and the storm drainage system are prohibited.
- 6.25 Storm drain lines shall be constructed by new development or redevelopment up to the property and include capacity for the upstream watershed area.
- 6.26 Storm drain lines shall be constructed downstream to a point of adequate discharge.
- 6.27 Pipe stubs with plugs shall be provided at points of known future extensions.
- 6.28 Outfalls and work within the Santa Clara Valley Water District (SCVWD) right-of-way are subject to approval and issuance of permits by the SCVWD.
- 6.29 Hydraulic grade analysis for design of new outfall and pipeline shall take into consideration the 10-year and 100-year storm event water surface elevations of the receiving river or creek. Consulting Engineer may obtain the water surface elevations of the receiving river or creek from the SCVWD.

7. WATER SYSTEM DESIGN (POTABLE AND RECYCLED)

- 7.1 The Consulting Engineer shall perform the preliminary layout of the Project water system. This preliminary layout shall show the locations of the existing water facilities and the proposed locations for the new facilities. The preliminary design shall be drawn on the street improvement plans and submitted to the City Water and Sewer Utilities Department for review and Final Design.
- 7.2 The Consulting Engineer shall work with the City Water and Sewer Utilities Department to arrive at a Final Design for the Project water system improvements.
- 7.3 The Consulting Engineer shall be responsible for reviewing the Final Design and shall note any conflicts with other Project improvements. Working together with the City Water and Sewer Utilities Department, all conflicts shall be eliminated.
- 7.4 The Consulting Engineer shall draw, on the street improvement plans, the plan and profile of the Final Design of the Project water system as reviewed and approved by the City Water and Sewer Utilities Department.
- 7.5 The Consulting Engineer shall use the following general design criteria for preparing public improvement plans for the Project water system. For special or complex situations, the City Water and Sewer Utilities Department should be contacted for direction.

A. Depth Requirements:

The typical depth of new potable and recycled water mains from top of near side curb (or finished grade for non-standard or non-street locations) to invert of the pipe is as listed below:



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- a) 4-inch pipe - 3.50 feet
- b) 6-inch pipe - 3.70 feet
- c) 8-inch pipe - 4.10 feet
- d) 10-inch pipe - 4.50 feet
- e) 12-inch pipe - 5.00 feet
- f) Pipe over 12 inches - top of pipe at 4.0 feet below finished grade

A minimum cover of 3.0 feet from finished grade to top of pipe.

A minimum cover of 2.0 feet from scarified sub-grade to top of pipe during construction.

For 2 inches and smaller copper tubing - 2.0 feet below scarified sub-grade.

For horizontal alignment, the centerline of the potable/recycled water main shall be located 6 feet from face of curb into the street. Other situations should be reviewed with the Water and Sewer Utilities Department prior to beginning of design.

B. Minimum Horizontal Clearance Requirements:

From potable water mains, services and facilities:

- a) To all sanitary sewer mains, manholes, and laterals - 10 feet
- b) To all recycled water mains, services, and facilities - 10 feet
- c) To all trees - 10 feet*
- d) To other utilities and general conflicts - 5 feet

* A note shall be placed on the landscape drawings to indicate that there is a 10' clearance requirement from trees and public water, recycled water and sewer facilities (i.e., mains, FH's, WM's, sewer manholes, C/O's, etc.) unless City-approved Tree Root Barriers (TRB) are utilized. TRB's must be 5' from the public facility. The TRB's must be shown on the plans and the TRB criteria must be included on the plans.

Provide a minimum of 12 inches of clearance around water meter boxes from any above-ground structures such as mail boxes, or fences.



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C. Minimum Vertical Clearance Requirement:

Vertical clearance when crossing typical conflicts shall be 12 inches minimum from outside of pipe to outside of pipe (or conduit). For crossings with less than 12 inches clearance, a concrete saddle shall be installed (see City Standard Details).

D. Improvement Plan Requirements:

Show both plan and profile views, and stationing or other means of locating all water facilities (i.e. water valves, tees, reducers, service taps, fire hydrants, etc.) with the station and item called out. The plans shall include but not be limited to the following:

- a) The plan view shall include all existing and proposed utilities and appropriate surface features within or near the street right-of-way as necessary (i.e., curb and gutter, sidewalks, driveways, trees within approximately 15 feet of proposed facilities, utility poles, sanitary sewer laterals, easements, etc.). Where these items may appear to be close or in conflict with the water facility some means of identifying the proper clearance shall be used.
- b) The profile view shall include the existing grade above the water main (or top of near-side curb or street centerline with a typical street section). It shall also identify and show all crossings with no conflicts and station and elevation of the water main at each full station and change of slope. Any parallel utility closer than 10 feet to the proposed main shall be shown in profile also.

E. Other Miscellaneous Requirements:

To clear conflicts, the pipe should be gradually deflected up or down sufficiently in advance to cross with the proper clearance without using fittings. In cases where this is not possible standard fittings shall be used.

Use air release valves at locations where the peak of the deflected pipe is more than one pipe diameter above the general elevation of the main. Air release valve cabinets shall be located in landscaped or non-paved areas behind the sidewalk at the nearest most convenient location.

Main line gate valves should be installed at tees for branching mains, large services, and fire hydrants, and at approximately:

- a) Every 1,000 feet where few services are installed.



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- b) After every three major connections to the water system (i.e., water services greater than 3 inches, fire services, and fire hydrants).
- c) After every two fire hydrants with no other services.

Fire hydrants are generally placed at 300 to 350 feet intervals on the same side of the street as the main. Typically, hydrant locations are at (or near) the returns of street intersections, 7 feet minimum from driveways, on property lines between properties, etc. The Fire Department requires 3 feet of clearance around all fire hydrants.

Any other utility crossing the public water main is required to cross at or near 90 degrees.

Water meters shall be located in landscaped or non-paved areas with a minimum of 12 inches clearance from above-ground structures such as mailbox posts or fences on all sides of the meter box. They shall be located in front of the property to be served.

Provide minimum 3 feet clearance around all above-grade water utilities. Include bollards as needed to protect the utilities.

Refer to Water Department Standard Drawings and Specifications for additional details.

For any variation from these design criteria the Design Engineer should consult with the Water Department for approval.

8. ELECTRIC UTILITY AND JOINT TRENCH DESIGN

- 8.1 Electric utility plans shall be drawn on half-tone sheets of the street improvement layout (“base sheets”). These half-tone sheets shall show the major existing and proposed street improvements without the extensive notes and details found on the final street improvement plans. Electric utility plans shall conform to the latest City Electric Department’s UG 1000, UG 1250, and SD 1800 standards.
- 8.2 The Consulting Engineer shall prepare preliminary electric utility plans which shall include locations of existing and proposed electric facilities. The Consulting Engineer shall submit a set of the electric utility design for City review (see PROCEDURE, page 1). These plans shall be reviewed by the City Electric Department.
- 8.3 The Consulting Engineer shall be responsible for the final design of the elevation and alignment and exact location of the electric utility facilities. Elevations shall be provided for tops of manhole rims, corners of vaults and transformer pads, streetlight foundations, and other electric substructures.



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- 8.4 The Consulting Engineer shall draw the final electric utility plans base sheets, incorporating the City's comments and directions.
- 8.5 Proposed electric facilities shall be stationed on the same centerline stationing as the civil improvements. All dimensions needed to accurately locate facilities shall be included on the plans.
- 8.6 The electric utility plans may have a separate legend from the civil plans.
- 8.7 The Consulting Engineer may reference any of the Standard Details contained in the latest revision of the UG 1000 by note on the plans. The Standard Details do not need to be shown on the plans.
- 8.8 Any trench section designed for the project, which is not detailed in the latest revision of the UG 1000, must be detailed on the plans.
- 8.9 At each location of intersections of underground conduits (e.g., street crossings) an installation profile detail shall be required to show exact location of all vaults, manholes, boxes, conduit sweeps, vertical clearances from other facilities, trench locations, etc. Note: conduits of differing diameter may have different minimum sweep radii.
- 8.10 All potential conflicts with any underground facility shall require a profile view of the conflict area.

9. HORIZONTAL DIRECTIONAL DRILLING (HDD) – MINIMUM REQUIREMENTS.

- 9.1 General
 - 9.1.1 The use of HDD shall be at the discretion of the Director of Public Works/City Engineer at all times.
 - 9.1.2 Displacement HDD shall not be allowed for reamed diameter of bore hole greater than six inches (6”).
- 9.2 A Geotechnical Report shall accompany a submittal of HDD plans requiring reamed diameter of bore hole greater than 6”.
 - A. The Geotechnical Report shall:
 1. Be prepared and signed by a State of California Registered Geotechnical Engineer.
 2. Be based on information gathered along the proposed layout of the HDD installation at the discretion of the Registered Geotechnical Engineer. Sufficient number of test borings should be included in the geotechnical investigation. Depth of test borings should extend to depth zones of utilities that potentially may be impacted by the HDD.



Design Criteria
City of Santa Clara Public Works Department

3. Specifically address the potential impacts (if any) on the surface improvements and existing underground improvements the proposed HDD project may have (based on the existing soil conditions). Alternative layouts and profiles must be considered to minimize the impacts to the existing facilities (surface and underground).
 4. Provide drilling fluid recommendations.
 5. Provide a general reaming operation recommendations and limitations.
 6. Specify the minimum horizontal clearance (from reamed perimeter of the borehole to the outer perimeter of the utility) from the existing utilities when the proposed HDD runs parallel to the existing utilities.
 7. Specify the minimum vertical clearance when crossing existing utilities.
 8. Specify the minimum depth of cover.
- B. A condensed version of the geotechnical report (signed and stamped by Registered Geotechnical Engineer) including conclusions and recommendations to be included in the plans for HDD. A letter from the Registered Geotechnical Engineer certifying that the plans comply with the requirements of the geotechnical report may be submitted with plans in lieu of condensed geotechnical report.

9.3 Civil HDD Plans

- A. The Civil HDD Plans shall:
1. Conform to the Geotechnical Report conclusions and recommendations at time of submittal.
 2. Be signed and stamped by a State of California Registered Civil Engineer.
 3. Specify minimum radius of curvature, taking into accounts the proposed material and equipment to be used.
 4. Specify maximum entry angles.
- B. HDD shall be located outside the roadway pavement, in the Public Utility Easements (PUE), landscape areas, and sidewalk areas, if possible. If it is not possible to locate the proposed HDD outside the roadway pavement, locate as close to the existing curb and gutter as possible.
- C. The drill path alignment should be as straight as possible to minimize the frictional resistance during pull back and maximize the installation length during a single pull.



Design Criteria
 City of Santa Clara Public Works Department

- D. The following minimum clearances (from reamed perimeter of the borehole to the outer perimeter of the utility) shall be used as a guideline. The Geotechnical Report conclusions and recommendations or the City’s determination shall be followed, if more restrictive
1. Locate HDD 8 feet clear (horizontally) from the existing storm drain and sanitary sewer mains. Minimum of 5 feet horizontal clearance shall be maintained from water mains, except when at the same elevation as water mains, 8 feet horizontal clearance shall be maintained. Minimum of 5 feet horizontal clearance shall be maintained from electrical conduits, boxes, and vaults.
 2. Use the following chart for minimum depth of cover (in the pavement and sidewalk areas) and minimum clearance when crossing utilities (storm drain, sanitary sewer, water, electrical, gas, etc.). Crossing shall be at 90-degree.

Bore Diameter	Min. Depth of Cover	Min. Clearance from Crossing Utilities
6” or less	4’	3’
14” or less	6’	5’
24” or less	10’	7’
48” or less	25’	15’

9.4 Construction Phase

- A. The contractor shall provide a “Letter of Training” from the manufacturer of the HDD equipment to the City Public Works Inspector at the pre-construction meeting or one week prior to starting the work which proves completion of the minimum course in the operations and safety of HDD equipment as contained in the HDD Equipment Manufacturer's Operator's Manual. The training shall be provided by the HDD equipment manufacturer, HDD equipment authorized dealer, or manufacturer’s authorized trainer. Operators having Caltrans form TR-0770, "Proof of Training", satisfy this requirement.
- B. All crossings with existing utilities with less than 6 feet separation shall be potholed or accurately located by other means.
- C. When the depth of the existing utility is unknown, the utility must be potholed.
- D. At the pre-construction meeting, or one week prior to starting the work, the Contractor shall provide the following:
 1. Specify tracking system used and its capability for both the forward drilling and the backream.



Design Criteria
City of Santa Clara Public Works Department

2. A written verification of experience and qualifications of the tracker. Experience shall include a minimum of 5 previous jobs and/or 1,000 feet of tracking experience with references.
 3. Specify HDD equipment used and its capability.
 4. Names of the HDD operator and the responsible tracker.
 5. Proposed methods to control, collect, transport, and dispose of drilling fluids and spoils.
 6. Emergency procedures for inadvertently boring into a live electric conduit, natural gas line, water line, sanitary sewer line, storm drain line, fiber optic cables, or any other utility in the ground (private or public). Procedures must comply with all applicable regulations.
- E. Geotechnical Engineer shall review the Contractor's submittal and comment on suitability of the proposed equipment with respect to the subsurface conditions described in the geotechnical report and provide a letter of compliance to the City.
- F. Contractor shall provide for the tracking and plotting of the HDD operations at all times.
1. Tracker shall check for electrical interference along drill path prior to construction operations for necessary adjustments to a pre-drill plan.
 2. Tracker shall provide continuous monitoring and plotting of pilot bore to establish a general running line and pull back operations to establish final location of the installed line.

9.5 As-built Drawings

- A. Contractor shall provide the City with As-Built Drawings, meeting the following minimum criteria:
1. As-Built Drawings shall show the layout and profile at a minimum horizontal scale of 1"=40' and vertical scale of 1"=10'.
 2. As-Built Drawings shall be based upon the plot information provided by the tracker.
 3. As-Built Drawings must show new construction, clearances and existing improvements (sidewalk, curb, gutter, roadway, utilities, etc.).



Design Criteria
City of Santa Clara Public Works Department

9.6 References

- A. Bueno, Sharon M. (1999), “Directional Crossing Contractor Association (DCCA) Roundtable – What Do Industry Leaders Have to Say About Safety, Contracts and Rollups?” *Directional Drilling Magazine*, Dec., p. 18.
- B. California Department of Transportation, “HDD Operator Certification Project (January 18, 2000)”.
- C. California Department of Transportation, “Guidelines and Specifications for Horizontal Directional Drilling Installations 2000”, pp. 12-22.”
- D. Twohig, M.A., “The Directional Crossing Contractor Association (DCCA) Directional Crossing Survey Standards 1998”, p. 5.
- E. U.S. Army Corps of Engineers, “Guidelines for Trenchless Technology: Cured-in-Place (CIPP), Fold-and-Formed Pipe (FFP), Mini-Horizontal Directional Drilling (Mini-HDD), and Microtunneling”, Construction Productivity Advancement Research (CPAR) Program (Final Report, September 1995).
- F. DCM/Joyal Engineering, Review Comments – City of Santa Clara Draft Minimum S.O.P. Requirements for H.D.D. Installation, Marc Gelinias/David Mathy, June 27, 2000.
- G. Geotechnical Comments, Proposed City of Santa Clara Draft Requirements – HDD-SOP, Hallenbeck & Associates, Adel Kasim, Ph.D., G.E., June 1, 2000.



EXHIBIT A

Typical Legend Symbols

Note: Include only the “proposed” and “existing” legend symbols that are actually used on the plans. Symbols other than what is shown in this Exhibit may be used subject to approval.

<u>TYPICAL LEGEND SYMBOLS</u>		
<u>EXISTING</u>	<u>PROPOSED</u>	<u>DESCRIPTION</u>
		PROPERTY LINE
		CURB, GUTTER, SIDEWALK & DRIVEWAY
-W-	-W-	WATER MAIN & VALVE
-SD-	-SD-	STORM SEWER, MANHOLE & CATCH BASIN
		CENTER LINE & MONUMENT
-SS-	-SS-	SANITARY SEWER & MANHOLE
-G-	-G-	GAS MAIN & VALVE
-T-	-T-	TELEPHONE DUCT & MANHOLE
-E-	-E-	ELECTRIC CONDUIT & PULL BOX
-FA-	-FA-	FIRE ALARM DUCT & BOX
-TV-	-TV-	TELEVISION CABLE
		EDGE OF PAVEMENT
		LIMIT OF WORK LINE
		STANDARD CITY BARRICADE
		GUARD RAIL
		HANDICAP RAMP
-x-	-x-	FENCE & GATE
		ELECTROLIER
		FIRE HYDRANT
● P.P.	● P.P.	POWER POLE
○ C.O.	○ C.O.	CLEAN OUT
□ W.M.	■ W.M.	WATER METER
■		BENCH MARK
		DIRECTION OF FLOW
	②	CURVE NUMBER
		TREE
		TREE TO BE REMOVED
○ S.S.		STREET SIGN
--- CITY OF SANTA CLARA --- --- CITY OF SAN JOSE ---		CITY LIMITS



EXHIBIT B

Typical Abbreviations

Note: Show only those abbreviations that are actually used on the plans.

A			
AB	aggregate base	Co	county
ABBC	asbestos bonded bituminous coated	Col	column
Abn	abandon	Conc	concrete
Abut	abutment	Cond	conduit
AC	asphalt concrete	Const	construct, construction
ACB	asphalt concrete base	Cont	continuous
ACP	asbestos cement pipe	Coord	coordinate
ADL	added dead load	Cr	creek
Adj	adjust	CSP	corrugated steel pipe
Alt	alternate	CTB	cement treated base
Approx	approximate	CTPB	cement treated permeable base
AS	aggregate subbase	CTPM	cement treated permeable material
Ave	avenue	Ctrs	centers
Avg	average	Culv	culvert
@	at	CL	centerline
B		D	
BC	begin horizontal curve	D	depth
BCR	begin curve return	Dbl	double
Beg	begin	Deg	degree
Bit Ctd	bituminous coated	Det	detail, detour
Bk	back	DI	drainage inlet, drop inlet
Bkf	backfill	Dia	diameter
Bldg	building	Diaph	diaphragm
Bldv	boulevard	Dist	distance, district
BM	bench mark	Dr	drive
Bot	bottom	Dwy	driveway
Br	bridge	E	
Brg	bearing	E	east
BTU	british thermal unit	Ease	easement
BVC	begin vertical curve	EB	eastbound
C		EC	end horizontal curve
CAP	corrugated aluminum pipe	ECR	end curb return
C-C	center to center	Elec	electrolier
CG	center of gravity	Elect	electric
Chnl	channel	Elev	elevation
CI	cast iron	Emb	embankment
CIP	cast iron pipe	Engr	engineer
CIPCP	cast in place concrete pipe	EP	edge of pavement
CL	chain link	EVC	end vertical curve
Cl	class	Exc	excavation
Clr	clear, clearance	Exist, (E)	existing
CM	corrugated metal	Exp	expansion, expressway
CMP	corrugated metal pipe	Exp Jt	expansion joint
		Ext	exterior



City of Santa Clara Public Works Department
Design Criteria

F

F & C	frame and cover
F & G	frame and grate
Fdn	foundation
FG	finished grade
FH	fire hydrant
Fig	figure
FL	flow line
FS	finished surface
Ftg	footing
Fwy	freeway

G

g	acceleration due to gravity
Ga	gage
Galv	galvanized
GR	guard railing
GSP	galvanized steel pipe
Gtr	gutter

H

H	height
h, hr	hour
hdwl	headwall
HMA	hot mixed asphalt
Horiz	horizontal
HP	high point, horsepower
HW	headwall
Hwy	highway

I

IB	imported borrow
ID	inside diameter
Int	interior
Inv	invert
Irr	irrigation

J

Jct	junction
JP	joint pole
JS	junction structure
Jt	joint

K

L

L	length
Ln	lane
Loc	location
LS	lump sum
Lt	left

M

Maint	maintenance
Max	maximum
Med	median
MH	manhole
Min	minimum
Misc	miscellaneous
Mod	modified, modify
Mon	monument
Mtl	material

N

N	north
NB	northbound
No.	number (must have period)
Nos.	numbers (must have period)
NTS	not to scale

O

OC	overcrossing
OD	outside diameter
OH	overhead
Opp	opposite

P

P	page
PAP	perforated aluminum pipe
PB	pull box
PC	point of curvature
PCC	point of compound curve
PCP	perforated concrete pipe
PCVC	point of compound vertical curve
Ped	pedestrian
Ped OC	pedestrian overcrossing
Ped UC	pedestrian undercrossing
PI	point of intersection
PJP	partial joint penetration
P/L	property line
POC	point of horizontal curve
POT	point of tangent
POVC	point of vertical curve
PP	power pole
PPP	perforated plastic pipe
PRC	point of reverse curve
PRF	pavement reinforcing fabric
PRVC	point of reverse vertical curve
PS&E	plans, specifications and estimates
PSP	perforated steel pipe
PT	point of tangency
PVC	polyvinyl chloride
Pvmt	pavement



City of Santa Clara Public Works Department
Design Criteria

Q

Qty quantity

R

R radius
RCP reinforced concrete pipe
Rd road
Reinf reinforced
Ret retaining
Rev revised
Rdwy roadway
RP radius point
RR railroad
Rt right
Rte route
RW redwood
R/W right of way

S

S south
SB southbound
SD storm drain
Sec second
Sht sheet
Sim similar

Specs specifications
St street
Sta station
Std standard
Str structure
Surf surfacing
SW sidewalk
Swr sewer
Sym symmetrical

T

Tan tangent
TC top of curb
TCB traffic control box

Tel telephone
Temp temporary
TG top of grade
Tot total
TP telephone pole
Trans transition
TS traffic signal
Typ typical

U

UC undercrossing
UD underdrain
UON unless otherwise noted
UP underpass

V

V valve
Var variable
VC vertical curve
VCP vitrified clay pipe
Vert vertical
Vol volume

W

W west
WB westbound
WM wire mesh
WS water surface
WSP welded steel pipe
Wt weight
WV water valve
WW wing wall

X

X sec cross section
Xing crossing

Y

Yr year
Yrs Years

Z



City of Santa Clara Public Works Department
Design Criteria

EXHIBIT C

General Notes

1. All materials and workmanship shall conform to the City's Standard Details, Standard Specifications, and General Requirements.
2. Contractor shall secure an Encroachment Permit from the City Engineering Department and pay appropriate fee prior to commencement of work. All work within the public right-of-way shall be done under a single Encroachment Permit.
3. It is the Contractor's responsibility to verify the location of all existing utilities with the appropriate utility agencies prior to the commencement of construction. Contractor shall notify all public and private utility owners 48 hours prior to commencement of work adjacent to the utility. Contact Underground Service Alert (USA) at 811 or 800-227-2600.
4. The Contractor shall notify, by circular, all business establishments and residences located in areas affected by the work at least forty-eight (48) hours prior to start of construction. Circular shall be subject to the approval of the City Engineer.
5. Unless otherwise directed by the City Engineer in the field: at each location where new curb/gutter is to be installed on an existing street (driveway installation, driveway abandonment, curb ramp installation, curb face drainage installation, etc.) pavement reconstruction shall be required. An 18-inch wide band of pavement shall be removed and replaced along the entire length of curb/gutter installation. Removal depth (saw cuts required) shall be to the base material on streets with A.C. or P.C.C. pavement four (4) inches or less in thickness. Removal depth shall be two (2) inches minimum on streets with A.C. (grind) and four (4) inches minimum on streets with P.C.C. (saw cut) pavement thickness greater than four (4) inches. Replace with A.C. or P.C.C. (dowels required) to match existing pavement.
6. All sidewalk, curb, and gutter damaged as a result of the project shall be removed and replaced to the nearest score mark or as directed by the City Engineer. Installation of new sidewalk, curb and gutter against existing improvements shall require a sidewalk contact joint (dowels required).
7. Partial replacement of a driveway is not allowed. A driveway that has been cut or damaged must be replaced in its entirety. The new replacement driveway must meet current City Standards which may affect on-site improvements and/or require a sidewalk easement.
8. Slurry seal shall be required on all new street pavement (e.g., trench work, potholes, and street widenings). Slurry seal shall extend twelve inches beyond the limit of pavement reconstruction.
9. All manholes, valve boxes, monument boxes, and other structures in the pavement area shall be adjusted to finish grade before paving final lift.
10. Grade breaks on curbs on sidewalks are to be rounded off on form work and finished surfacing.



City of Santa Clara Public Works Department
Design Criteria

11. The contractor shall be responsible for the preservation and/or perpetuation of existing survey monuments (curb tags, iron pipes, street monuments, etc.) noted on the plans or found during construction per Section 8771 of the California Business and Professions Code. If a survey monument has the potential of being disturbed or within 3 feet of the Work, the monument shall be located, referenced, and a corner record shall be filed with the Santa Clara County Surveyor, and a duplicate of the corner record shall be submitted to the City Engineer prior to the start of construction. Should any survey monument be damaged or destroyed during construction, the contractor shall re-establish said monument per City standard, file a corner record with the Santa Clara County Surveyor, and submit a duplicate of the corner record to the City Engineer prior to final project notice of completion issued by the Department of Public Works. The contractor shall, at his/her expense, hire a licensed professional civil engineer authorized to practice land surveying or land surveyor to perform the work.
12. All surplus and unsuitable material shall be removed from public right-of-way.
13. Contractor shall provide adequate dust control and keep mud and debris off the public right-of-way at all times.
14. All trenches and excavations shall be constructed in strict compliance with the applicable sections of California and Federal O.S.H.A. requirements and other applicable safety ordinances. Contractor shall bear full responsibility for trench shoring design and installation.
15. Existing utilities shown are based upon record information and are approximate in location and depth. The Contractor shall pothole all existing utilities that may be affected by new facilities in this contract, verify actual location and depth, and report potential conflicts to the Engineer prior to excavating for new facilities.
16. Contractor shall perform his 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 brochures entitled "Best Management Practice for the Construction Industry" issued by the Santa Clara Valley Nonpoint Source Pollution Control Program, to suit the construction site and job condition.
17. Overnight parking of construction equipment in the public right-of-way shall not be permitted, except at location(s) approved by the City Traffic Engineer.
18. All sanitary sewer and/or storm drain mains to be abandoned shall be filled with sand or control density fill (CDF) and plugged at each end with a 6" thick wall of Class "A" P.C.C.
19. Abandonment of sanitary sewer lateral at the property line shall include the complete removal of the Christy Box, all vertical pipes and the 45° Wye. The remaining lateral ends shall be plugged with 6" thick wall of Class "A" P.C.C., ensuring no concrete enters the main. Abandonment of sanitary sewer lateral at the main will occur when lateral connects at a manhole or as determined by the City. Plug the lateral end with 6" thick wall of Class "A" P.C.C., and fill lateral with sand or control density fill (CDF), making a smooth trowel finish on the inside wall of the manhole for manhole connections.
20. Unless otherwise noted, Class 2 A.B. under curb, gutter, and street sections paved with asphalt concrete shall be compacted to 95% relative compaction (minimum).
21. Near completion of the Project, contractor shall replace damaged curb and gutter along Project frontage as directed by the City Engineer.



EXHIBIT D

Figure 3-3 of Sanitary Sewer Capacity Assessment Report, May 2007

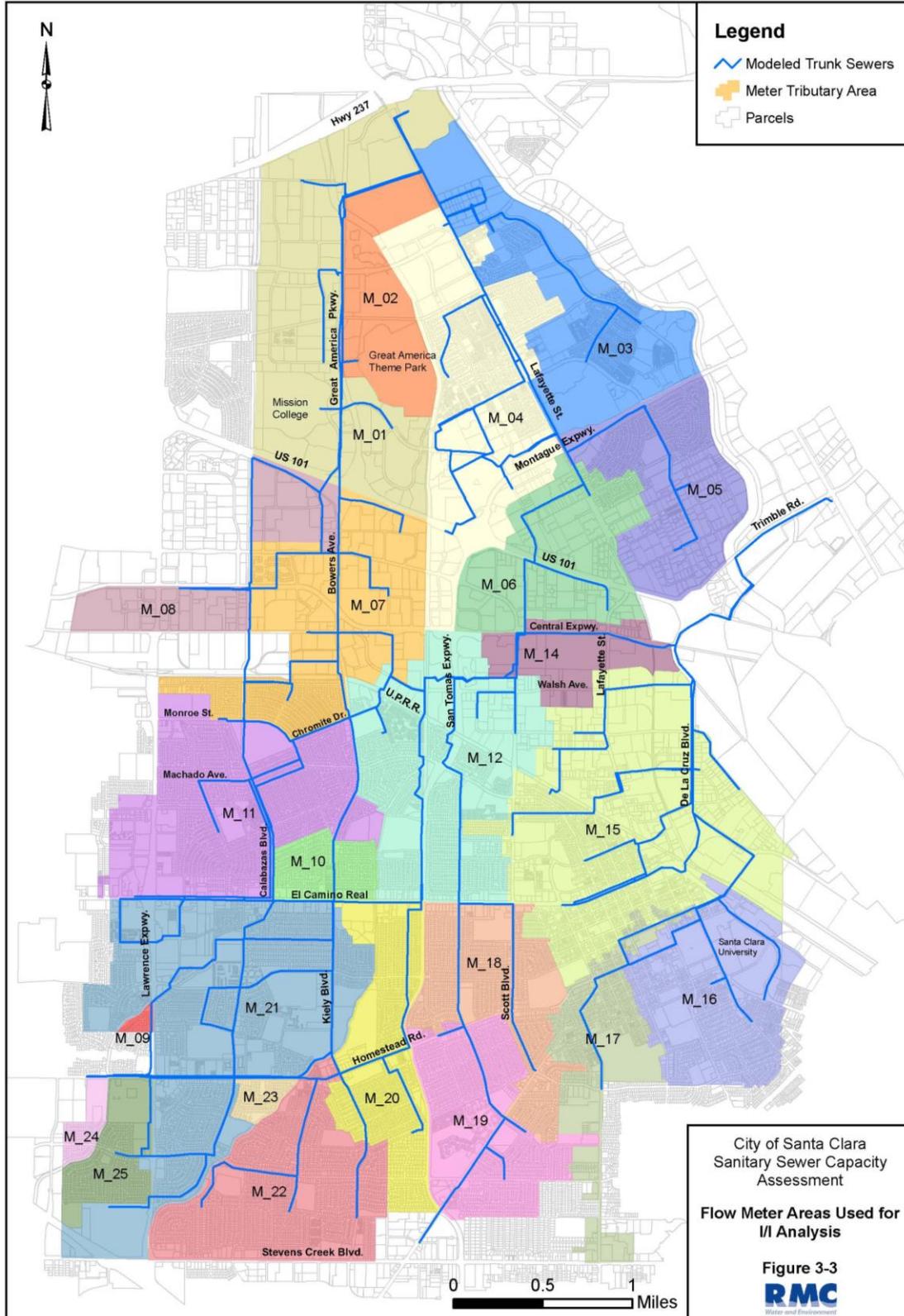




EXHIBIT E

Table 3-2 of Sanitary Sewer Capacity Assessment Report, May 2007

Table 3-2 GWI and RDI/I Parameters by Meter Area

Meter Area ^a	Dry Weather GWI ^b (gpd/acre)	Wet Weather GWI ^c (gpd/acre)	R1 RDI/I Vol. (%) (2 hrs. to peak)	R2 RDI/I Vol. (%) (6 hrs. to peak)	R3 RDI/I Vol. (%) (12 hrs. to peak)
M_01	0	0	0.5	0.8	0.8
M_02	0	0	0.5	0.8	0.8
M_03	0	0	0.6	0.1	0.1
M_04	500	1,300	0.6	0.1	0.1
M_05	700	1,000	0.6	0.1	0.1
M_06	0	0	0.6	0.1	0.1
M_07	1,900	1,900	0.3	0.5	0.5
M_08	0	0	0.3	0.5	0.5
M_09	0	0	0.6	0.1	0.1
M_10	0	0	0.6	0.1	0.1
M_11	1,600	2,300	0.9	1.7	6.0
M_12	0	0	0.9	1.0	0.5
M_14	0	0	0.6	0.1	0.1
M_15	300	700	1.0	0.2	0.2
M_16	900	1,600	1.0	0.2	0.2
M_17	200	200	0.6	0.1	0.1
M_18	0	0	0.8	1.0	0.1
M_19	0	0	0.3	0.1	0.1
M_20	0	0	0.6	0.1	0.1
M_21	0	0	0.6	0.1	0.1
M_22	0	0	0.6	0.1	0.1
M_23	0	0	0.6	0.1	0.1
M_24	0	0	0.6	0.1	0.1
M_25	0	0	0.6	0.1	0.1
CuSD	0	0	0.5	0.2	0.4

- (a) See Figure 3-3.
- (b) Represents GWI during non-rainfall periods (e.g., early to mid-February) of the 2006 flow monitoring period.
- (c) Represents GWI immediately following rainfall events.



EXHIBIT F

Santa Clara County Drainage Manual 2007

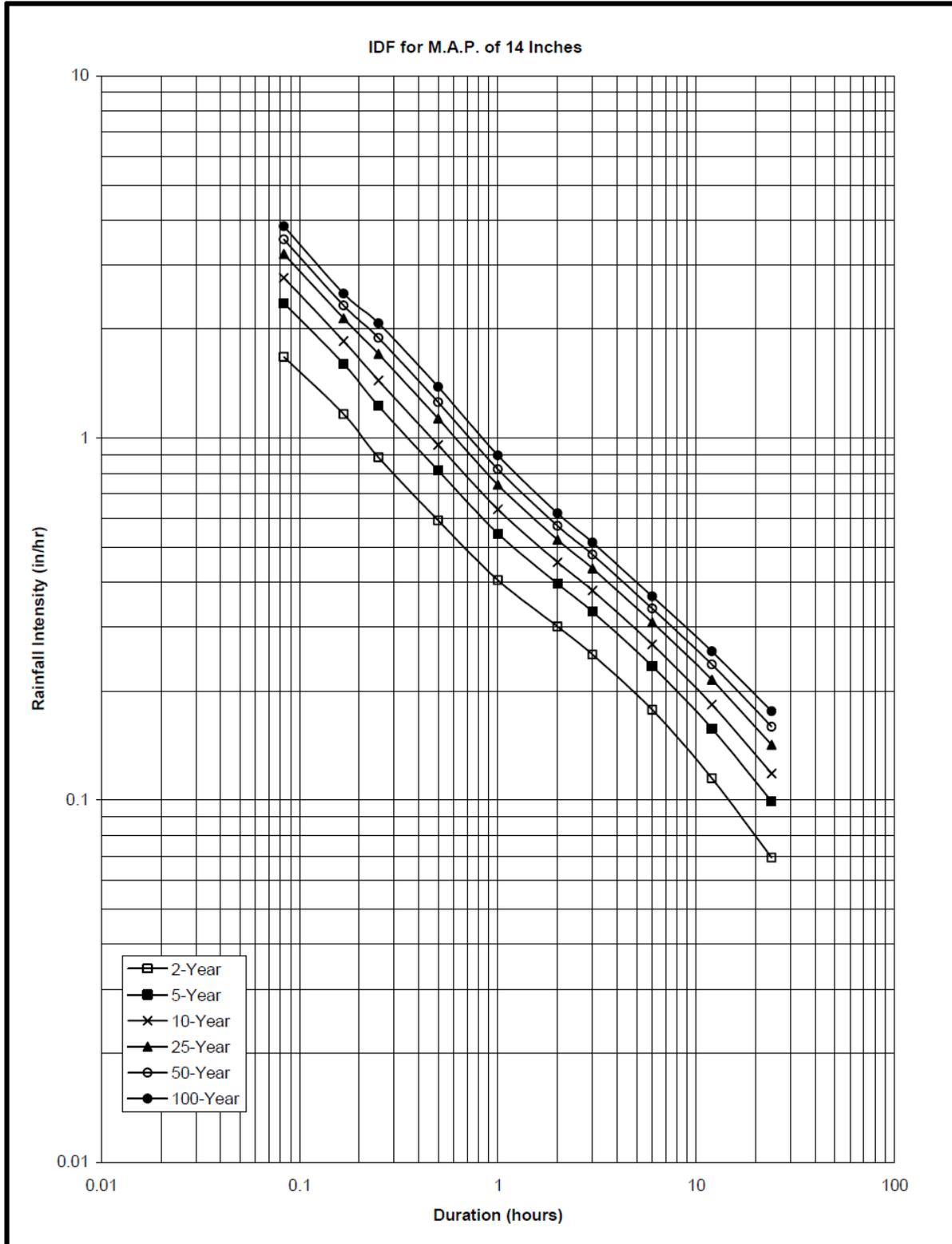


Figure B-2: IDF for M.A.P. of 14 Inches



EXHIBIT G

Standard Form DM-2: Santa Clara County Drainage Manual 2007



Drainage Manual 2007
County of Santa Clara, California

<p>county of santa clara DEPARTMENT OF PUBLIC WORKS</p> <p>APPROVED: _____ DIRECTOR</p>	<p>STANDARD FORM DM-2 Drainage Manual STORM DRAIN DESIGN BY RATIONAL METHOD</p>	<p>Project Location: _____ Date: _____</p> <p>Computations by: _____</p> <p>Type of Development: _____ Total Area (Acres): _____</p>																																																													
<p>EXAMPLE</p>																																																															
<p>Runoff Coefficient (based on Santa Clara County Drainage Manual): Land Use _____ Weighted C-Value = _____</p> <p>Rainfall Curves: Return Period _____ years (County minimum standard = 10 years) Time of Concentration (improved): _____ min. Gutter Time _____ min. Total Inlet Time _____ min.</p> <p>Pipe (minimum standard size = 12" diameter): Type _____ Manning's "n" _____ Minimum Velocity at Design Flow: V = _____ fps (min. standard velocity = 2.0 ft/sec)</p> <p>Attach map showing boundaries of drainage areas, runoff coefficients, inlet locations, Q's, slope, point of concentration, existing and proposed drainage facilities. If, under normal conditions, pipe will flow full at any point in the system, attach plot of hydraulic grade line.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Concentration Point</th> <th>Discharge (Q) cfs</th> <th>Ground Slope</th> <th>Pipe Slope, S</th> <th>Ys</th> <th>Area * Coefficient</th> <th>Duration, min.</th> <th>(Time of Concentration)</th> <th>Rainfall Intensity, I (inches/hr)</th> <th>Runoff Coefficient</th> <th>Q = CIA</th> <th>Length, ft</th> <th>Pipe Diameter, in.</th> <th>Slope, percent</th> <th>Depth of Flow, Dfd</th> <th>Hydraulic Radius, ft</th> <th>Velocity, fps</th> <th>V²/2g</th> <th>Flow Time, min.</th> <th>Fall, ft.</th> <th>Flow Time, min.</th> <th>Flow Time, min.</th> <th>Invert Elevation, ft.</th> <th>Invert Elevation, ft.</th> <th>Finished Grade</th> <th>Finished Grade</th> <th>Minimum Cover, ft.</th> <th>Location of Point of Minimum Contact, ft.</th> <th>Minimum Cover, ft.</th> <th>Remarks</th> </tr> <tr> <td>1</td> <td>1X2</td> <td>3+4</td> <td>5+15</td> <td>4X6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> <td>31</td> <td>32</td> </tr> </table>	Concentration Point	Discharge (Q) cfs	Ground Slope	Pipe Slope, S	Ys	Area * Coefficient	Duration, min.	(Time of Concentration)	Rainfall Intensity, I (inches/hr)	Runoff Coefficient	Q = CIA	Length, ft	Pipe Diameter, in.	Slope, percent	Depth of Flow, Dfd	Hydraulic Radius, ft	Velocity, fps	V ² /2g	Flow Time, min.	Fall, ft.	Flow Time, min.	Flow Time, min.	Invert Elevation, ft.	Invert Elevation, ft.	Finished Grade	Finished Grade	Minimum Cover, ft.	Location of Point of Minimum Contact, ft.	Minimum Cover, ft.	Remarks	1	1X2	3+4	5+15	4X6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	<p>Signature of Applicant _____</p>
Concentration Point	Discharge (Q) cfs	Ground Slope	Pipe Slope, S	Ys	Area * Coefficient	Duration, min.	(Time of Concentration)	Rainfall Intensity, I (inches/hr)	Runoff Coefficient	Q = CIA	Length, ft	Pipe Diameter, in.	Slope, percent	Depth of Flow, Dfd	Hydraulic Radius, ft	Velocity, fps	V ² /2g	Flow Time, min.	Fall, ft.	Flow Time, min.	Flow Time, min.	Invert Elevation, ft.	Invert Elevation, ft.	Finished Grade	Finished Grade	Minimum Cover, ft.	Location of Point of Minimum Contact, ft.	Minimum Cover, ft.	Remarks																																		
1	1X2	3+4	5+15	4X6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32																																	

Figure C-1: Calculation Sheet, Storm Drain Design by Rational Method

Appendix G
City of Santa Clara Standard Details

STANDARD DETAILS



**CITY OF SANTA CLARA
2015**

**PREPARED BY
DEPARTMENT OF PUBLIC WORKS**

**RAJEEV BATRA
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER**

Department of Public Works
City of Santa Clara, CA



STANDARD DETAILS

<p>APPROVED BY:</p> <p><i>Rajeev Batra</i></p> <hr/> <p>RAJEEV BATRA DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER</p> <p>DATE: <i>Oct. 27, 2013</i></p>
--

Acknowledgement of contributions

Our sincere thanks to the staffs of the
Public Works Department,
Electric Utility Department,
and Water & Sewer Department,
for their contributions.

CITY OF SANTA CLARA
DEPARTMENT OF PUBLIC WORKS

STANDARD DETAILS

TABLE OF CONTENTS

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Department of Public Works
City of Santa Clara, CA

STANDARD DETAILS

STREET SECTION
DETAILS ST-1 TO ST-28

1. Definitions:
 - a. Driveway - area between lines $\frac{1}{2}$ driveway width plus 2.5 feet each side of driveway centerline (area of thickened section, see driveway details).
 - b. Driveway approach - area between back of curb and property line.
 - c. Driveway apron - drive area within private property reserved for vehicular ingress and egress.
 - d. Curb cut - area of curb and gutter within the driveway limits described in 1.a. (above).
 - e. Driveway centerline - a line drawn normal to the street that crosses the depressed area of the curb at its midpoint.
 - f. Driveway width - the length of the fully depressed curb.

2. No person, firm, or corporation shall construct or maintain any driveway across any curbing or sidewalk, or connecting with any uncurbed roadway without first securing a City Encroachment Permit. All construction of such driveways shall be done in conformity with City of Santa Clara Standard Details and Standard Specifications, and shall be subject to City inspection.

3. Not more than 50 percent of the street frontage of any parcel of land shall be devoted to driveways, except in cases of narrow frontages (e.g., cul-de-sacs) when approved by the City Engineer.

4. Driveway centerlines on the same property shall be at least their combined half widths plus 29 feet apart.

5. Driveways located adjacent to side property lines or in proximity to utilities obstructions should in general satisfy the Driveway Locations shown in detail ST-2.

6. Driveways located in proximity to street intersections should in general satisfy the Driveway Locations at Curb Returns shown in detail ST-3.

7. Adjustments to utility facilities or other public improvements shall be accomplished without cost to the City.

8. Any abandoned driveway shall be reconstructed to City standard sidewalk, curb and gutter requirements, concurrent with the new driveway construction without any cost to the City.

9. Where difficulties, unnecessary hardships and effects inconsistent with the general purpose of these driveway standards may result from the strict application of certain provisions thereof, variances may be granted by the City Engineer.



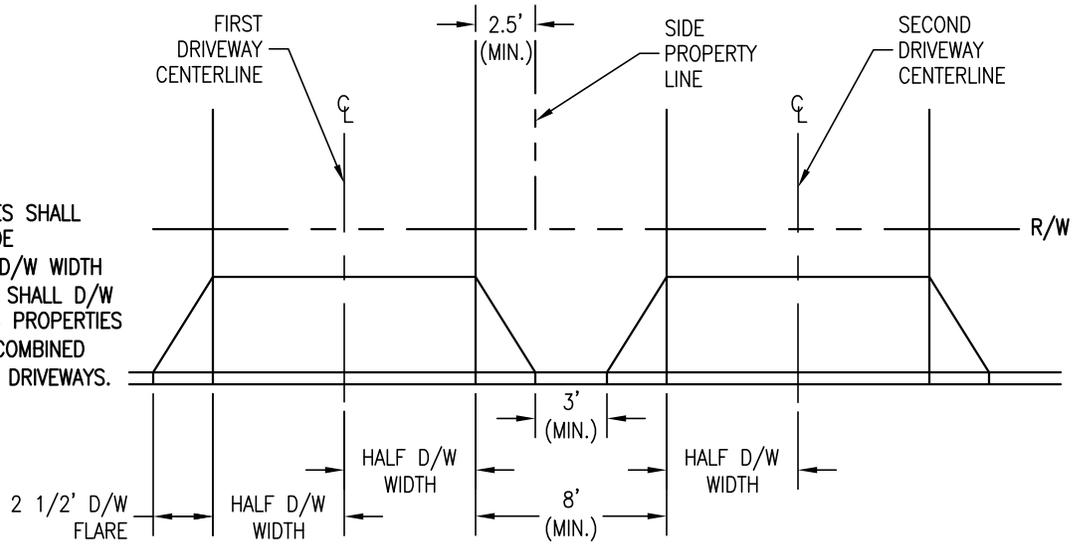
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APPROVED BY:	G. GOMEZ
DATE:	OCTOBER 2013

<p>DRIVEWAY STANDARDS</p>
<p>CITY OF SANTA CLARA</p>

<p>ST-1</p>
<p>PAGE: 1</p>

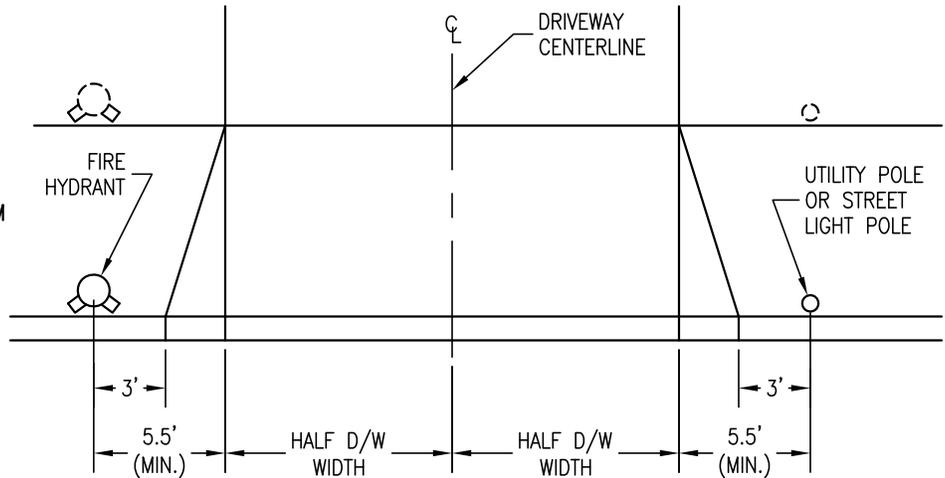
CONDITION 1

DRIVEWAY (D/W) CENTERLINES SHALL NOT BE CLOSER TO THE SIDE PROPERTY LINE THAN HALF D/W WIDTH PLUS 2.5' BUT IN NO CASE SHALL D/W CENTERLINES FOR ADJOINING PROPERTIES BE CLOSER THAN 8' PLUS COMBINED HALF D/W WIDTHS OF BOTH DRIVEWAYS.



CONDITION 2

NO D/W CENTERLINE SHALL BE CLOSER THAN HALF D/W WIDTH PLUS 5.5' FROM THE CENTER OF ANY FIRE HYDRANT, UTILITY POLE OR STREET LIGHT STANDARD.



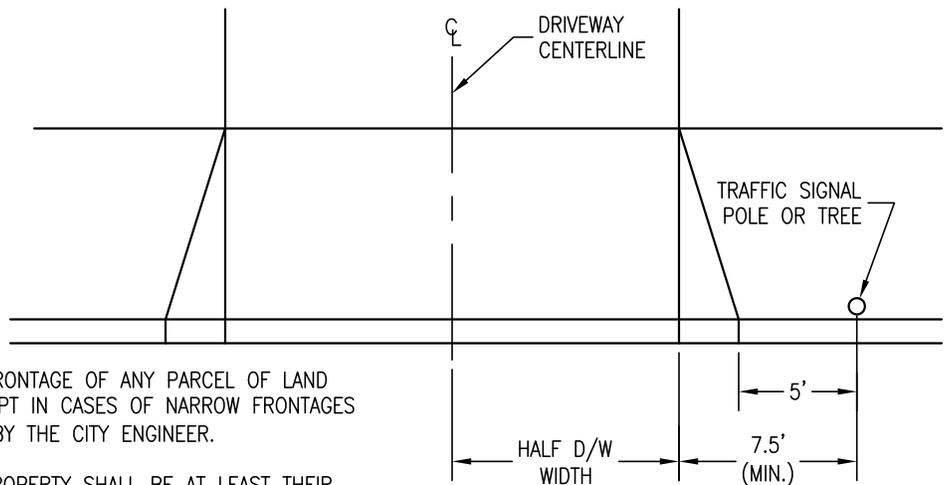
CONDITION 3

NO D/W CENTERLINE SHALL BE CLOSER THAN HALF D/W WIDTH PLUS 7.5' FROM THE CENTER OF A TRAFFIC SIGNAL POLE OR TREE.

NOTE:

NOT MORE THAN 50% OF THE STREET FRONTAGE OF ANY PARCEL OF LAND SHALL BE DEVOTED TO DRIVEWAYS, EXCEPT IN CASES OF NARROW FRONTAGES (E.G., CUL-DE-SACS) WHEN APPROVED BY THE CITY ENGINEER.

DRIVEWAY CENTERLINES ON THE SAME PROPERTY SHALL BE AT LEAST THEIR COMBINED HALF WIDTHS PLUS 29 FEET APART.



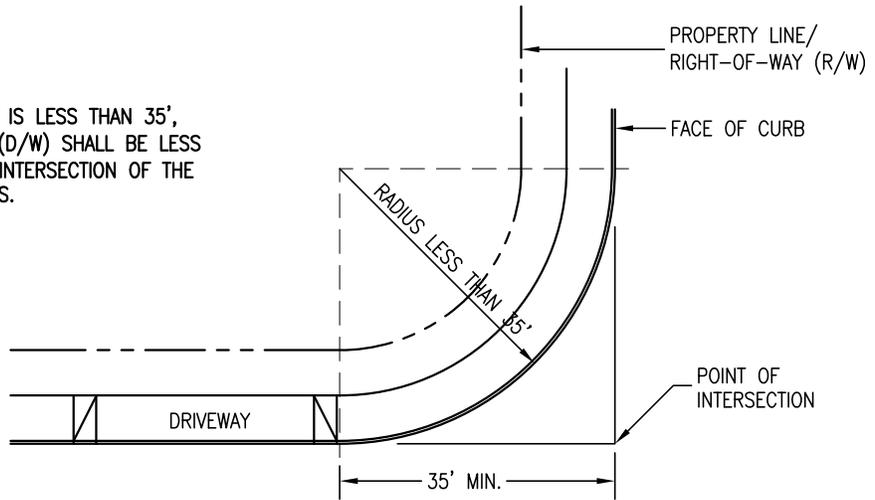
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DRIVEWAY LOCATIONS
 CITY OF SANTA CLARA

ST-2
 PAGE: 2

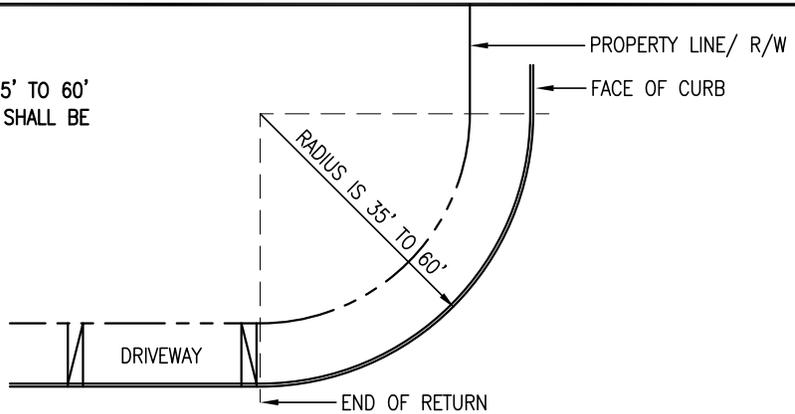
CONDITION 1

WHERE A CURB RETURN RADIUS IS LESS THAN 35', NO PORTION OF ANY DRIVEWAY (D/W) SHALL BE LESS THAN 35' FROM THE POINT OF INTERSECTION OF THE PROJECTED FACE OF CURB LINES.



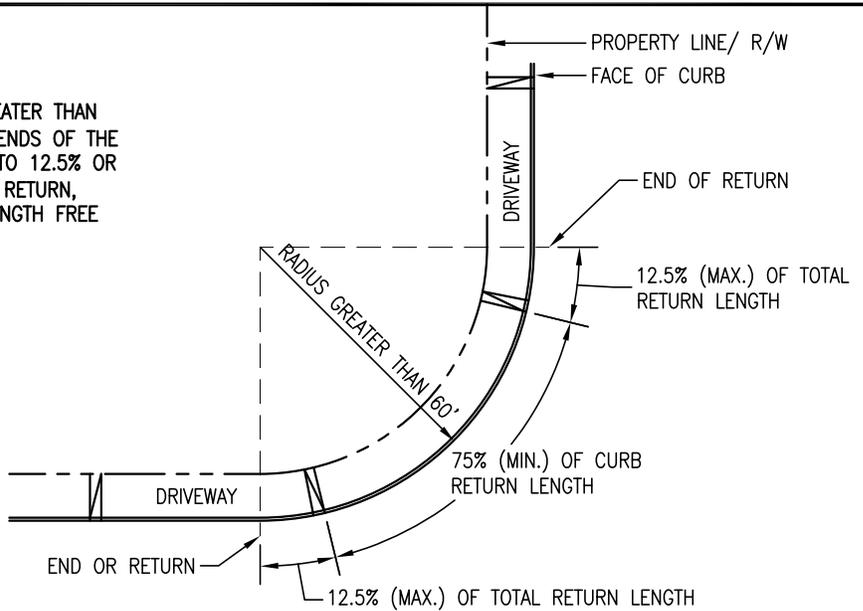
CONDITION 2

WHERE THE CURB RETURN RADIUS IS 35' TO 60' (INCLUSIVE), NO PORTION OF ANY D/W SHALL BE PERMITTED WITHIN THE CURB RETURN.



CONDITION 3

WHERE A CURB RETURN RADIUS IS GREATER THAN 60', D/W MAY ENCROACH UPON EACH ENDS OF THE RETURNS A MAXIMUM DISTANCE EQUAL TO 12.5% OR 1/8TH THE ARC LENGTH OF THE CURB RETURN, LEAVING 75% OF THE CURB RETURN LENGTH FREE FROM D/W ENCROACHMENTS.



CONDITION 4

ON ALL CURB RETURNS WHERE CHANNELIZATION AND/OR COMPOUND CURVES EXIST, D/W LOCATION SHALL BE SUBJECT TO APPROVAL BY THE CITY ENGINEER.



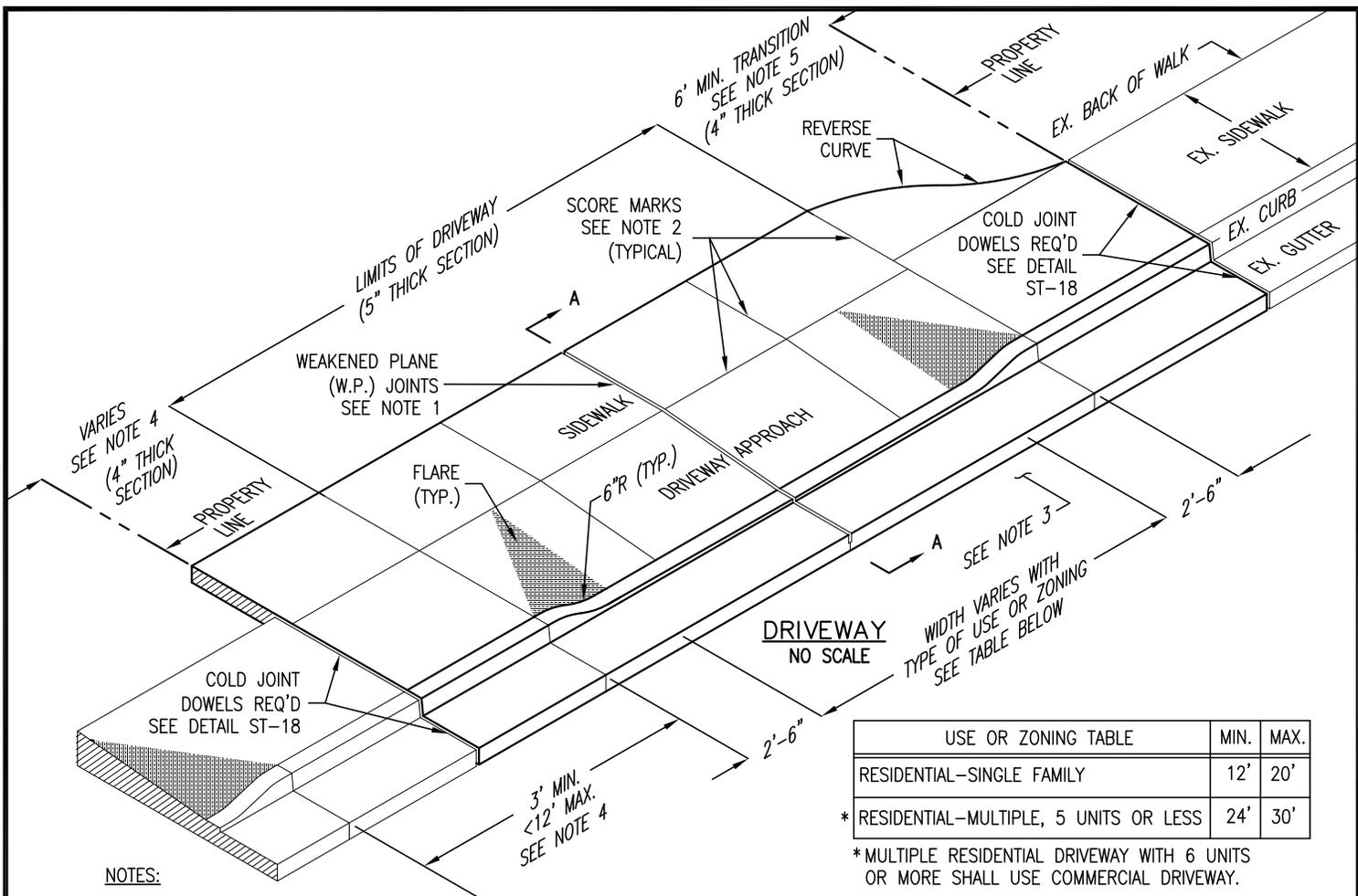
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DRIVEWAY LOCATIONS AT CURB RETURNS

CITY OF SANTA CLARA

ST-3

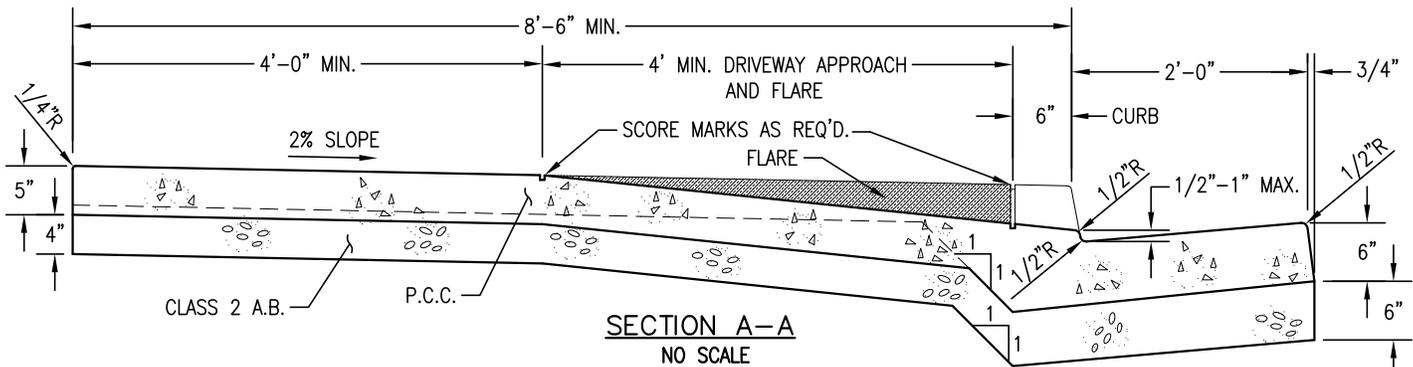
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USE OR ZONING TABLE	MIN.	MAX.
RESIDENTIAL-SINGLE FAMILY	12'	20'
* RESIDENTIAL-MULTIPLE, 5 UNITS OR LESS	24'	30'

NOTES:

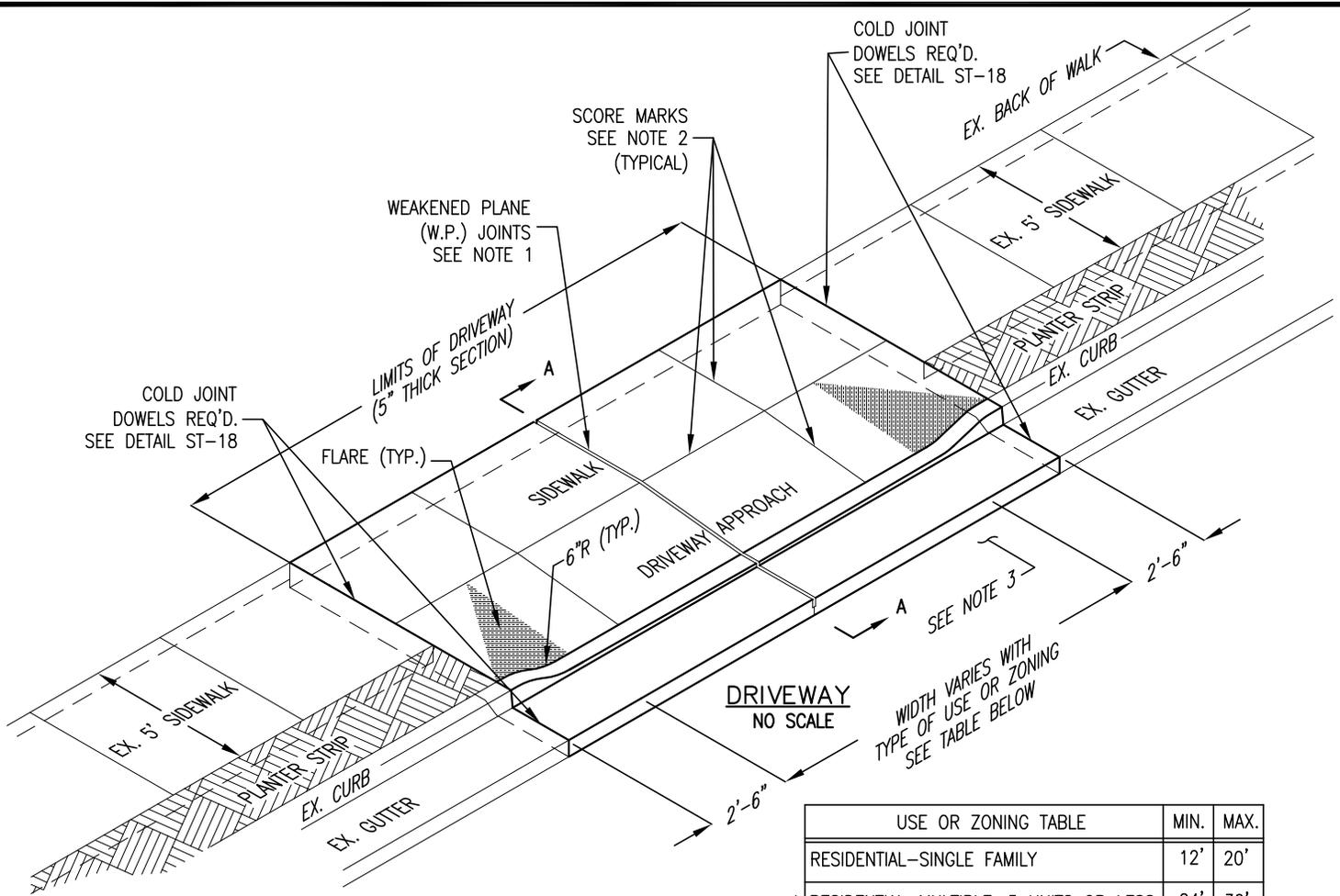
1. W.P. JOINTS REQUIRED ON CENTERLINE FOR DRIVEWAYS 12' TO 20' WIDE. DRIVEWAYS 24' TO 30' WIDE SHALL HAVE 2 W.P. JOINTS EVENLY SPACED (AT 1/3 AND 2/3 POINTS).
2. PLACE SCORE MARKS AT 1/4 POINTS ON DRIVEWAYS 12' TO 20' WIDE AND AT 1/6 POINTS ON DRIVEWAYS 24' TO 30' WIDE. SCORE MARK REQUIRED AT DRIVEWAY SLOPE BREAK PARALLEL TO EXISTING FACE OF CURB.
3. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.
4. WHERE THE DISTANCE BETWEEN NEW DRIVEWAY LIMIT AND PROPERTY LINE IS LESS THAN 6 FEET AT THE BACK OF DRIVEWAY AND THERE IS AN ADJACENT DRIVEWAY LESS THAN 12 FEET DISTANCE AWAY, THE SIDEWALK SHALL NOT TRANSITION. NEW SIDEWALK SHALL TERMINATE AT PROPERTY LINE OR ADJACENT DRIVEWAY TO MAINTAIN ADA PATHWAY.
5. WHERE THE DISTANCE BETWEEN NEW DRIVEWAY LIMIT AND PROPERTY LINE IS EQUAL TO OR GREATER THAN 6 FEET AT THE BACK OF DRIVEWAY AND THERE IS NO ADJACENT DRIVEWAY WITHIN 12 FEET DISTANCE OF NEW DRIVEWAY, THE SIDEWALK SHALL TRANSITION FROM BACK OF DRIVEWAY TO EXISTING SIDEWALK.
6. IF THE EXISTING ON-SITE IMPROVEMENTS DO NOT MATCH THE GRADE OF THE REAR OF THE NEW DRIVEWAY, SUFFICIENT EXISTING IMPROVEMENTS SHALL BE RECONSTRUCTED TO PRODUCE A SMOOTH, USABLE SURFACE WITH A CHANGE IN GRADE NOT EXCEEDING 10%.



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**RESIDENTIAL DRIVEWAY
 WITH ATTACHED SIDEWALK**

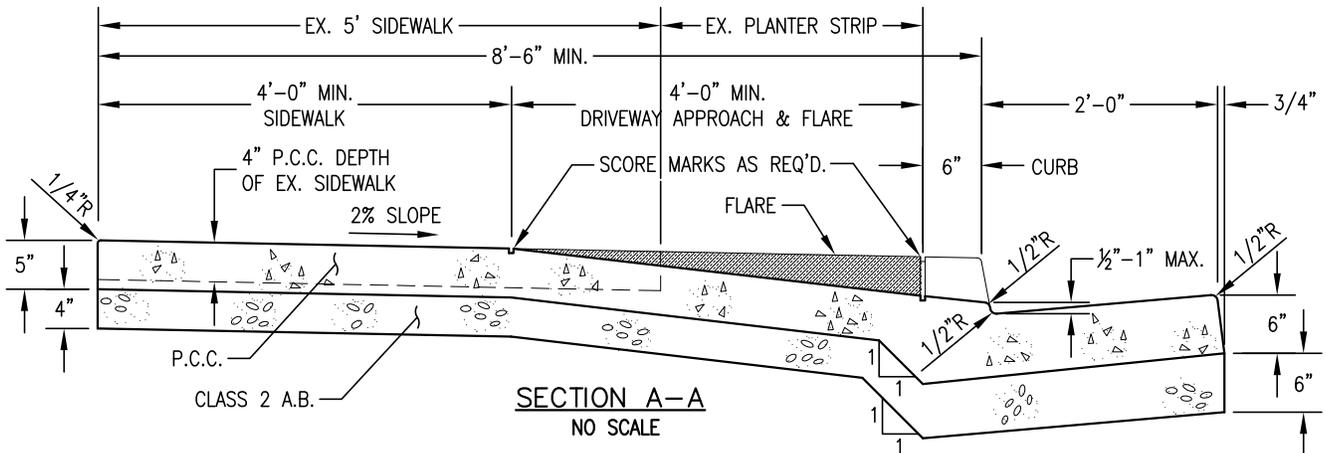
CITY OF SANTA CLARA



USE OR ZONING TABLE	MIN.	MAX.
RESIDENTIAL-SINGLE FAMILY	12'	20'
* RESIDENTIAL-MULTIPLE, 5 UNITS OR LESS	24'	30'

NOTES:

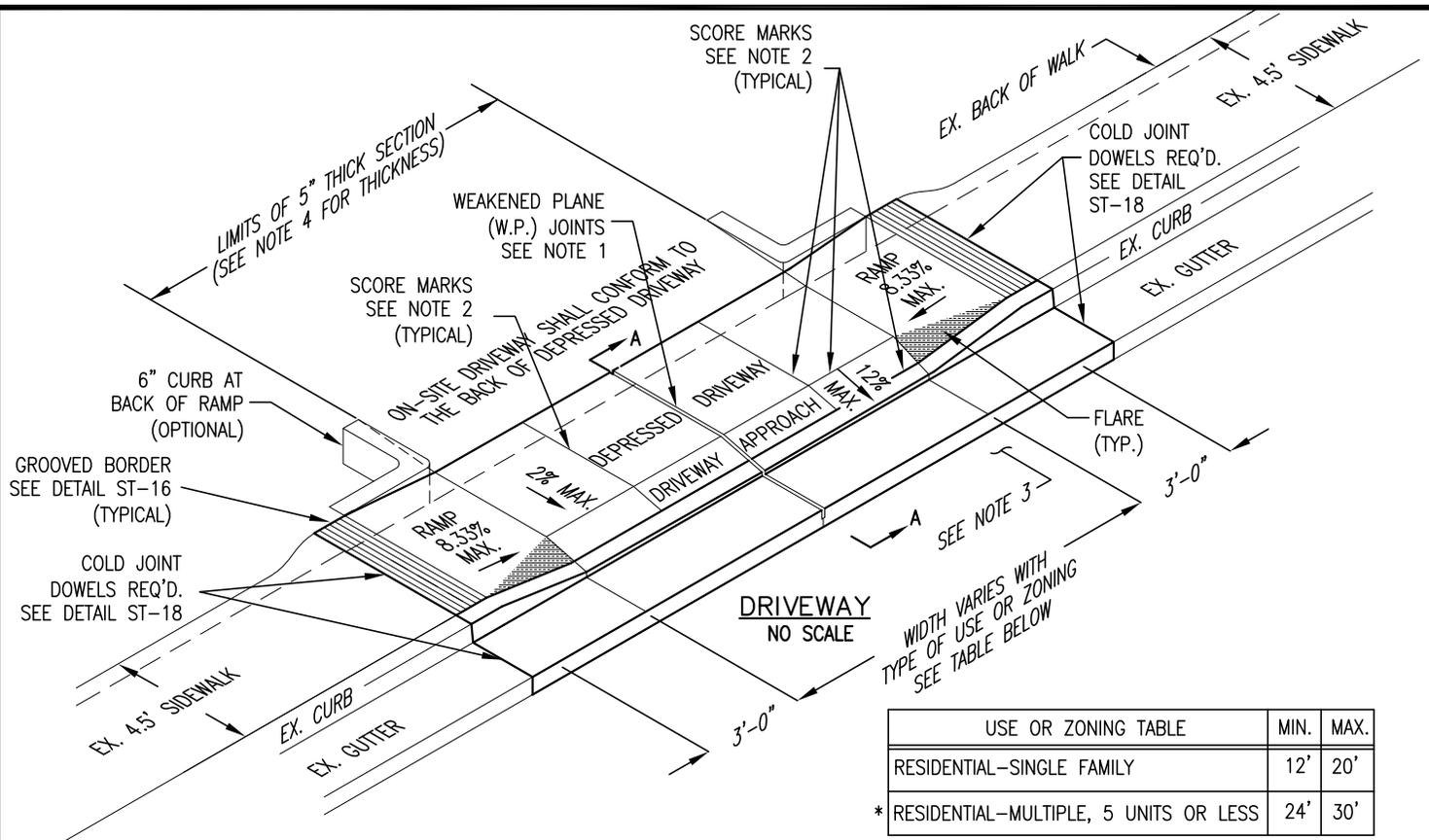
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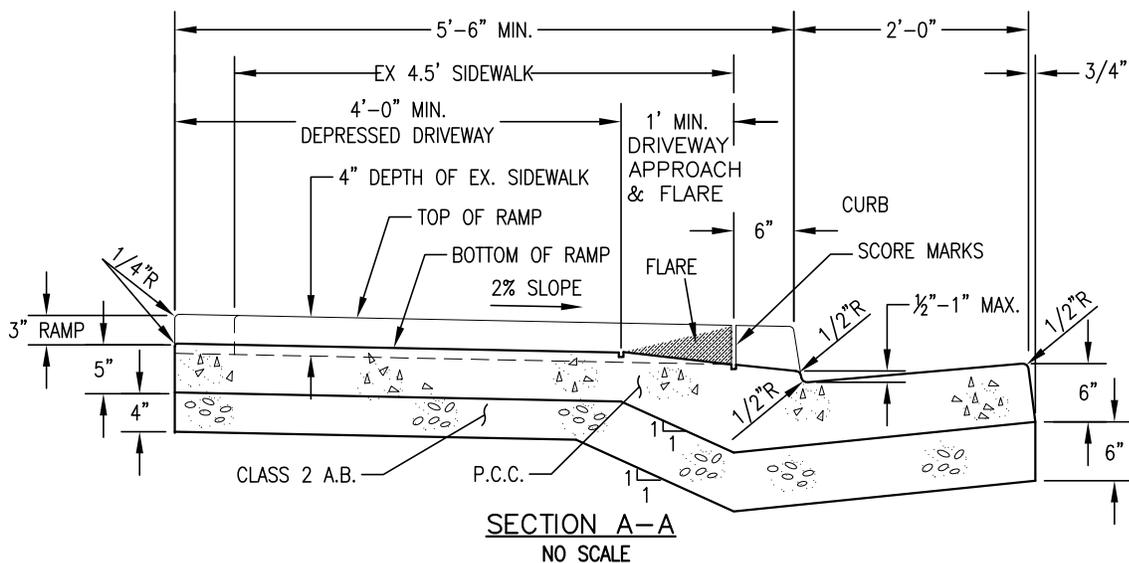
RESIDENTIAL DRIVEWAY WITH SEPARATED SIDEWALK
 CITY OF SANTA CLARA

ST-5
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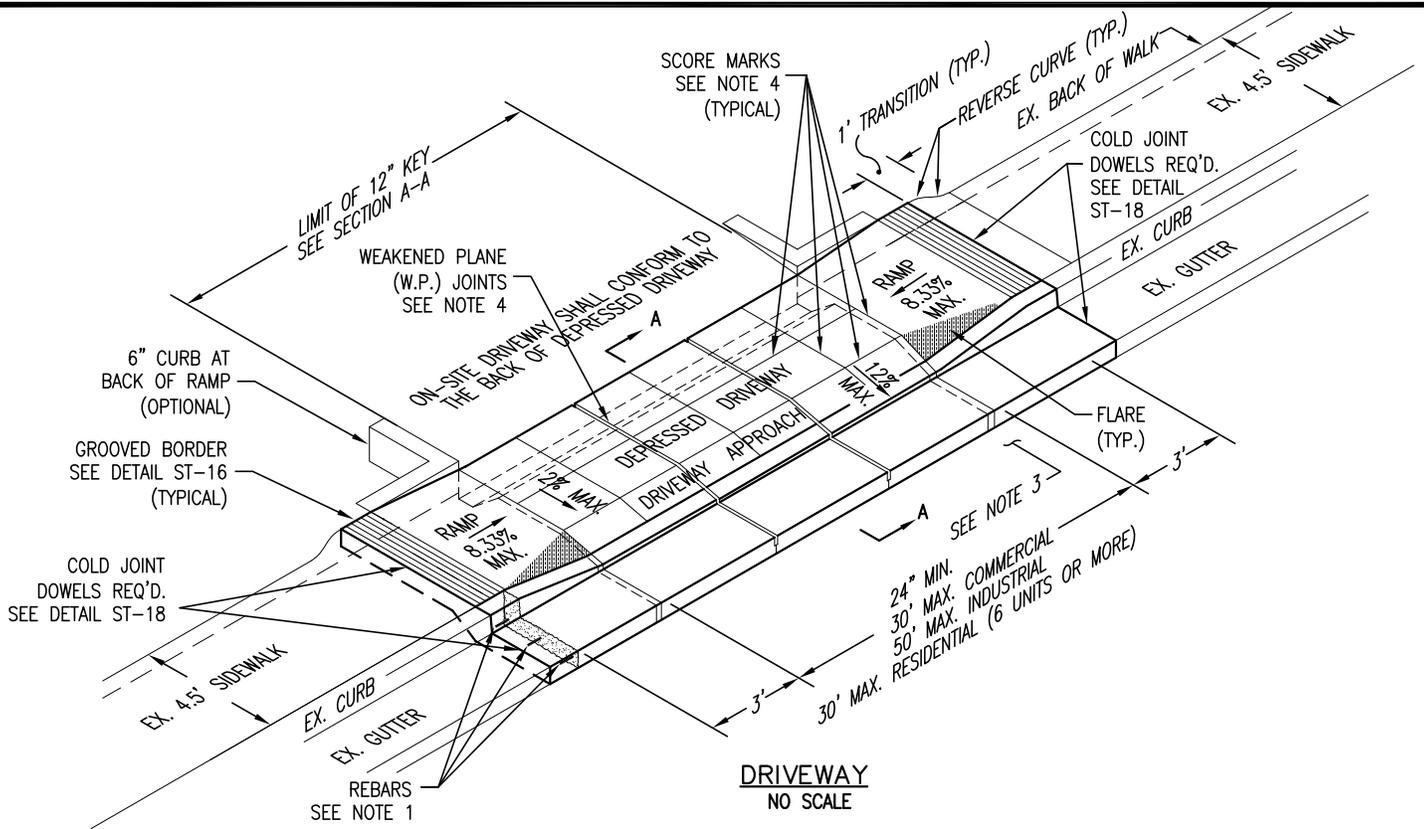
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3. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.
4. DEPRESSED DRIVEWAY, DRIVEWAY APPROACH, GROOVED BORDERS, AND RAMPS SHALL HAVE A THICKNESS OF 5" P.C.C. OVER 4" A.B. GROOVED BORDERS, RAMPS, DEPRESSED DRIVEWAY, DRIVEWAY APPROACH, CURB AND GUTTER SHALL BE MONOLITHIC.
5. IF THE EXISTING ON-SITE IMPROVEMENTS DO NOT MATCH THE GRADE OF THE REAR OF THE NEW DRIVEWAY, SUFFICIENT EXISTING IMPROVEMENTS SHALL BE RECONSTRUCTED TO PRODUCE A SMOOTH, USABLE SURFACE WITH A CHANGE IN GRADE NOT EXCEEDING 10%.



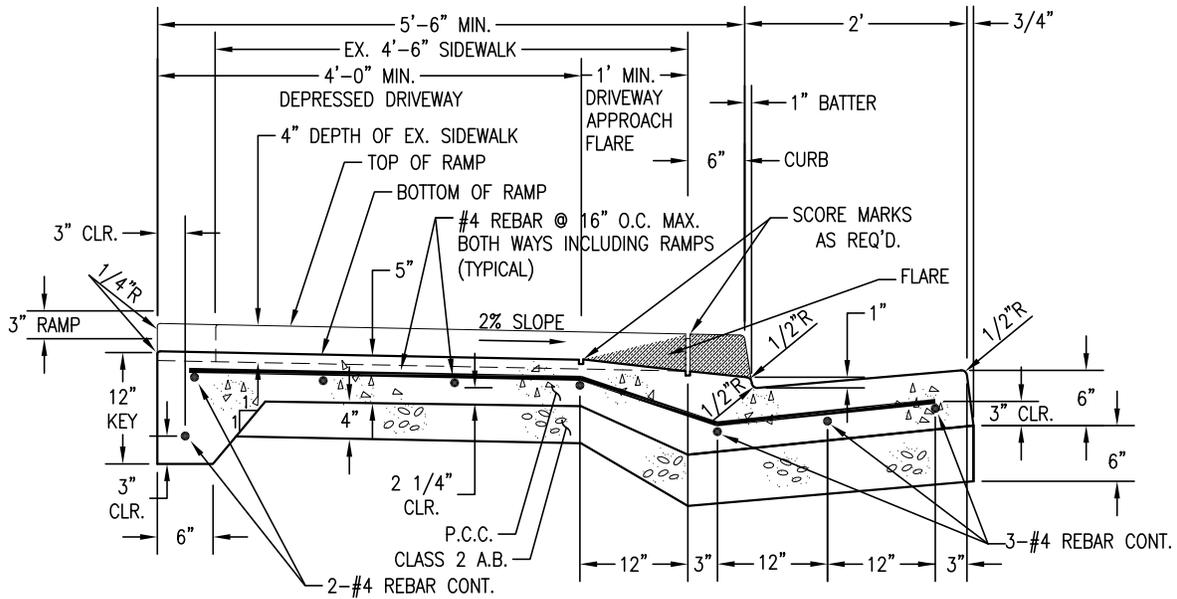
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**DEPRESSED DRIVEWAY FOR
 EX. 5' ATTACHED SIDEWALK**
 CITY OF SANTA CLARA

ST-6
 PAGE: 6



DRIVEWAY
NO SCALE



SECTION A-A
NO SCALE

NOTES:

1. END REBAR 3" FROM COLD JOINT FOR GUTTER AND 12" FROM COLD JOINT FOR RAMPS.
2. DEPRESSED DRIVEWAY, DRIVEWAY APPROACH, GROOVED BORDERS, AND RAMPS SHALL HAVE A THICKNESS OF 5" P.C.C. OVER 4" A.B. GROOVED BORDERS, RAMPS, DEPRESSED DRIVEWAY, DRIVEWAY APPROACH, CURB AND GUTTER SHALL BE MONOLITHIC.
3. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX), FOR REQUIREMENTS.
4. JOINT/SCORE MARK: SEE TABLE ON ST-8.
5. USE OF DETAIL ST-7 IS ALLOWED ONLY WITH WRITTEN APPROVAL OF CITY ENGINEER.
6. IF THE EXISTING ON-SITE IMPROVEMENTS DO NOT MATCH THE GRADE OF THE REAR OF THE NEW DRIVEWAY, SUFFICIENT EXISTING IMPROVEMENTS SHALL BE RECONSTRUCTED TO PRODUCE A SMOOTH, USABLE SURFACE WITH A CHANGE IN GRADE NOT EXCEEDING 10%.



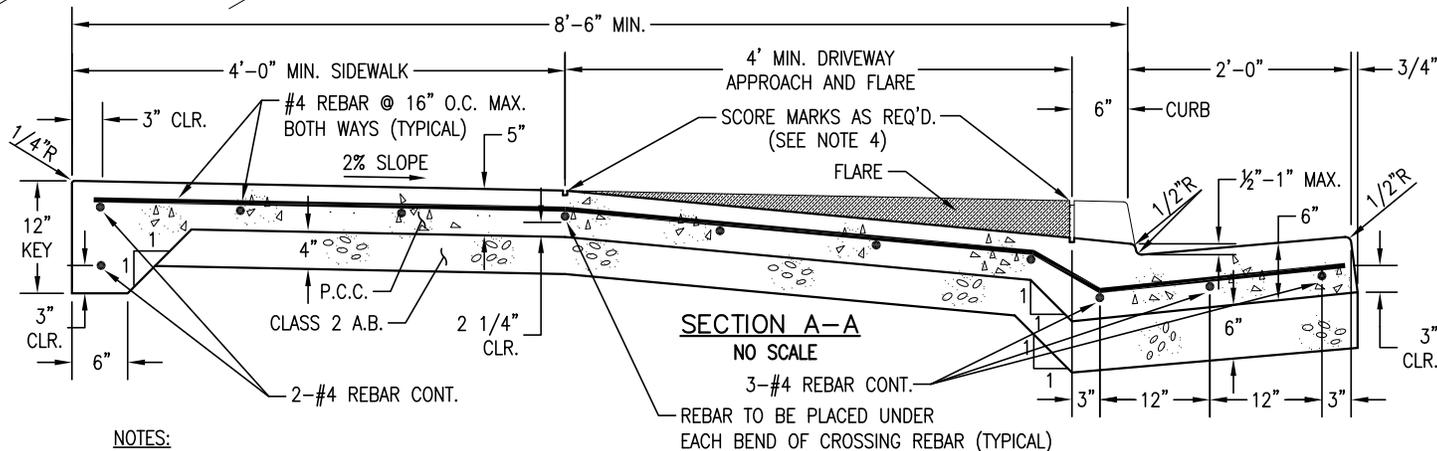
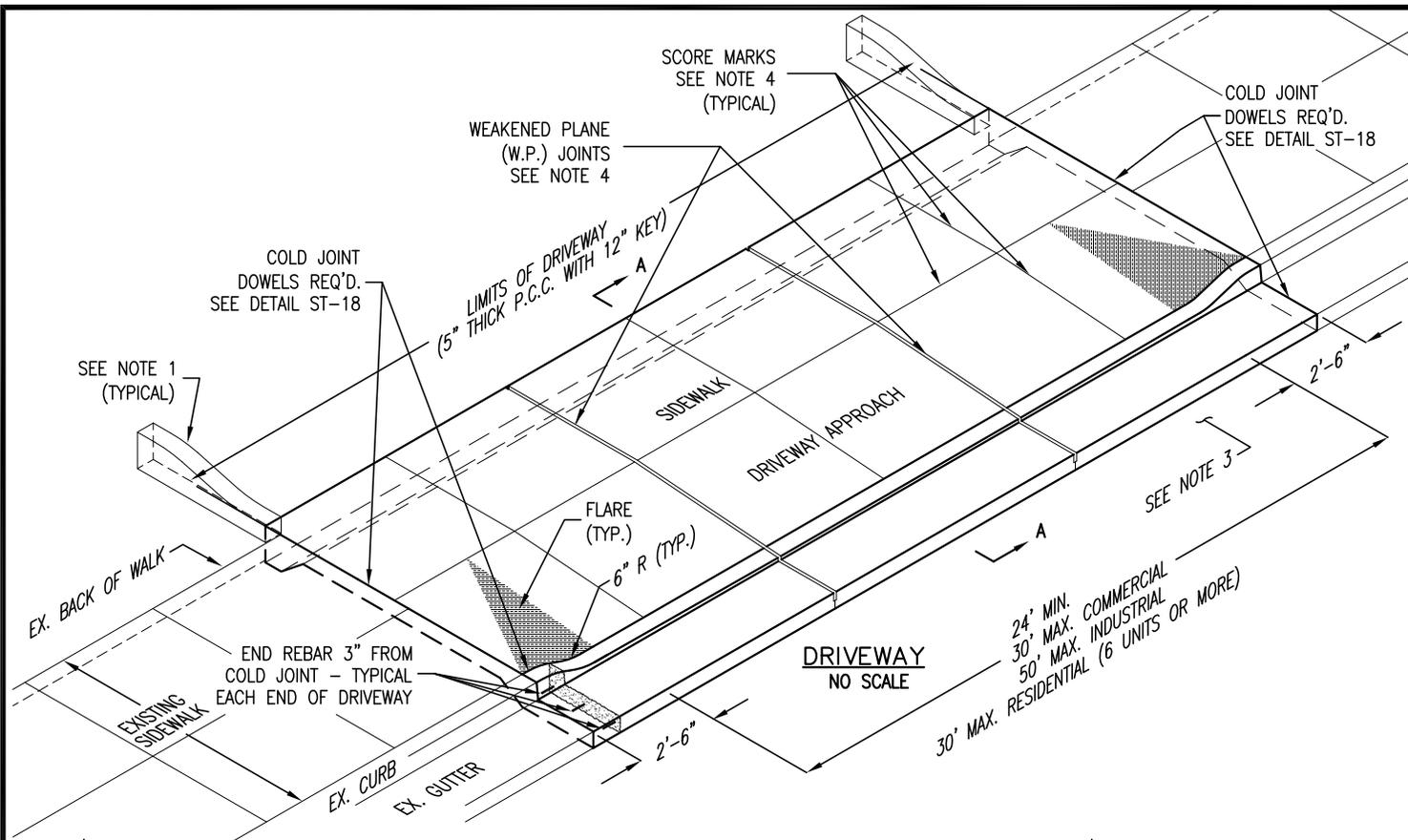
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DATE:	MAY 2015

**DEPRESSED COMMERCIAL
DRIVEWAY FOR
EX. 5' ATTACHED SIDEWALK**

CITY OF SANTA CLARA

ST-7

PAGE: 7



NOTES:

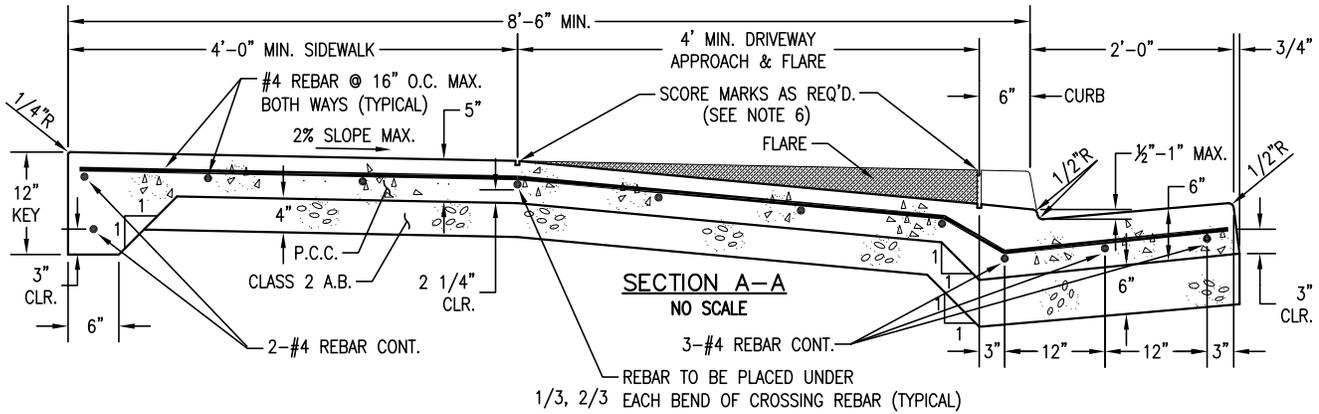
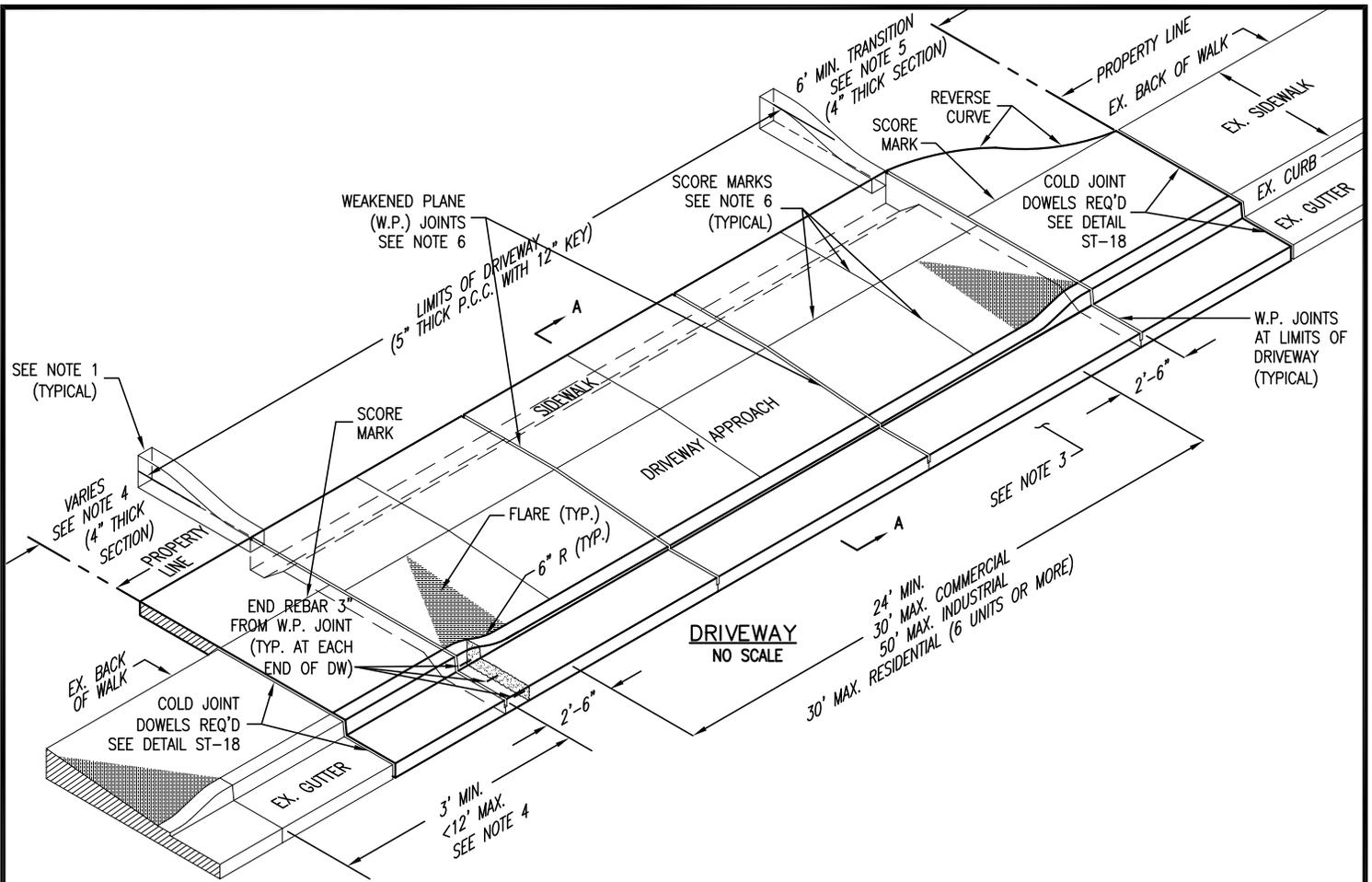
1. CONCRETE CURB SHALL NOT ENCR OACH INTO PUBLIC RIGHT-OF-WAY AND SHALL BE FLUSH AT BACK OF WALK.
2. COMMERCIAL DRIVEWAY SHALL BE INSTALLED IN ZONES DESIGNATED COMMERCIAL, INDUSTRIAL, AND RESIDENTIAL WITH 6 UNITS OR MORE.
3. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.
4. JOINT/SCORE MARK TABLE:

DRIVEWAY WIDTH		WEAKENED PLANE JOINT		SCORE MARKS	
MIN.	MAX.	NO. OF JOINTS	LOCATION POINT	NO. OF MARKS	LOCATION POINT
24'	30'	2	1/3, 2/3	3	1/6, 1/2, 5/6
>30'	40'	3	1/4, 1/2, 3/4	4	1/8, 3/8, 5/8, 7/8
>40'	50'	4	1/5, 2/5, 3/5, 4/5	5	1/10, 3/10, 1/2, 7/10, 9/10

SCORE MARK REQUIRED AT DRIVEWAY SLOPE BREAK PARALLEL TO EXISTING FACE OF CURB

5. IF THE EXISTING ON-SITE IMPROVEMENTS DO NOT MATCH THE GRADE OF THE REAR OF THE NEW DRIVEWAY, SUFFICIENT EXISTING IMPROVEMENTS SHALL BE RECONSTRUCTED TO PRODUCE A SMOOTH, USABLE SURFACE WITH A CHANGE IN GRADE NOT EXCEEDING 10%.

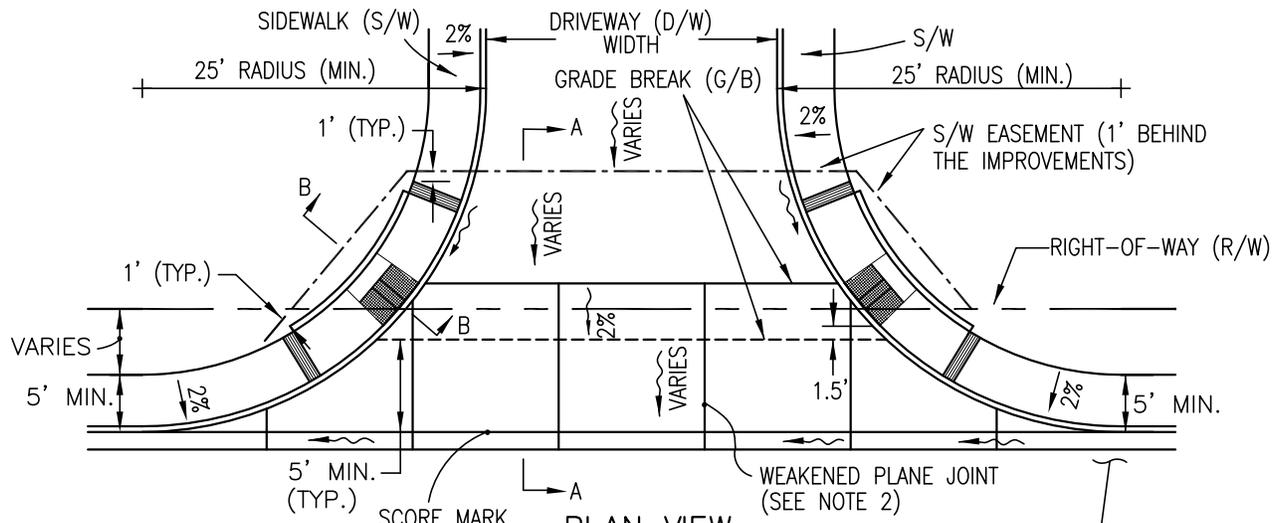
	DRAWN BY: K. TRAN	COMMERCIAL DRIVEWAY WITH/ WITHOUT SEPARATED SIDEWALK	ST-8
	CHECKED BY: F. AMIN		
	APPROVED BY: G. GOMEZ		
	DATE: MAY 2015		
CITY OF SANTA CLARA		PAGE: 8	



NOTES:

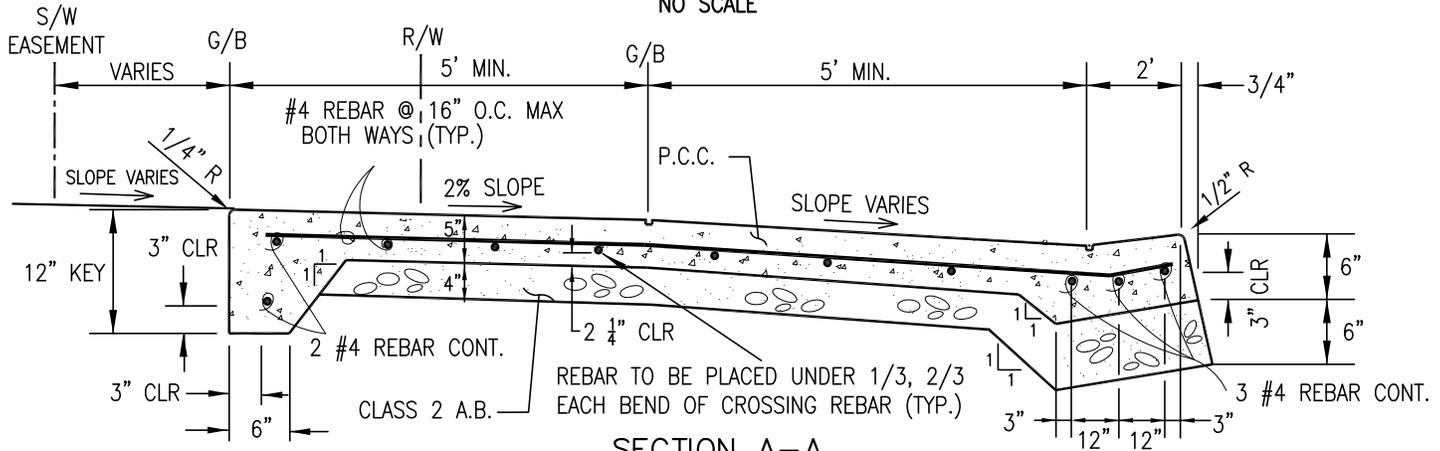
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2. COMMERCIAL DRIVEWAY SHALL BE INSTALLED IN ZONES DESIGNATED COMMERCIAL, INDUSTRIAL, AND RESIDENTIAL WITH 6 UNITS OR MORE.
3. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.
4. WHERE THE DISTANCE BETWEEN NEW DRIVEWAY LIMIT AND PROPERTY LINE IS LESS THAN 6 FEET AT THE BACK OF DRIVEWAY OR LESS THAN 12 FEET FROM AN ADJACENT DRIVEWAY LIMIT AT THE BACK OF DRIVEWAY, THE SIDEWALK SHALL NOT TRANSITION. NEW SIDEWALK SHALL TERMINATE AT PROPERTY LINE OR ADJACENT DRIVEWAY TO MAINTAIN ADA PATHWAY.
5. WHERE THE DISTANCE BETWEEN NEW DRIVEWAY LIMIT AND PROPERTY LINE IS EQUAL TO OR GREATER THAN 6 FEET AT THE BACK OF DRIVEWAY OR EQUAL TO OR GREATER THAN 12 FEET FROM AN ADJACENT DRIVEWAY LIMIT AT THE BACK OF DRIVEWAY, THE SIDEWALK SHALL TRANSITION FROM BACK OF DRIVEWAY TO EXISTING SIDEWALK.
6. JOINT/SCORE MARK: SEE TABLE ON DETAIL ST-8.
7. IF THE EXISTING ON-SITE IMPROVEMENTS DO NOT MATCH THE GRADE OF THE REAR OF THE NEW DRIVEWAY, SUFFICIENT EXISTING IMPROVEMENTS SHALL BE RECONSTRUCTED TO PRODUCE A SMOOTH, USABLE SURFACE WITH A CHANGE IN GRADE NOT EXCEEDING 10%.

	DRAWN BY: K. TRAN	COMMERCIAL DRIVEWAY WITH ATTACHED SIDEWALK	ST-9
	CHECKED BY: F. AMIN		
	APPROVED BY: G. GOMEZ	CITY OF SANTA CLARA	PAGE: 9
	DATE: MAY 2015		

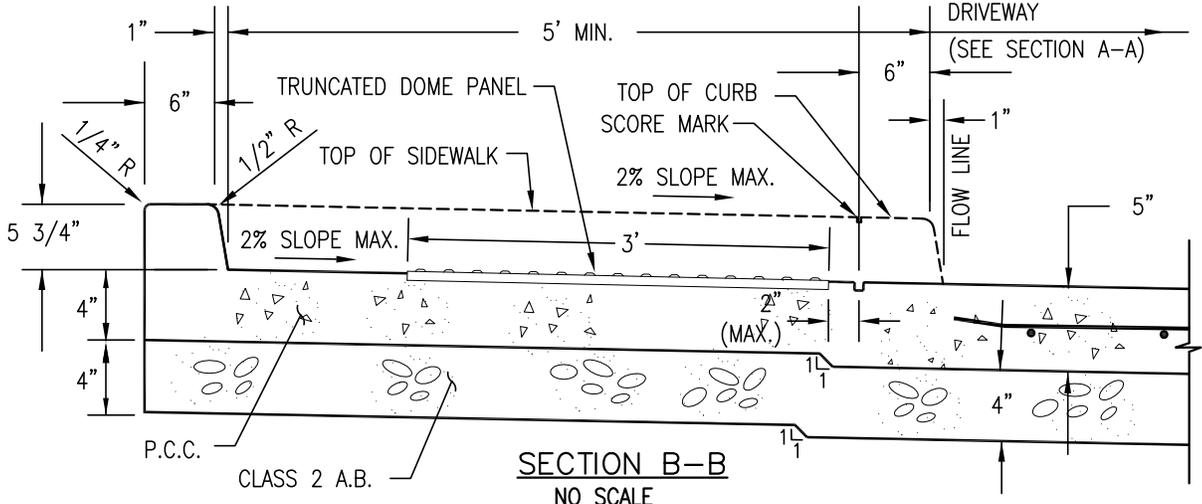


PLAN VIEW
NO SCALE

SEE NOTE 4



SECTION A-A
NO SCALE



SECTION B-B
NO SCALE

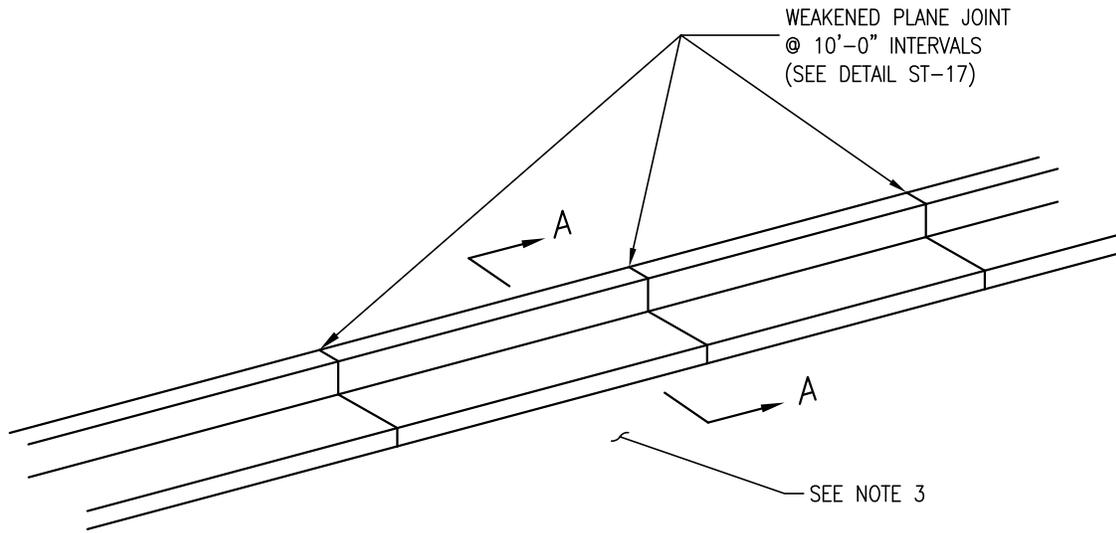
- NOTES:**
1. USE OF CURB-RETURN DRIVEWAY ALLOWED ONLY WITH WRITTEN APPROVAL OF CITY ENGINEER.
 2. SEE DETAIL ST-8 FOR D/W WIDTH, JOINTS, AND SCORE MARKS. JOINTS/SCORE MARKS PATTERNS SHALL CONTINUE TO THE AREA OUTSIDE OF D/W WIDTH.
 3. SEE DETAIL ST-14 FOR CURB RAMP CONSTRUCTION AND NOTES.
 4. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.



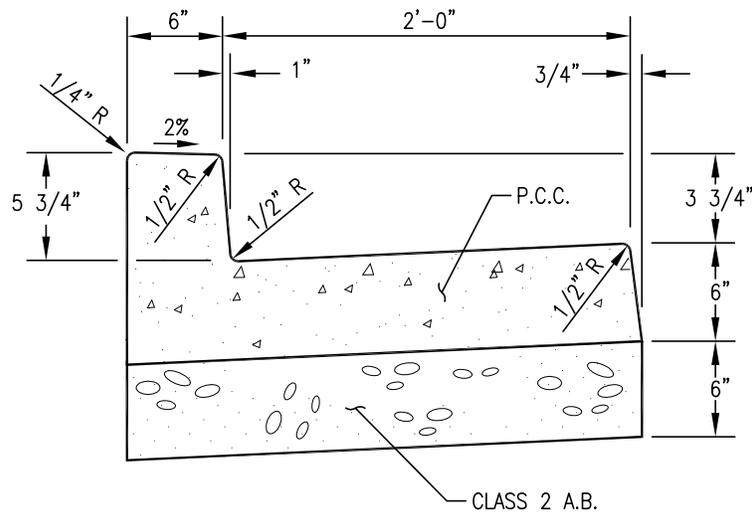
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 APPROVED BY: **F. AMIN**
 DATE: **JANUARY 2016**

CURB-RETURN DRIVEWAY
CITY OF SANTA CLARA

ST-10
 PAGE: 10



CURB GUTTER
NO SCALE



SECTION A-A
NO SCALE

NOTES:

1. EXPANSION JOINTS (SEE DETAIL ST-17) SHALL BE INSTALLED AT MAJOR STRUCTURES AND CURB RETURNS.
2. TOLERANCE OF THE VERTICAL DIMENSION AT FACE OF CURB AND LIP OF GUTTER SHALL BE 1/4"±.
3. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.



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 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

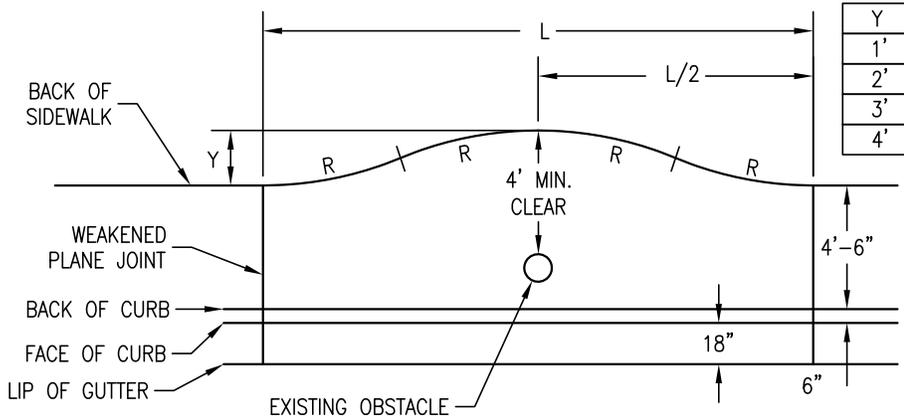
**MONOLITHIC
CURB AND GUTTER**

CITY OF SANTA CLARA

ST-11

PAGE: 11

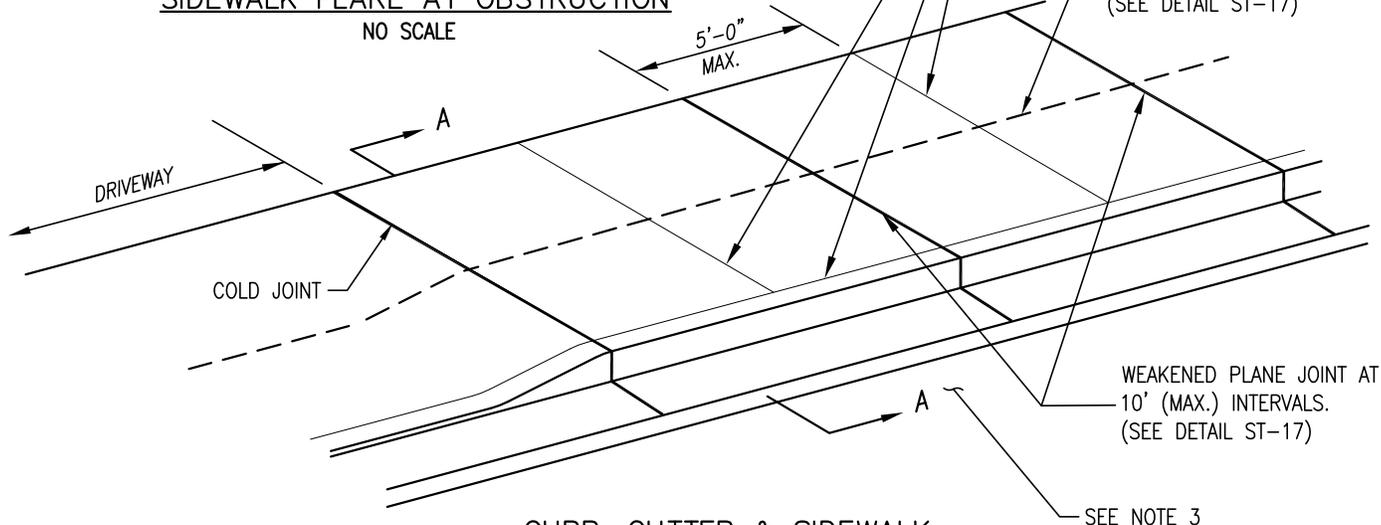
Y	L	R
1'	20'	25'
2'	20'	13'
3'	20'	9'
4'	25'	11'



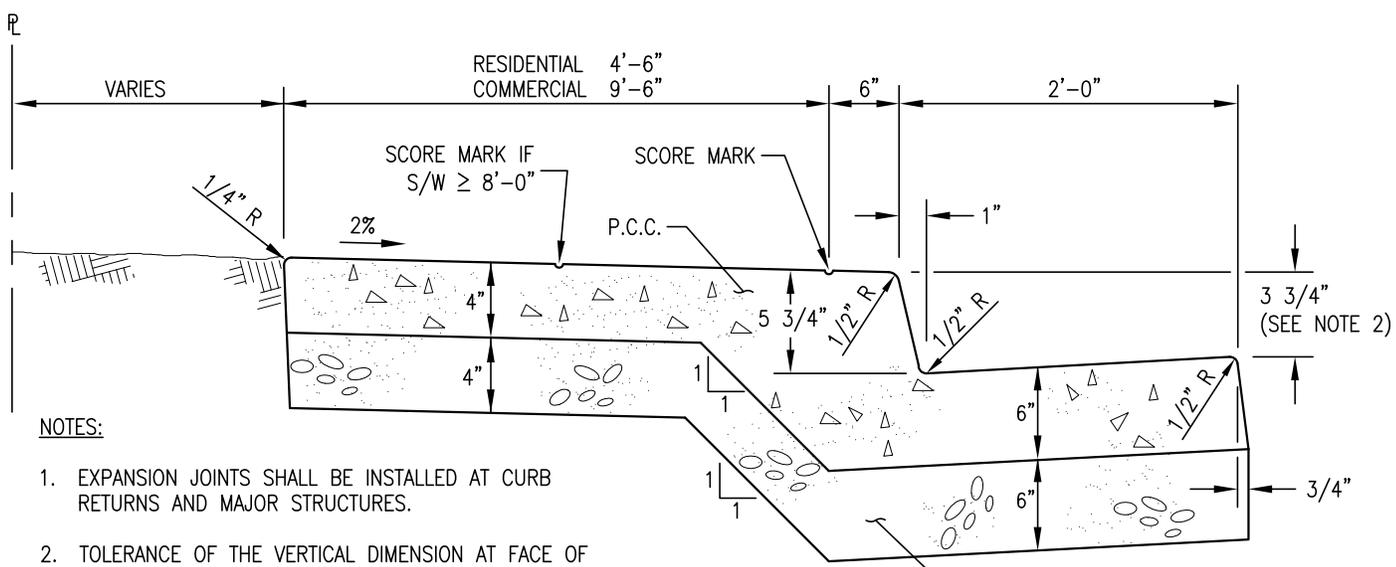
SIDEWALK FLARE AT OBSTRUCTION
NO SCALE

SIDEWALKS AND DRIVEWAYS SHALL BE SCORED INTO FLAGS, AS SHOWN. SCORE TO DEPTH OF 1/4". (SEE DETAIL ST-17)

SCORE PARALLEL TO CURB AT CENTER OF SIDEWALK IF WIDTH IS 8' OR GREATER. (SEE DETAIL ST-17)



CURB, GUTTER & SIDEWALK
NO SCALE



SECTION A-A
NO SCALE

NOTES:

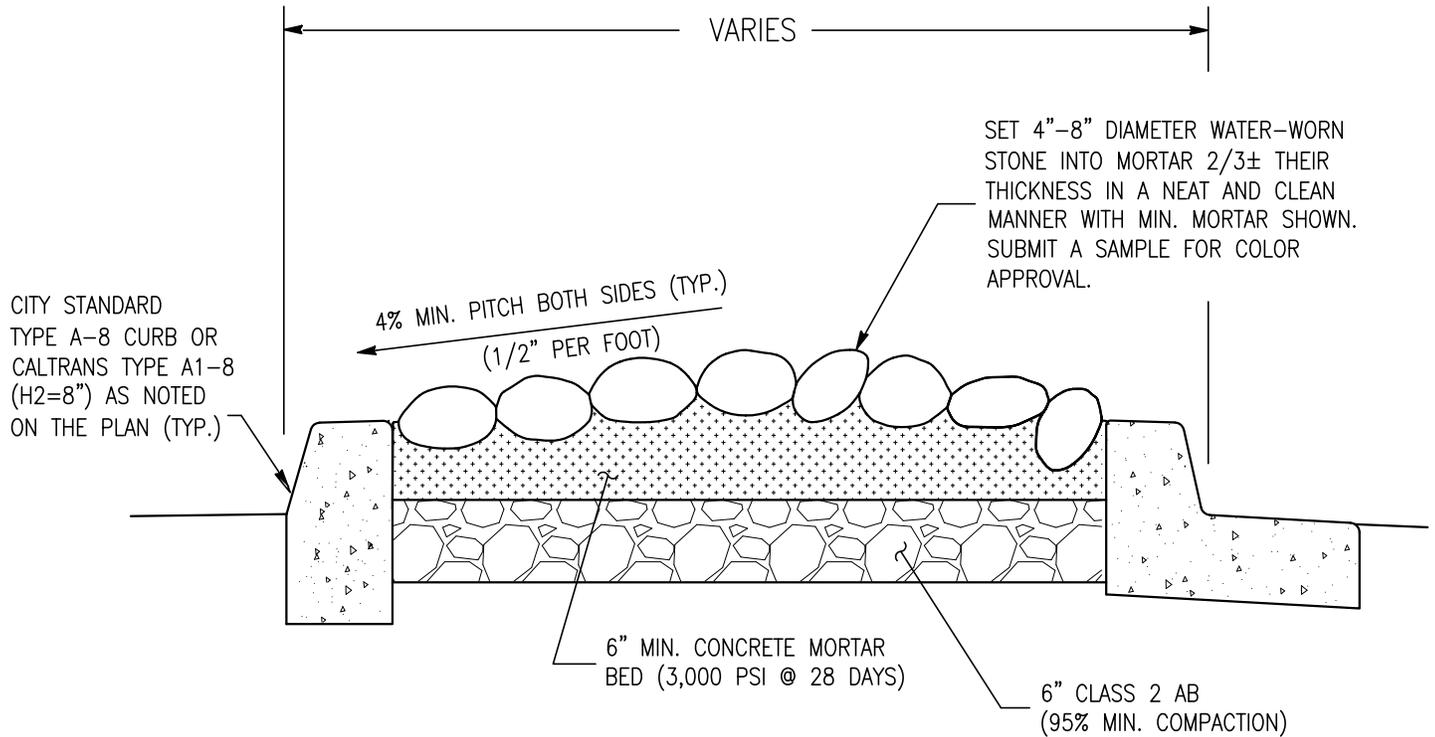
1. EXPANSION JOINTS SHALL BE INSTALLED AT CURB RETURNS AND MAJOR STRUCTURES.
2. TOLERANCE OF THE VERTICAL DIMENSION AT FACE OF CURB AND LIP OF GUTTER SHALL BE 1/4"±.
3. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.



DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

**MONOLITHIC CURB,
GUTTER AND SIDEWALK**
 CITY OF SANTA CLARA

ST-12
 PAGE: 12



NOTES:

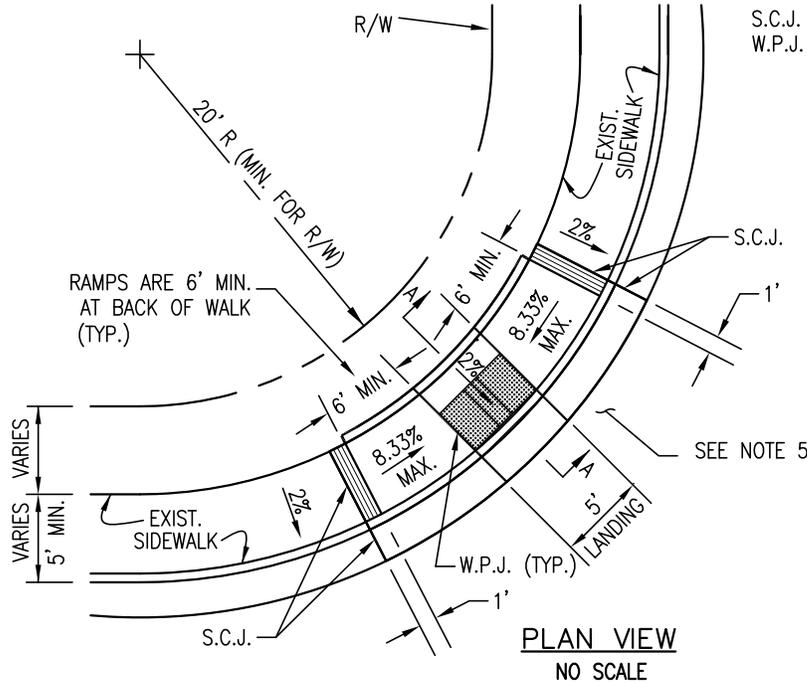
1. AFTER THE COBBLESTONE HAS BEEN SET INTO THE MORTAR, THE EXCESSIVE MORTAR IN BETWEEN THE JOINTS OF THE COBBLESTONES SHALL BE CAREFULLY REMOVED AND RAKED IN A SMOOTH JOINT (NO PROTRUSION OF MORTAR WILL BE ALLOWED).
2. CLEAN MORTAR FROM VISIBLE PORTIONS OF COBBLESTONES AFTER INSTALLATION.



DRAWN BY:	K. TRAN
CHECKED BY:	F. AMIN
APPROVED BY:	F. AMIN
DATE:	JANUARY 2016

MEDIAN COBBLESTONE INSTALLATION
CITY OF SANTA CLARA

ST-13A
PAGE: 13A

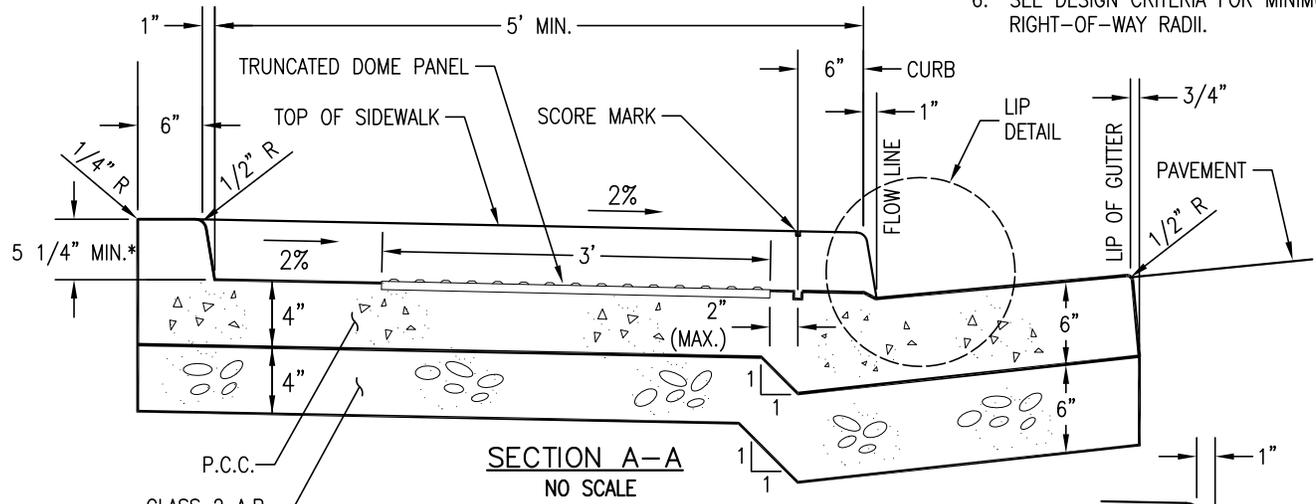


PLAN VIEW
NO SCALE

S.C.J. = SIDEWALK CONTACT JOINT
W.P.J. = WEAKENED PLANE JOINT

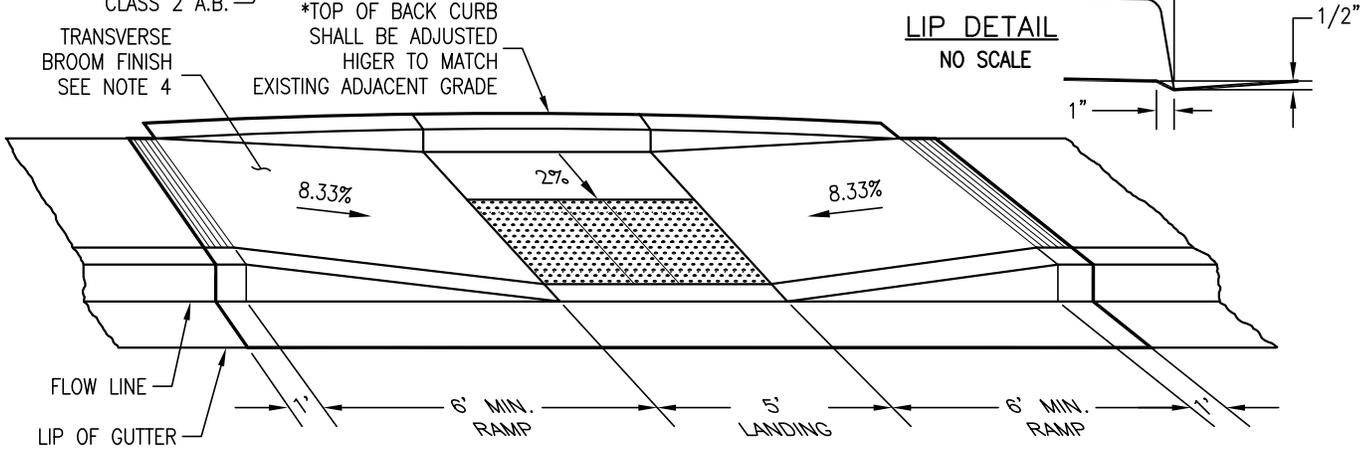
NOTES:

1. CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES (GROOVING AND TRUNCATED DOMES). SEE DETAIL ST-16 FOR GROOVING DETAILS AND TRUNCATED DOME DETAILS.
2. AT THE DISCRETION OF CITY ENGINEER, TWO CURB RAMPS SHALL BE REQUIRED WHERE THERE ARE TWO CROSS WALKS AT A CORNER.
3. CURB RAMPS FOR SEPARATED SIDEWALKS SHALL BE DESIGNED ON AN INDIVIDUAL BASIS.
4. THE SURFACE OF RAMP SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.
5. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.
6. SEE DESIGN CRITERIA FOR MINIMUM RIGHT-OF-WAY RADII.



SECTION A-A
NO SCALE

LIP DETAIL
NO SCALE



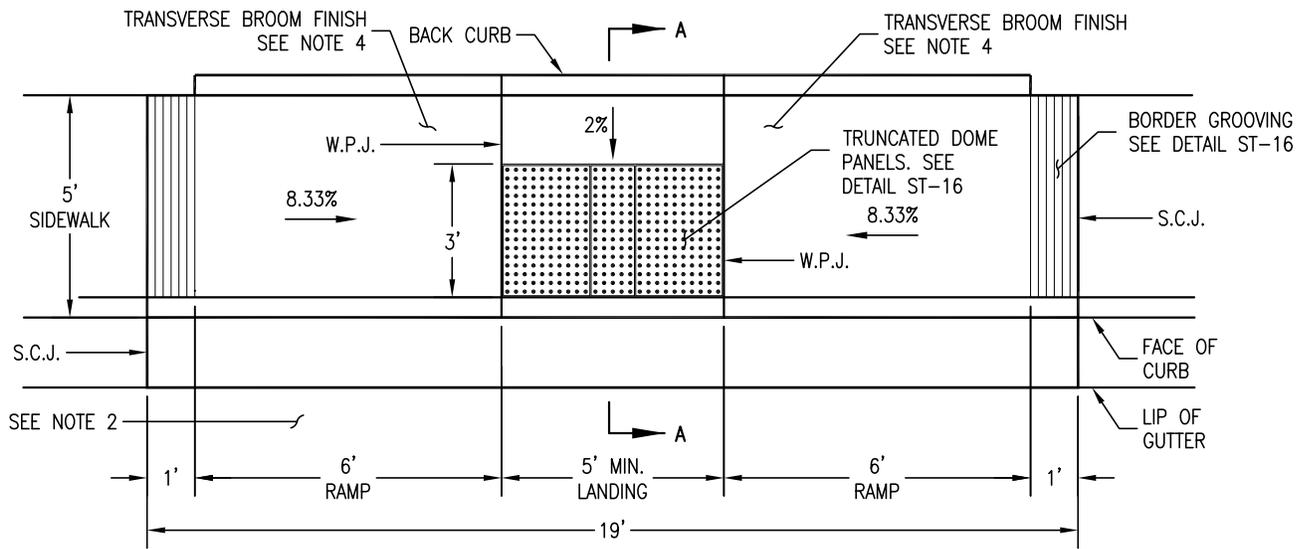
ELEVATION VIEW
NO SCALE



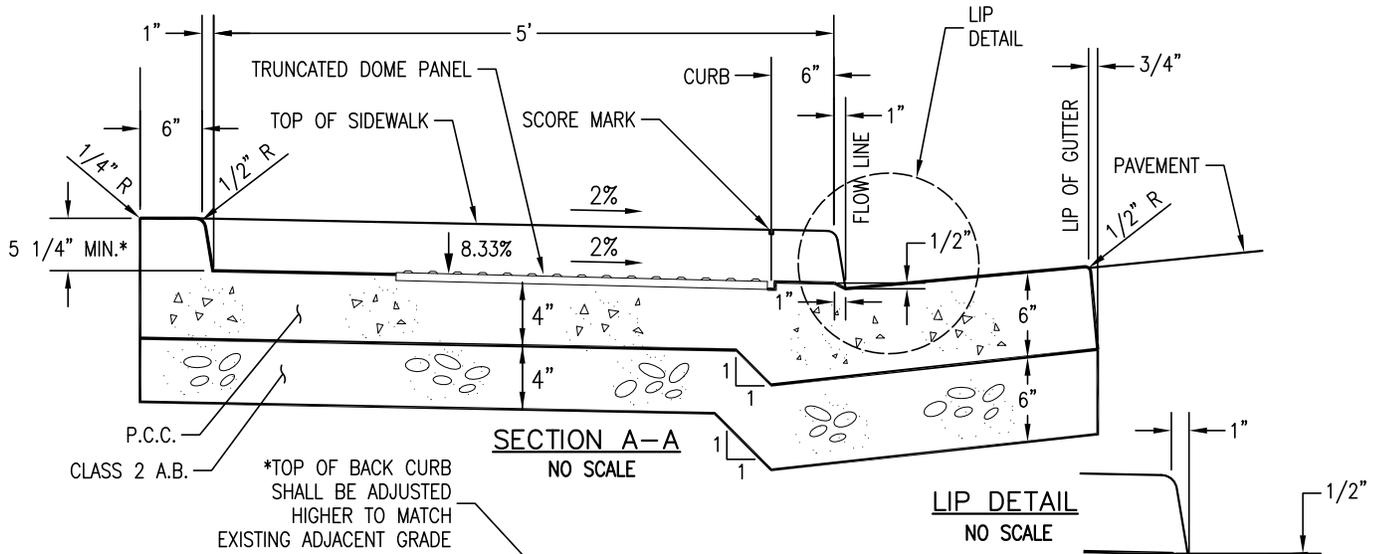
DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

CURVED CURB RAMP
 CITY OF SANTA CLARA

ST-14



S.C.J. = SIDEWALK CONTACT JOINT
W.P.J. = WEAKENED PLANE JOINT



NOTES:

1. CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES (GROOVING AND TRUNCATED DOMES). SEE DETAIL ST-16 FOR GROOVING DETAILS AND TRUNCATED DOME DETAILS.
2. 18" WIDE BAND OF PAVEMENT SHALL BE REMOVED AND REPLACED. SEE NOTE 5 OF GENERAL NOTES (APPENDIX) FOR REQUIREMENTS.
3. CURB RAMPS FOR SEPARATED SIDEWALKS SHALL BE DESIGNED ON AN INDIVIDUAL BASIS.
4. THE SURFACE OF RAMP SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.



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 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

STRAIGHT CURB RAMP

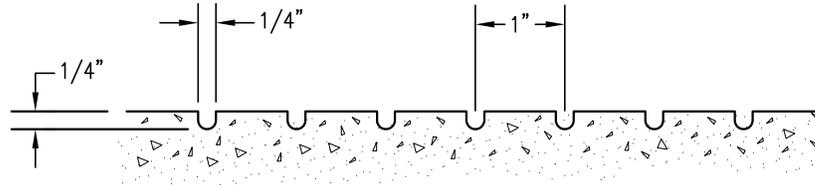
CITY OF SANTA CLARA

ST-15

PAGE: 15

NOTES:

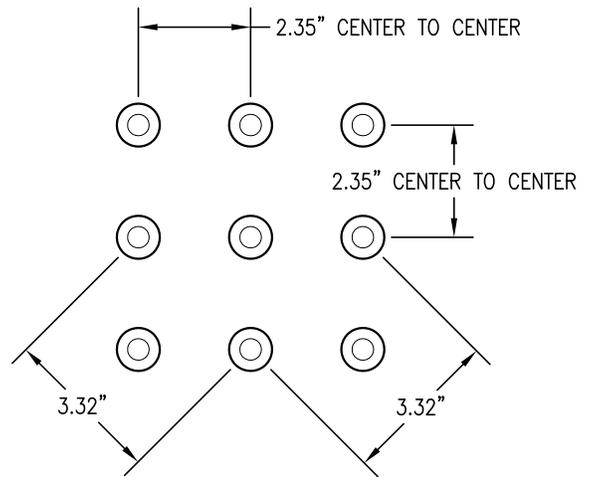
1. THE CURB RAMP SHALL HAVE A 12" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 1" O.C. SEE BORDER GROOVING DETAIL.



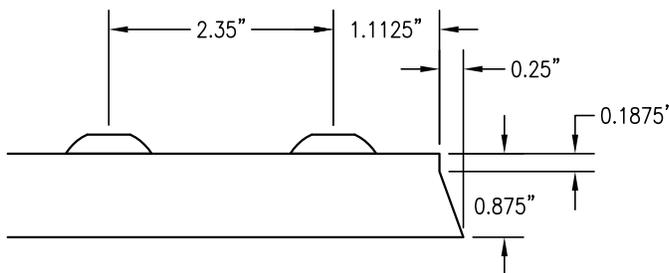
BORDER GROOVING DETAIL

NOTES:

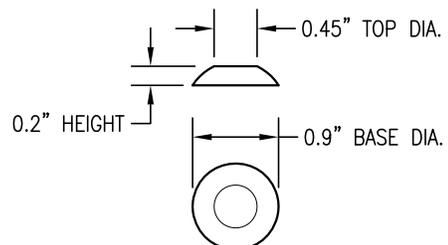
1. THE DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES EXTENDING THE FULL WIDTH OF AND 3'-0" DEPTH OF THE CURB RAMP LANDING.
2. THE RAISED TRUNCATED DOME PANELS SHALL BE CENTERED AND SQUARED ON THE CURB RAMP.
3. THE RAISED TRUNCATED DOME PANELS SHALL BE CONCRETE, CASTinTACT™ MANUFACTURED BY MASCO, TELEPHONE NO. 1-530-878-2440, OR APPROVED EQUAL.
4. THE COLOR OF THE RAISED TRUNCATED DOMES SHALL BE "SAFETY YELLOW".
5. THE EDGE OF THE RAISED TRUNCATED DOME PANEL NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
6. ALL TRUNCATED DOME DIMENSIONS HEREIN ARE NOMINAL.



RAISED TRUNCATED DOME PATTERN (IN-LINE)



TRUNCATED DOME PANEL WEDGE DETAIL



RAISED TRUNCATED DOME



DRAWN BY: K. TRAN

CHECKED BY: F. AMIN

APPROVED BY: G. GOMEZ

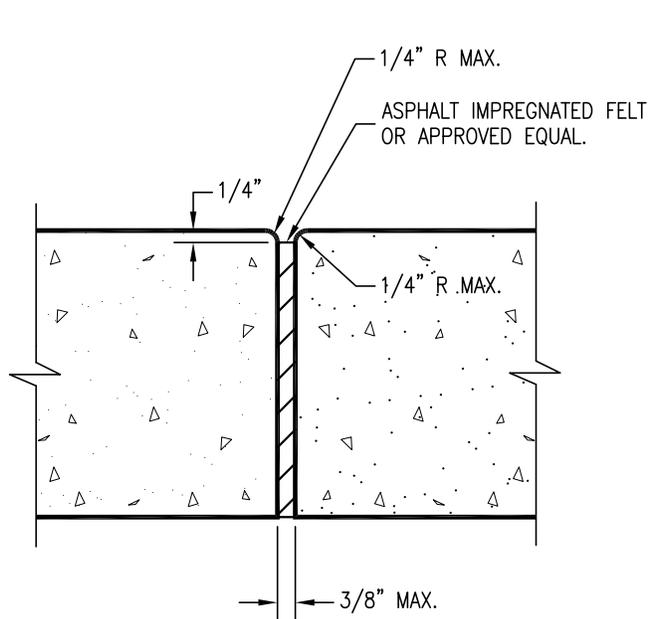
DATE: OCTOBER 2013

CURB RAMP GROOVING AND TRUNCATED DOME DETAILS

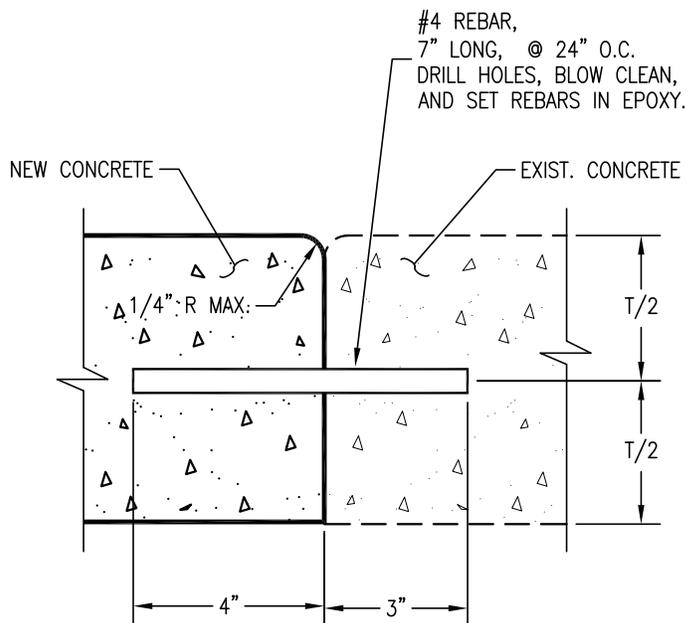
CITY OF SANTA CLARA

ST-16

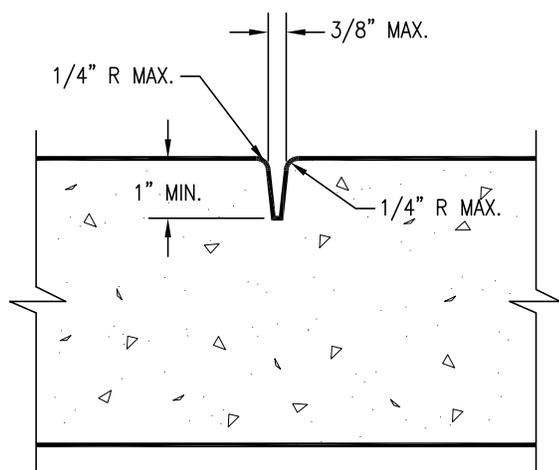
PAGE: 16



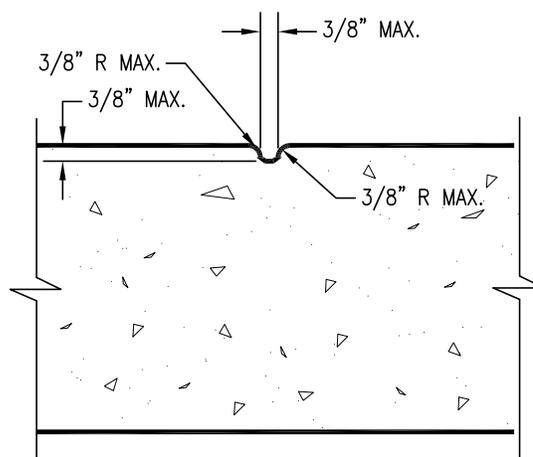
EXPANSION JOINT



SIDEWALK CONTACT JOINT
"COLD JOINT"



WEAKENED PLANE JOINT
"DEEP JOINT"



SCORE MARK
"DUMMY JOINT"



DRAWN BY: K. TRAN

CHECKED BY: F. AMIN

APPROVED BY: G. GOMEZ

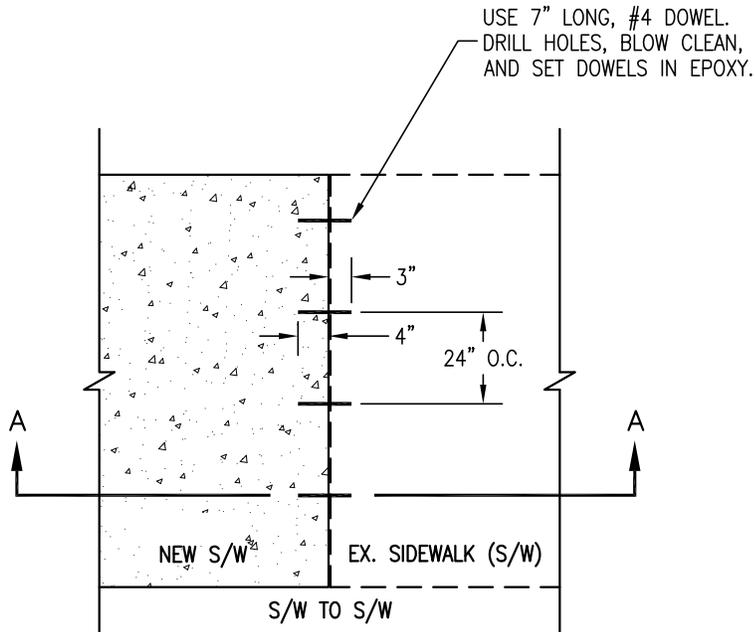
DATE: OCTOBER 2013

CONCRETE JOINTS

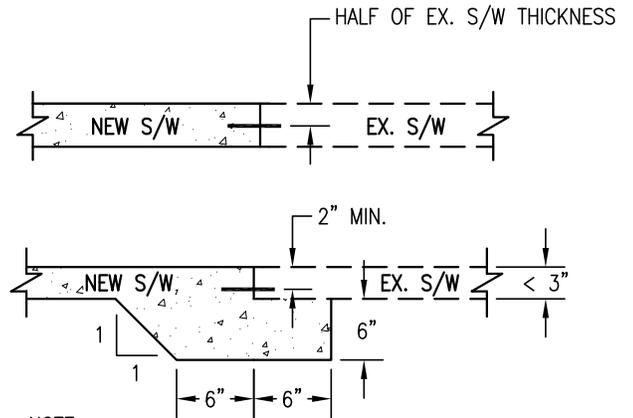
CITY OF SANTA CLARA

ST-17

PAGE: 17



PLAN VIEW
NO SCALE

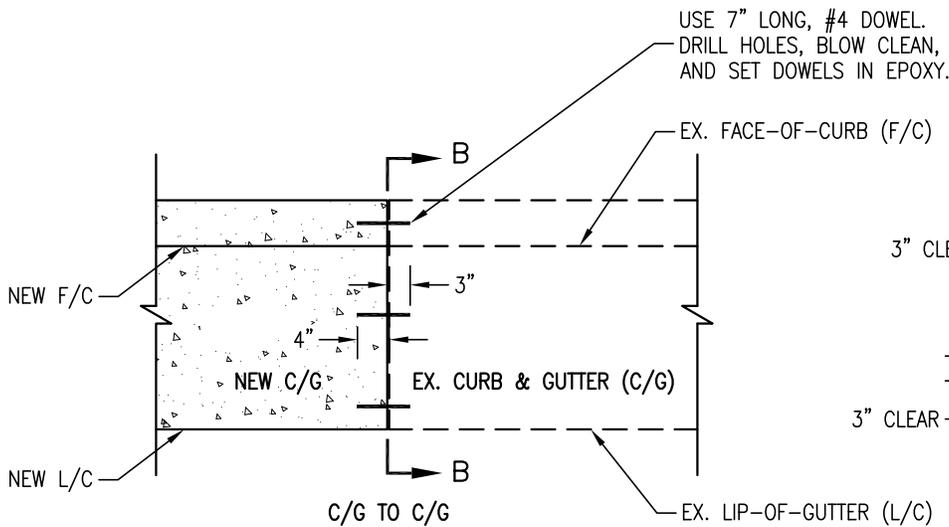


NOTE:

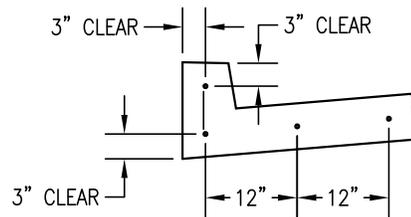
IF EXISTING SIDEWALK IS LESS THAN 3" THICK,
USE 6" DEEP X 12" WIDE P.C.C. KEY WITH
DOWEL CONNECTION.

SECTION A-A
NO SCALE

SIDEWALK



PLAN VIEW
NO SCALE



SECTION B-B
NO SCALE

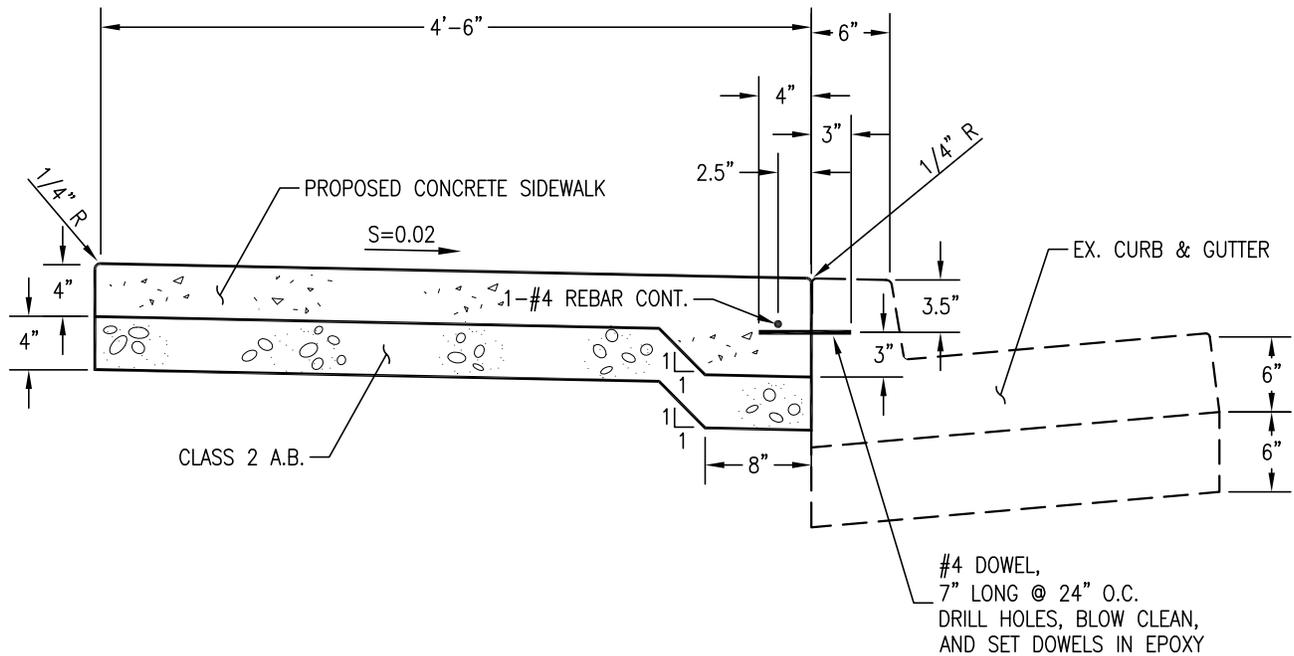
CURB & GUTTER



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CHECKED BY: F. AMIN
APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013

DOWEL CONNECTIONS
CITY OF SANTA CLARA

ST-18
PAGE: 18



NOTES:

1. WHERE A NEW DRIVEWAY OCCURS, REPLACE EXISTING CURB AND GUTTER BETWEEN THE NEAREST JOINTS AND POUR CURB AND DRIVEWAY MONOLITHICALLY.
2. IF THE REAR FACE OF THE DRIVEWAY CURB DEPRESSION IS NOT AT LEAST 6 INCHES IN DEPTH, REMOVE AND REPLACE THE CURB DEPRESSION WITH A STANDARD MONOLITHIC DRIVEWAY.
3. WHERE IT BECOMES NECESSARY FOR ANY REASON TO REPLACE CURB AND/OR GUTTER, REPLACEMENT MUST BE MONOLITHIC.
4. IF TOP OF EXISTING CURB DOES NOT DRAIN TOWARDS THE STREET, REMOVE CURB AND GUTTER AND REPLACE WITH MONOLITHIC CURB, GUTTER, AND SIDEWALK.



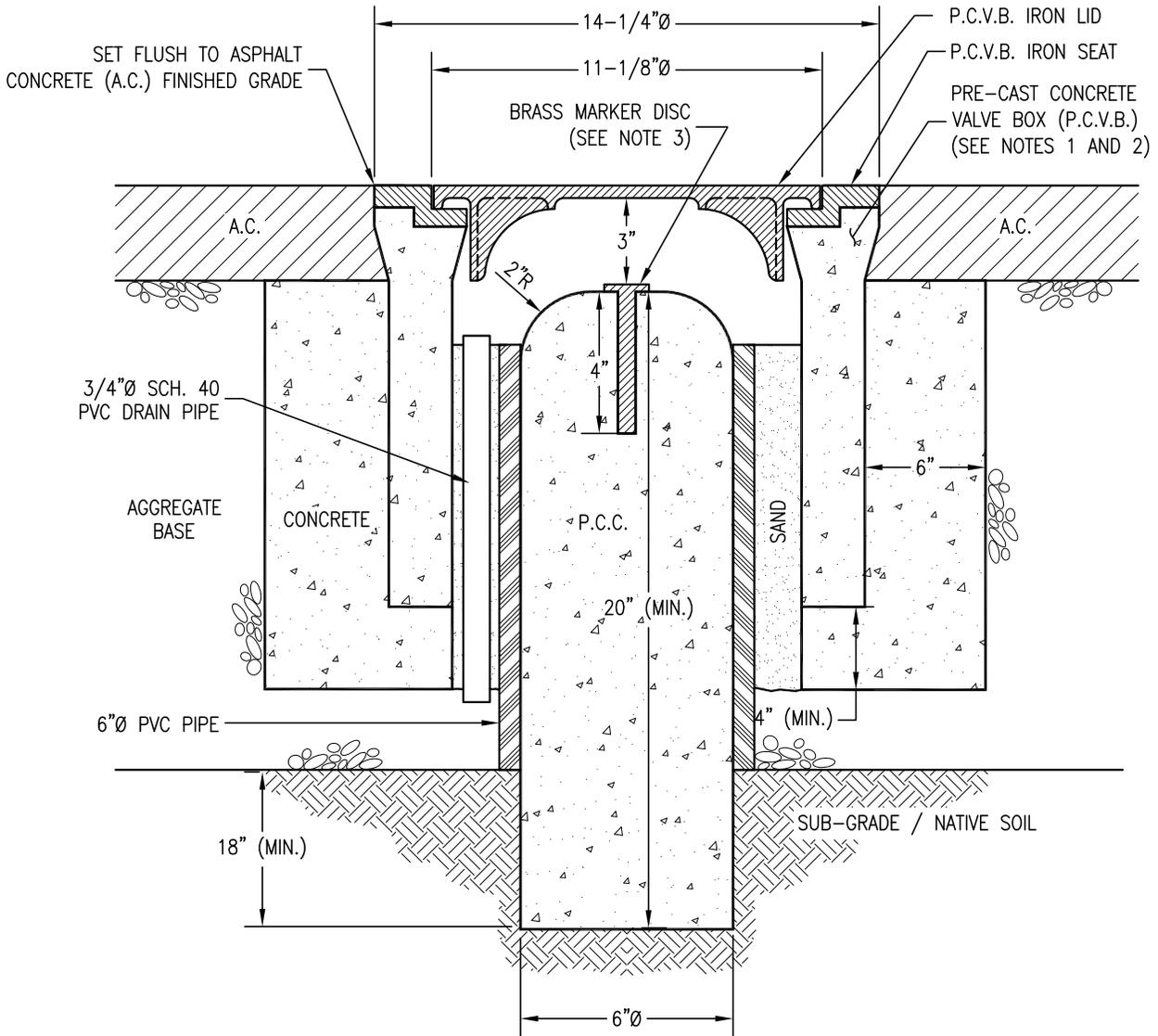
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 DATE: OCTOBER 2013

**SIDEWALK TO CURB
 CONNECTION**

CITY OF SANTA CLARA

ST-19

PAGE: 19



NOTES:

1. PRE-CAST BOX, SEAT, AND LID SHALL BE CHRISTY CONCRETE PRODUCT MODEL G5 TRAFFIC VALVE BOX OR APPROVED EQUAL.
2. SURFACE OF LID SHALL BE LABELED "MONUMENT" ENGRAVED IN 1" HIGH LETTERS.
3. BRASS MARKER DISC SHALL BE ENGRAVED WITH RESPONSIBLE LICENSED SURVEYOR OR CIVIL ENGINEER REGISTRATION NO. AND MONUMENT POINT PUNCHED.
4. CONCRETE SHALL BE CLASS "A".
5. PLACE CONCRETE FOR MONUMENT IN DRILLED HOLE.
6. LOCKING GRADE RINGS (NOT SHOWN) SHALL BE INSTALLED WITH 3/8"x1" NC BOLT AND JAM NUT (IN 3 PLACES) WHEN STREET IS RESURFACED TO BRING MONUMENT LID FLUSH WITH NEW FINISHED GRADE.

LOCKING GRADE RINGS	
CHRISTY NO.	DESCRIPTION
G5GR10	1" HIGH CAST IRON
G5GR15	1-1/2" HIGH CAST IRON
G5GR20	2" HIGH CAST IRON



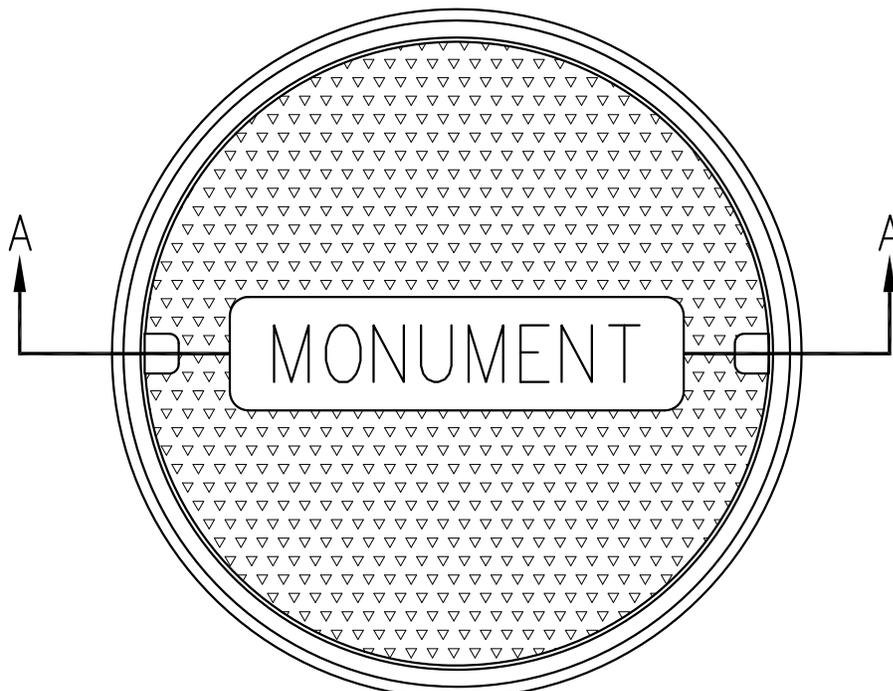
DRAWN BY: **K. TRAN**
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 APPROVED BY: **G. GOMEZ**
 DATE: **OCTOBER 2013**

MONUMENT

CITY OF SANTA CLARA

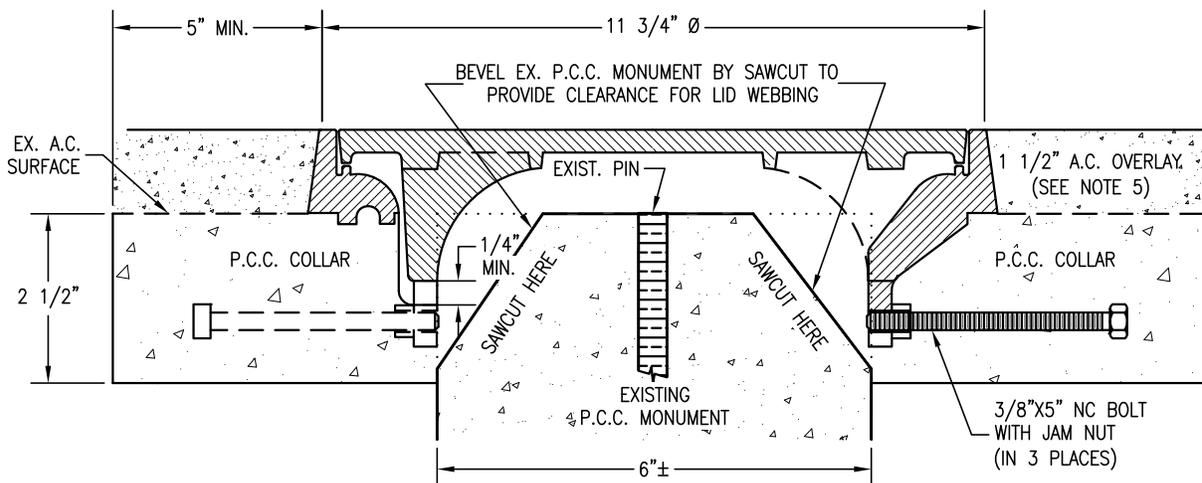
ST-20

PAGE: 20



TOP VIEW

NO SCALE



SECTION A-A

NO SCALE

NOTES:

1. WHERE AN EXISTING MONUMENT BOX CANNOT BE ADJUSTED TO GRADE WITH IRON EXTENSION RINGS, THE OLD BOX SHALL BE COMPLETELY REMOVED AND A NEW MONUMENT BOX INSTALLED. THIS ADJUSTMENT IS ALSO APPLICABLE TO MONUMENTS WHICH DO NOT HAVE MONUMENT BOXES.
2. MAINTAIN AT LEAST 1/4 INCH CLEARANCE BETWEEN LEGS OF THE NEW COVER AND THE CONCRETE COLLAR.
3. THE BEVELING OF THE EXISTING MONUMENT MUST BE SAW CUT. EXERCISE EXTREME CARE TO AVOID DAMAGE TO PIN.
4. ON STREETS WITH OVERLAY THICKNESS OF 2 1/2" OR 3", PROVIDE ADDITIONAL LOCKING GRADE RINGS COMBINED TO MATCH OVERLAY THICKNESS. ON STREETS WITH 2" OVERLAY, PROVIDE 2" GRADE RING. LOCKING GRADE RINGS AND COVER SHALL BE CHRISTY PRODUCTS FOR G5 TRAFFIC VALVE BOX OR APPROVED EQUAL (SEE DETAIL ST-20).
5. IF THE STABILITY OR LOCATION OF THE EXISTING MONUMENT IS AFFECTED BY THE SAWCUTTING, THE CONTRACTOR SHALL, AT HIS EXPENSE, FILE A CORNER RECORD WITH THE COUNTY SURVEYOR AND INSTALL A REPLACEMENT STANDARD MONUMENT.



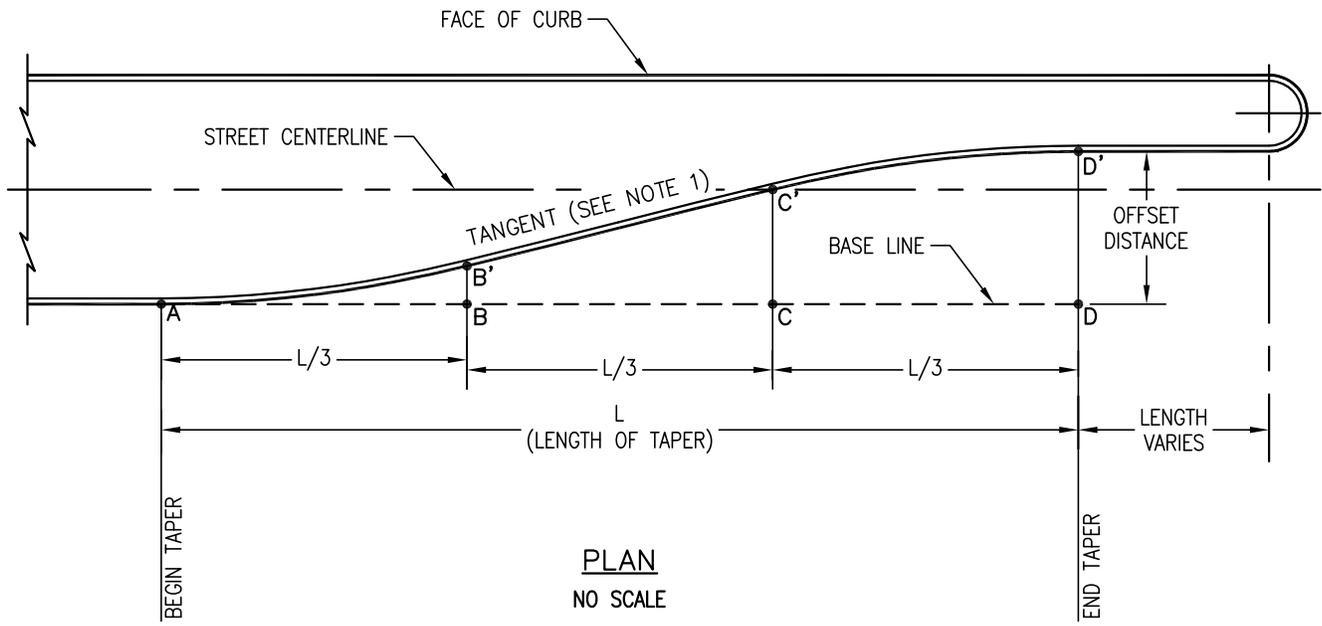
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DATE:	OCTOBER 2013

**SPECIAL MONUMENT BOX
ADJUSTMENT**

CITY OF SANTA CLARA

ST-21

PAGE: 21



LENGTH OF TAPER (FEET)			OFFSET DISTANCE (FEET)				
L=60'	L=90'	L=120'	DD'=10'	DD'=11'	DD'=12'		
DISTANCE FROM POINT "A"							
0	0	0	0	0	0		
5	7.5	10	0.16	0.17	0.19		
10	15.0	20	0.62	0.69	0.75		
15	22.5	30	1.41	1.55	1.69		
B'	20	30.0	40	2.50	2.75	3.00	B'
30	45.0	60	5.00	5.50	6.00		
C'	40	60.0	80	7.50	8.25	9.00	C'
45	67.5	90	8.59	9.45	10.31		
50	75.0	100	9.38	10.31	11.25		
55	82.5	110	9.84	10.83	11.81		
D'	60	90.0	120	10.00	11.00	12.00	D'

NOTES:

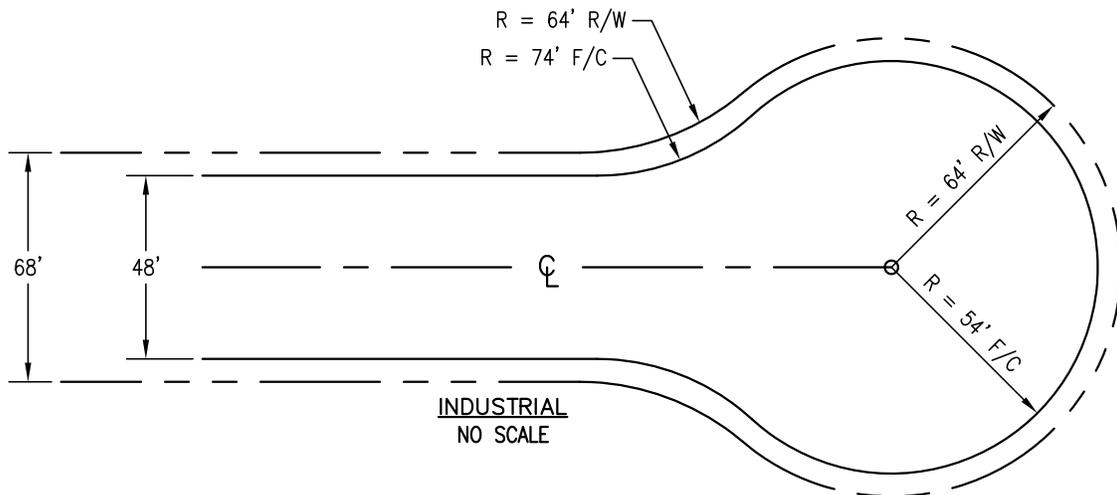
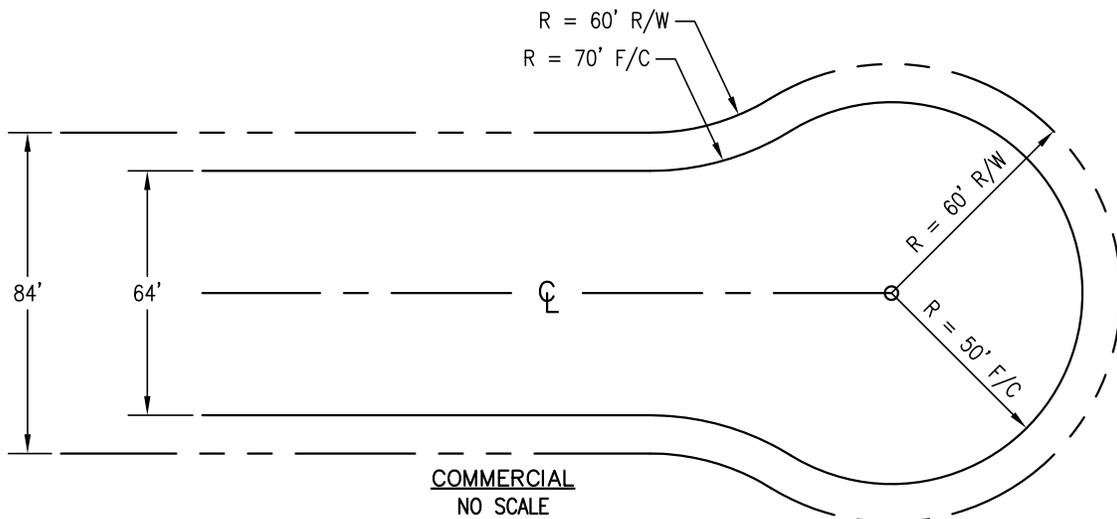
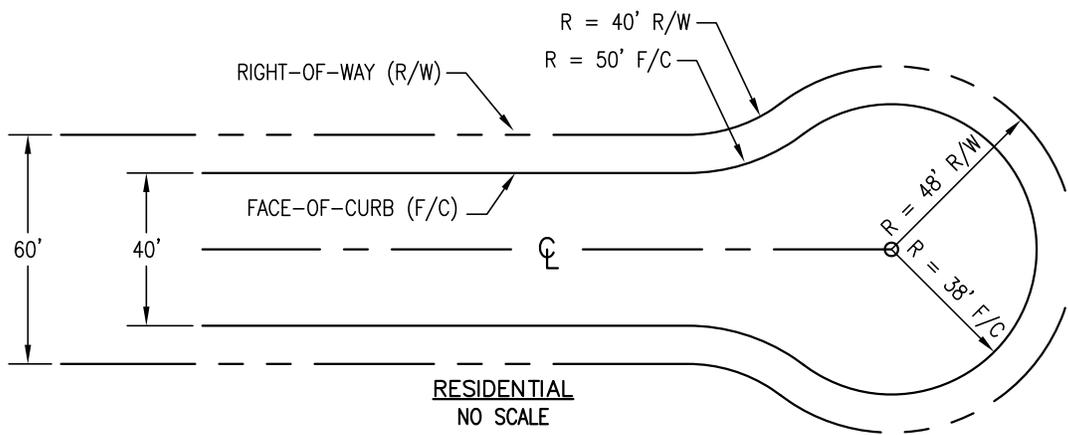
- WHERE STREET CENTERLINE IS A CURVE, NEITHER BASE LINE NOR TAPER BETWEEN B & C WILL BE A TANGENT. USE PROPORTIONAL OFFSETS FROM B TO C.
- L = AD = LENGTH OF TAPER
 AB = BC = CD = 1/3 L
 BB' = 1/3 CC' = 1/4 DD'
 AB' & C'D' ARE PARABOLIC CURVES



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 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

MEDIAN ISLAND TAPER
 CITY OF SANTA CLARA

ST-22
 PAGE: 22



NOTE: MINIMUM FRONTAGE ROAD WIDTH IS 36 FEET BETWEEN CURB FACES.



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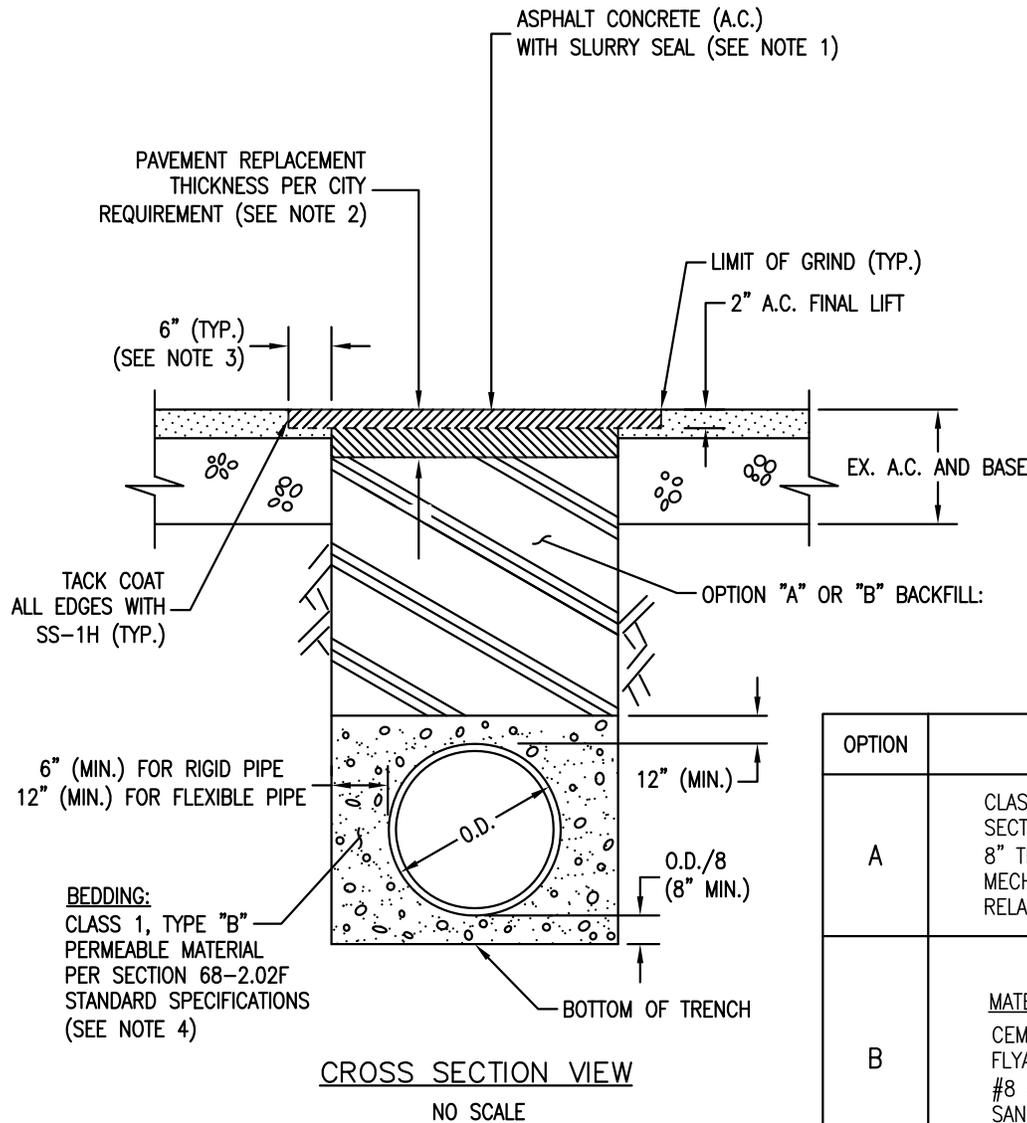
DATE: OCTOBER 2013

CUL-DE-SAC

CITY OF SANTA CLARA

ST-23

PAGE: 23



OPTION	DESCRIPTION																
A	CLASS 2 AGGREGATE BASE (3/4") PER SECTION 26 OF CALTRANS SPECIFICATIONS. 8" THICK (MAX.) UNCOMPACTED LIFTS. MECHANICALLY COMPACT TO AT LEAST 95% RELATIVE COMPACTION.																
B	<p><u>CONTROLLED DENSITY FILL (CDF)</u></p> <table border="1"> <thead> <tr> <th>MATERIAL</th> <th>ABS. VOL.</th> </tr> </thead> <tbody> <tr> <td>CEMENT</td> <td>0.15</td> </tr> <tr> <td>FLYASH</td> <td>1.98</td> </tr> <tr> <td>#8 AGGREGATE</td> <td>8.97</td> </tr> <tr> <td>SAND</td> <td>8.27</td> </tr> <tr> <td>WATER</td> <td>6.02</td> </tr> <tr> <td>AIR</td> <td>1.61</td> </tr> <tr> <td></td> <td><hr/>27.00</td> </tr> </tbody> </table>	MATERIAL	ABS. VOL.	CEMENT	0.15	FLYASH	1.98	#8 AGGREGATE	8.97	SAND	8.27	WATER	6.02	AIR	1.61		<hr/> 27.00
MATERIAL	ABS. VOL.																
CEMENT	0.15																
FLYASH	1.98																
#8 AGGREGATE	8.97																
SAND	8.27																
WATER	6.02																
AIR	1.61																
	<hr/> 27.00																

NOTES:

1. SLURRY SEAL SHALL BE EXTENDED 12" BEYOND THE A.C. PAVEMENT REPLACEMENT LIMIT.
2. A.C. PAVEMENT REPLACEMENT SHALL BE FULL DEPTH A.C. WITH THICKNESS PER CITY REQUIREMENT. SEE DETAIL ST-26 FOR TRENCH PAVEMENT THICKNESS REQUIREMENTS OF A PARTICULAR STREET.
3. THE 6" BENCH SECTION FOR A.C. SHALL BE GROUND AND REMOVED IMMEDIATELY PRIOR TO FINISH PAVING OPERATIONS.
4. BEDDING MATERIAL SHALL CONSIST ENTIRELY OF CRUSHED, ANGULAR ROCK (NO ROUNDED PEA GRAVEL ALLOWED) FOR FLEXIBLE PIPE. FOR WATER MAINS AND LATERALS, BEDDING SHALL BE SAND. MATERIAL SHALL BE INSTALLED IN MAX. 8" LIFTS AND COMPACTED WITH VIBRATORY COMPACTOR.



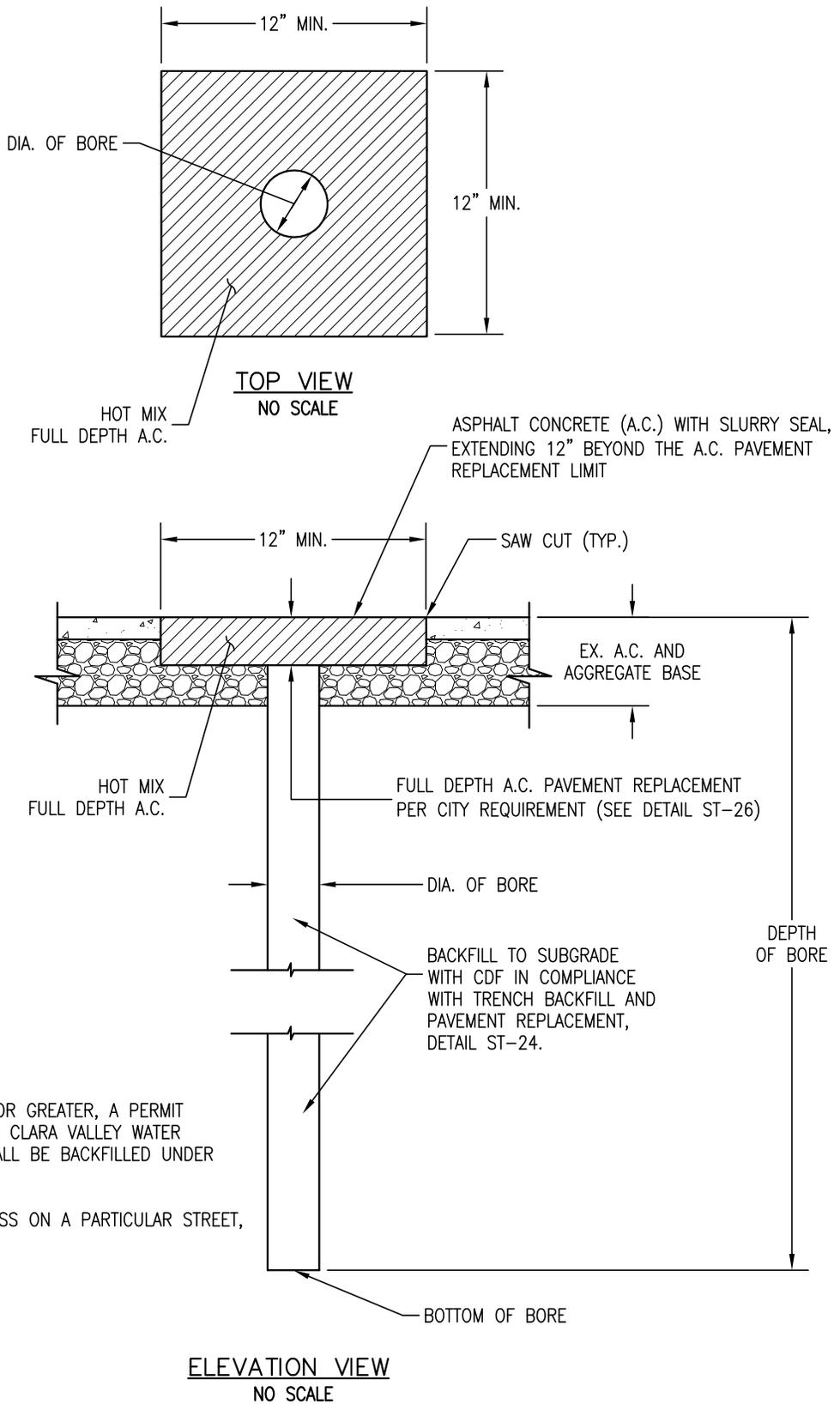
DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: DECEMBER 2014

TRENCH BACKFILL AND PAVEMENT REPLACEMENT

CITY OF SANTA CLARA

ST-24

PAGE: 24



NOTES:

1. IF DEPTH OF BORE IS 45 FEET OR GREATER, A PERMIT SHALL BE OBTAINED FROM SANTA CLARA VALLEY WATER DISTRICT (SCVWD) AND BORE SHALL BE BACKFILLED UNDER SCVWD INSPECTION.
2. FOR THE REQUIRED A.C. THICKNESS ON A PARTICULAR STREET, SEE DETAIL ST-26.



DRAWN BY:	K. TRAN
CHECKED BY:	F. AMIN
APPROVED BY:	G. GOMEZ
DATE:	OCTOBER 2013

SOIL BORING BACKFILL AND PAVEMENT REPLACEMENT
CITY OF SANTA CLARA

ST-25
PAGE: 25

**STREETS REQUIRING 10 INCHES OF ASPHALT CONCRETE
FOR PAVEMENT RESTORATION**

Agnew Road
 Bassett Street
 Benton Street (Lincoln to West City Limits)
 Betsy Ross Drive
 Bowers Avenue
 Bunker Hill Lane
 Calle de Luna
 Calle del Mundo
 Calle del Sol
 De La Cruz Boulevard
 Democracy Way
 Freedom Circle
 Great America Parkway
 Great America Way (See note 1)
 Homestead Road
 Hope Drive
 Juliette Lane
 Kiely Boulevard
 Kifer Road
 Lafayette Street
 Laurelwood Road
 Lick Mill Boulevard
 Martin Avenue
 Mission College Boulevard
 Monroe Street
 Norman Avenue
 Old Ironsides Drive
 Old Mountain View-Alviso Road
 Patrick Henry Drive
 Pruneridge Avenue
 Russell Avenue
 Saratoga Avenue
 Scott Boulevard
 Stevens Creek Boulevard
 Tasman Drive
 Thomas Road
 Walsh Avenue
 Washington Street (South of Poplar)
 Winchester Boulevard

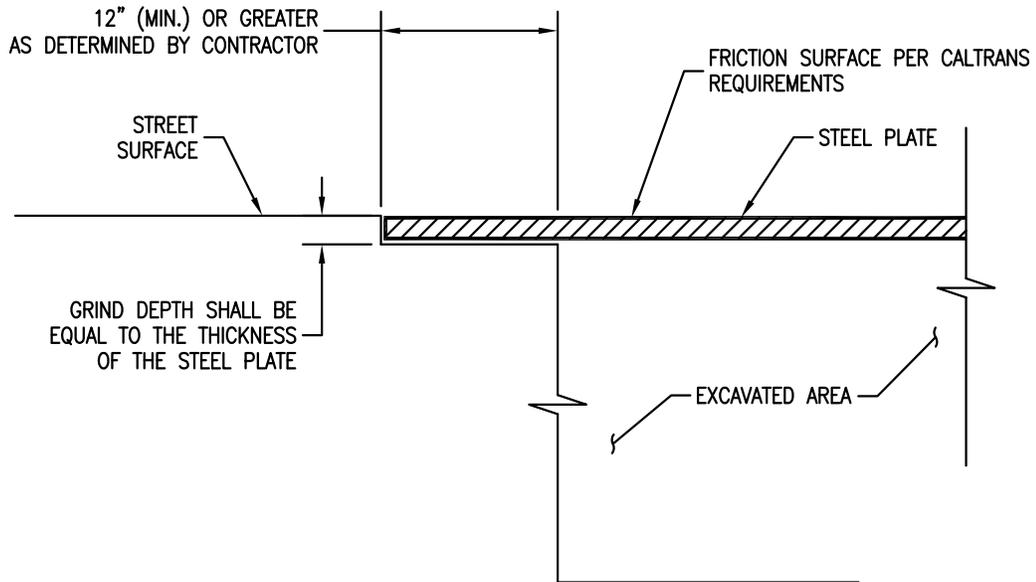
- NOTES: 1. Due to the presence of potentially hazardous materials in the ground under this road, special permission must be obtained prior to any work.
2. All streets, other than the streets listed above, require 8 inches of asphalt concrete for pavement restoration.



DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: DECEMBER 2014

**ASPHALT CONCRETE PAVEMENT
THICKNESS REQUIREMENTS**
 CITY OF SANTA CLARA

ST-26
 PAGE: 26



CROSS SECTION VIEW

NO SCALE

NOTES:

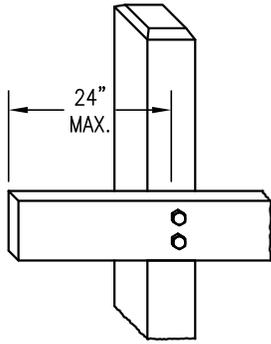
1. THE PLATE BENCHING DETAIL (SHOWN ABOVE) SHALL BE USED ON STREETS WITH A POSTED SPEED LIMIT OF 35 MPH OR HIGHER.
2. NAILS, COLD PATCH ASPHALT, ETC., MAY BE USED TO HOLD THE STEEL PLATE IN PLACE, SUBJECT TO THE APPROVAL OF THE CITY ENGINEER OR DESIGNEE.
3. IF THE GAP BETWEEN THE STREET SURFACE AND THE STEEL PLATE EXCEEDS 1 INCH, THE GAP SHALL BE FILLED WITH COLD PATCH ASPHALT.
4. THE EXCAVATION AREA SHALL BE BACKFILLED, AND THE PAVEMENT SHALL BE RESTORED WITHIN 5 WORKING DAYS OF THE COMPLETION OF THE PERMITTED WORK.



DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

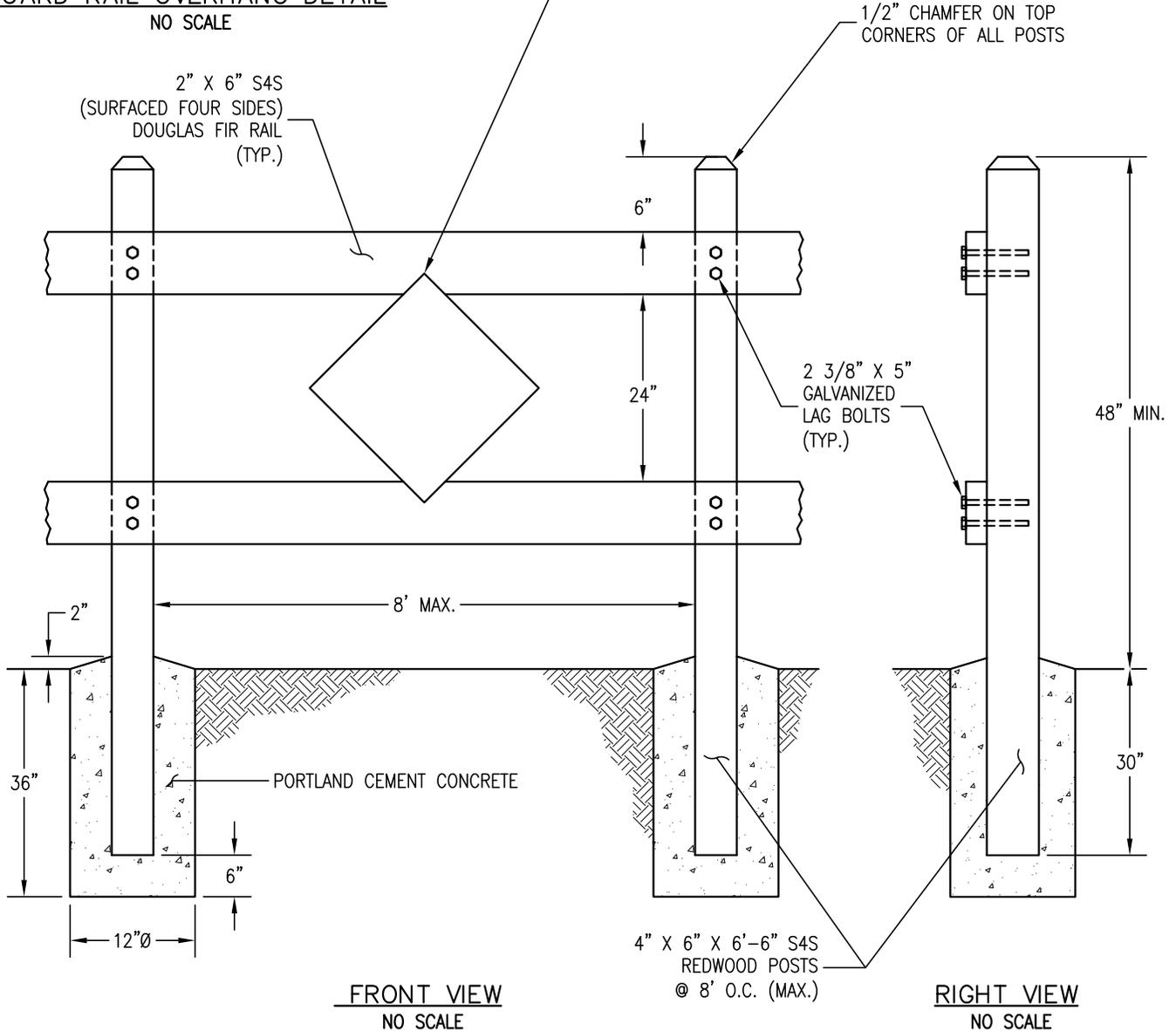
STEEL PLATE BENCHING
 CITY OF SANTA CLARA

ST-27
 PAGE: 27



GUARD RAIL OVERHANG DETAIL
NO SCALE

24" X 24" REFLECTORIZED SIGN SHALL BE NO. 2271 YELLOW SCOTCHLITE OR APPROVED EQUAL ON .080 ALUMINUM SECURELY ATTACHED AS SHOWN (1 REQUIRED AT MIDPOINT OF EACH SECTION)



FRONT VIEW
NO SCALE

RIGHT VIEW
NO SCALE

NOTES:

1. GUARD RAILS AND POSTS SHALL BE PAINTED WITH TWO (2) COATS OF EXTERIOR WHITE WOOD PAINT.
2. BARRICADE SHALL EXTEND 2' BEYOND FACE OF CURB.



DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

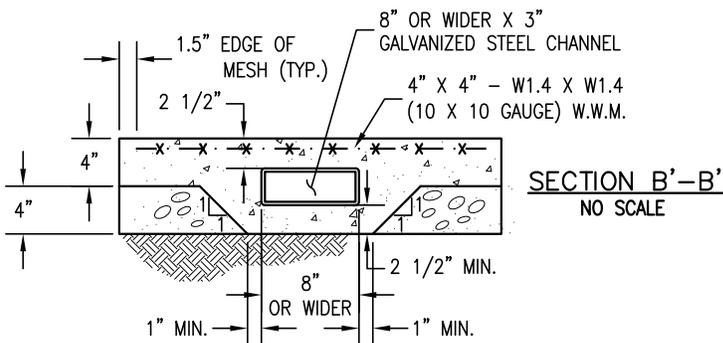
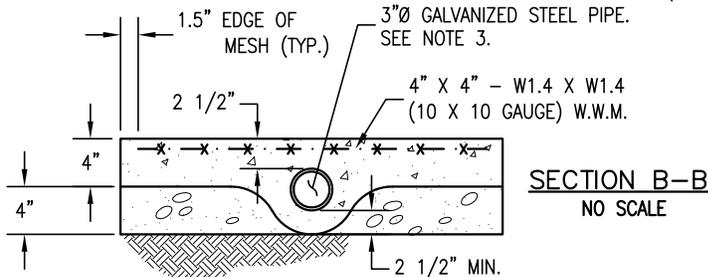
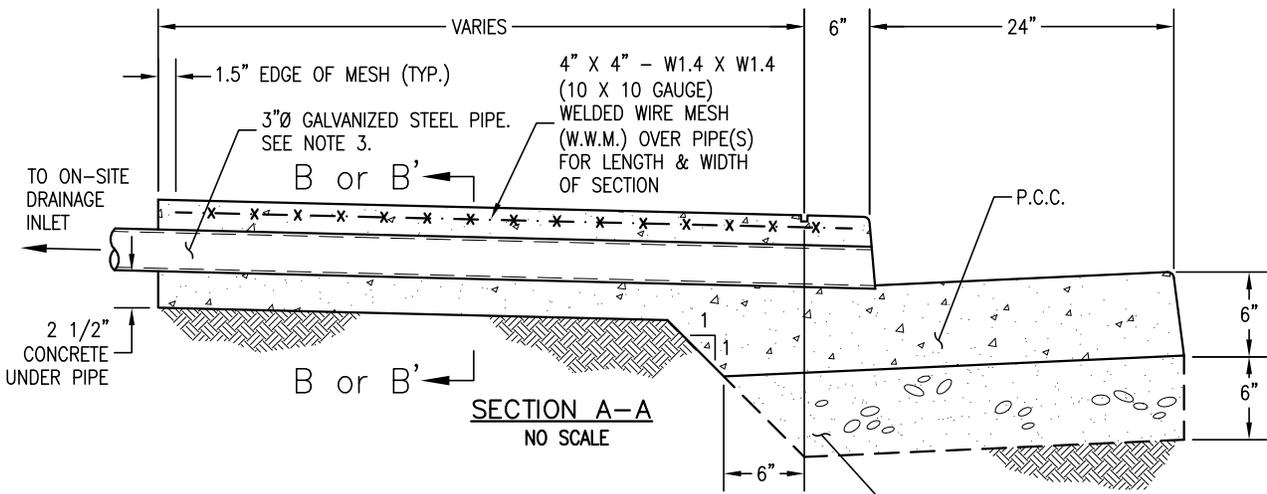
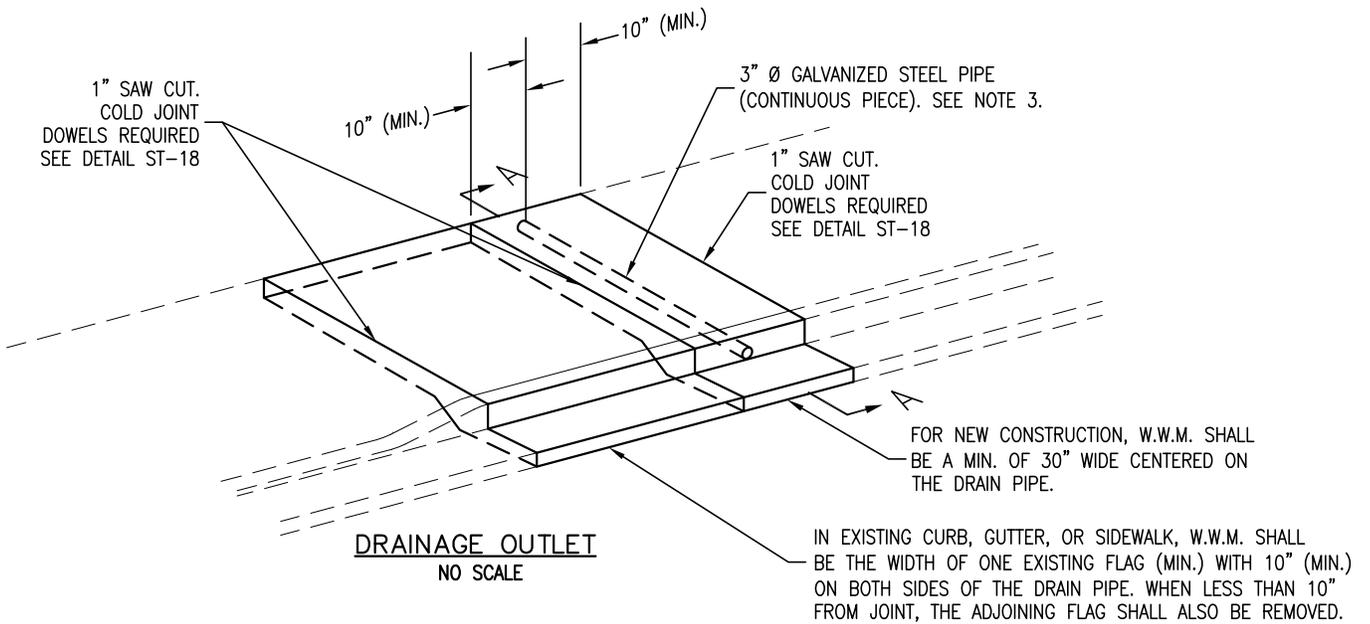
STREET BARRICADE
 CITY OF SANTA CLARA

ST-28
 PAGE: 28

Department of Public Works
City of Santa Clara, CA

STANDARD DETAILS

STORM DRAIN SECTION DETAILS SD-1 TO SD-8



NOTES:

1. STEEL PIPE OR CHANNEL SHALL BE ONE CONTINUOUS LENGTH FROM PROPERTY LINE TO CURB FACE.
2. WHERE TWO PIPES ARE ALLOWED, PIPE SPACING SHALL MAINTAIN A MINIMUM CLEAR DISTANCE OF TWO (2) INCHES.
3. WHERE THREE OR MORE PIPES ARE REQUIRED, A RECTANGULAR 8" OR WIDER X 3" GALVANIZED STEEL CHANNEL SHALL BE USED, AND SHALL MAINTAIN THE MINIMUM CLEAR DISTANCES. SEE SECTION B'-B'.
4. CURB FACE DRAIN OUTLET MAY BE USED ONLY AT LOCATIONS APPROVED BY THE CITY ENGINEER.



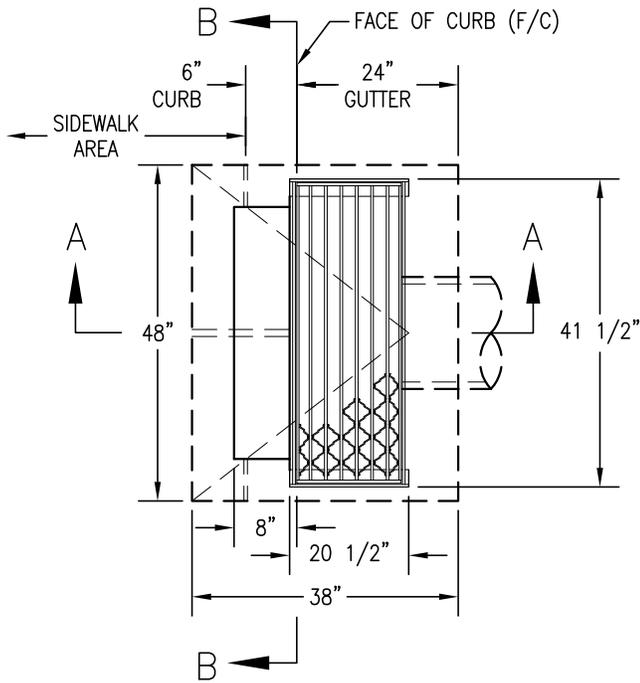
DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

CURB FACE DRAINAGE OUTLET

CITY OF SANTA CLARA

SD-1

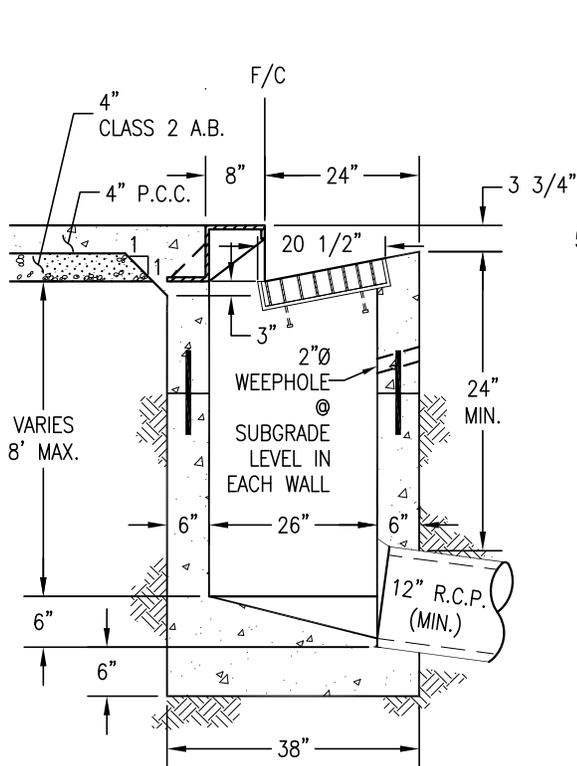
PAGE: 29



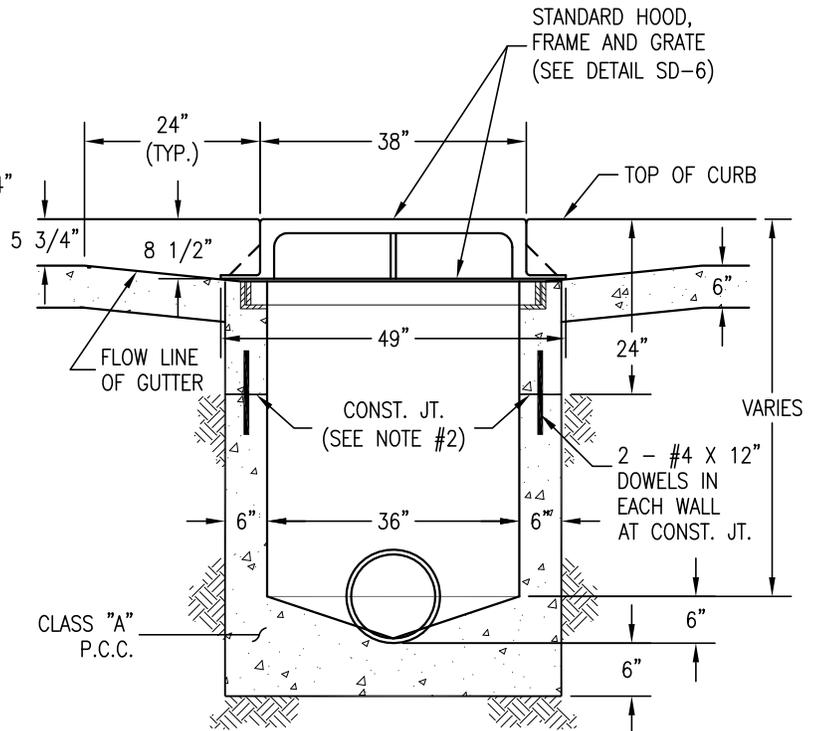
PLAN VIEW
NO SCALE

NOTES:

1. PRECAST CONCRETE CATCH BASIN (C.B.) MAY BE USED SUBJECT TO WRITTEN APPROVAL OF THE CITY ENGINEER.
2. C.B. WALLS MAY BE POURED TO AN ELEVATION NOT LESS THAN 2'-0" BELOW TOP OF CURB. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FRAME IN AND POUR THE UPPER 2'-0" OF THE C.B. MONOLITHICALLY WITH CURB AND GUTTER.
3. WHEN CURB AND SIDEWALK ARE NOT POURED MONOLITHICALLY, CONCRETE CURB POUR SHALL ALSO ENCASE SIDES AND BACK OF HOOD A MINIMUM OF 12" WIDE AND 12" DEEP. SAID ENCASEMENT SHALL BE POURED IN FORM TO PROVIDE STRAIGHT EDGES.



SECTION A-A
NO SCALE



SECTION B-B
NO SCALE



DRAWN BY: K. TRAN

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APPROVED BY: G. GOMEZ

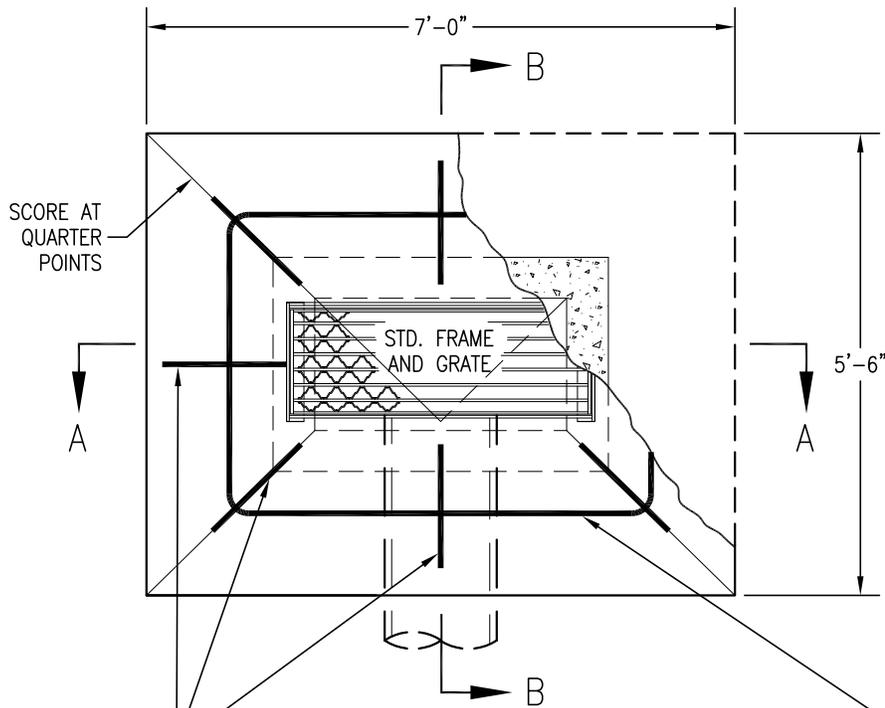
DATE: OCTOBER 2013

CURB INLET CATCH BASIN

CITY OF SANTA CLARA

SD-2

PAGE: 30



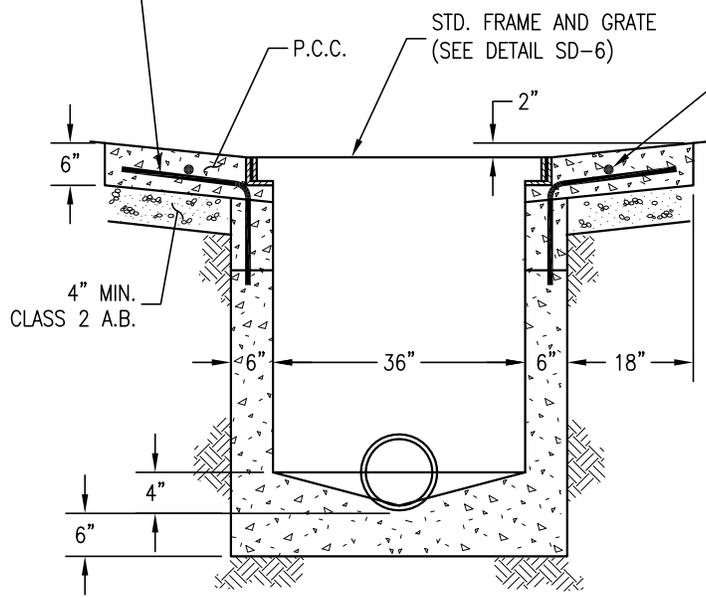
NOTES:

1. WHERE VALLEY GUTTER MEETS INLET APRON, SHAPE APRON TO CONFORM TO VALLEY GUTTER.
2. PRECAST INLETS MAY BE USED SUBJECT TO WRITTEN APPROVAL OF THE CITY ENGINEER.

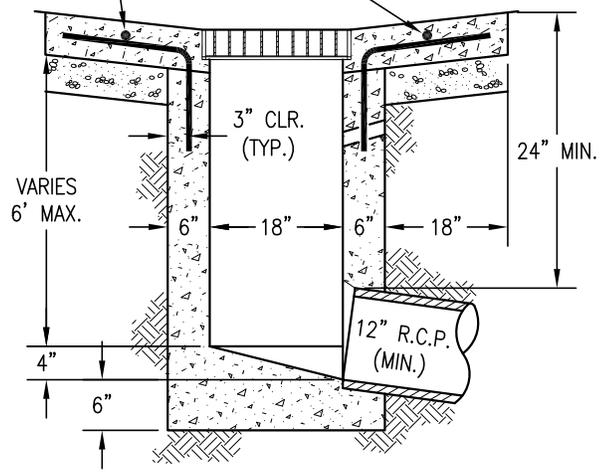
PLAN VIEW
NO SCALE

PLACE 8 - #4 X 18"
REBARS SYMMETRICALLY

1 - #4 X 43" 60"
REBAR WHERE SHOWN



SECTION A-A
NO SCALE



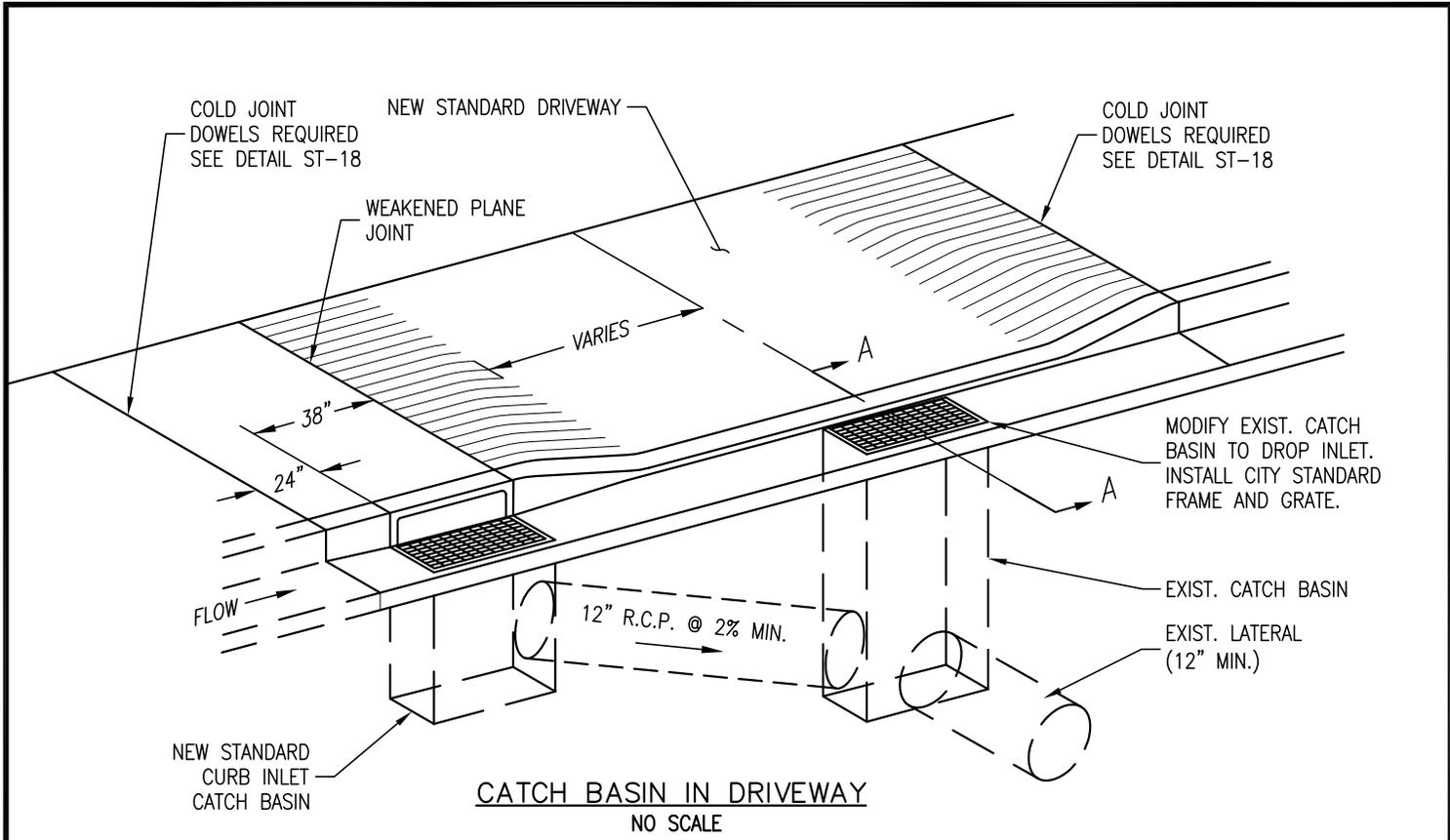
SECTION B-B
NO SCALE



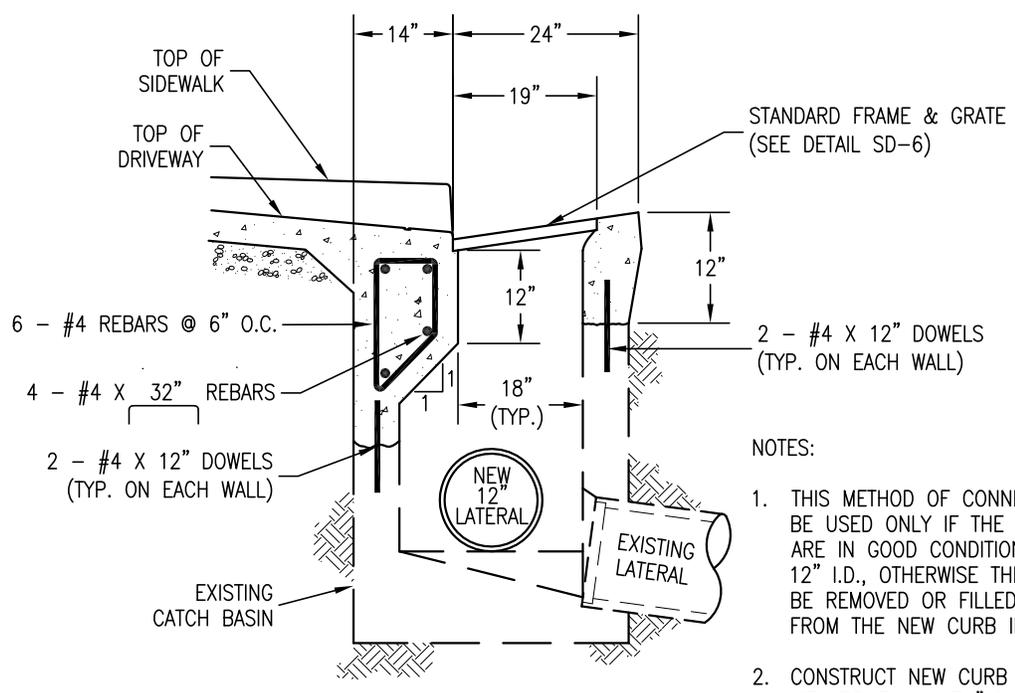
DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

DROP INLET CATCH BASIN
 CITY OF SANTA CLARA

SD-4
 DATE: 32



CATCH BASIN IN DRIVEWAY
NO SCALE

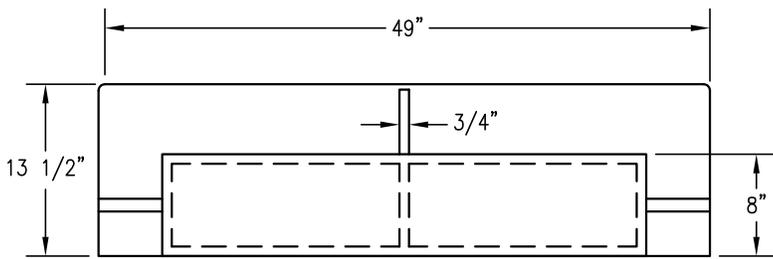


SECTION A-A
NO SCALE

NOTES:

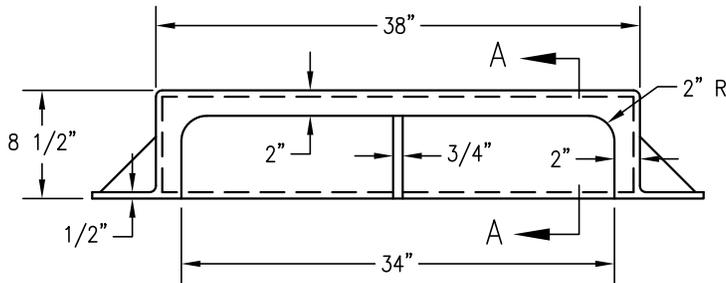
1. THIS METHOD OF CONNECTING A NEW CURB INLET IS TO BE USED ONLY IF THE EXISTING CATCH BASIN AND LATERAL ARE IN GOOD CONDITION AND THE LATERAL IS AT LEAST 12" I.D., OTHERWISE THE EXISTING CATCH BASIN SHALL BE REMOVED OR FILLED IN AND A NEW LATERAL INSTALLED FROM THE NEW CURB INLET TO THE NEAREST MANHOLE.
2. CONSTRUCT NEW CURB INLET ON THE UPSTREAM SIDE OF NEW DRIVEWAY OR "LONGER UPSTREAM RUN" SIDE OF DRIVEWAY IF ORIGINAL CATCH BASIN IS CONSTRUCTED AT A LOW POINT.

	DRAWN BY: K. TRAN	ADAPTION FOR EXISTING CATCH BASIN IN NEW DRIVEWAY	SD-5
	CHECKED BY: F. AMIN		
	APPROVED BY: G. GOMEZ		
	DATE: OCTOBER 2013		
		CITY OF SANTA CLARA	DATE: 33

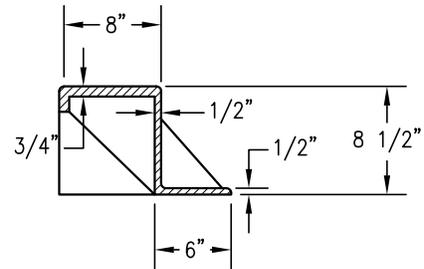


HOOD - PLAN VIEW
NO SCALE

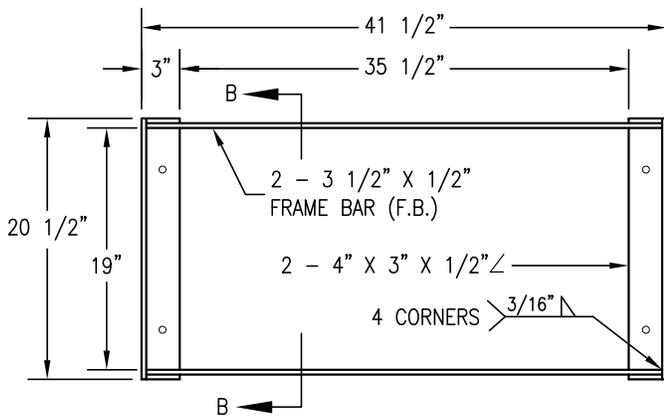
- NOTES:**
1. HOOD SHALL BE CAST IRON AND BE EQUAL TO SOUTH BAY FOUNDRY SBF 1902. WEIGHT OF HOOD = 175 LBS (APPROX.)
 2. CASTING SHALL BE GIVEN A HOT ASPHALT DIP.
 3. FRAME & GRATE SHALL BE EQUAL TO METALFAB M-1001.
 4. MATERIAL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
 5. WEIGHT OF FRAME = 80 LBS. (TYP.)
WEIGHT OF GRAGE = 130 LBS. (TYP.)



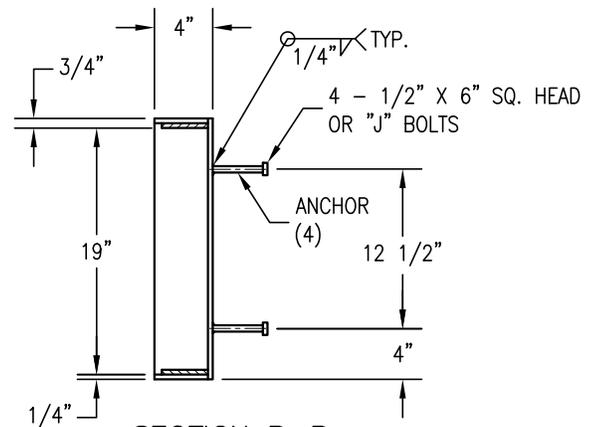
HOOD - FRONT VIEW
NO SCALE



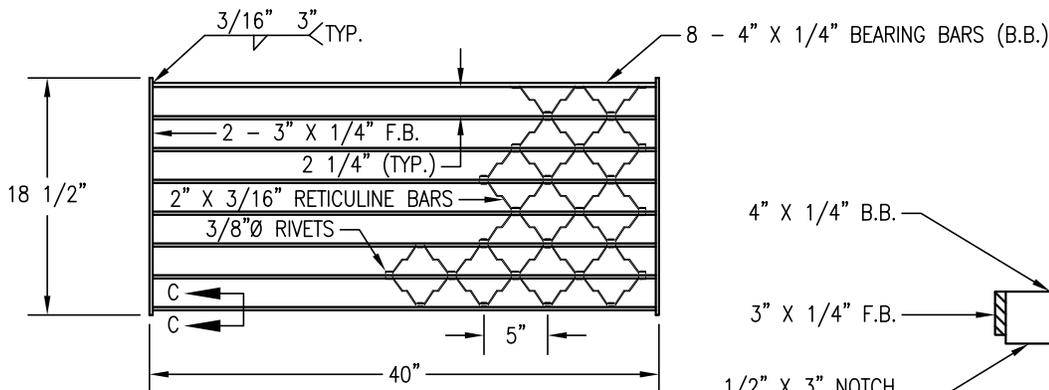
SECTION A-A
NO SCALE



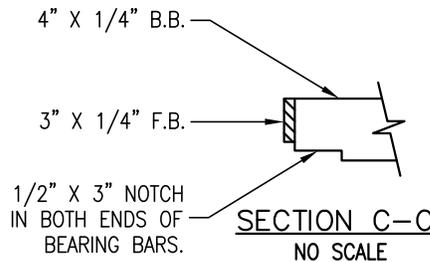
FRAME - PLAN VIEW
NO SCALE



SECTION B-B
NO SCALE



GRATE - PLAN VIEW
NO SCALE



SECTION C-C
NO SCALE

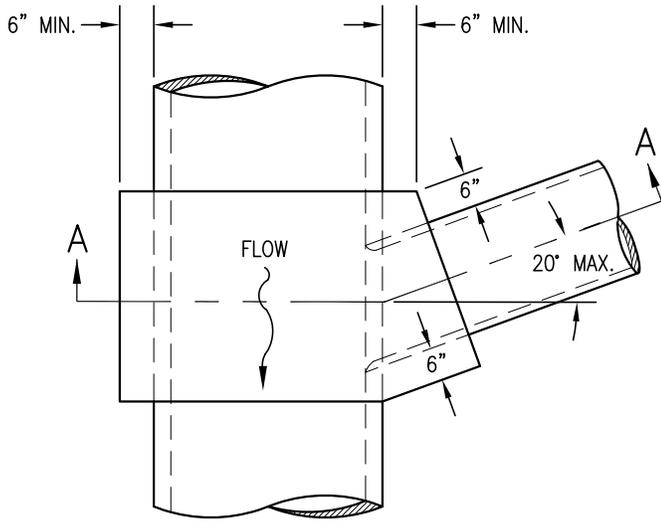


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 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

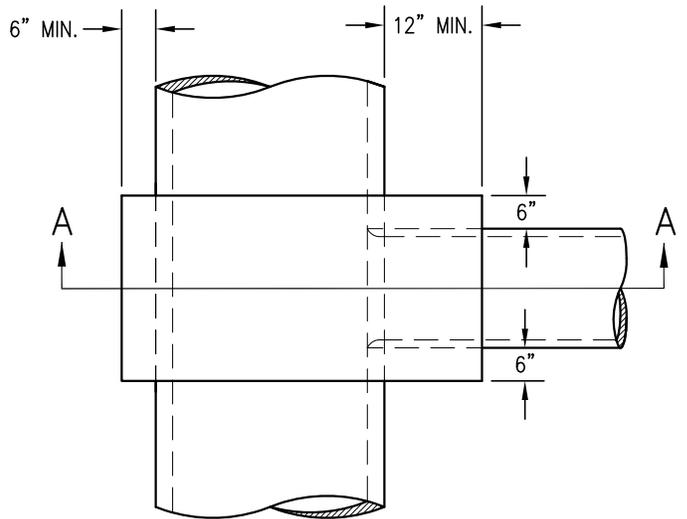
**CATCH BASIN HOOD,
FRAME AND GRATE**

CITY OF SANTA CLARA

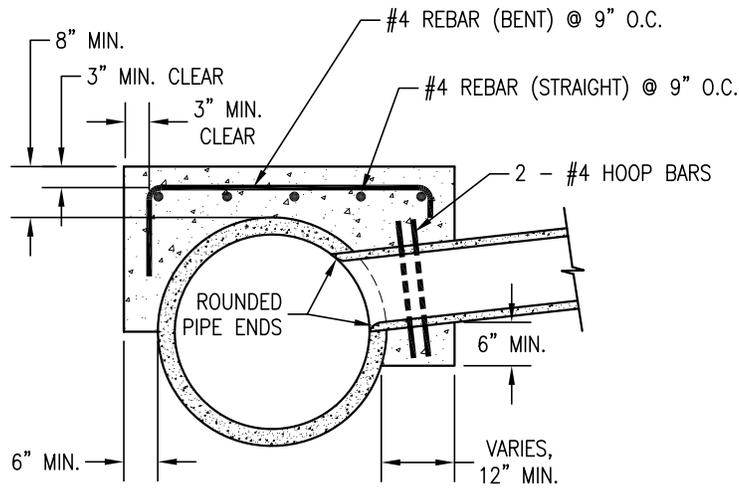
SD-6



SKewed CONNECTION
PLAN VIEW
 NO SCALE



PERPENDICULAR CONNECTION
PLAN VIEW
 NO SCALE



SECTION A-A
 NO SCALE

NOTES:

1. CONCRETE LUG CONNECTION MAY BE USED ONLY AT LOCATIONS APPROVED BY THE CITY ENGINEER.
2. THE LARGER PIPE SHALL NOT BE LESS THAN 48" I.D.
3. THE SMALLER PIPE SHALL NOT BE LESS THAN 12" I.D. OR MORE THAN 15" I.D.
4. INVERT OF SMALLER PIPE SHALL NOT BE LOWER THAN MID-HEIGHT OF LARGER PIPE.
5. THE END OF THE CONNECTING PIPE SHALL NOT PROJECT INTO THE WATERWAY OF THE LARGER PIPE.
6. CONCRETE SHALL BE CLASS "A".



DRAWN BY: **K. TRAN**
 CHECKED BY: **F. AMIN**
 APPROVED BY: **G. GOMEZ**
 DATE: **OCTOBER 2013**

CONCRETE LUG

CITY OF SANTA CLARA

SD-7

PAGE: 35

CONNECTION TO PUBLIC STORM DRAIN SYSTEM

CASE A: CONNECTION TO MAINS LESS THAN 48" IN DIAMETER

1. Lateral connection shall require a manhole.
2. Lateral diameter shall be 12" or greater. A lateral diameter greater than 50% of the main diameter or greater than 18" shall require the review and approval of the City Engineer.
3. An accessible cleanout structure at the property line is NOT required.
4. A lateral that connects directly from an on-site collection system to a City manhole, shall be maintained by the owner of the serviced property.

CASE B: CONNECTION TO MAINS 48" IN DIAMETER OR GREATER

1. Lateral connection shall require a junction structure designed by a registered Civil Engineer.
2. Lateral diameter shall be 12" or greater. A lateral diameter greater than 50% of the main diameter or greater than 18" shall require the review and approval of the City Engineer.
3. An accessible cleanout structure at the property line is NOT required.
4. A lateral that connects directly from an on-site collection system to a City junction box, shall be maintained by the owner of the serviced property.

CASE C: CONNECTION OF PRIVATE PIPE SYSTEM TO STREET CATCH BASIN

1. Pipe connection shall be made at the back of the existing catch basin.
2. Pipe diameter shall not be less than 4" nor greater than 12".
3. Cleanout structure at the property line is NOT required.
4. Pipe from site to the catch basin shall be maintained by the owner of the serviced property.

CASE D: CURB FACE DRAINAGE OUTLET

1. A "Curb Face Drainage Outlet" (see Standard Details SD-1) may be used only at locations approved by the City Engineer.
2. The pipe shall be 3"-diameter galvanized steel.
3. The channel shall be 8" or wider by 3" high galvanized steel.
4. A cleanout structure at the property line is NOT required.
5. The "Curb Face Drainage Outlet" shall be maintained by the owner of the serviced property.

NOTE: Backflow preventive devices may be required by the City Engineer when it is determined that the potential for flooding due to the surcharge of the storm drainage system exists. These devices shall be located within the private property (outside the public right-of-way and City easements) and shall be maintained by the owner of the serviced property (see Design Criteria).



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DATE:	OCTOBER 2013

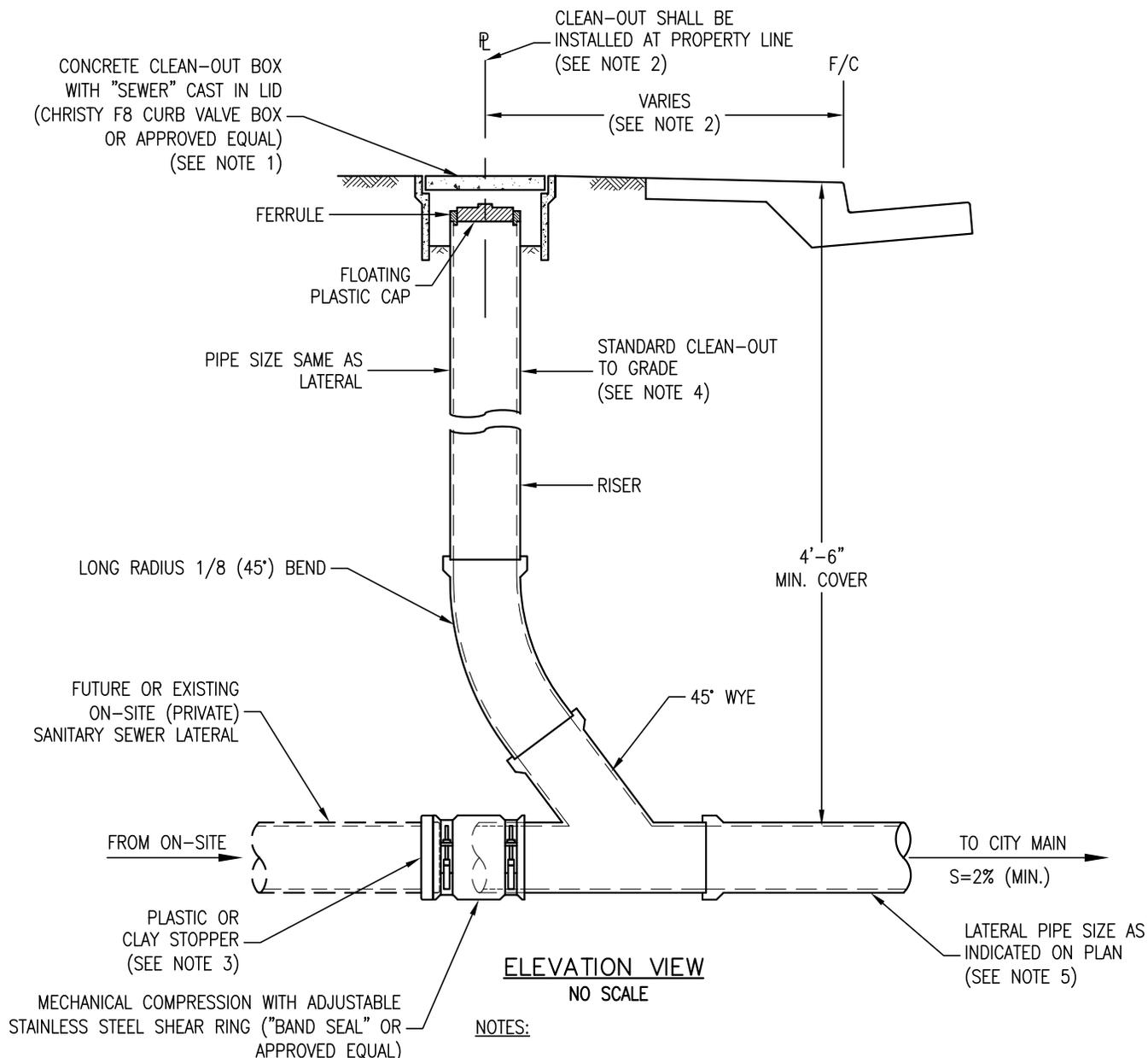
<p>CONNECTION TO PUBLIC STORM DRAIN SYSTEM</p>
<p>CITY OF SANTA CLARA</p>

<p>SD-8</p>
<p>PAGE: 36</p>

Department of Public Works
City of Santa Clara, CA

STANDARD DETAILS

SANITARY SEWER SECTION DETAILS SS-1 TO SS-6



NOTES:

1. IF CLEAN-OUT IS INSTALLED IN DRIVEWAY OR FOR 6" LATERALS, USE CHRISTY G5 TRAFFIC VALVE BOX WITH "SEWER" CAST IN LID (OR APPROVED EQUAL). BOX SHALL HAVE A CONCRETE COLLAR. (SEE DETAIL DS-6 FOR DETAILS OF CONCRETE COLLAR)
2. WHEN PROPERTY LINE IS AT BACK OF WALK, INSTALL CLEAN-OUT BEHIND BACK OF WALK.
3. PROVIDE STOPPER WHEN THERE IS NO ON-SITE LATERAL CONNECTION.
4. FOR NEW LATERALS, THE MATERIAL FOR THE CLEANOUT PIPE SHALL MATCH THE MATERIAL FOR THE LATERAL. SEE CITY'S SPECIFICATIONS FOR MATERIALS. FOR EXISTING LATERALS, THE REPAIR OR REPLACEMENT MATERIAL FOR THE CLEANOUT PIPE SHALL COMPLY WITH STANDARDS FROM THE LATEST EDITION OF THE CALIFORNIA PLUMBING CODE. USE APPROPRIATE COUPLINGS.
5. FOR 8" OR LARGER LATERALS, A STANDARD MANHOLE SHALL BE INSTALLED AT OR NEAR THE PROPERTY LINE.



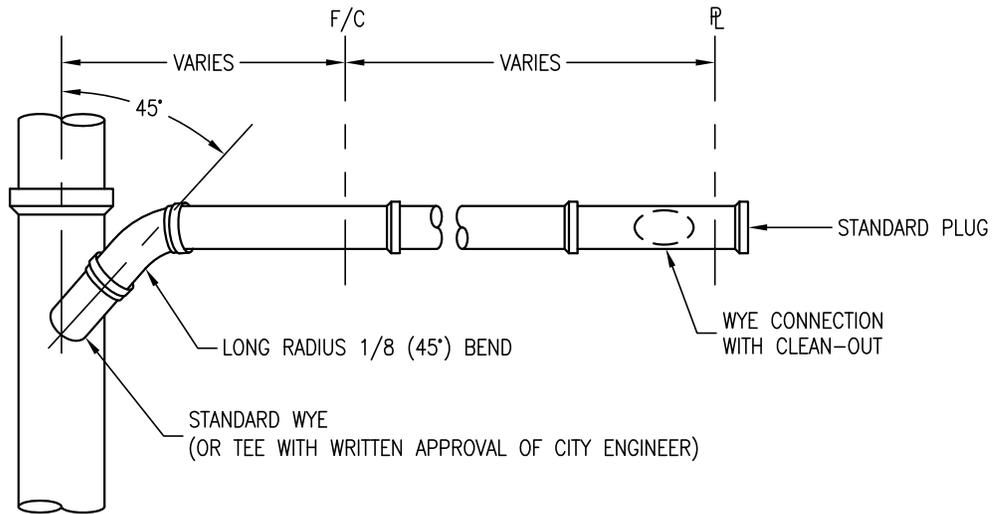
DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: DECEMBER 2014

**4" & 6" SANITARY SEWER
 CLEAN-OUT**

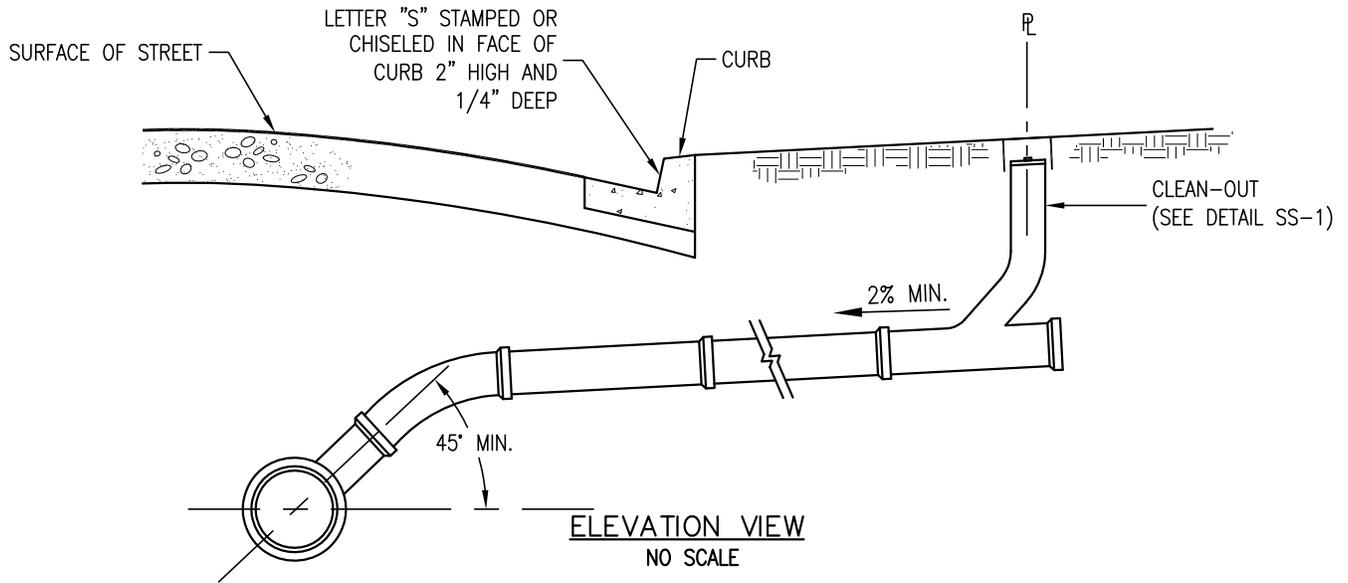
CITY OF SANTA CLARA

SS-1

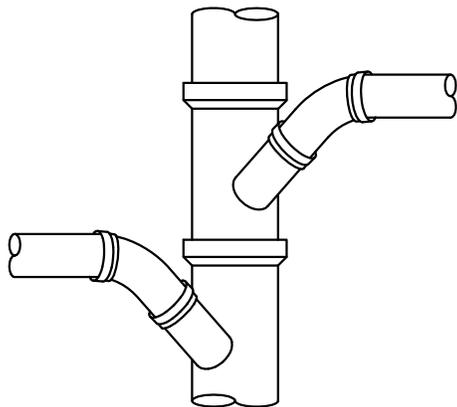
PAGE: 37



PLAN VIEW
NO SCALE



ELEVATION VIEW
NO SCALE



OPPOSITE LATERALS – PLAN VIEW
NO SCALE

NOTES:

1. IN NO CASE SHALL A LATERAL CONNECT TO THE SANITARY SEWER MAIN DIRECTLY ON TOP OF THE PIPE.
2. ONLY ONE CONNECTION MAY BE MADE IN EACH SECTION OF SANITARY SEWER MAIN.
3. SANITARY SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 2%.
4. ALL LATERAL PIPE JOINTS SHALL BE COMPRESSION TYPE.
5. LATERAL SHALL EXTEND TO PROPERTY LINE UNLESS OTHERWISE NOTED, AND A CLEANOUT SHALL BE INSTALLED AT THE PROPERTY LINE. (SEE DETAIL SS-1)



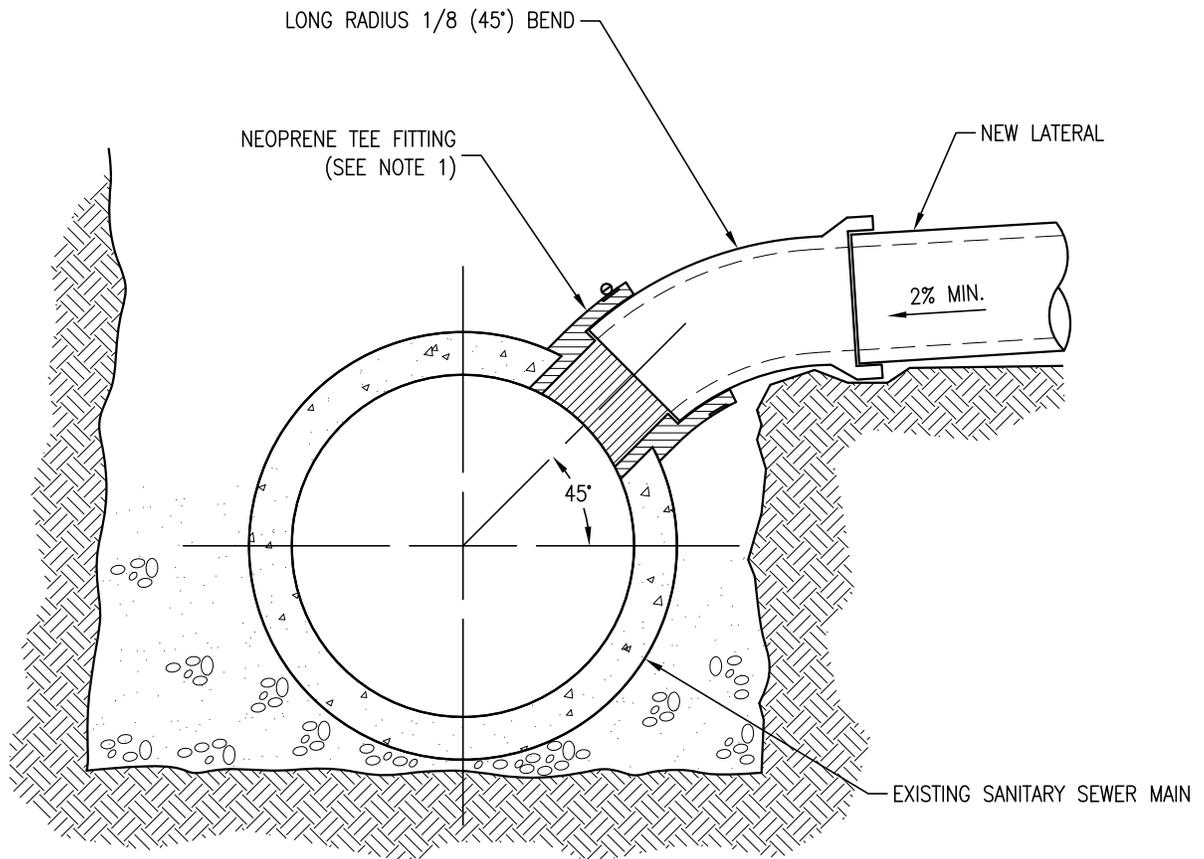
DRAWN BY: K. TRAN
 CHECKED BY: F. AMIN
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

**4" & 6" SANITARY SEWER
LATERAL CONNECTION**

CITY OF SANTA CLARA

SS-2

PAGE: 38



NOTES:

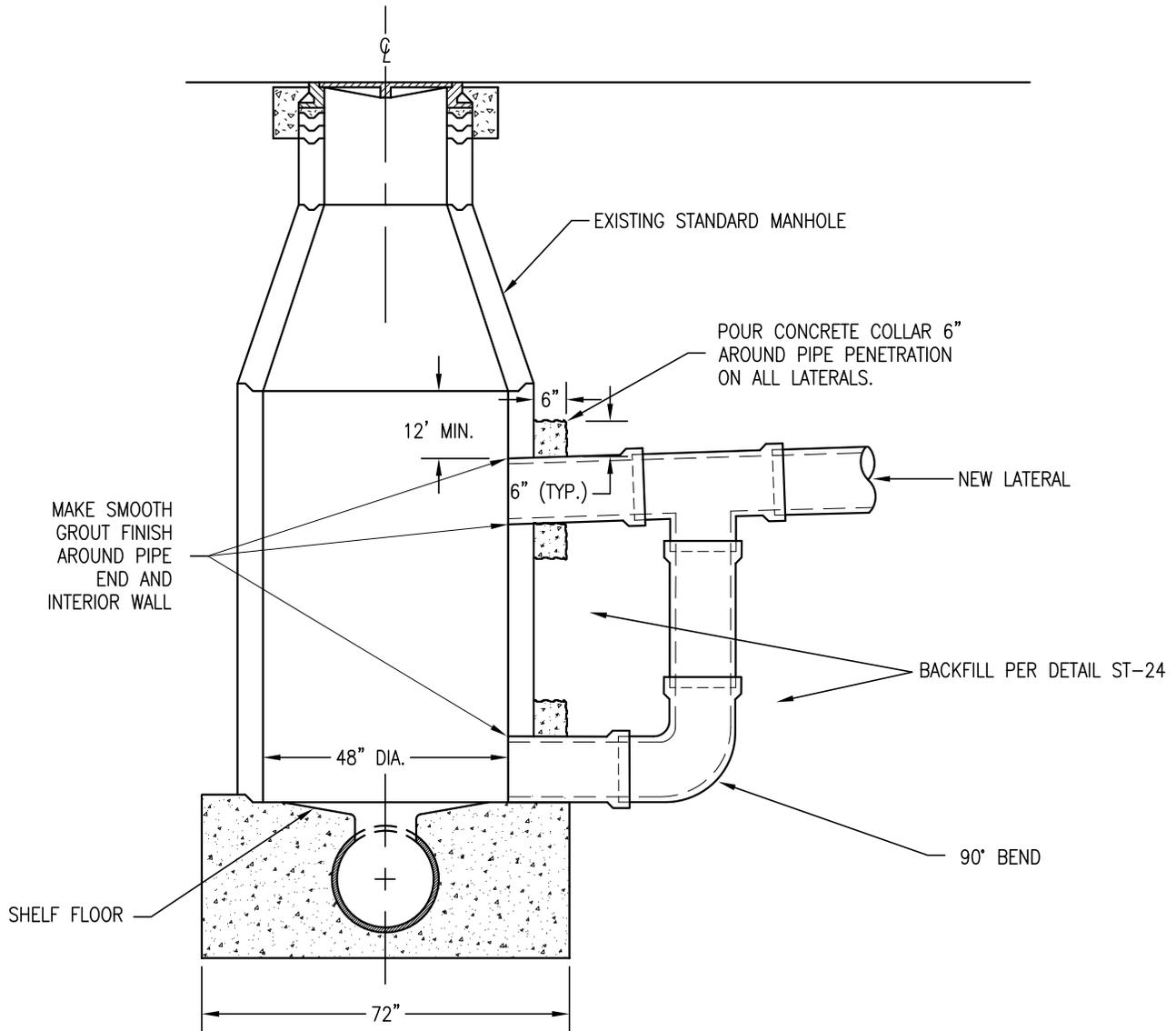
1. SYNTHETIC RUBBER CONNECTION FITTING WITH WEDGED INSERT AND MECHANICALLY TIGHTENED STAINLESS STEEL BAND. HOLE TO BE DRILLED WITH A POWER DRIVEN CUTTER PRODUCING A SMOOTH SURFACE ("TAP-TITE" OR APPROVED EQUAL).
2. THIS LATERAL TAP CONNECTION DETAIL SHALL BE APPLICABLE ONLY TO LATERALS WITH INSIDE PIPE DIAMETER OF 4" OR 6". LATERALS GREATER THAN 6" SHALL CONNECT TO MAINS IN MANHOLES.
3. MORE THAN ONE LATERAL TAP CONNECTION IN ANY SECTION OF SANITARY SEWER MAIN IS SUBJECT TO THE WRITTEN APPROVAL OF THE CITY ENGINEER.
4. WHERE 6" LATERALS CONNECT TO 8" MAINS, OR 4" LATERALS CONNECT TO 6" MAINS, THE MAIN AND TEE FITTING SHALL BE ENCASED WITH CONCRETE TO A LEVEL OF THREE INCHES ABOVE THE TOP OF THE SANITARY SEWER MAIN.
5. IF THE SANITARY SEWER MAIN IS NOT IN SOUND CONDITION, THE ENTIRE SECTION OF THE MAIN SHALL BE REMOVED AND REPLACED, AND THE LATERAL SHALL BE CONNECTED PER CITY STANDARD "4" & 6" SANITARY SEWER LATERAL CONNECTION" (SEE DETAIL SS-2).
6. FOR 8" OR LARGER LATERALS, A STANDARD MANHOLE SHALL BE INSTALLED AT OR NEAR THE PROPERTY LINE.



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DATE:	OCTOBER 2013

4" & 6" SANITARY SEWER LATERAL CONNECTION TO EXISTING MAIN
CITY OF SANTA CLARA

SS-3
PAGE: 39



ELEVATION VIEW
NO SCALE

- NOTES:**
1. NEW LATERAL MUST ENTER MANHOLE AT OR ABOVE THE SHELF FLOOR OF THE EXISTING MANHOLE.
 2. USE OF DROP MANHOLE ALLOWED ONLY WITH WRITTEN APPROVAL OF CITY ENGINEER.



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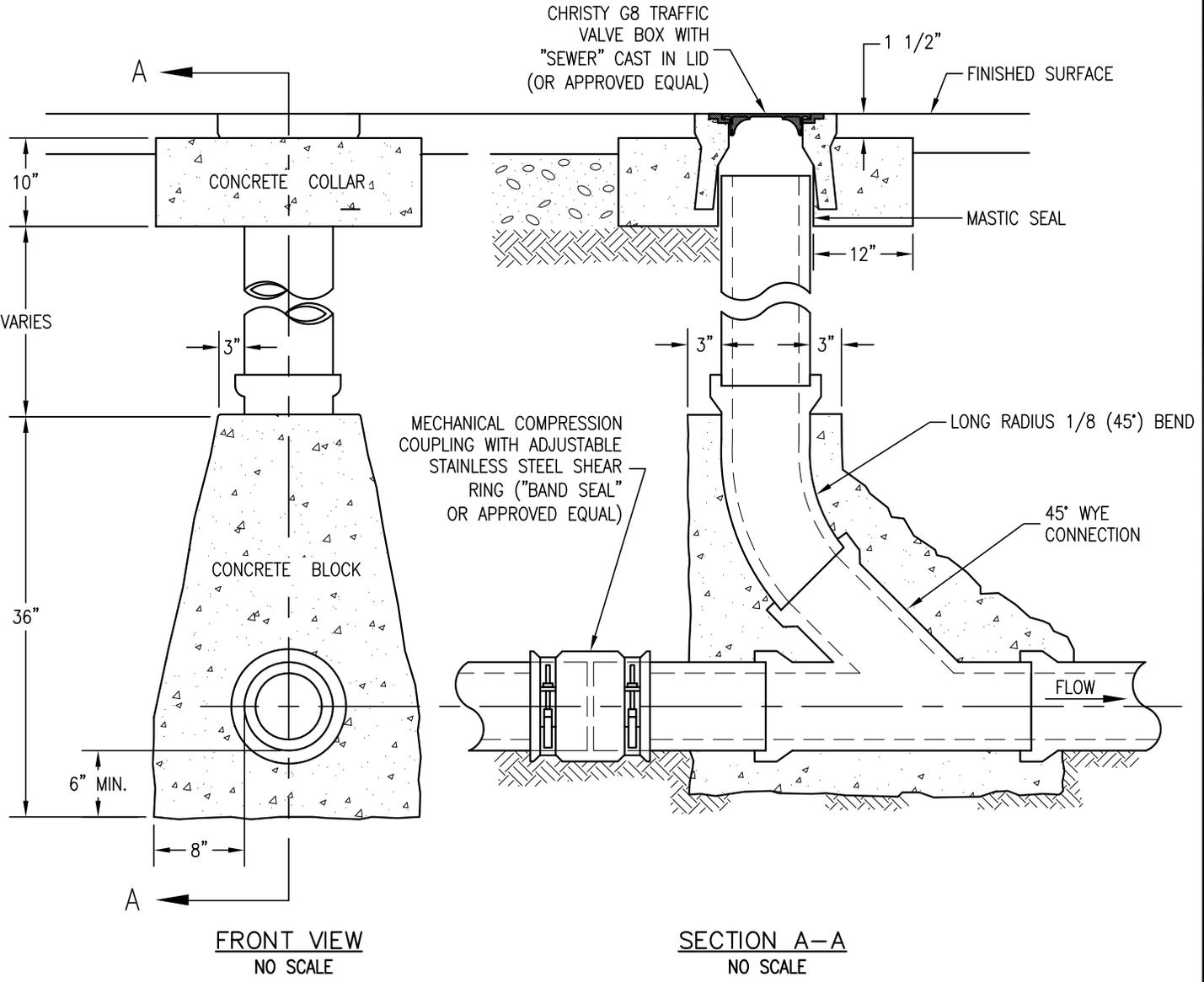
DATE: OCTOBER 2013

STANDARD DROP MANHOLE

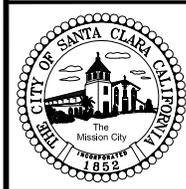
CITY OF SANTA CLARA

SS-4

PAGE: 40



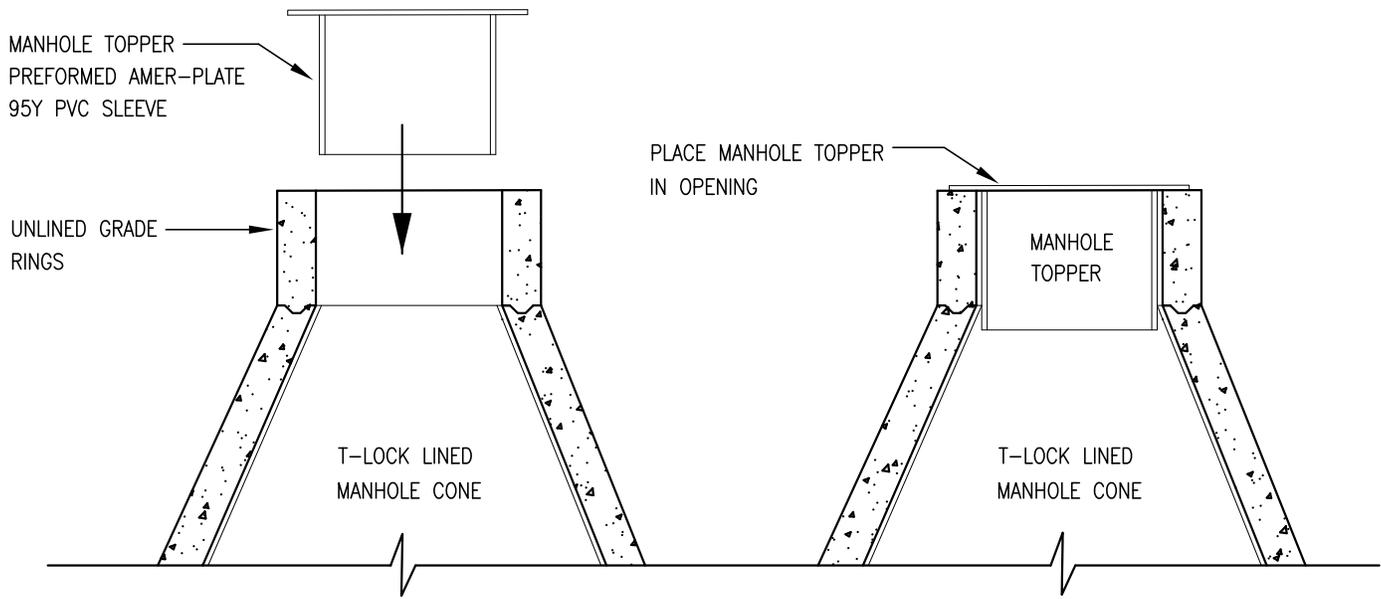
NOTE: FLUSHING INLETS MAY BE USED ONLY WITH WRITTEN APPROVAL OF THE CITY ENGINEER.



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 DATE: OCTOBER 2013

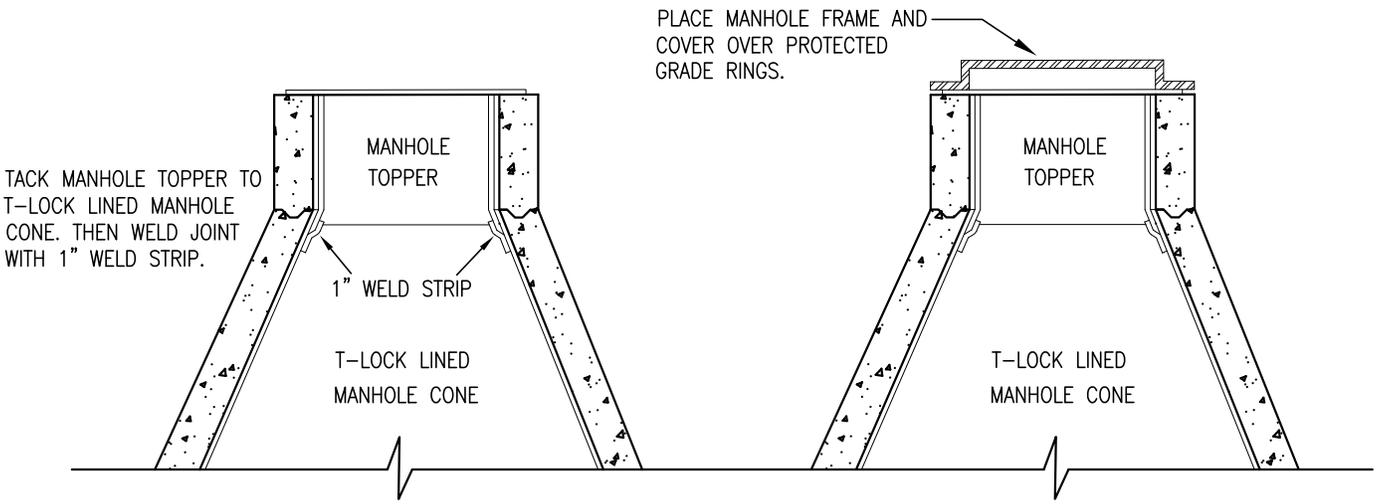
FLUSHING INLET
 CITY OF SANTA CLARA

SS-5
 PAGE: 41



STEP 1

STEP 2



STEP 3

STEP 4

AMER-PLATE PROTECTION FOR GRADE RINGS

NOTE:

1. FOR LINING PRODUCTS, CONTACT AMERON INTERNATIONAL PROTECTIVE LINING PRODUCTS, 201 NORTH BERRY STREET, P.O. BOX 1629, BREA, CA 92822-1629, PHONE (714) 256-7755, FAX (714) 256-7750, OR APPROVED EQUAL.
2. ALL T-LOCK LINER JOINTS MUST BE WELDED WITH 1" WELD STRIP (TYP.)



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 DATE: DECEMBER 2014

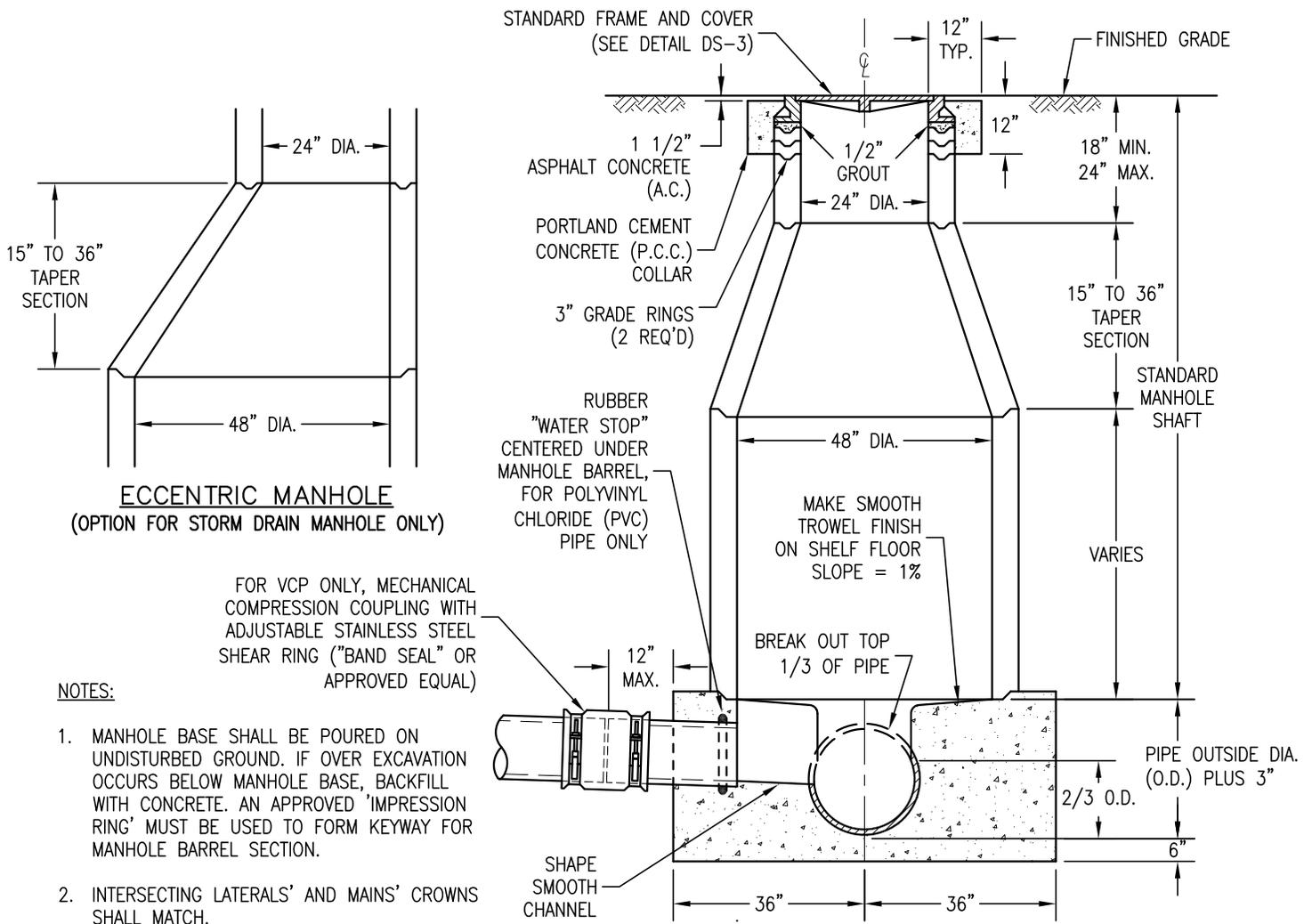
SANITARY SEWER MANHOLE TOPPER
 CITY OF SANTA CLARA

SS-6
 PAGE: 42

Department of Public Works
City of Santa Clara, CA

STANDARD DETAILS

DRAINAGE STRUCTURE SECTION DETAILS DS-1 TO DS-6



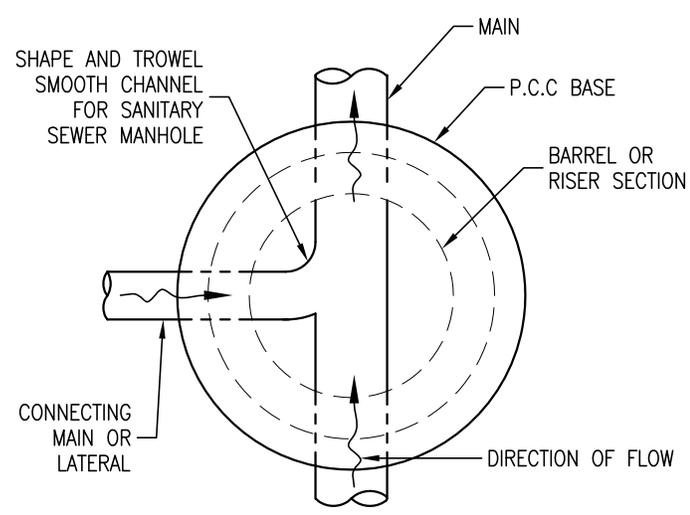
ECCENTRIC MANHOLE
(OPTION FOR STORM DRAIN MANHOLE ONLY)

FOR VCP ONLY, MECHANICAL COMPRESSION COUPLING WITH ADJUSTABLE STAINLESS STEEL SHEAR RING ("BAND SEAL" OR APPROVED EQUAL)

NOTES:

1. MANHOLE BASE SHALL BE POURED ON UNDISTURBED GROUND. IF OVER EXCAVATION OCCURS BELOW MANHOLE BASE, BACKFILL WITH CONCRETE. AN APPROVED 'IMPRESSION RING' MUST BE USED TO FORM KEYWAY FOR MANHOLE BARREL SECTION.
2. INTERSECTING LATERALS' AND MAINS' CROWNS SHALL MATCH.
3. ALL JOINTS SHALL BE SEALED WITH "RAMNEK" OR APPROVED EQUAL.
4. CENTER OF ECCENTRIC MANHOLE COVER SHALL BE LOCATED OVER THE CENTER OF THE MAIN ON THE UPSTREAM SIDE.
5. TYPE V PORTLAND CEMENT FOR SANITARY SEWER STRUCTURES AND TYPE II PORTLAND CEMENT FOR STORM DRAIN STRUCTURES.
6. BELL END OF PIPE SHALL BE 12" MAX. FROM WALL OF MANHOLE
7. THIS DESIGN IS USABLE FOR PIPES UP TO 39" DIA. ONLY.
8. ALL SANITARY SEWER MANHOLES SHALL BE LINED WITH INTEGRALLY LOCKING PVC (T-LOCK) OR APPROVED EQUAL. ALL T-LOCK LINER JOINTS MUST BE WELDED WITH 1" WELD STRIP. GRADE RINGS SHALL BE PVC LINED VIA THE MANHOLE TOPPER BY AMERON OR APPROVED EQUAL. SEE DETAIL SS-6.
9. BACKFILL AROUND THE MANHOLE AND ANY NEW OR EXISTING PIPE CONNECTION(S) SHALL CONFORM TO DETAIL ST-24.

CONCENTRIC MANHOLE - ELEVATION VIEW
NO SCALE



BOTTOM VIEW
NO SCALE



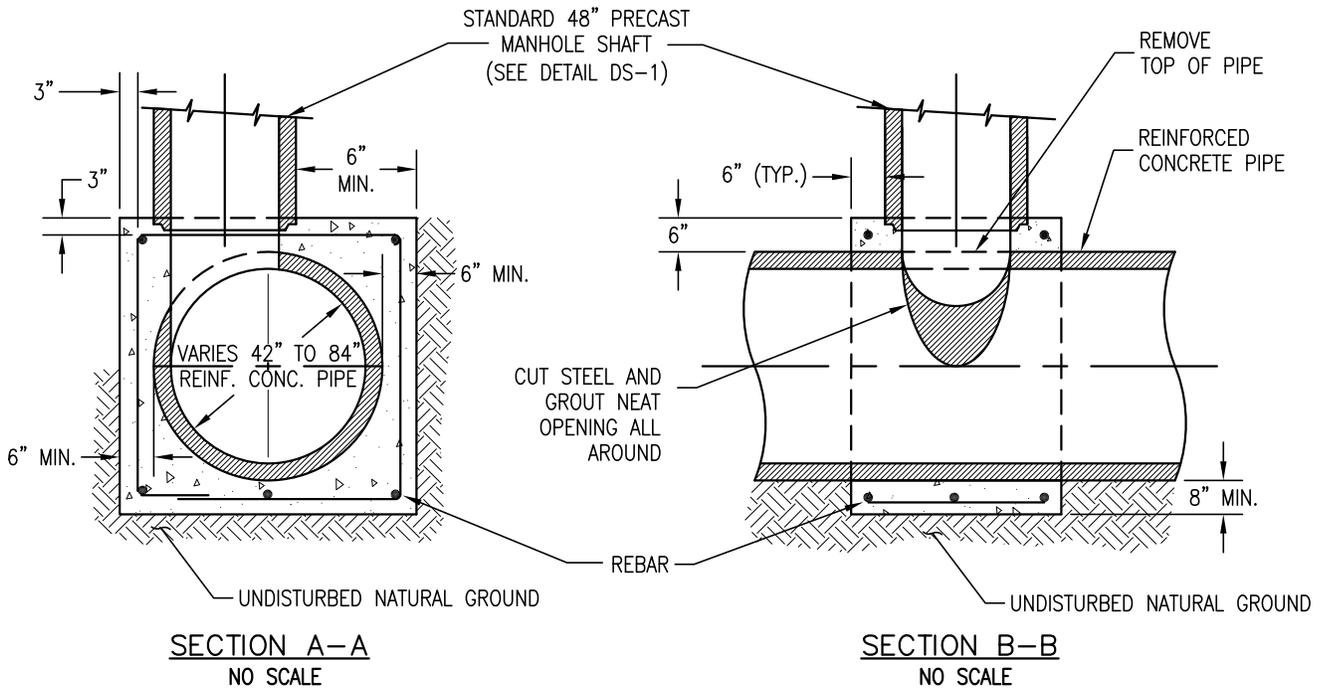
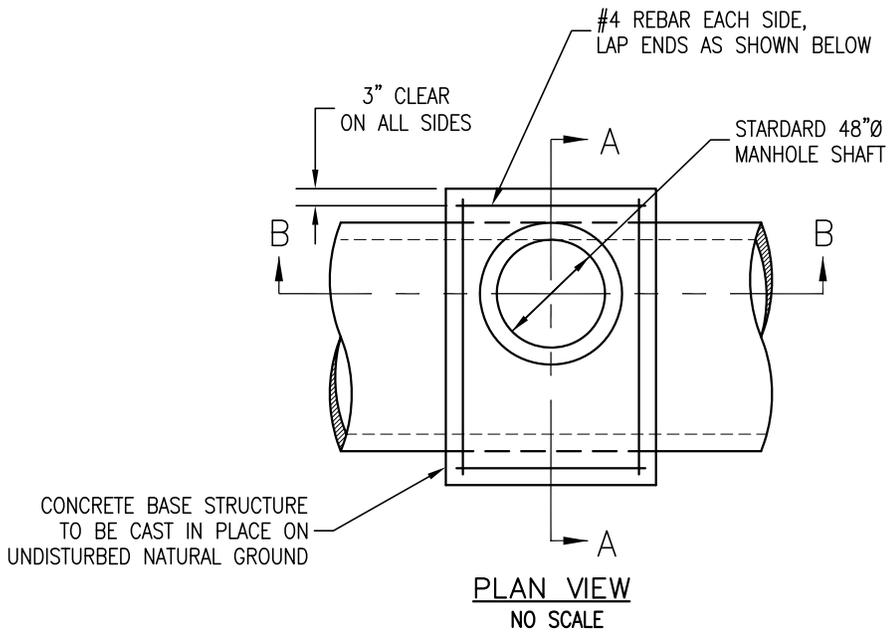
DRAWN BY:	K. TRAN
CHECKED BY:	F. AMIN
APPROVED BY:	F. AMIN
DATE:	JANUARY 2016

MANHOLE

CITY OF SANTA CLARA

DS-1

PAGE: 43



NOTES:

1. MANHOLE SHAFT SHALL BE CENTERED AT MID-LENGTH OF PIPE SECTION.
2. DETAIL NOT APPLICABLE WHERE PIPE DEFLECTION OCCURS AT MANHOLE. SPECIAL MANHOLE BASE DETAIL REQUIRED IF LOCATED AT PIPE JOINT.
3. ALL JOINTS SHALL BE SEALED WITH "RAMNEK" OR APPROVED EQUAL.
4. BACKFILL AROUND THE MANHOLE AND ANY NEW OR EXISTING PIPE CONNECTION(S) SHALL CONFORM TO DETAIL ST-24.



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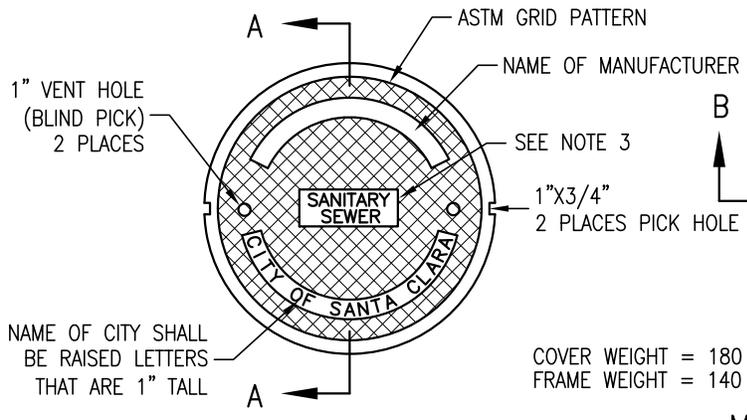
DATE: OCTOBER 2013

TYPE "A" MANHOLE

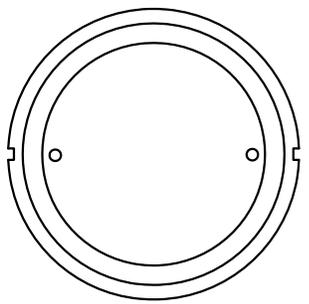
CITY OF SANTA CLARA

DS-2

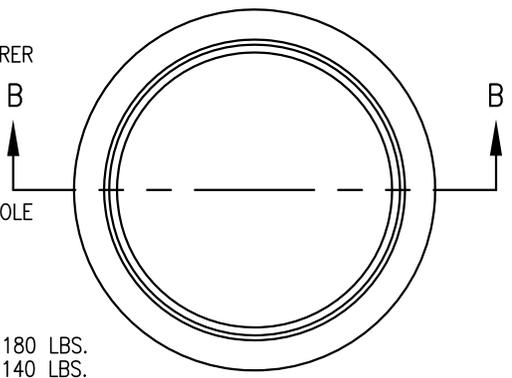
PAGE: 44



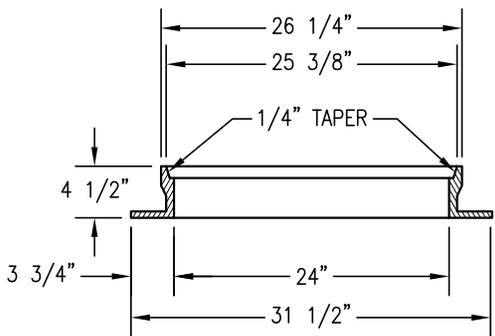
MANHOLE COVER - PLAN VIEW
NO SCALE



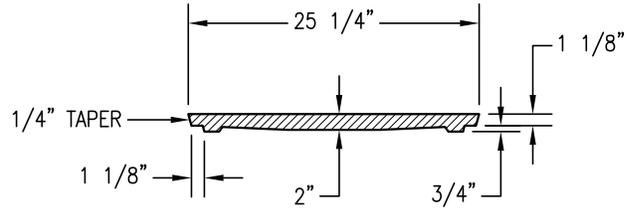
MANHOLE COVER - BOTTOM VIEW
NO SCALE



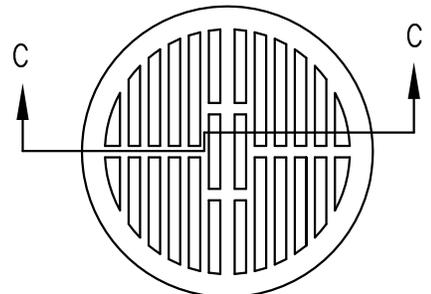
MANHOLE FRAME - PLAN VIEW
NO SCALE



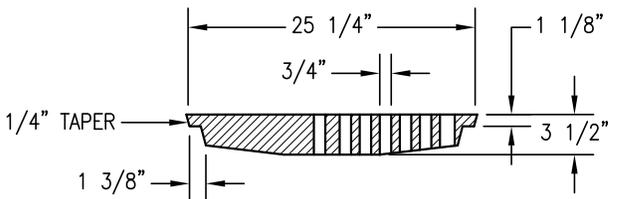
SECTION B-B
NO SCALE



SECTION A-A
NO SCALE



MANHOLE GRATE - PLAN VIEW
NO SCALE



SECTION C-C
NO SCALE

NOTES:

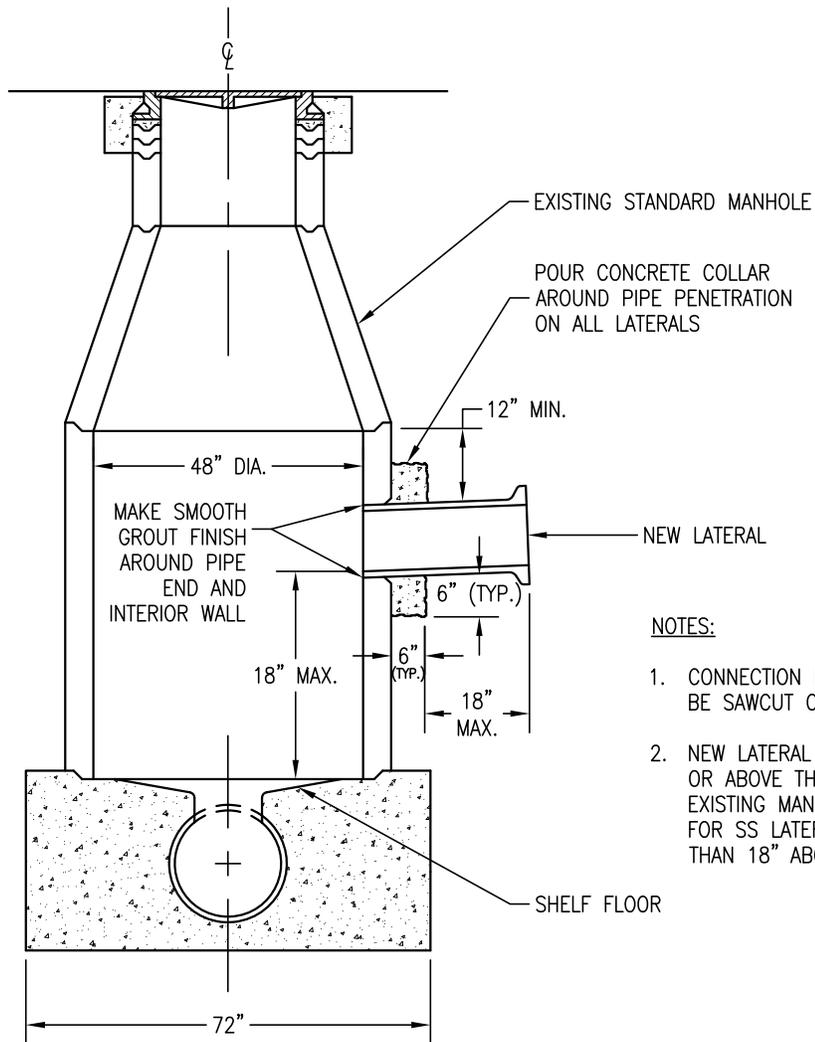
1. ALL MATERIAL TO BE CAST IRON DIPPED IN ASPHALT PAINT.
2. FRAME, GRATE AND COVER SHALL BE SUITABLE FOR H-20 LOADING.
3. COVER SHALL HAVE EITHER "SANITARY SEWER" FOR SANITARY SEWERS OR "STORM DRAIN" FOR STORM DRAINS IN RAISED LETTERS THAT ARE 1-1/2" TALL.



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 DATE: DECEMBER 2014

**MANHOLE FRAME,
 COVER AND GRATE**
 CITY OF SANTA CLARA

DS-3
 PAGE: 45



NOTES:

1. CONNECTION INTO MANHOLE BARREL SHALL BE SAWCUT OR CORE DRILLED.
2. NEW LATERAL MUST ENTER MANHOLE AT OR ABOVE THE SHELF FLOOR OF THE EXISTING MANHOLE. SEE DETAIL SS-4 FOR SS LATERAL CONNECTION GREATER THAN 18" ABOVE MANHOLE SHELF FLOOR.

ELEVATION VIEW
NO SCALE



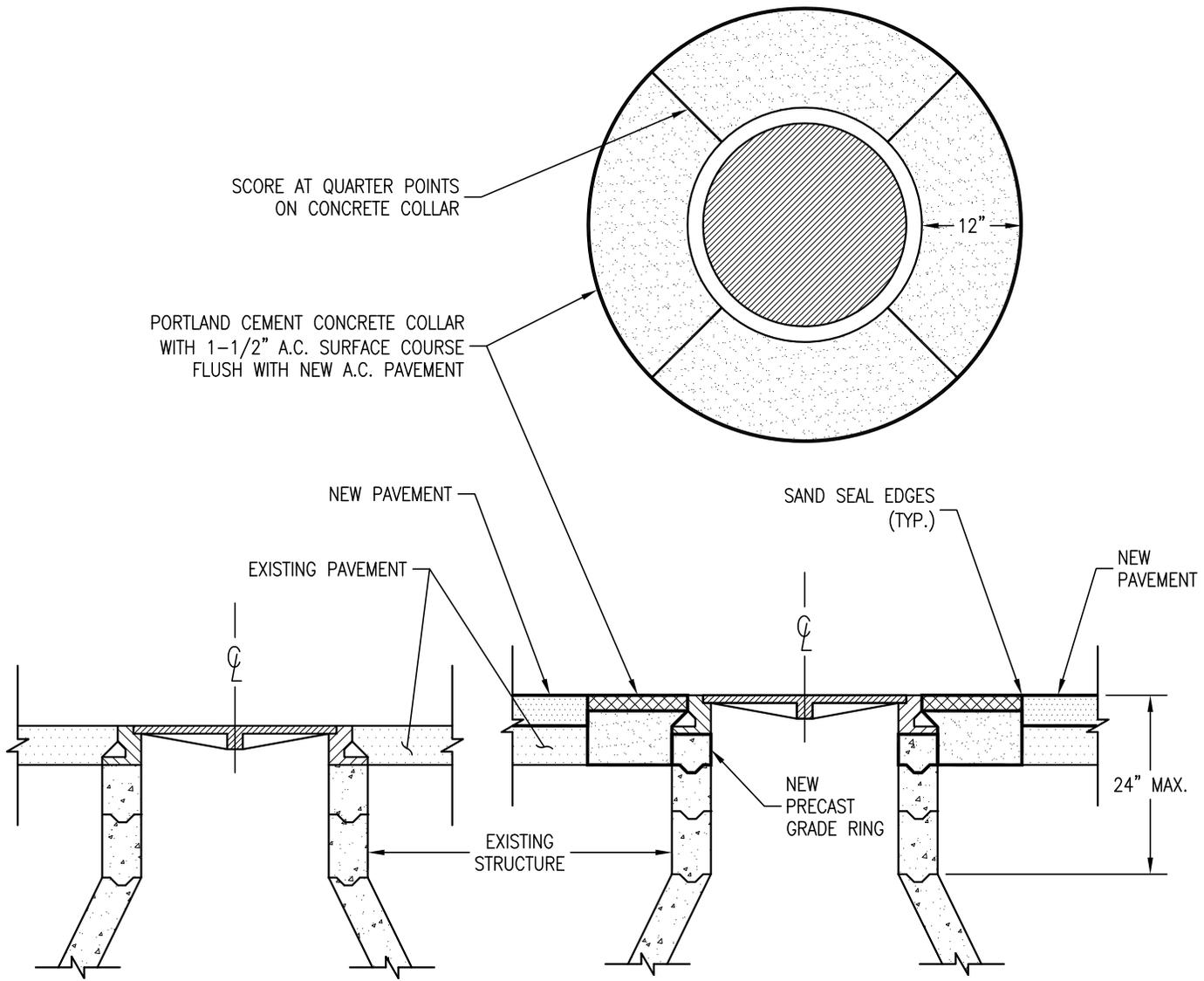
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LATERAL CONNECTION
TO EXISTING MANHOLE

CITY OF SANTA CLARA

DS-4

PAGE: 46



EXISTING MANHOLE
NO SCALE

RAISED MANHOLE
NO SCALE

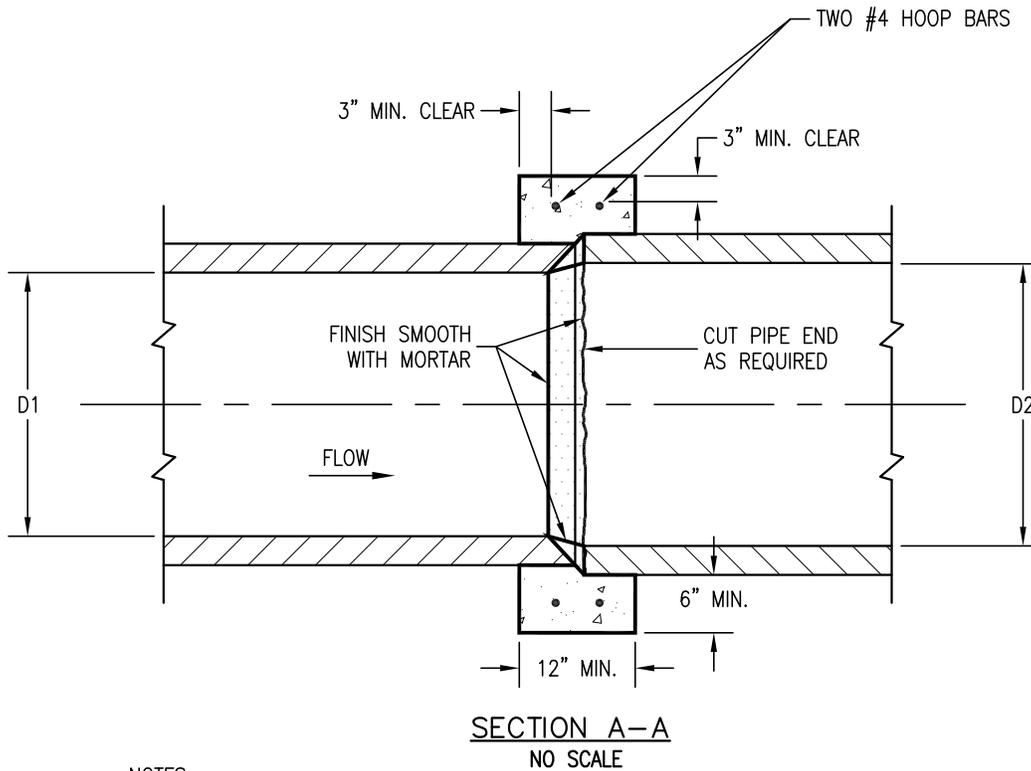
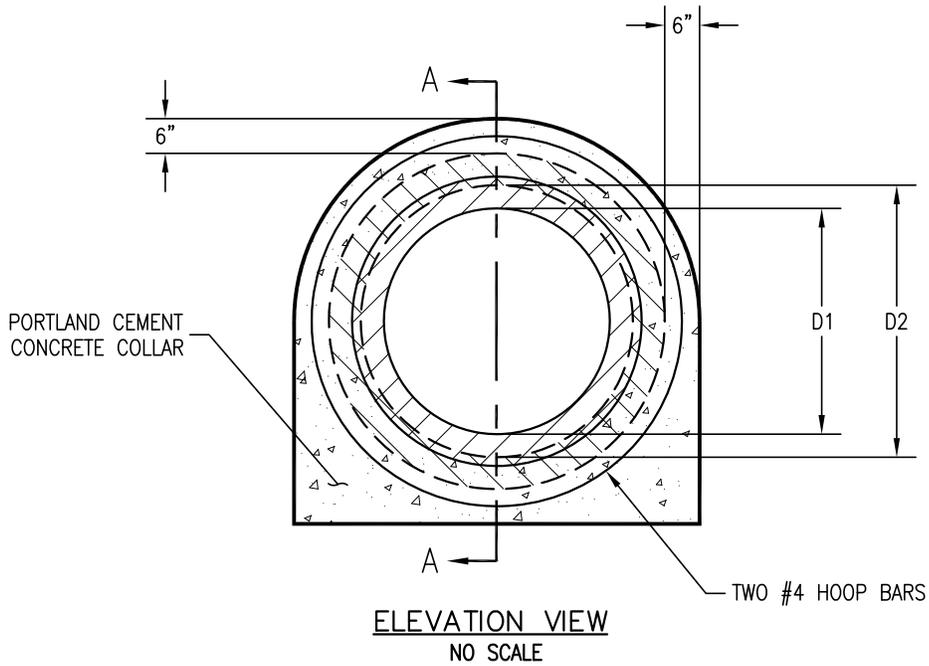
NOTE:
EXISTING FRAME AND COVER TO BE USED
UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



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 DATE: OCTOBER 2013

MANHOLE RAISING
 CITY OF SANTA CLARA

DS-5
 PAGE: 47



NOTES:

1. PIPE COLLAR MAY BE USED ONLY WITH WRITTEN APPROVAL OF THE CITY ENGINEER.
2. PIPE COLLAR MAY BE USED IN JOINING PIPES WITH INCOMPATIBLE (NON-MATING) JOINTS, WHERE: $D2 \geq D1$ AND $D2 \leq (D1 + 3")$.
3. PIPE COLLAR DOES NOT HAVE TO BE FINISHED IF COVERED, BUT MUST HAVE A MINIMUM OF 6" OF CONCRETE AROUND JOINT.



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CONCRETE COLLAR

CITY OF SANTA CLARA

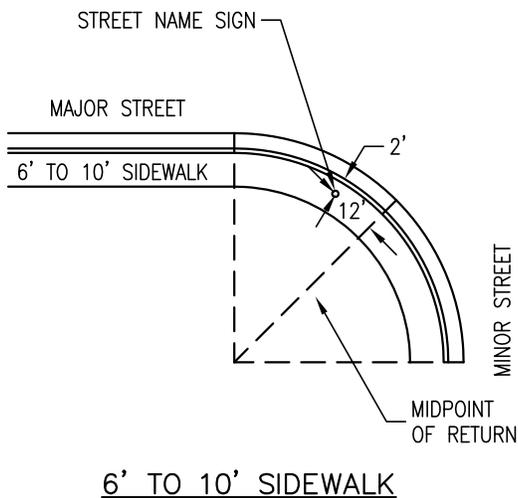
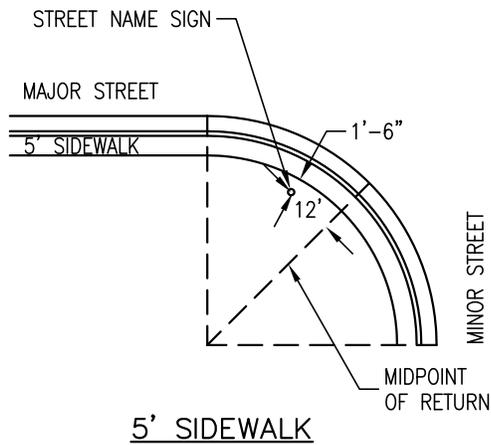
DS-6

PAGE: 48

Department of Public Works
City of Santa Clara, CA

STANDARD DETAILS

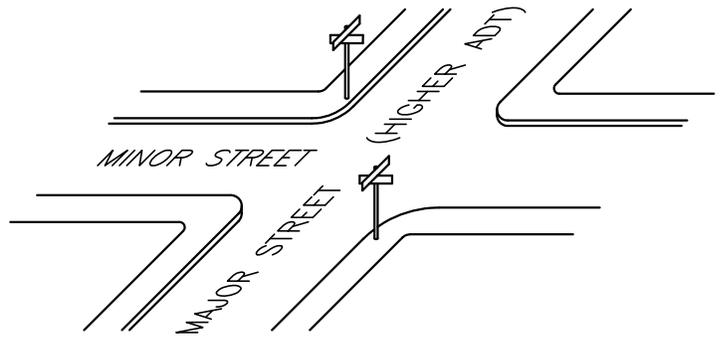
TRAFFIC SECTION
DETAILS TR-1 TO TR-8



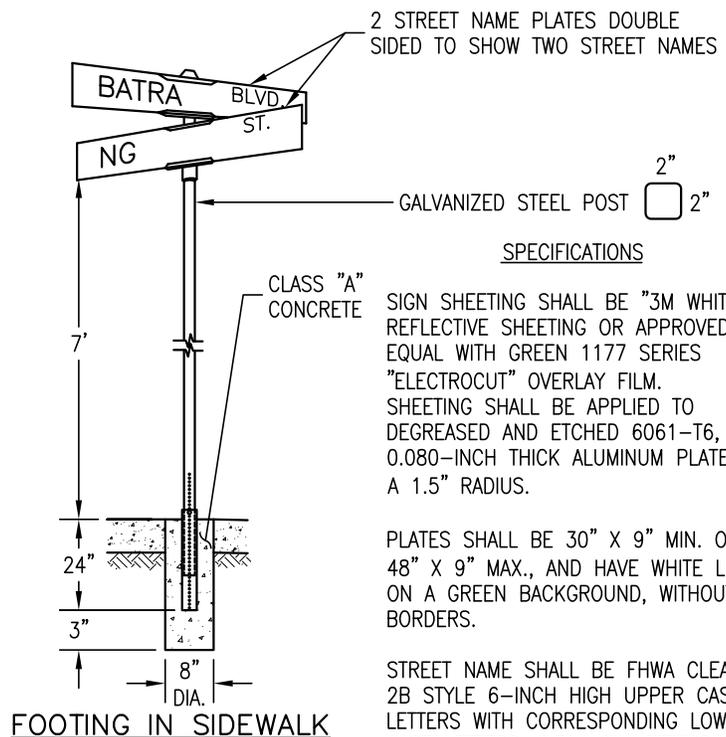
STREET NAME SIGN LOCATION DETAILS
NO SCALE

NOTES:

1. TWO STREET NAME SIGNS LOCATED DIAGONALLY ACROSS FROM EACH OTHER ARE REQUIRED WHERE ONE OF THE TWO INTERSECTING STREETS' WIDTH (CURB TO CURB) IS 64' OR MORE.
2. ONLY ONE STREET NAME SIGN IS REQUIRED IF BOTH INTERSECTING STREETS' WIDTHS (CURB TO CURB) ARE LESS THAN 64'.
3. PRIVATE STREET NAME SIGN SHALL BE WHITE LETTERING ON BROWN BACKGROUND AND SHALL BE PLACED OUTSIDE PUBLIC ROW.



TYPICAL STREET NAME SIGN LOCATIONS
NO SCALE



SIGN SHEETING SHALL BE "3M WHITE HIP" REFLECTIVE SHEETING OR APPROVED EQUAL WITH GREEN 1177 SERIES "ELECTROCUT" OVERLAY FILM. SHEETING SHALL BE APPLIED TO DECREASED AND ETCHED 6061-T6, 0.080-INCH THICK ALUMINUM PLATE WITH A 1.5" RADIUS.

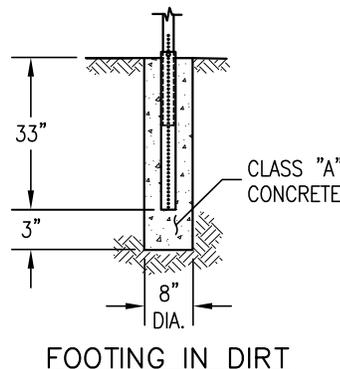
PLATES SHALL BE 30" X 9" MIN. OR 48" X 9" MAX., AND HAVE WHITE LETTERS ON A GREEN BACKGROUND, WITHOUT BORDERS.

STREET NAME SHALL BE FHWA CLEARVIEW 2B STYLE 6-INCH HIGH UPPER CASE LETTERS WITH CORRESPONDING LOWER CASE LETTERS. 2.5-INCH LETTERS SHALL BE USED FOR "AVE., BLVD., CT., DR., PL., RD., ST., LN." "WAY" SHALL NOT BE ABBREVIATED.

ASSEMBLY HARDWARE SHALL BE "WESTERN HIGHWAY PRODUCTS" (WHP) NO. (812F/12" FOR FLAT BLADES) OR NO. (812F-90% CROSSPIECE FOR FLAT BLADES) OR APPROVED EQUAL.

2" X 2" GALVANIZED STEEL POST SHALL BE INSTALLED WITH WHP "ANCHOR-MATE" SIGN POST SUPPORT ANCHOR OR APPROVED EQUAL.

FOOTING IN SIDEWALK



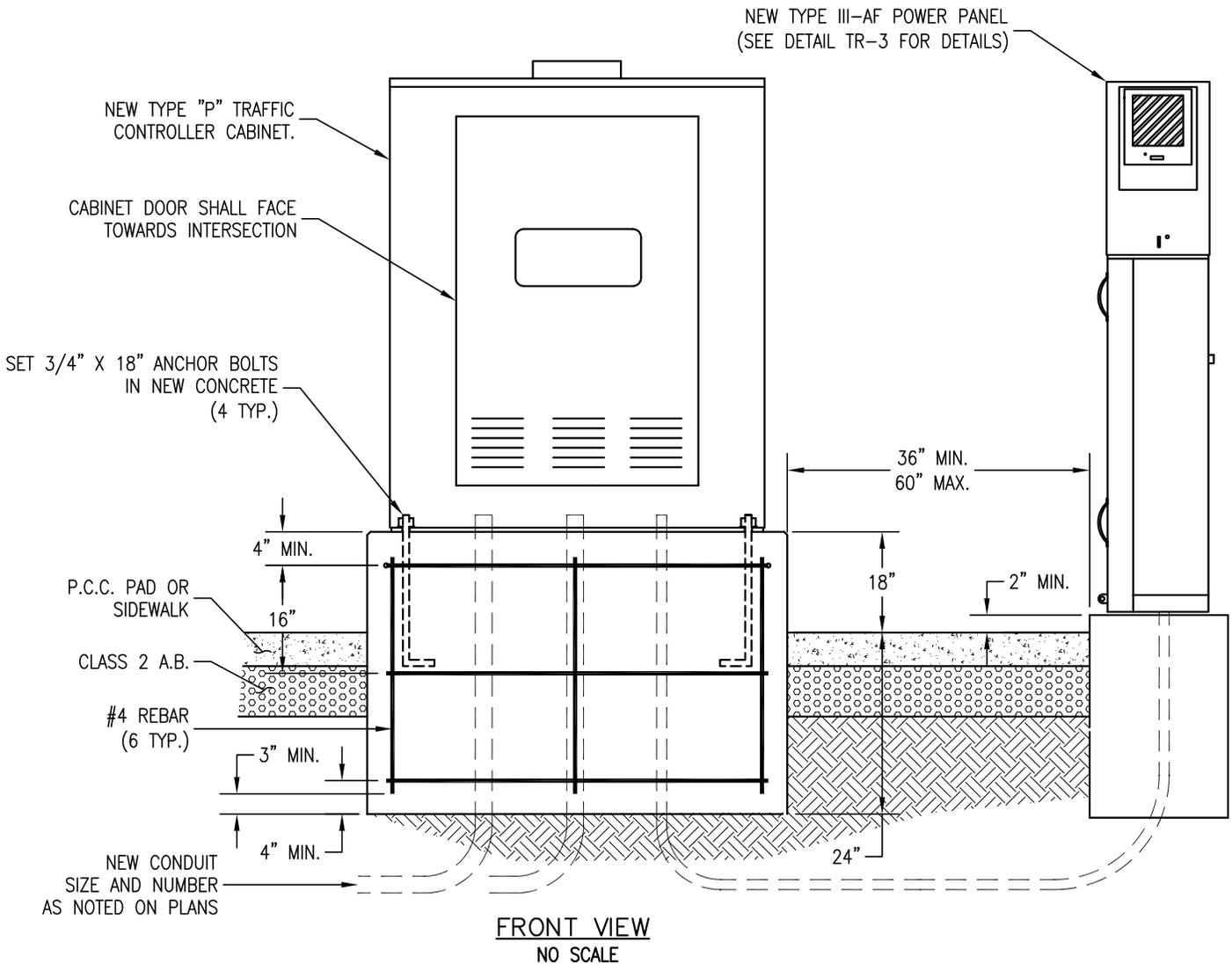
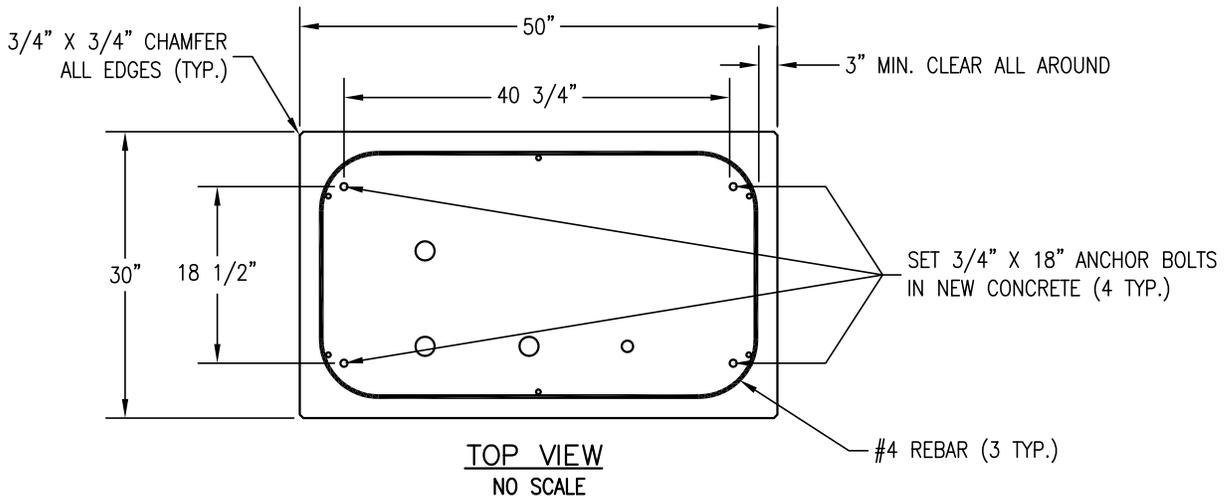
STREET NAME SIGN
NO SCALE



DRAWN BY:	K. TRAN
CHECKED BY:	P. BHATIA
APPROVED BY:	D. NG
DATE:	OCTOBER 2015

STREET NAME SIGN AND LOCATION
CITY OF SANTA CLARA

TR-1
PAGE: 49



NOTE: GROUND ROD TO BE IN PULL BOX NEXT TO CABINET.



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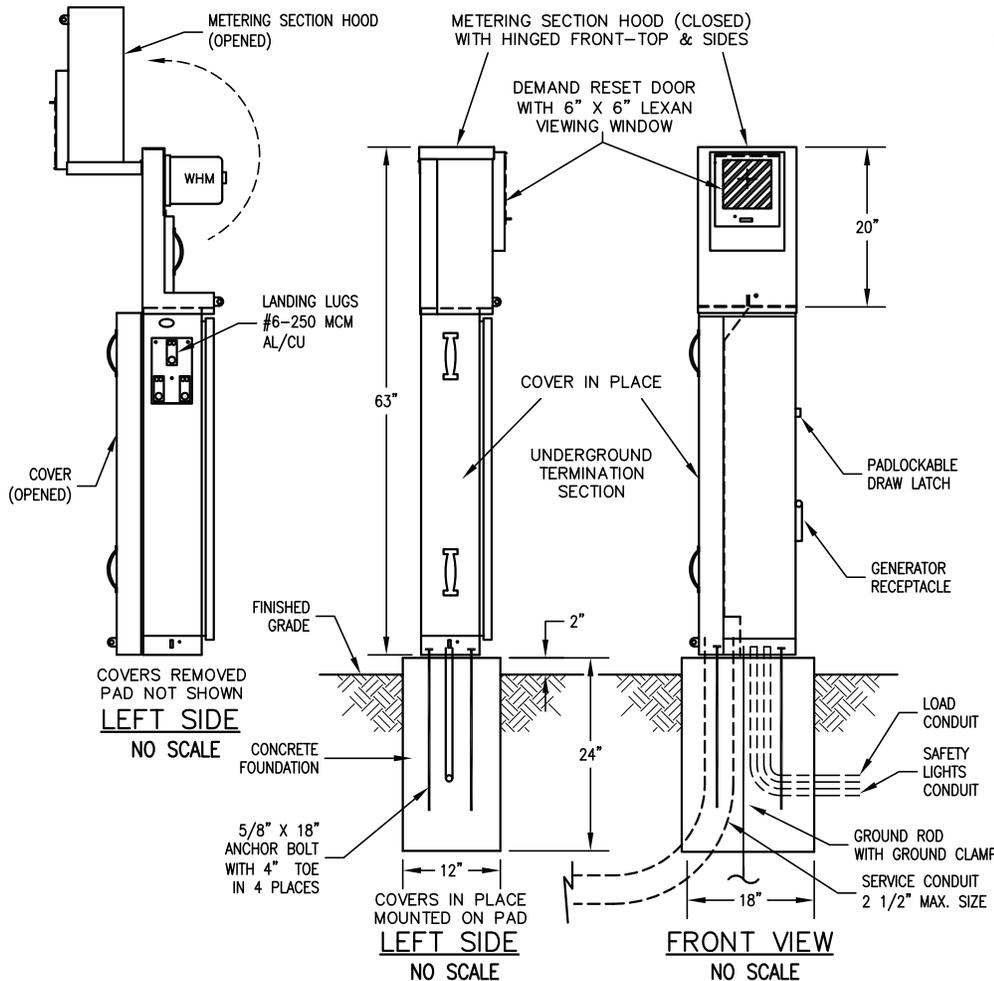
DATE: OCTOBER 2013

**TRAFFIC SIGNAL
CONTROLLER CABINET**

CITY OF SANTA CLARA

TR-2

DATE: 50



SEE ENCLOSURE CONSTRUCTION NOTE 10

Underwriters Laboratories Inc.
File No. E62062

TESCO
TESCO CONTROLS INC.
916 322-2620
SACRAMENTO, CA.

T-
26-100

INDUSTRIAL CONTROL PANEL

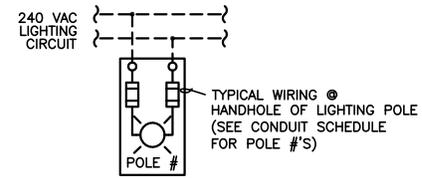
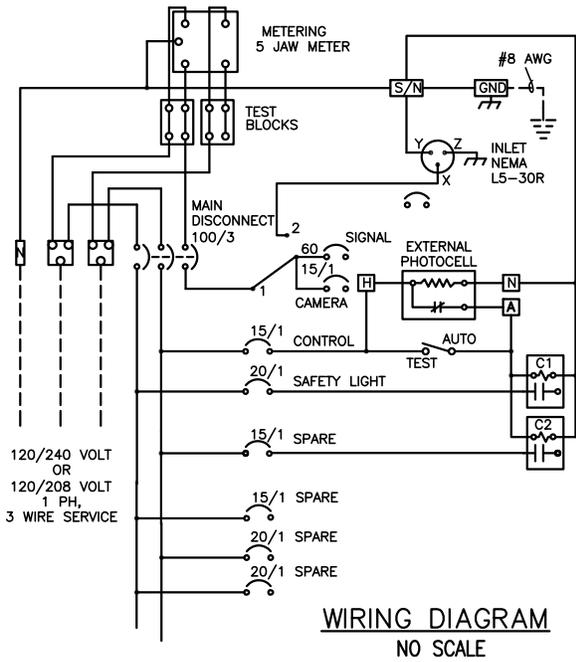
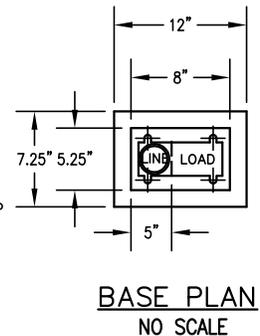
VOLTAGE	PHASE	WIRES	MAINS AMPERES	HZ
120/240 OR 120/208	1	3	100	60

SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN:

AMPERES	AT	VOLTAGE
10,000	RMS SYM.	240 v

METER SOCKET RATING: 100 A. CONT.
ENCLOSURE: TYPE 3R

SUITABLE ONLY FOR USE AS SERVICE EQUIPMENT



ENCLOSURE CONSTRUCTION NOTES:

1. FABRICATED FROM 1/8" ALUMINUM SHEET STOCK ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
2. CONSTRUCTION WILL BE NEMA 3R AND 12, RAIN TIGHT AND DUST TIGHT.
3. ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
4. NUTS, BOLTS & SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
5. PHENOLIC NAMEPLATES SHALL BE PROVIDED AS REQUIRED.
6. CONTROL WIRING SHALL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
7. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
8. ENCLOSURE WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARD.
9. FINISH: ANODIZED ALUMINUM
10. PANEL SHALL BE TESCO TYPE III AF OR APPROVED EQUAL.



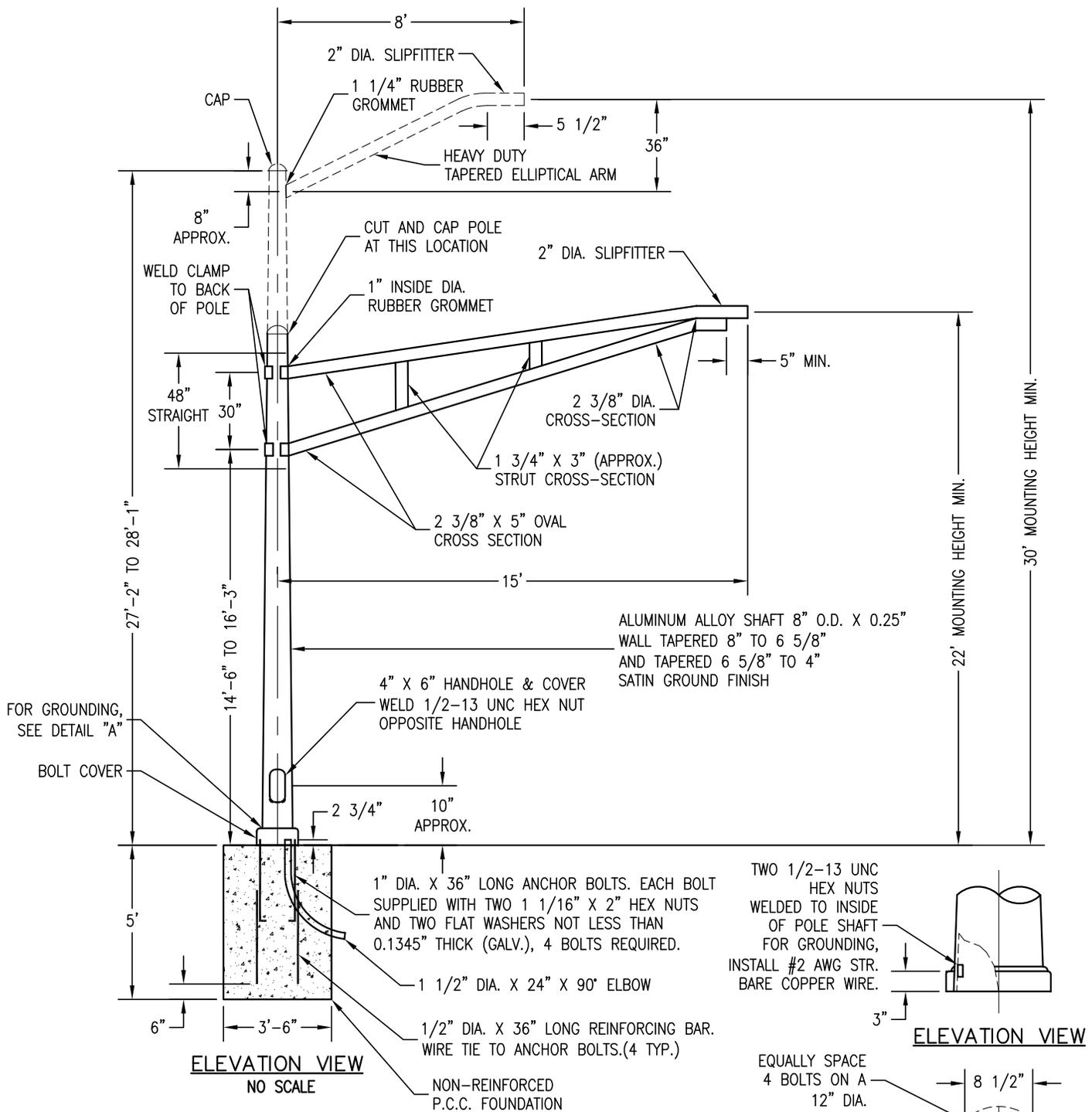
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DATE: OCTOBER 2013

**TRAFFIC SIGNAL
POWER PANEL**

CITY OF SANTA CLARA

TR-3

PAGE: 51



NOTES:

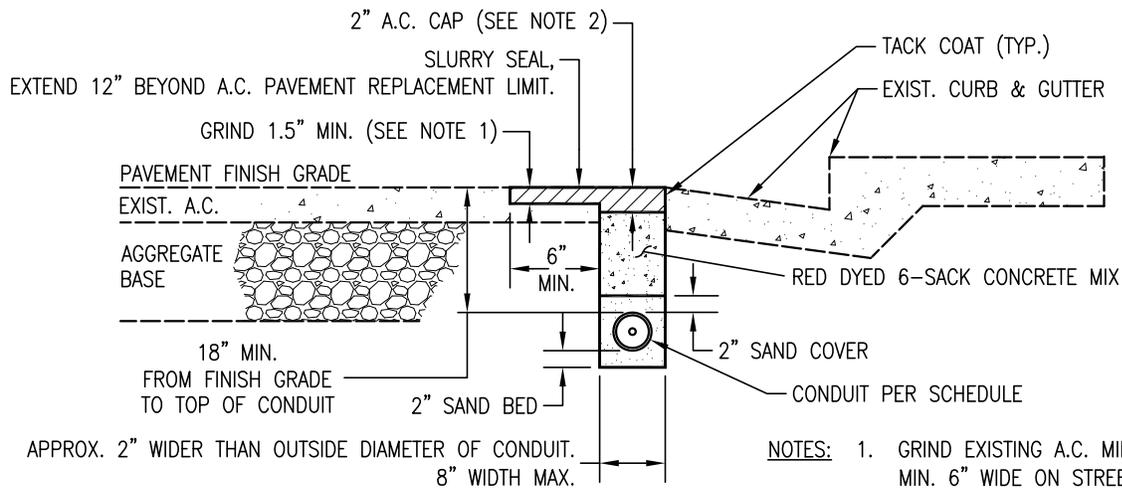
1. THIS DETAIL IS ONLY FOR MAINTENANCE REFERENCE. NEW TRAFFIC SIGNAL POLES SHALL MEET THE LATEST CALTRANS STANDARDS.
2. THE POLE SHALL BE FURNISHED WITH GROUNDING CONNECTORS, ANCHOR BOLTS, NUTS, WASHERS, AND BOLT COVER.
3. IF FOUNDATION IS PLACED IN SIDEWALK, PLACE THE FOUNDATION TOP WITHIN 4" OF SIDEWALK SURFACE. REMAINDER OF FOUNDATION SHALL BE PLACED WHEN SIDEWALK IS INSTALLED.
4. IF FOUNDATION IS PLACED AT BACK OF SIDEWALK OR IN DIRT, FINISH TOP 6" TO 42" X 42" SQUARE.



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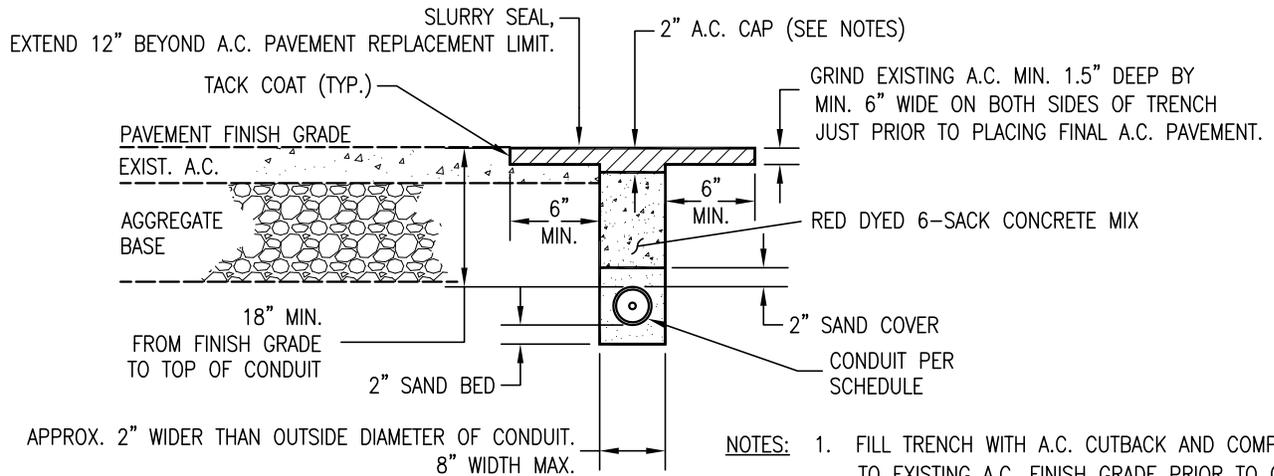
TYPE III POLE
 CITY OF SANTA CLARA

TR-4
 PAGE: 52



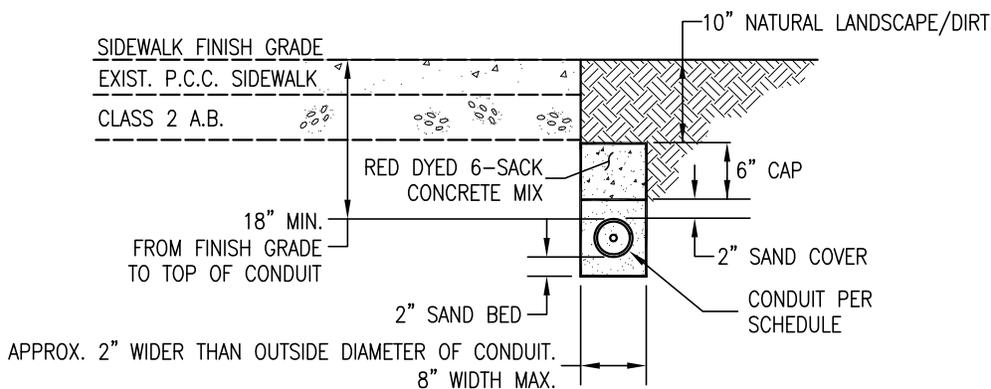
TRENCH AT LIP OF GUTTER
NO SCALE

- NOTES:
1. GRIND EXISTING A.C. MIN 1.5" DEEP BY MIN. 6" WIDE ON STREET SIDE OF TRENCH JUST PRIOR TO PLACING FINAL A.C. PAVEMENT.
 2. FINAL A.C. PAVEMENT SHALL BE PLACED WITHIN 5 WORKING DAYS OF EXCAVATION.



TRENCH IN ROADWAY
NO SCALE

- NOTES:
1. FILL TRENCH WITH A.C. CUTBACK AND COMPACTED TO EXISTING A.C. FINISH GRADE PRIOR TO OPENING THE LANE TO TRAFFIC.
 2. FINAL A.C. PAVEMENT SHALL BE PLACED WITHIN 48 HOURS OF EXCAVATION.



TRENCH AT BACK OF SIDEWALK
NO SCALE



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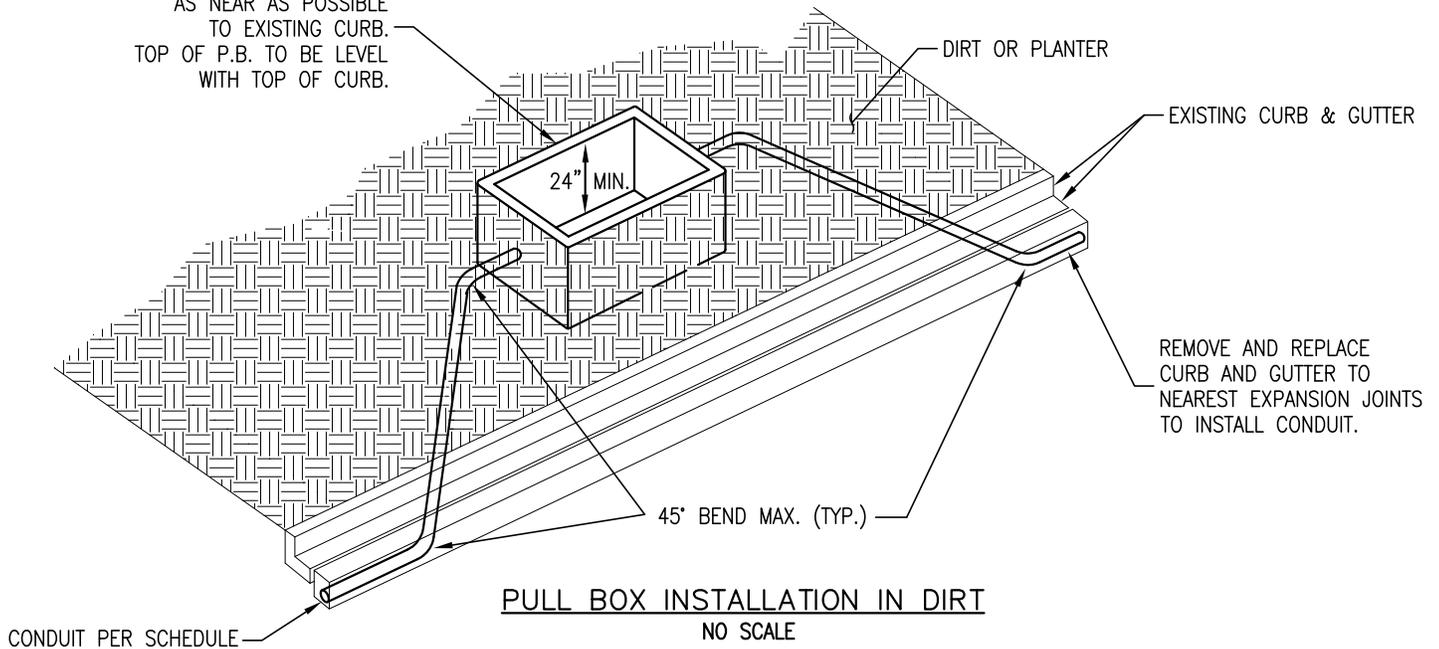
**TRAFFIC SIGNAL
TRENCH DETAILS**

CITY OF SANTA CLARA

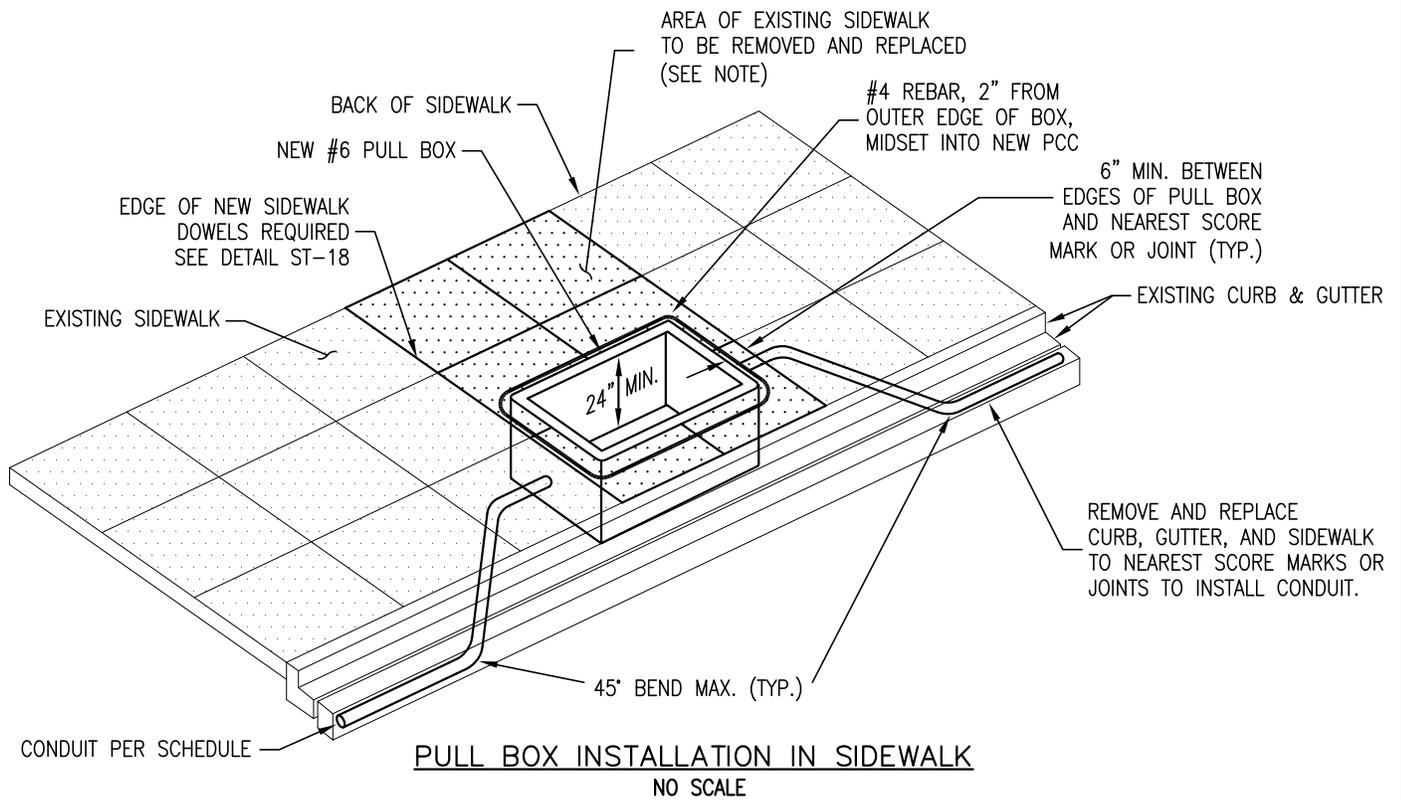
TR-5

PAGE: 53

PLACE NEW #6 PULL BOX (P.B.)
AS NEAR AS POSSIBLE
TO EXISTING CURB.
TOP OF P.B. TO BE LEVEL
WITH TOP OF CURB.



PULL BOX INSTALLATION IN DIRT
NO SCALE



PULL BOX INSTALLATION IN SIDEWALK
NO SCALE

NOTE: IF SIDEWALK IS GREATER THAN 9', REMOVE AND REPLACE TO MIDDLE SCORE MARK.



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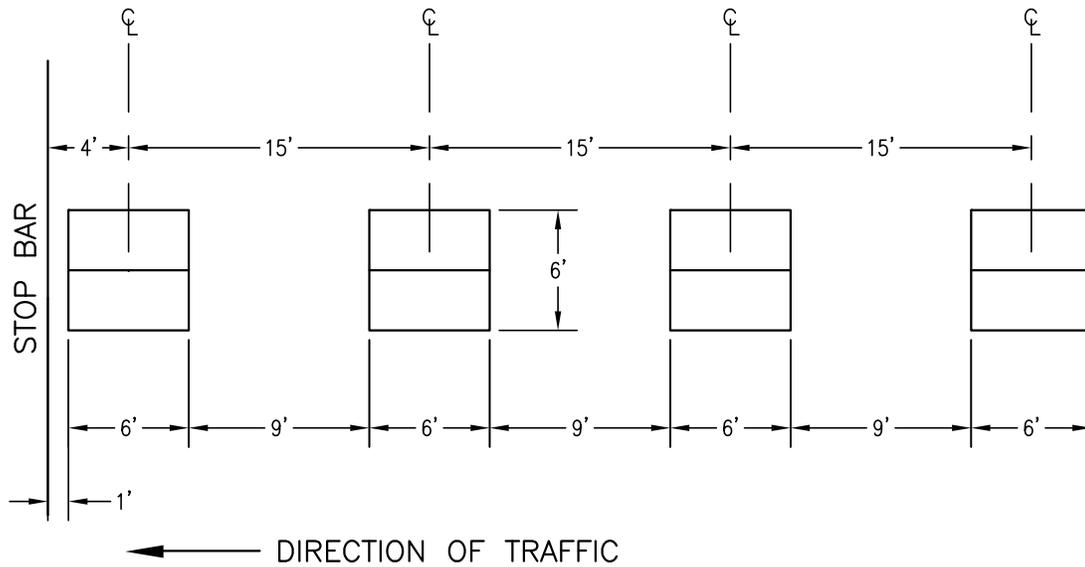
DATE: DECEMBER 2014

**TRAFFIC SIGNAL
PULL BOX**

CITY OF SANTA CLARA

TR-6

PAGE: 54



NOTES:

1. FOUR (4) LOOPS FOR LEFT AND RIGHT TURN LANES. THREE (3) LOOPS FOR STRAIGHT THROUGH LANES.
2. LOOPS TO BE CUT IN A 6'x6' QUAD CONFIGURATION. LOOP MARKS SHALL BE VERIFIED BY CITY TRAFFIC STAFF (72 HOURS ADVANCE NOTIFICATION REQUIRED) UNLESS OTHERWISE NOTED.
3. DETECTOR LOOPS SHALL BE TYPE "Q". DETECTOR LOOP WIRE SHALL BE TYPE 1. LEAD IN CABLE SHALL CONFORM TO TYPE B. LOOP WIRING IS TO BE WRAPPED IN A 3-6-3 CONFIGURATION.
4. EACH LANE SHALL HAVE ITS INDIVIDUAL LOOP CONNECTED IN SERIES, AND ITS WIRING SHALL BE BROUGHT INTO PROPER PULLBOX FOR CONNECTION TO TYPE B DETECTOR LEAD IN CABLE (DLC). LOOP WIRING IN STREET SHALL ENTER A (G5 BOX) DETECTOR HANDHOLE AT THE LIP OF GUTTER.
5. SEALANT SHALL BE HOT MELT RUBBERIZED ASPHALT. FINISHED PRODUCT MUST BE AT A MINIMUM STREET LEVEL OR ABOVE.
6. ANY TRAFFIC LOOP WIRE CONNECTION(S) TO BE LAID DOWN IN SIGNAL CABINET SHALL BE SOLDERED. DLC SHIELD CONDUCTORS ARE NOT TO BE BONDED TO THE GROUND, BUT WRAPPED AROUND AND SECURED TO RESPECTIVE OWNER. THEY ARE NOT TO BE SHORTER THAN SIX INCHES (6").
7. ACCEPTABLE TESTING RESULTS FOR EACH INDIVIDUAL LOOP PAIR SHALL BE 126 MICRO-HENRIES INDUCTANCE AND INFINITE MEG-OHMS TO GROUND. NO LOOP WIRING SHALL BE CONNECTED UNTIL TESTED AND APPROVED BY SILICON VALLEY POWER STAFF (72 HOURS ADVANCE NOTIFICATION REQUIRED).
8. SEE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS, PAGES ES-5A AND ES-5B, FOR INSTALLATION DETAILS.



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DATE:	DECEMBER 2014

TRAFFIC SIGNAL DETECTOR LOOPS SPACING
CITY OF SANTA CLARA

TR-7
PAGE: 55

MAJOR STREET

TYPICAL CROSSWALK
(IF APPROVED BY TRAFFIC)

STOP BAR REQUIRED IF
THERE IS NO CROSSWALK

12" WHITE (TYP.)
(SEE NOTE 1)

SEE DETAIL ST-14 FOR
CURB RAMP DETAILS

CALTRANS STD DETAIL 22
WITH TYPE 'D' 2-WAY
YELLOW REFLECTIVE
MARKER AT 24' O.C.
(AS APPLICABLE AND
IF APPROVED BY TRAFFIC)

INSTALL R1-1 AT BC;
SEE DETAIL TR-1 FOR
POST & FOOTING DETAILS
(SEE NOTE 2)

BEGIN CURVE (BC)
18" MIN.

"STOP" MARKING PER
CALTRANS STD PLAN A24D

8' TYP.

48'
MIN.

24'

MINOR STREET

PROPERTY LINE

BACK OF WALK

LIP OF GUTTER

BACK OF CURB

FACE OF CURB

NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC OR PRE-FORMED THERMOPLASTIC PER SPECIFICATIONS.
2. INSTALL R1-1 MINIMUM OF 18" FROM FACE OF CURB, 7' FROM GROUND TO BOTTOM OF SIGN. EDGE OF INSTALLED R1-1 SHALL BE 4" BEHIND FACE OF CURB (OFFSET AS NEEDED).
3. NO PERMANENT MARKINGS OR SIGNS SHALL BE PLACED UNTIL THE CITY TRAFFIC ENGINEER OR HIS REPRESENTATIVE APPROVES THE CAT-TRACKING OR PRE-MARKINGS IN THE FIELD.



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DATE: OCTOBER 2013

**TYPICAL STOP
INTERSECTION**

CITY OF SANTA CLARA

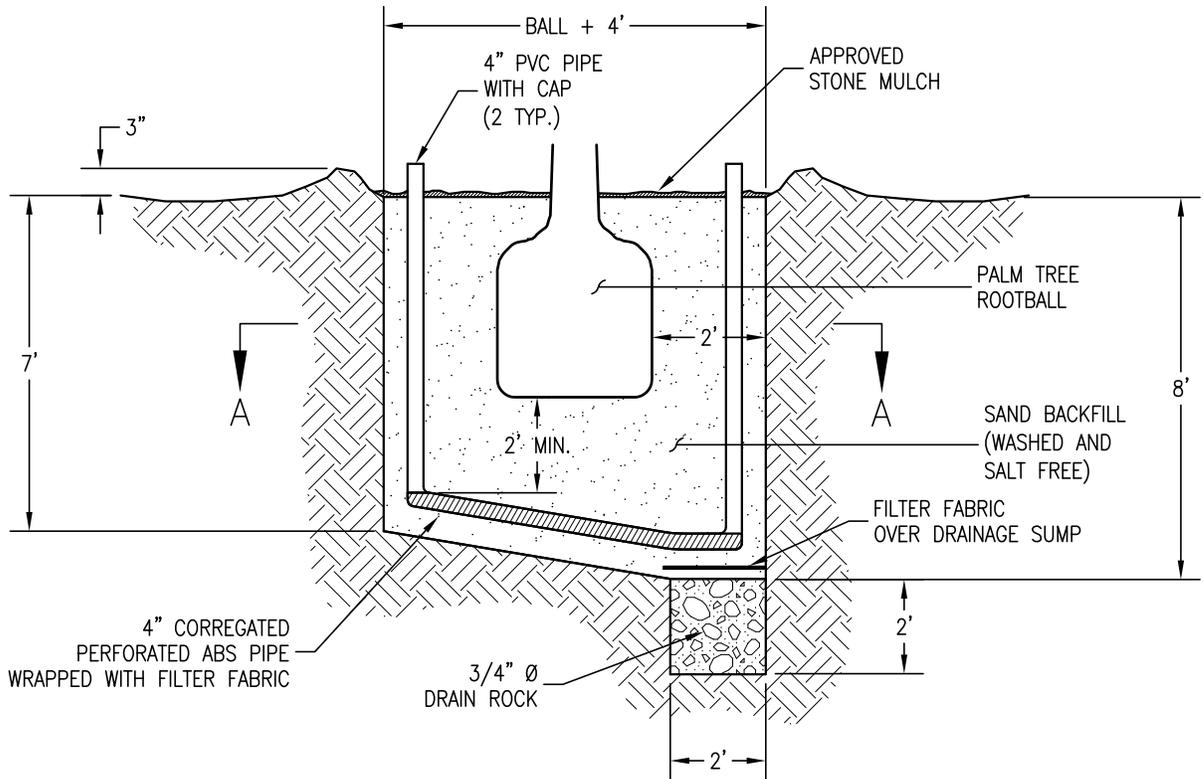
TR-8

PAGE: 56

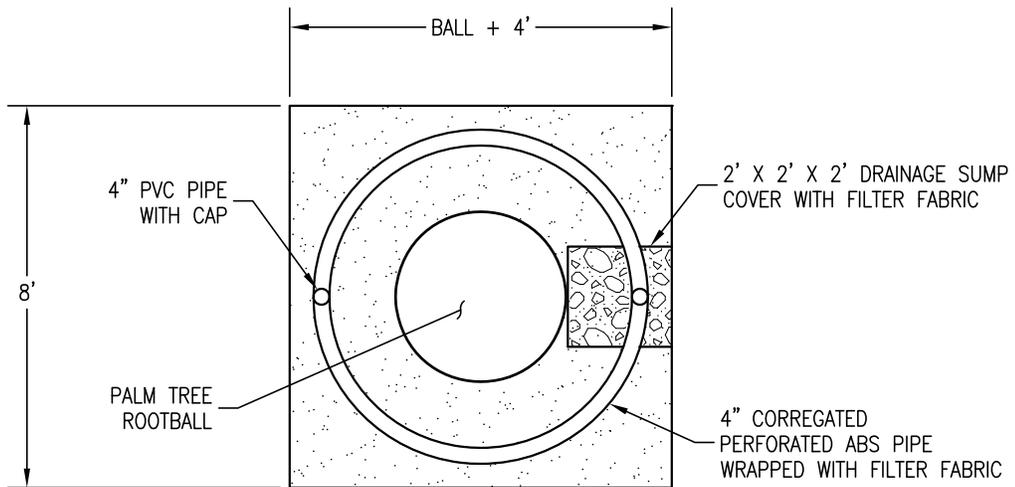
Department of Public Works
City of Santa Clara, CA

STANDARD DETAILS

LANDSCAPE SECTION DETAILS LS-1 TO LS-22



ELEVATION VIEW
NO SCALE



SECTION A-A
NO SCALE



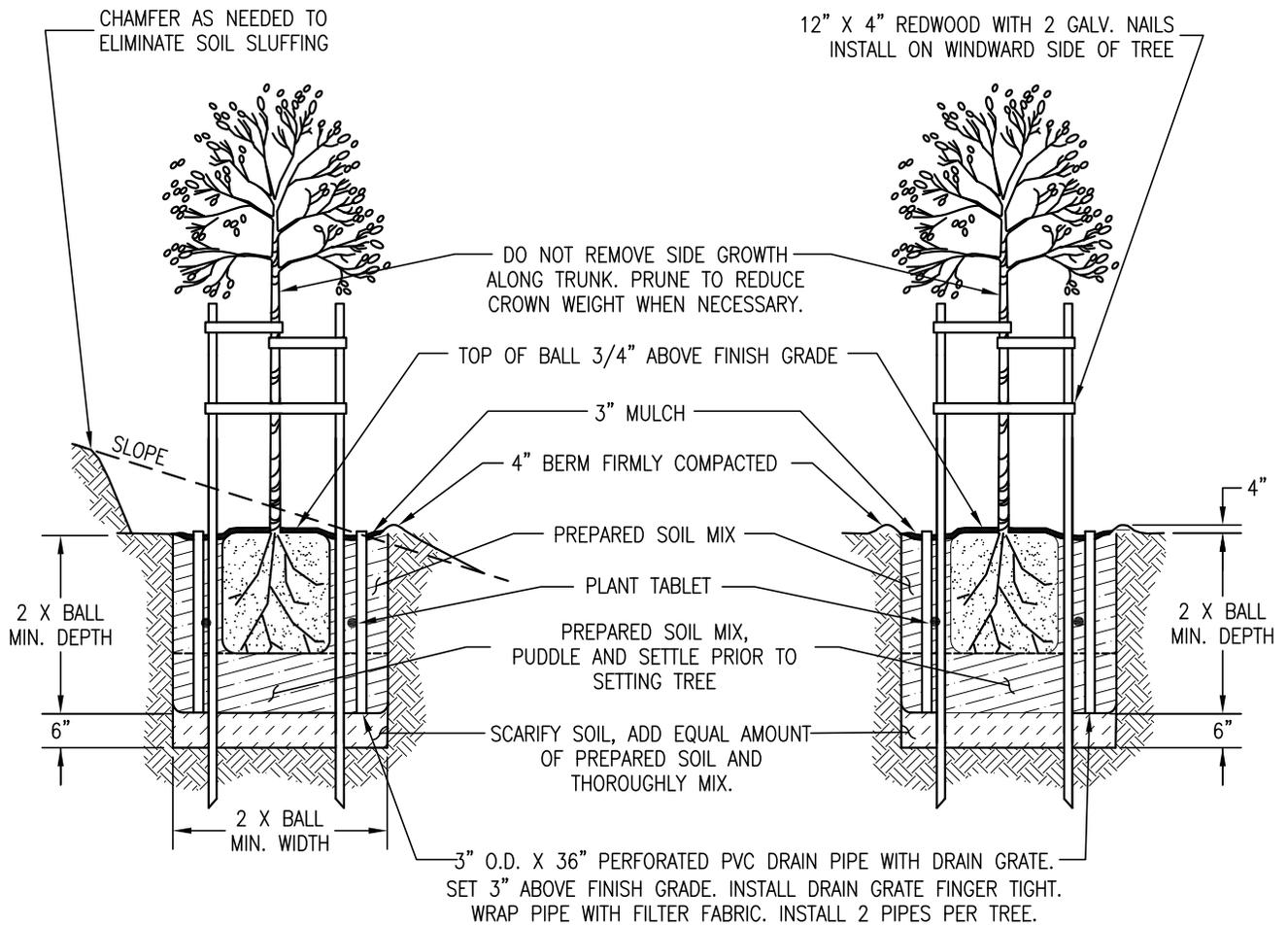
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 DATE: OCTOBER 2013

PALM TREE PLANTING

CITY OF SANTA CLARA

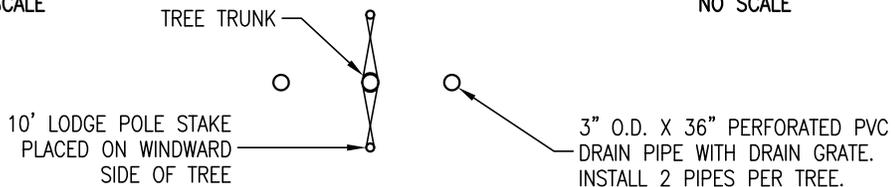
LS-1

* ALL TREES EXCEPT PALMS



SLOPE SURFACE
ELEVATION VIEW
NO SCALE

LEVEL SURFACE
ELEVATION VIEW
NO SCALE



NOTES:

1. CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 642-2444 AT LEAST 5 DAYS PRIOR TO BEGINNING EXCAVATION WORK TO LOCATE EXISTING UTILITIES.
2. BUILD SOIL BERM MIN. 4" HIGH AND 3' FROM TREE TRUNK IN PLANTER STRIP. PROVIDE LOAM TOPSOIL NEEDED TO FORM BERM AND FILL HOLES.
3. SOIL, CONCRETE AND OTHER MATERIALS SPILLED ON STREET, SIDEWALK, AND PLANTING AREA SHALL BE CLEANED UP IMMEDIATELY BY CONTRACTOR.
4. IF TREE PLANTING IS DELAYED AFTER TREE WELLS ARE CONSTRUCTED, HOLES WILL BE FILLED IN WITH SOIL UNTIL TREES ARE AVAILABLE.
5. TREE PLANTING PIT DRAINAGE TEST TO BE: AUGER HOLE 18" DEEP 6" DIA., FILL WITH WATER, LET DRAIN, FILL WITH WATER AGAIN AND HAVE CITY ARBORIST ON SITE TO REVIEW DRAINAGE AND MAKE ANY NECESSARY RECOMMENDATIONS AT THAT TIME.



DRAWN BY: K. TRAN
 CHECKED BY: C. QUANZ
 APPROVED BY: G. GOMEZ
 DATE: OCTOBER 2013

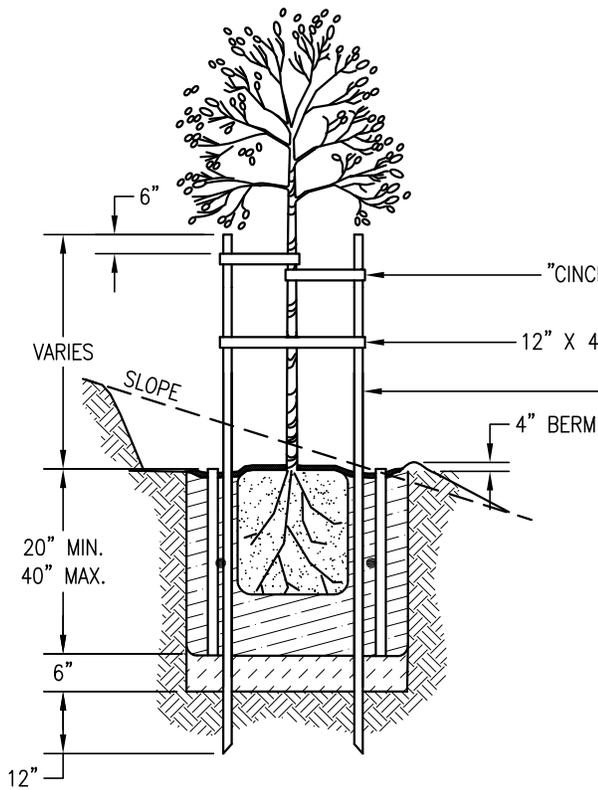
TREE PLANTING

CITY OF SANTA CLARA

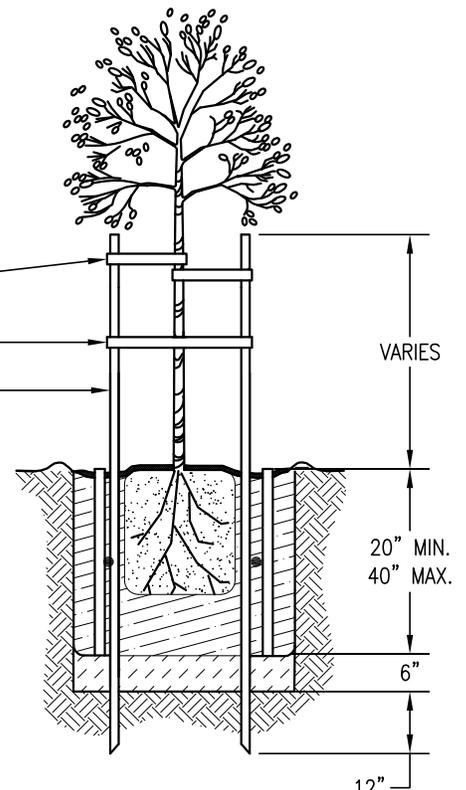
LS-2

PAGE: 58

* ALL TREES EXCEPT PALMS



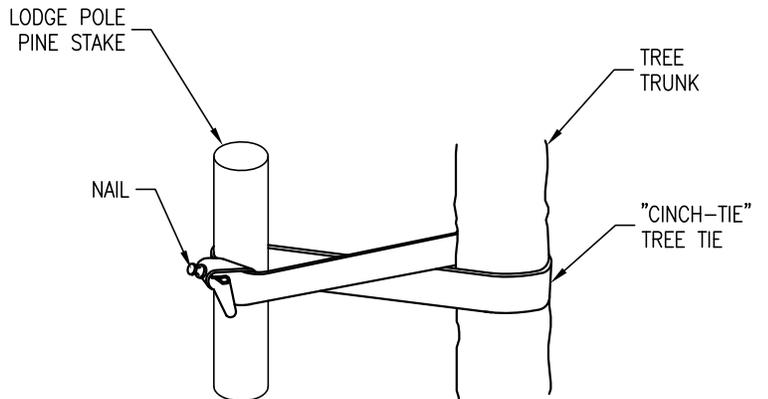
**SLOPE SURFACE
ELEVATION VIEW**
NO SCALE



**LEVEL SURFACE
ELEVATION VIEW**
NO SCALE

NOTES:

1. USE 2 STAKES AND 2 "CINCH-TIE" TREE TIES.
2. TIE TREE TRUNK 6" ABOVE BENDING MOMENT OF TREE.
3. TIE SHOULD ALLOW TRUNK FLEXIBILITY BUT NOT ALLOW THE STAKE TO RUB AGAINST THE TRUNK.
4. CUT STAKES 6" ABOVE TIES.
5. FOR SINGLE STAKE TREES, PLACE STAKE ON WINDWARD SIDE OF TREE.



**"CINCH-TIE"
TREE TIE DETAIL**
NO SCALE



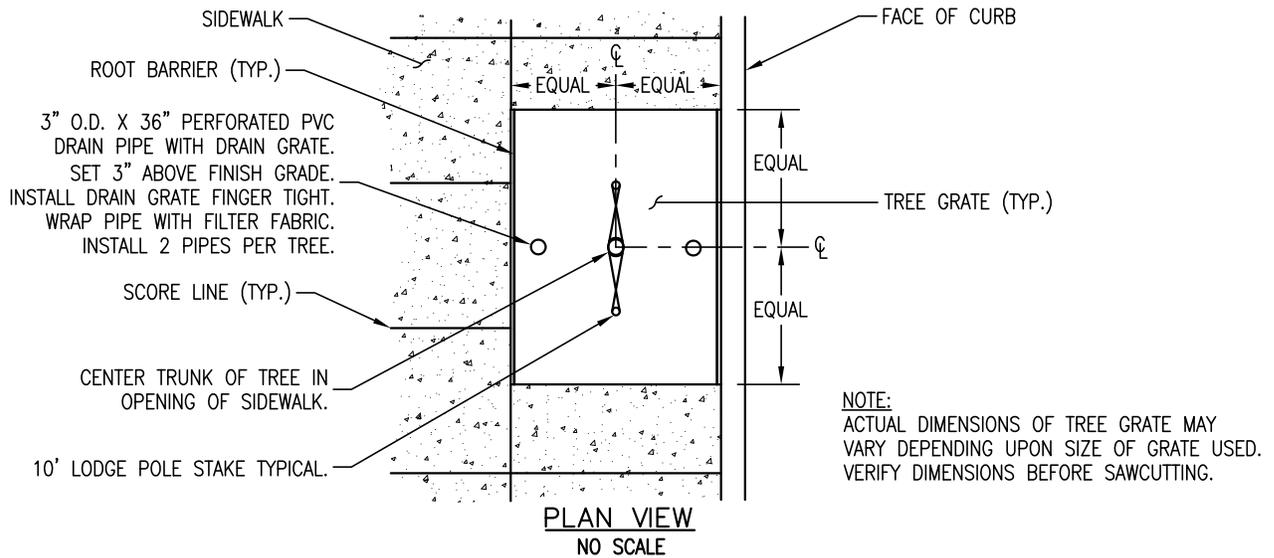
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TREE STAKING

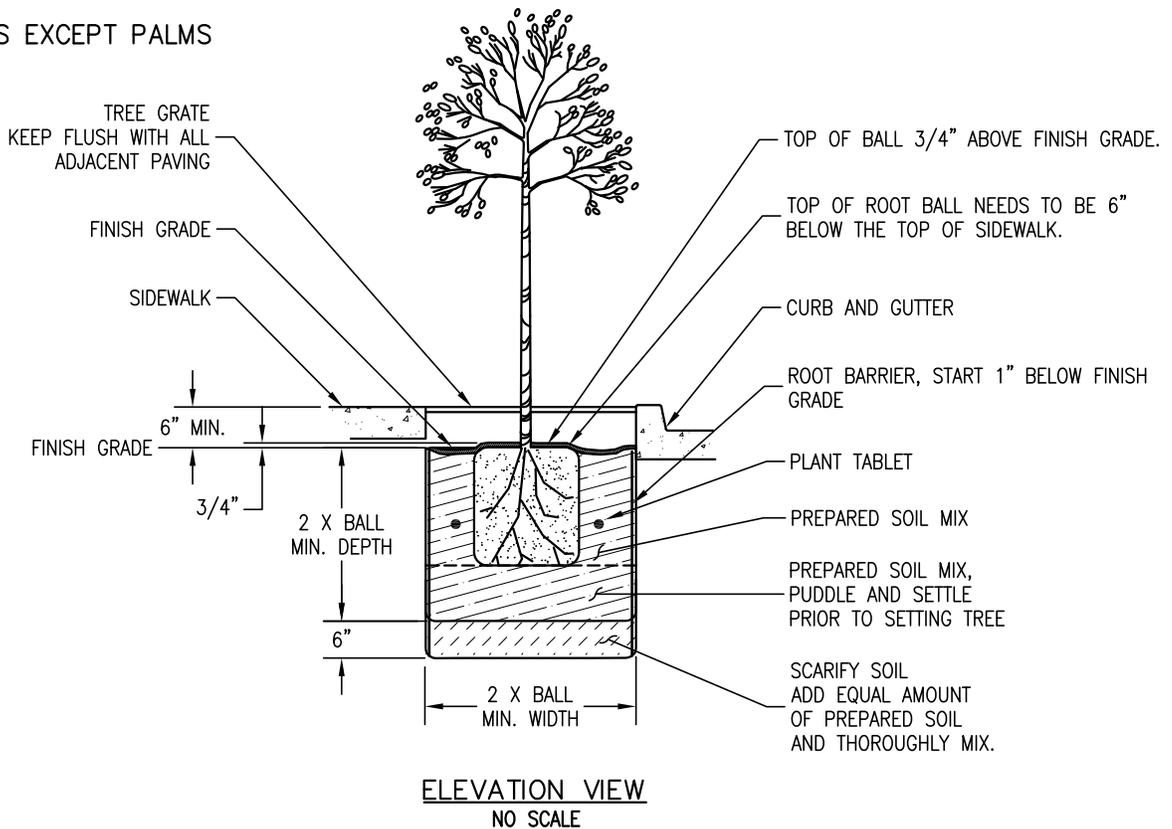
CITY OF SANTA CLARA

LS-3

PAGE: 59



*** ALL TREES EXCEPT PALMS**



NOTES:

1. CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 642-2444 AT LEAST 5 DAYS PRIOR TO BEGINNING EXCAVATION WORK TO LOCATE EXISTING UTILITIES.
2. BUILD SOIL BERM MIN. 4" HIGH AND 3' FROM TREE TRUNK IN PLANTER STRIP. PROVIDE LOAM TOPSOIL NEEDED TO FORM BERM AND FILL HOLES.
3. SOIL, CONCRETE AND OTHER MATERIALS SPILLED ON STREET, SIDEWALK, AND PLANTING AREA SHALL BE CLEANED UP IMMEDIATELY BY CONTRACTOR.
4. IF TREE PLANTING IS DELAYED AFTER TREE WELLS ARE CONSTRUCTED, HOLES WILL BE FILLED IN WITH SOIL UNTIL TREES ARE AVAILABLE.
5. TREE PLANTING PIT DRAINAGE TEST TO BE: AUGER HOLE 18" DEEP 6" DIA., FILL WITH WATER, LET DRAIN, FILL WITH WATER AGAIN AND HAVE CITY ARBORIST ON SITE TO REVIEW DRAINAGE AND MAKE ANY NECESSARY RECOMMENDATIONS AT THAT TIME.



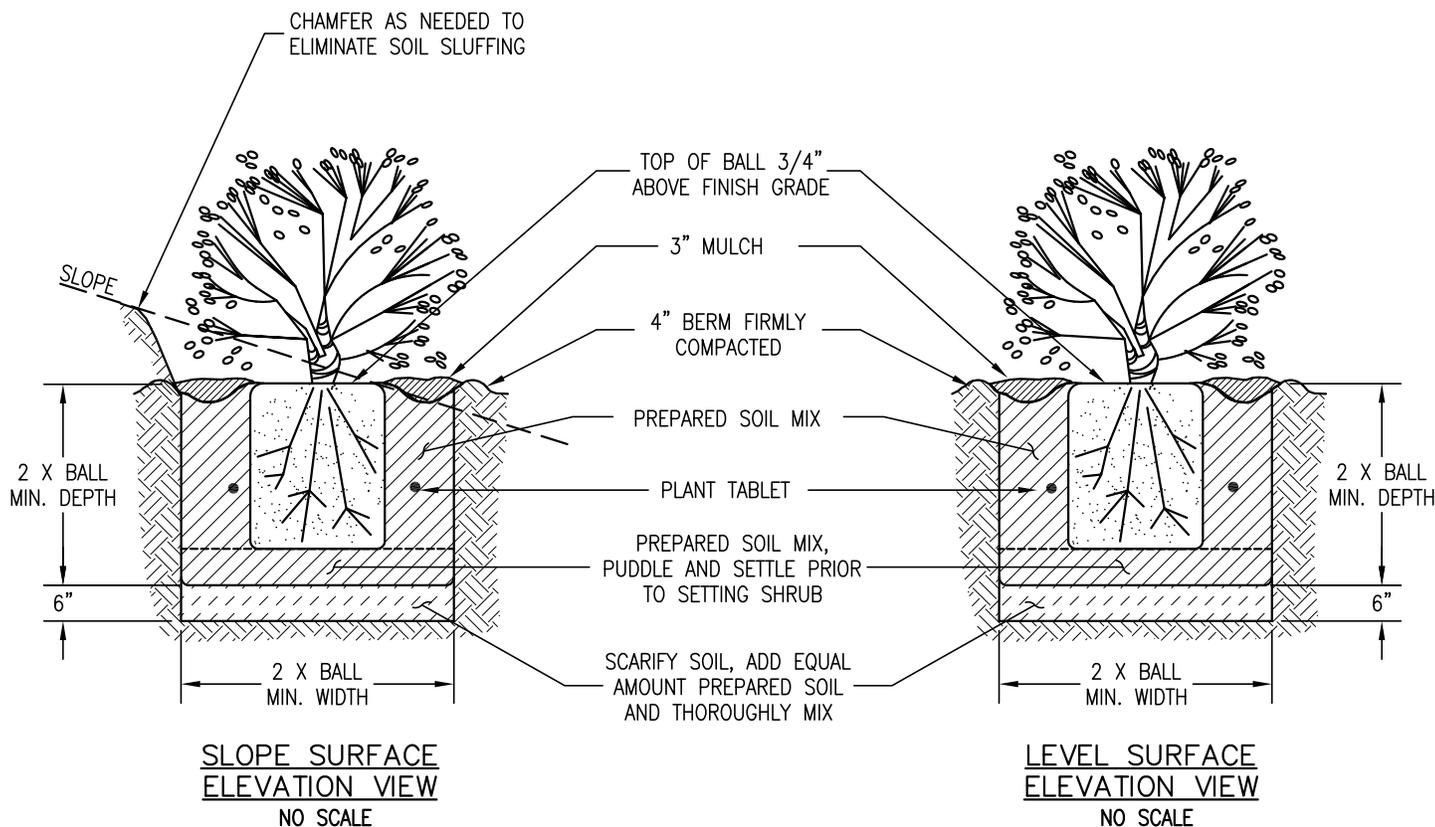
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TREE WELL

CITY OF SANTA CLARA

LS-4

PAGE: 60



NOTES:

1. CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 642-2444 AT LEAST 5 DAYS PRIOR TO BEGINNING EXCAVATION WORK TO LOCATE EXISTING UTILITIES.
2. BUILD SOIL BERM MIN. 4" HIGH AND 3' FROM SHRUB TRUNK IN PLANTER STRIP. PROVIDE LOAM TOPSOIL NEEDED TO FORM BERM AND FILL HOLES.
3. SOIL, CONCRETE AND OTHER MATERIALS SPILLED ON STREET, SIDEWALK, AND PLANTING AREA SHALL BE CLEANED UP IMMEDIATELY BY CONTRACTOR.
4. IF TREE PLANTING IS DELAYED AFTER TREE WELLS ARE CONSTRUCTED, HOLES WILL BE FILLED IN WITH SOIL UNTIL TREES ARE AVAILABLE.
5. SHRUB PLANTING PIT DRAINAGE TEST TO BE CONDUCTED AT 3 DIFFERENT LOCATIONS ON SITE. TEST TO BE: AUGER HOLE 18" DEEP 6" DIA., FILL WITH WATER, LET DRAIN, FILL WITH WATER AGAIN AND HAVE CITY ARBORIST ON SITE TO REVIEW DRAINAGE AND MAKE ANY NECESSARY RECOMMENDATIONS AT THAT TIME.



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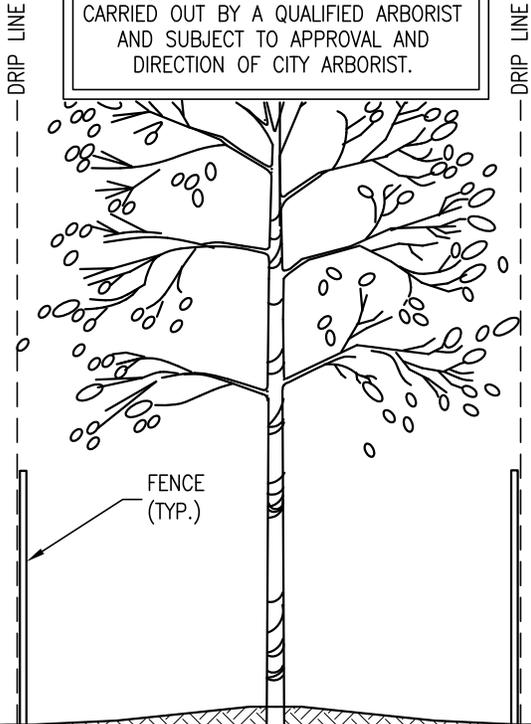
SHRUB PLANTING

CITY OF SANTA CLARA

LS-5

PAGE: 61

PRUNING MAY BE NECESSARY TO FACILITATE REMOVAL OF DEAD WOOD, CONFLICT WITH NEW STRUCTURE, OR REDUCE STRESS AND SHALL BE CARRIED OUT BY A QUALIFIED ARBORIST AND SUBJECT TO APPROVAL AND DIRECTION OF CITY ARBORIST.



FENCE THE PERIMETER OF DRIP LINE WITH 6' HIGH CHAIN LINK FENCE OR APPROVED EQUAL.

FENCE (TYP.)

BORING OF UTILITY LINES IS LESS DAMAGING TO TREES THAN TRENCHING.

WHEN EXCAVATING AND TRENCHING ADJACENT TO DRIPLEINES, APPROVAL OF CITY ARBORIST IS REQUIRED.

1. CUT AS FEW ROOTS AS POSSIBLE AND CUT THEM CLEAN.
2. PAINT CUT ROOTS WITH APPROVED DRESSING.
3. BACKFILL AS SOON AS POSSIBLE TO AVOID ROOTS FROM DRYING.

NOTES:

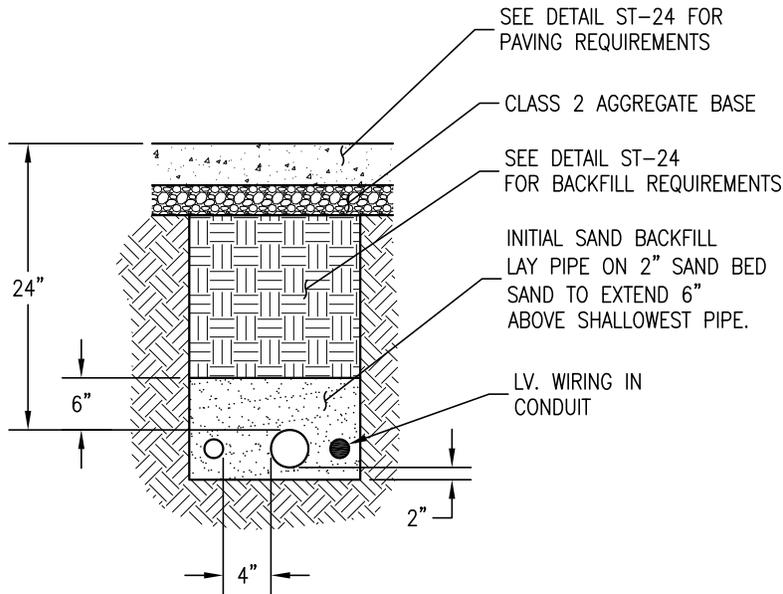
1. PROVIDE ADEQUATE RETAINING WALL – NO CLOSER THAN DRIP LINE. LARGE AMOUNTS OF FILL WILL INHIBIT DELICATE BALANCE BETWEEN ROOTS AND SOIL.
2. AVOID ANY PONDING BY DRAINING LOW POINTS.
3. PRIOR TO GRADING, INSTALL FENCES AND BARRICADES AROUND TREE.
4. FERTILIZE AND WATER TO MINIMIZE SHOCK AS DIRECTED BY QUALIFIED ARBORIST.



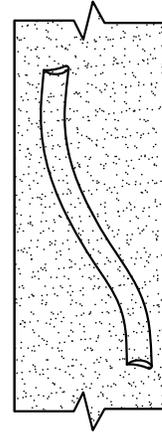
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TREE PROTECTION
 CITY OF SANTA CLARA

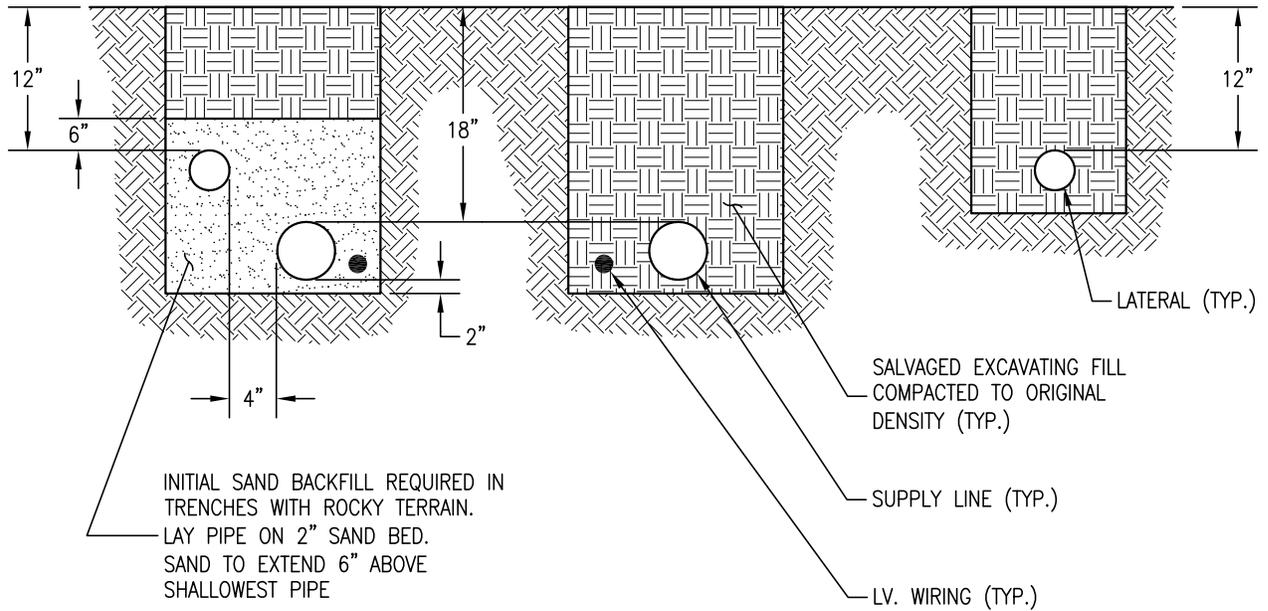
LS-6
 PAGE: 62



**TRENCH IN PAVED AREA
ELEVATION VIEW
NO SCALE**



**SNAKE ALL PIPE
IN TRENCHES
AS SHOWN**



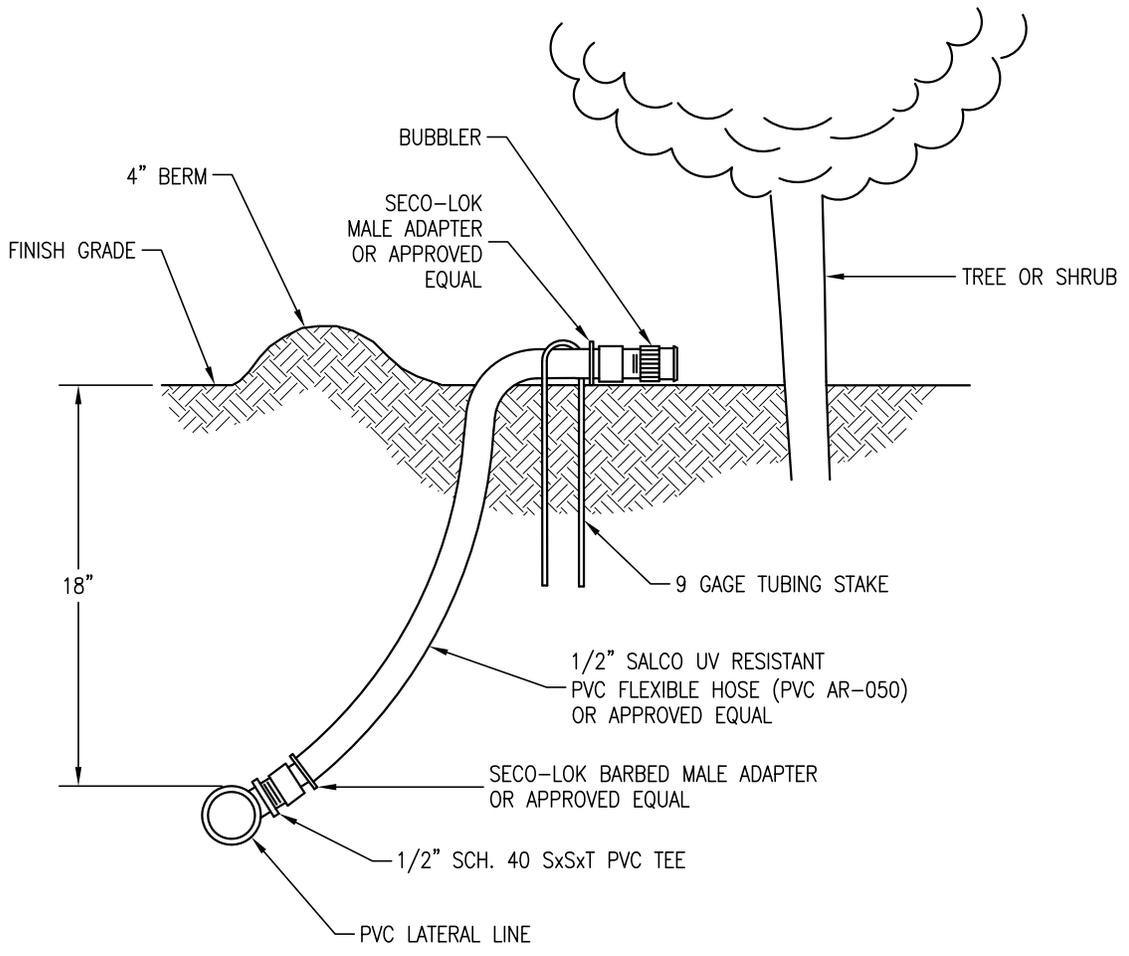
**TRENCHES IN PLANTING AREA
ELEVATION VIEW
NO SCALE**



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LANDSCAPE
 TRENCHING DETAILS
 CITY OF SANTA CLARA

LS-7
 PAGE: 63



ELEVATION VIEW
NO SCALE

NOTES:

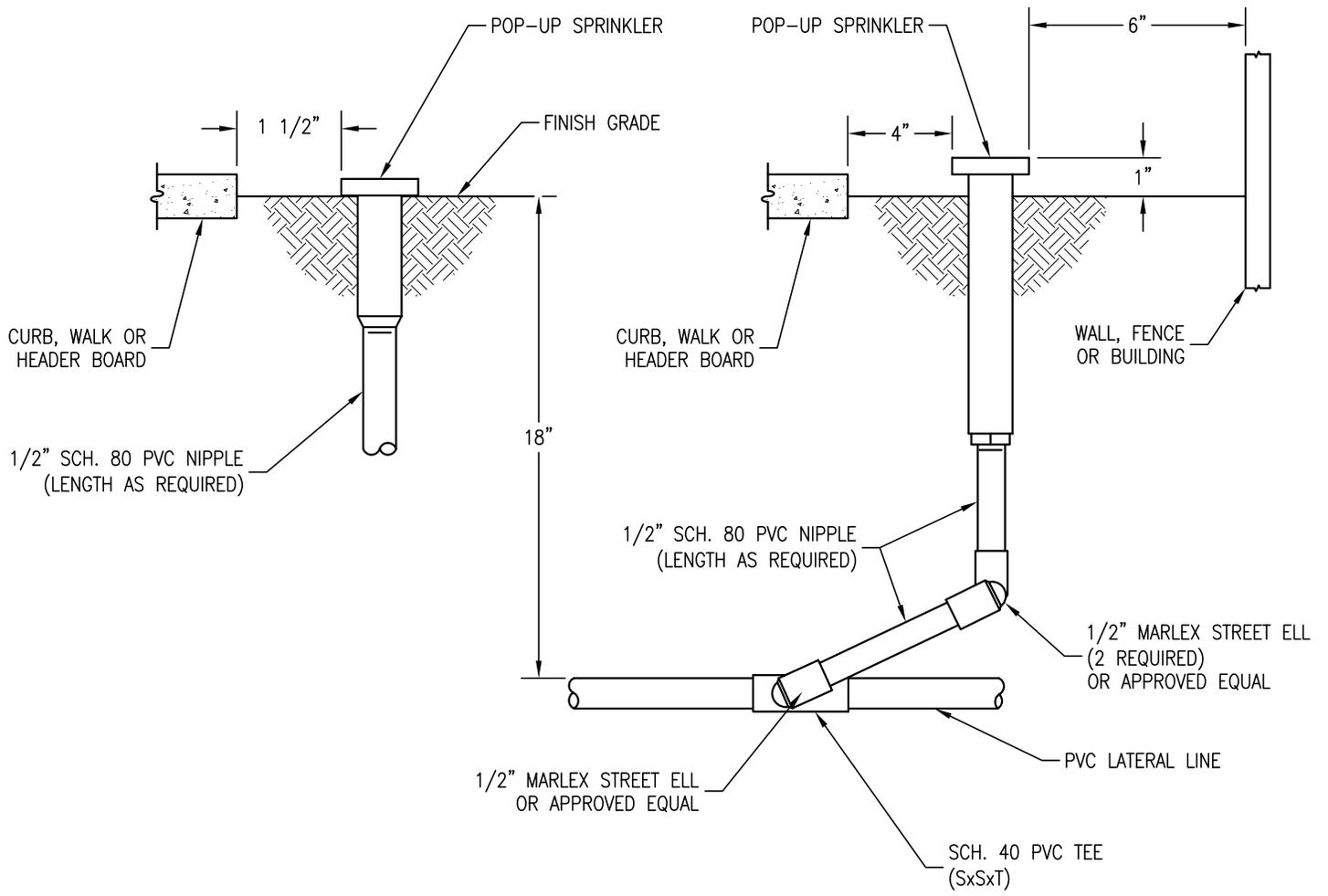
1. ONE BUBBLER PER TREE TO BE PLACED UPHILL SIDE OF ROOTBALL.
2. TREE BUBBLER TO BE A MINIMUM 1' AWAY FROM AERATION TUBE.



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**TREE AND SHRUB
 BUBBLER**
 CITY OF SANTA CLARA

LS-8
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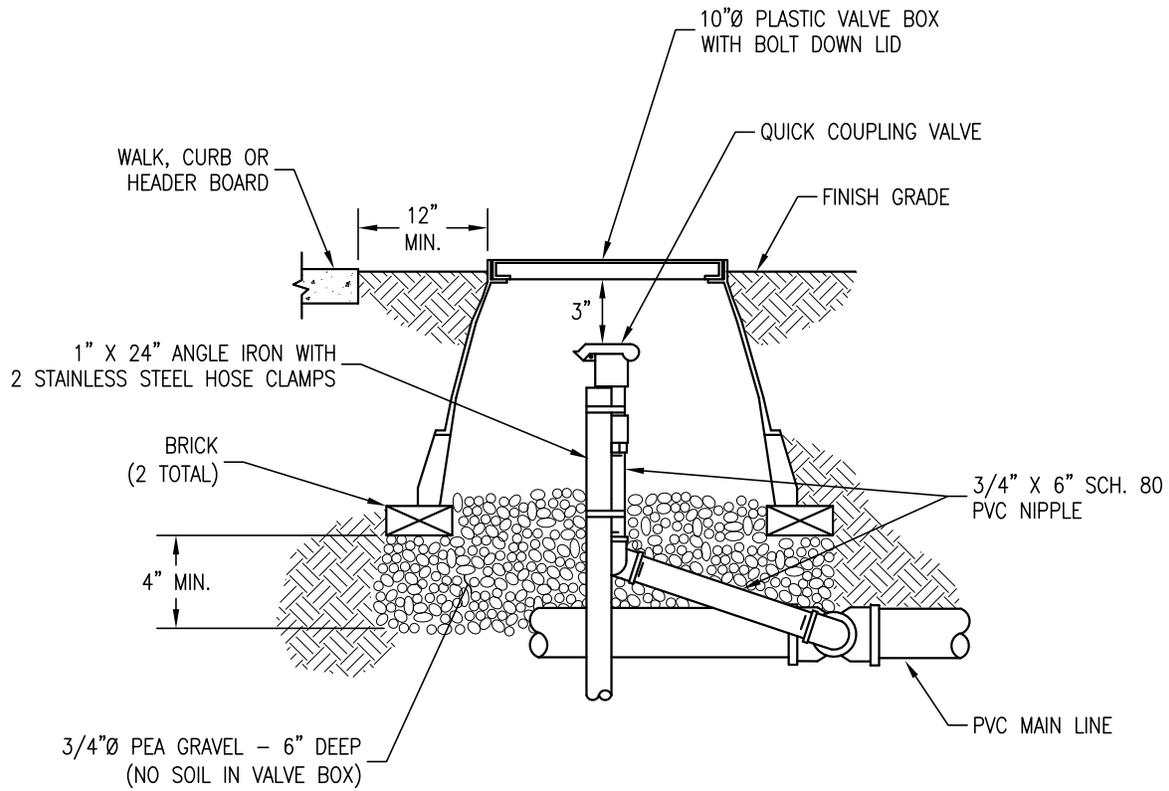
ELEVATION VIEW
NO SCALE



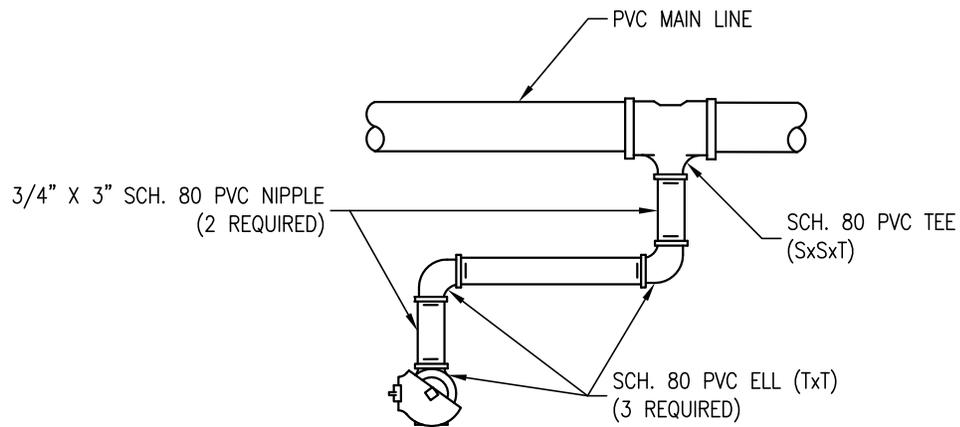
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POP-UP SPRINKLER
 CITY OF SANTA CLARA

LS-9
 PAGE: 65



ELEVATION VIEW
NO SCALE



PLAN VIEW
NO SCALE



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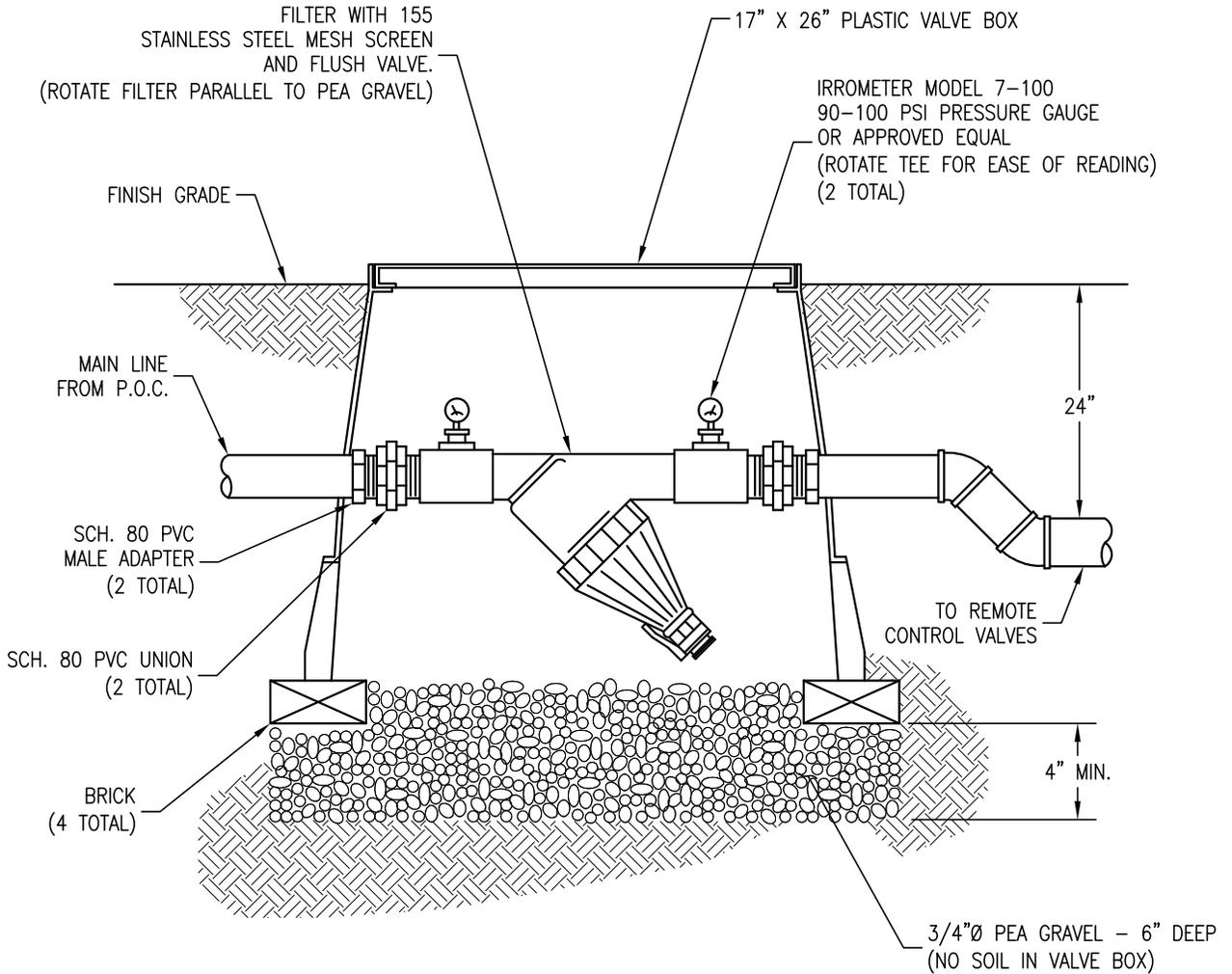
DATE: OCTOBER 2013

QUICK COUPLER

CITY OF SANTA CLARA

LS-10

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ELEVATION VIEW
NO SCALE

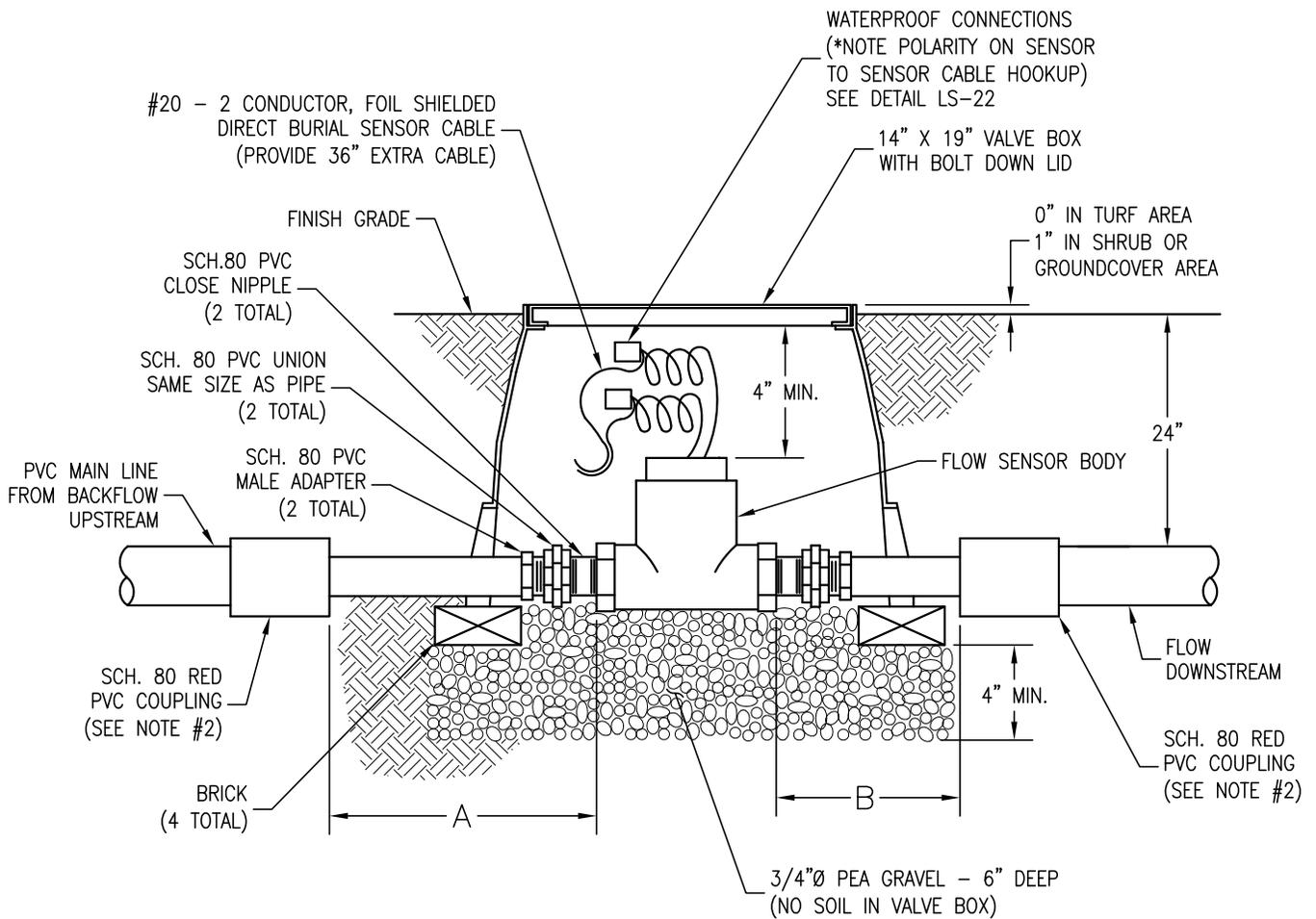


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LANDSCAPE FILTER

CITY OF SANTA CLARA

LS-11



ELEVATION VIEW
NO SCALE

NOTES:

1. FLOW SENSOR MUST BE INSTALLED WITH INSERT (TOP) VERTICAL AND BODY (TEE) POSITIONED HORIZONTALLY.
2. REDUCER COUPLING MUST BE AT A DISTANCE EQUAL TO 10 TIMES THE PIPE DIAMETER ON THE UPSTREAM SIDE (A) AND 5 TIMES THE THE PIPE DIAMETER ON THE DOWNSTREAM (B) SIDE.

EXAMPLE: FOR 3" FLOW SENSOR, 30" ON UPSTREAM SIDE AND 15" ON DOWNSTREAM SIDE.



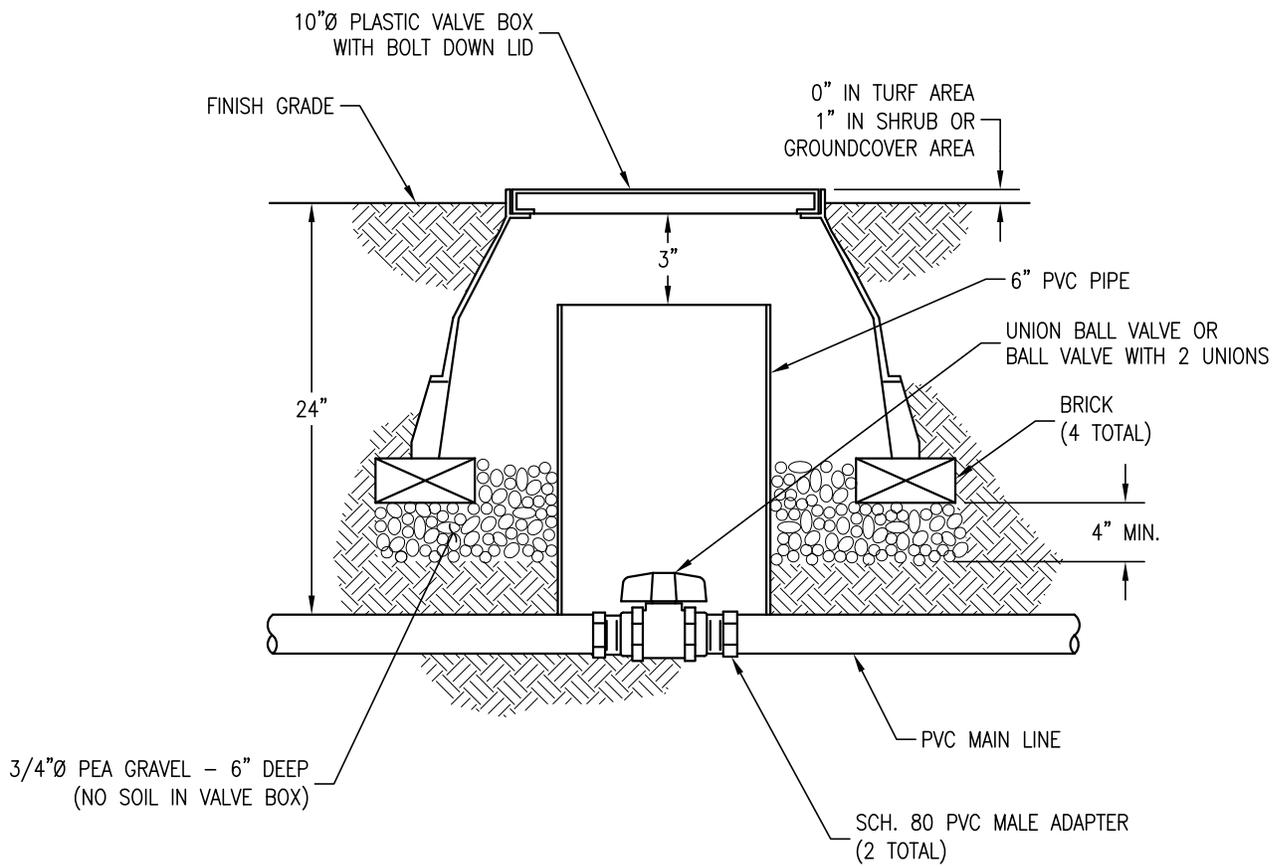
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FLOW SENSOR

CITY OF SANTA CLARA

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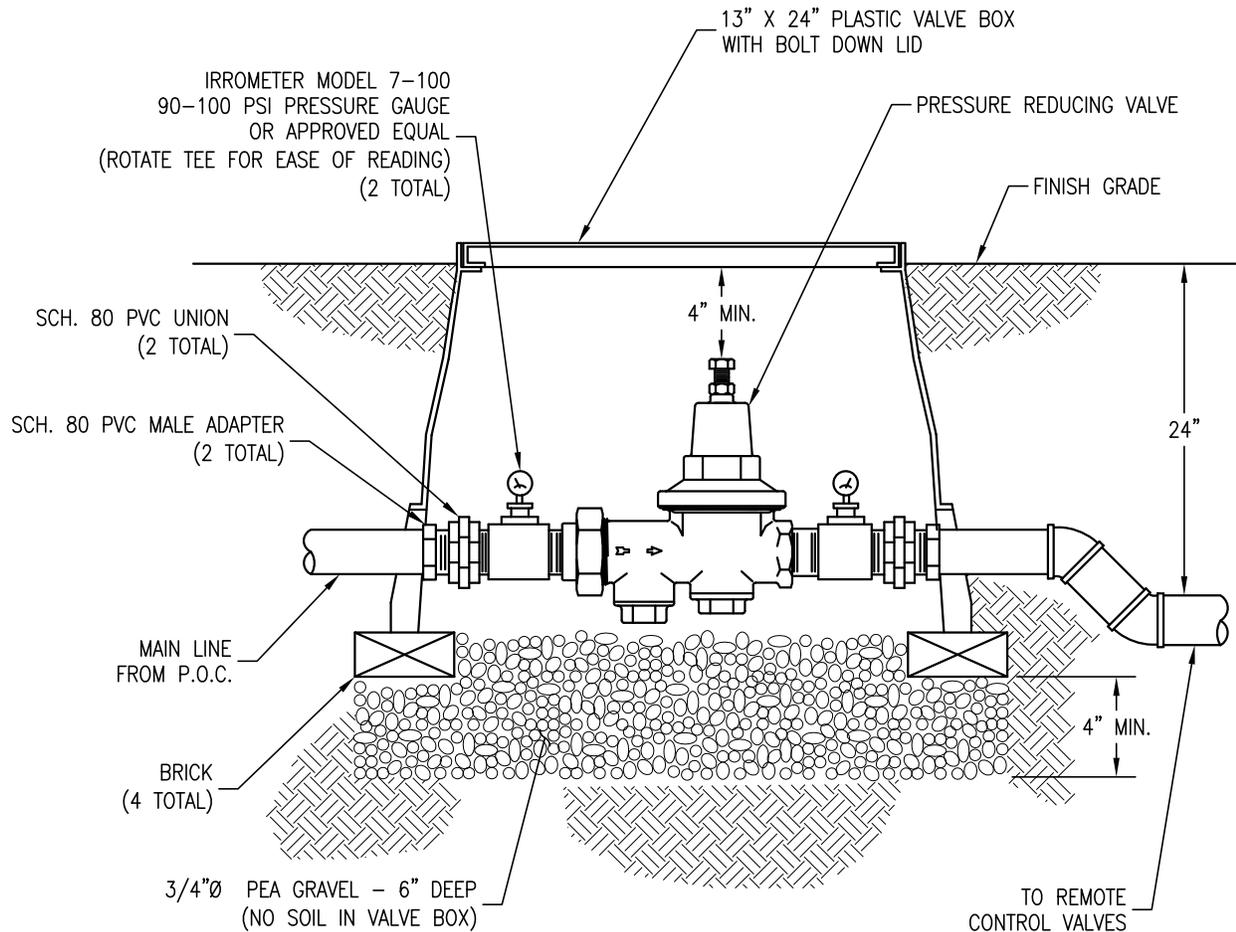
ELEVATION VIEW
NO SCALE



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UNION BALL VALVE
 CITY OF SANTA CLARA

LS-13
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ELEVATION VIEW
NO SCALE



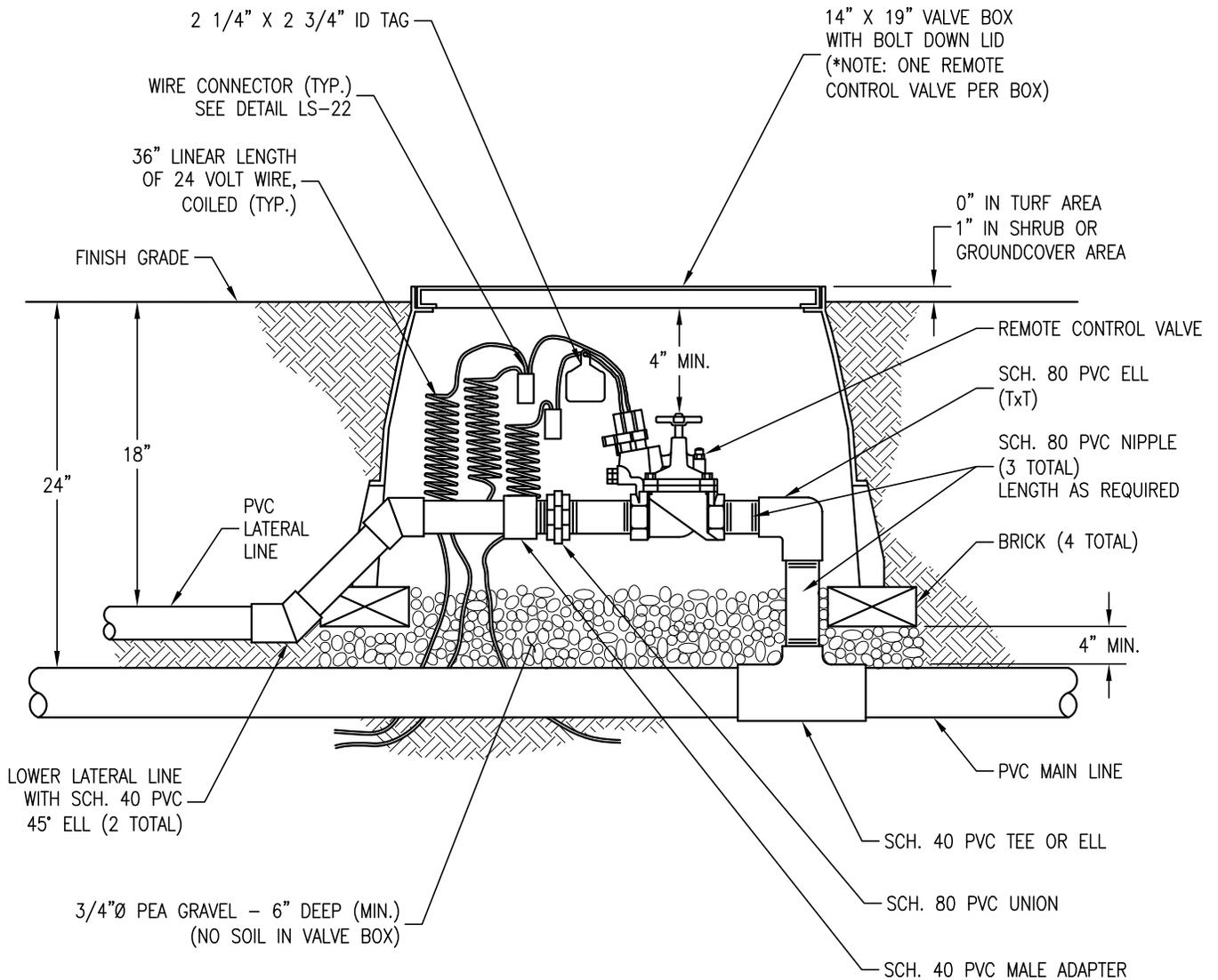
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PRESSURE REDUCING VALVE

CITY OF SANTA CLARA

LS-14

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ELEVATION VIEW
NO SCALE



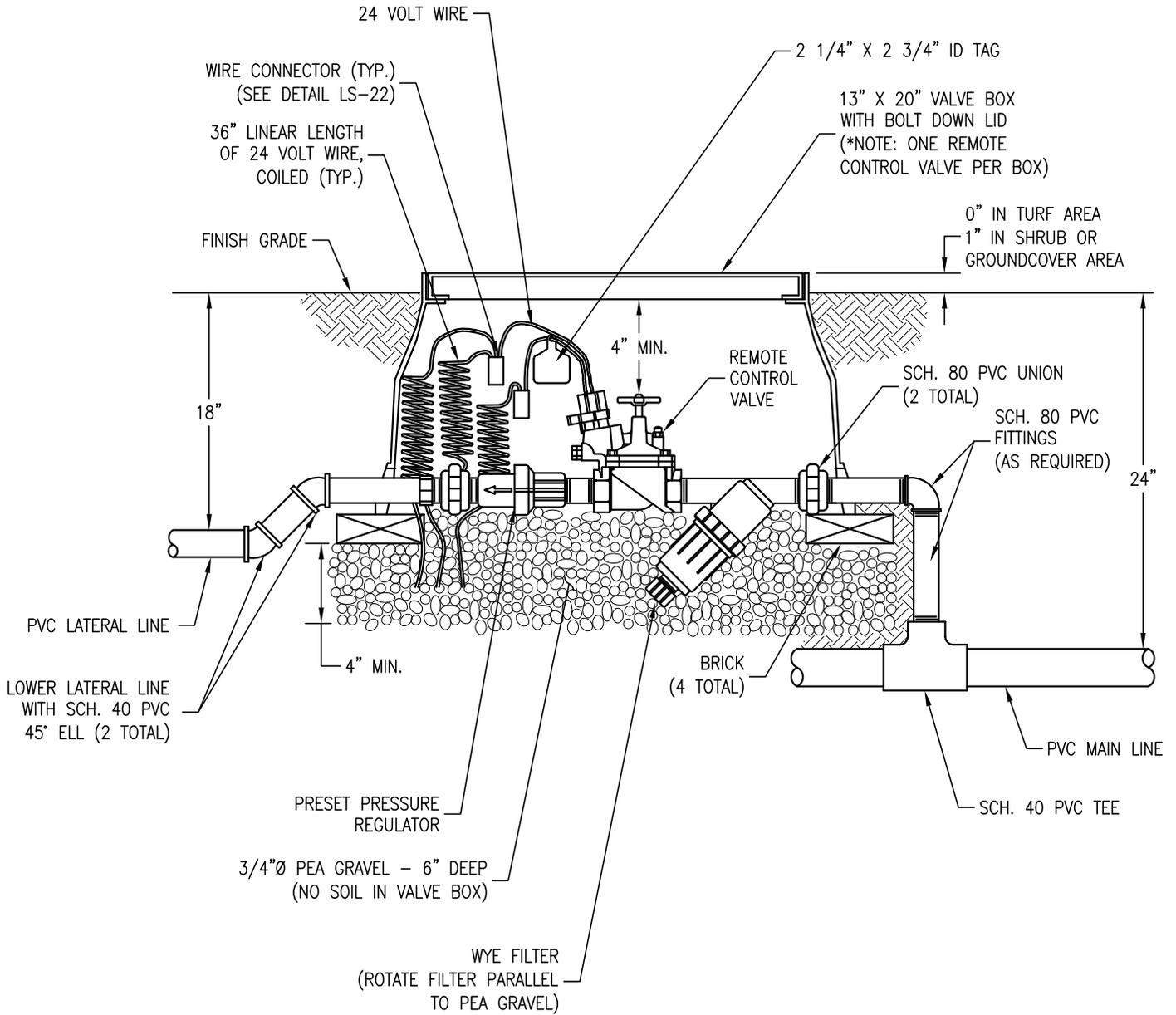
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REMOTE CONTROL VALVE

CITY OF SANTA CLARA

LS-15

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ELEVATION VIEW
NO SCALE



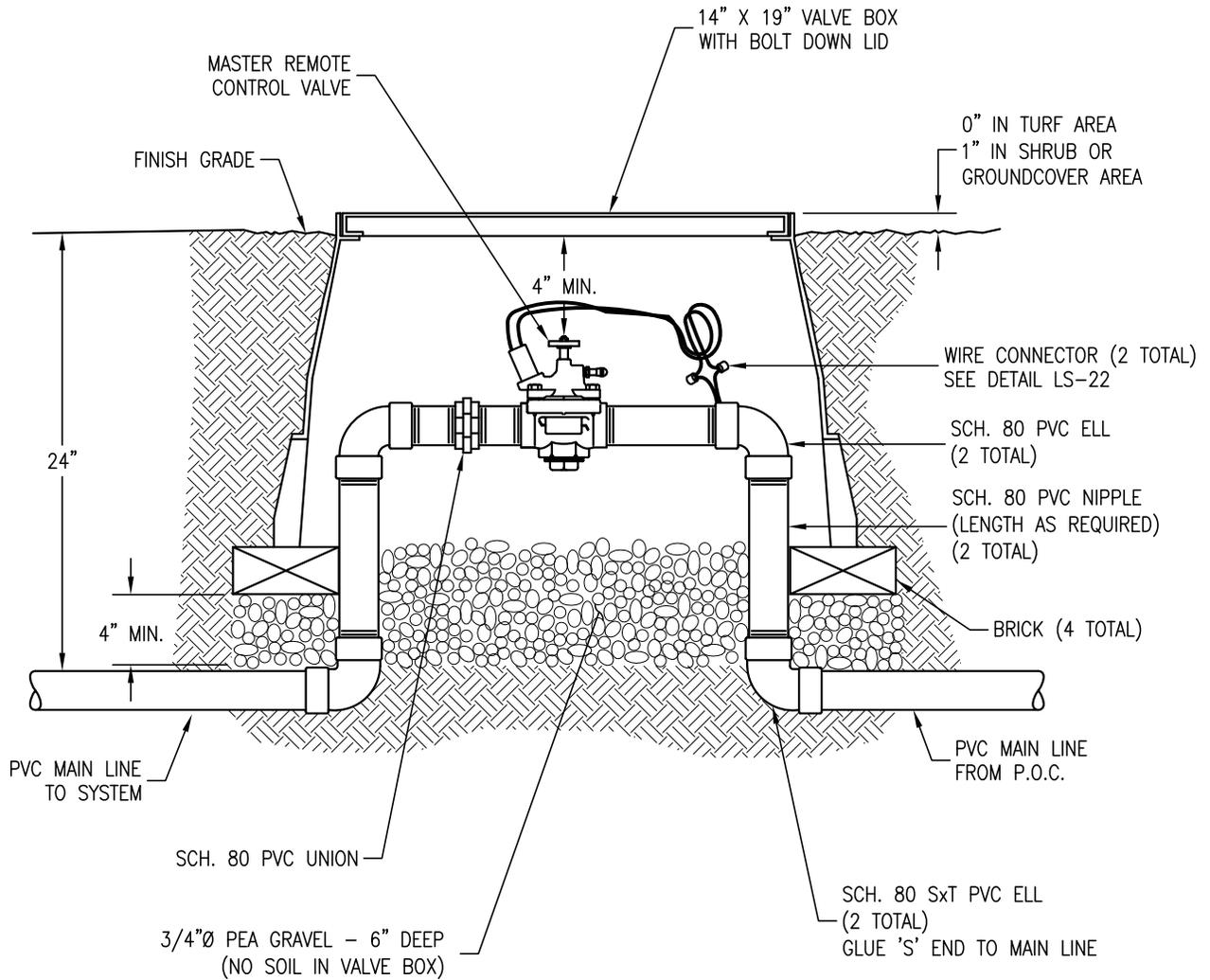
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**LOW VOLUME
 REMOTE CONTROL VALVE**

CITY OF SANTA CLARA

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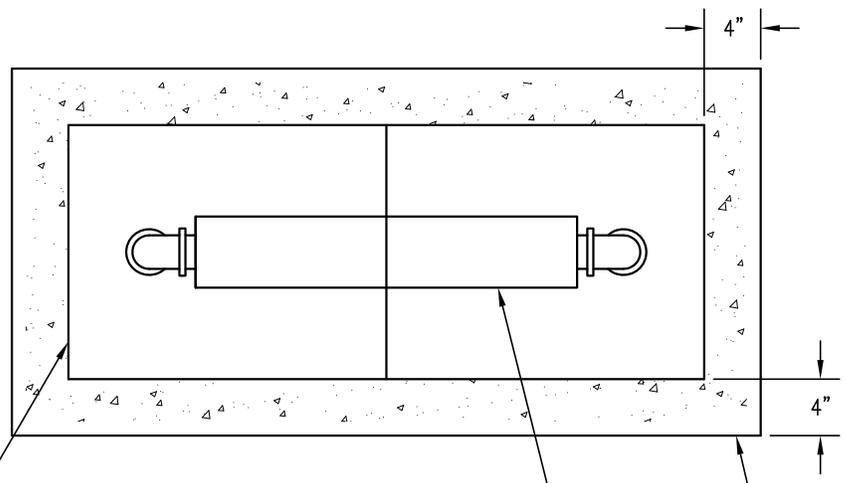
ELEVATION VIEW
NO SCALE



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MASTER REMOTE CONTROL VALVE
 CITY OF SANTA CLARA

LS-17
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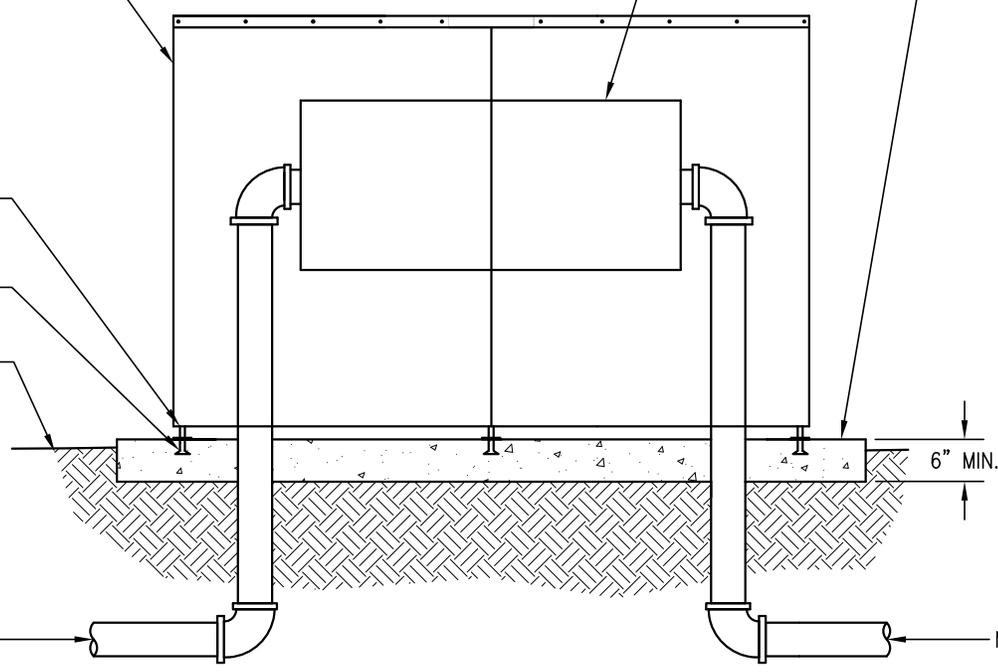
PLAN VIEW
NO SCALE

ALUMINUM
BACKFLOW
ENCLOSURE

BACKFLOW
PREVENTOR

POURED CONCRETE BASE

ANCHOR ROD
(TYP.)
SUPPORT ROD
(TYP.)
FINISH GRADE



ELEVATION VIEW
NO SCALE

MAIN LINE FROM
POINT OF CONNECTION
OR WATER METER

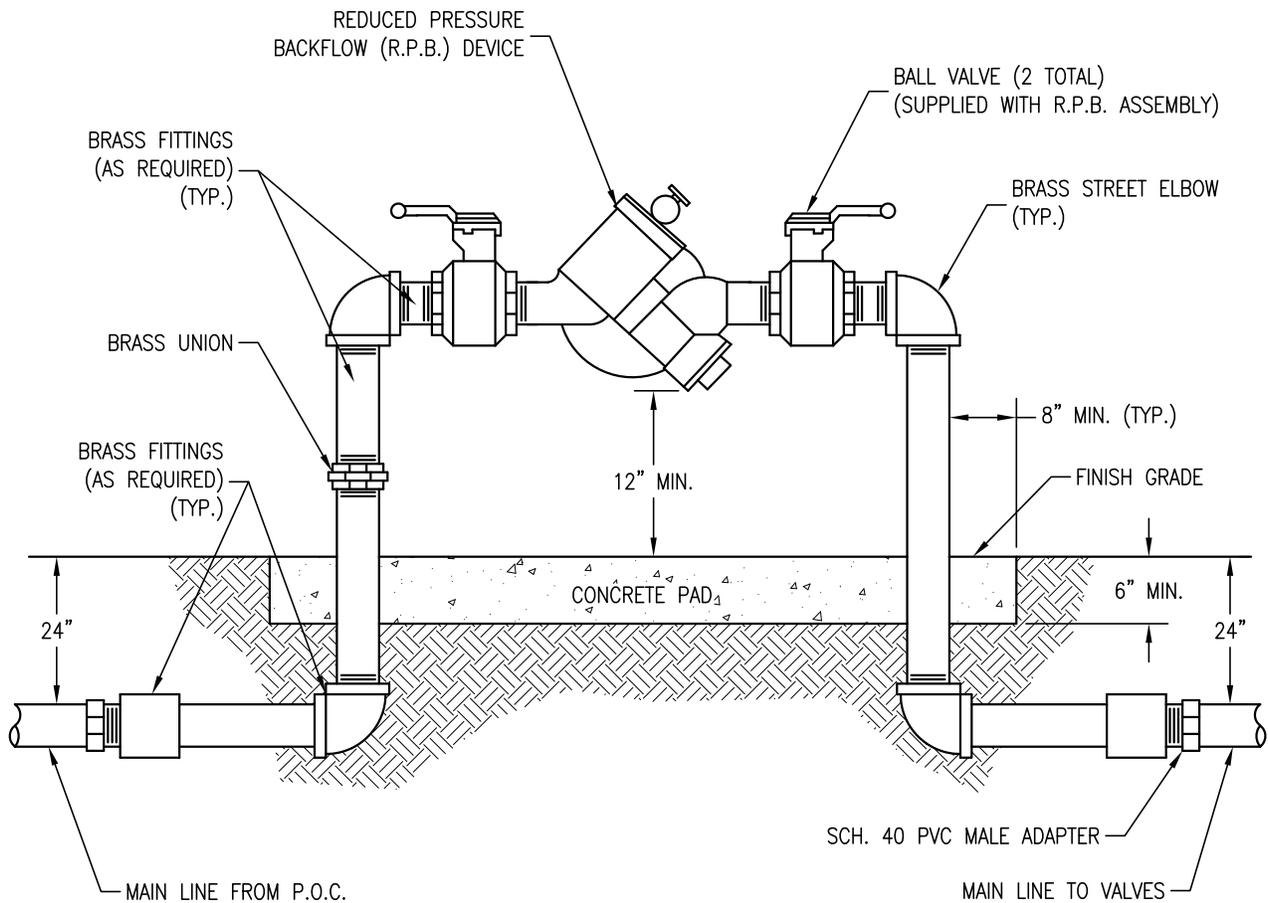
MAIN LINE TO VALVES



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BACKFLOW ENCLOSURE
CITY OF SANTA CLARA

LS-18
PAGE: 74



ELEVATION VIEW
NO SCALE

NOTES:

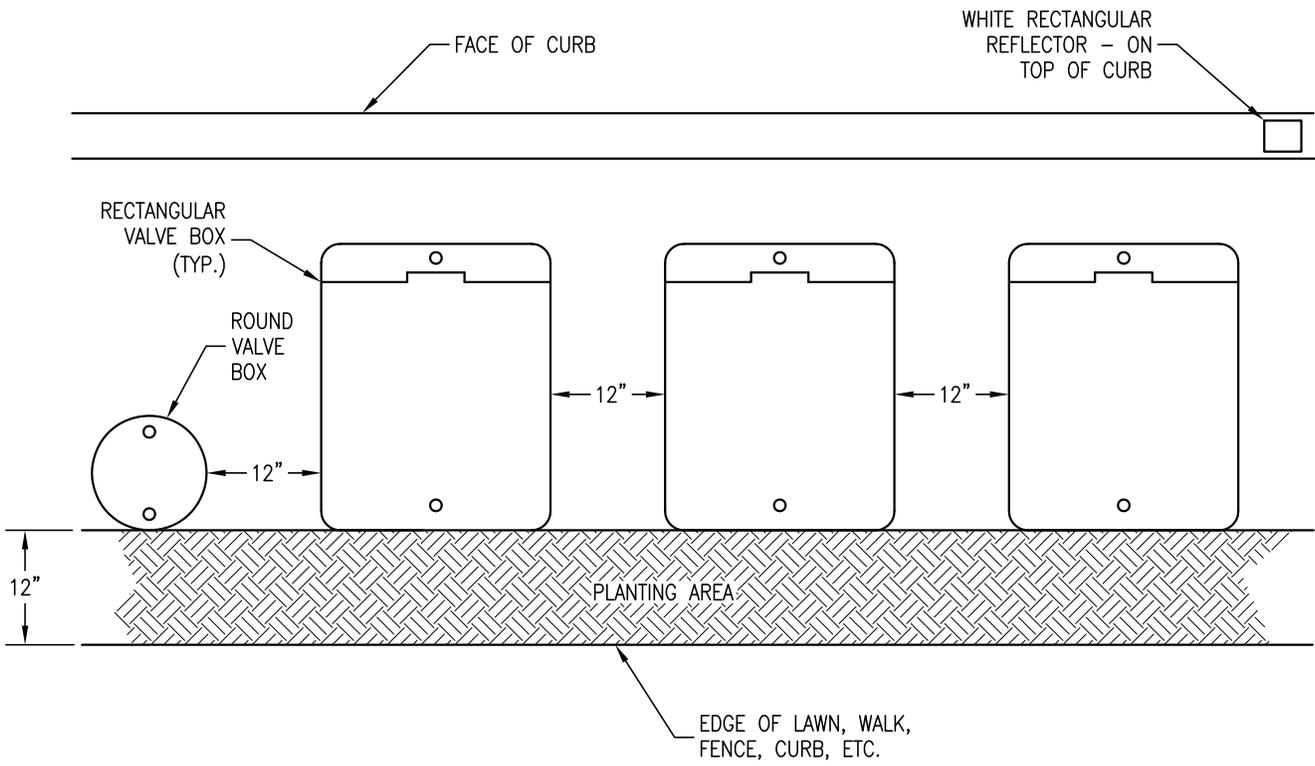
1. EVENLY COAT METAL FITTINGS EXPOSED TO SOIL AND CONCRETE WITH 3M SCOTCHRAP PIPE PRIMER AND THEN WRAP WITH 3M SCOTCHRAP NO. 51 BLACK TAPE (3/4" OVERLAP).
2. FOR SERVICE CONNECTION, REFER TO WATER & SEWER DEPARTMENT STANDARD DETAILS.



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**REDUCED PRESSURE
 BACKFLOW ASSEMBLY**
 CITY OF SANTA CLARA

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PLAN VIEW
NO SCALE

NOTES:

1. CENTER BOXES OVER VALVES.
2. SET BOXES IN GROUND COVER/SHRUB AREA WHERE POSSIBLE.
3. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
4. AVOID HEAVILY COMPACTING SOIL AROUND BOXES TO PREVENT DAMAGING VALVE BOXES



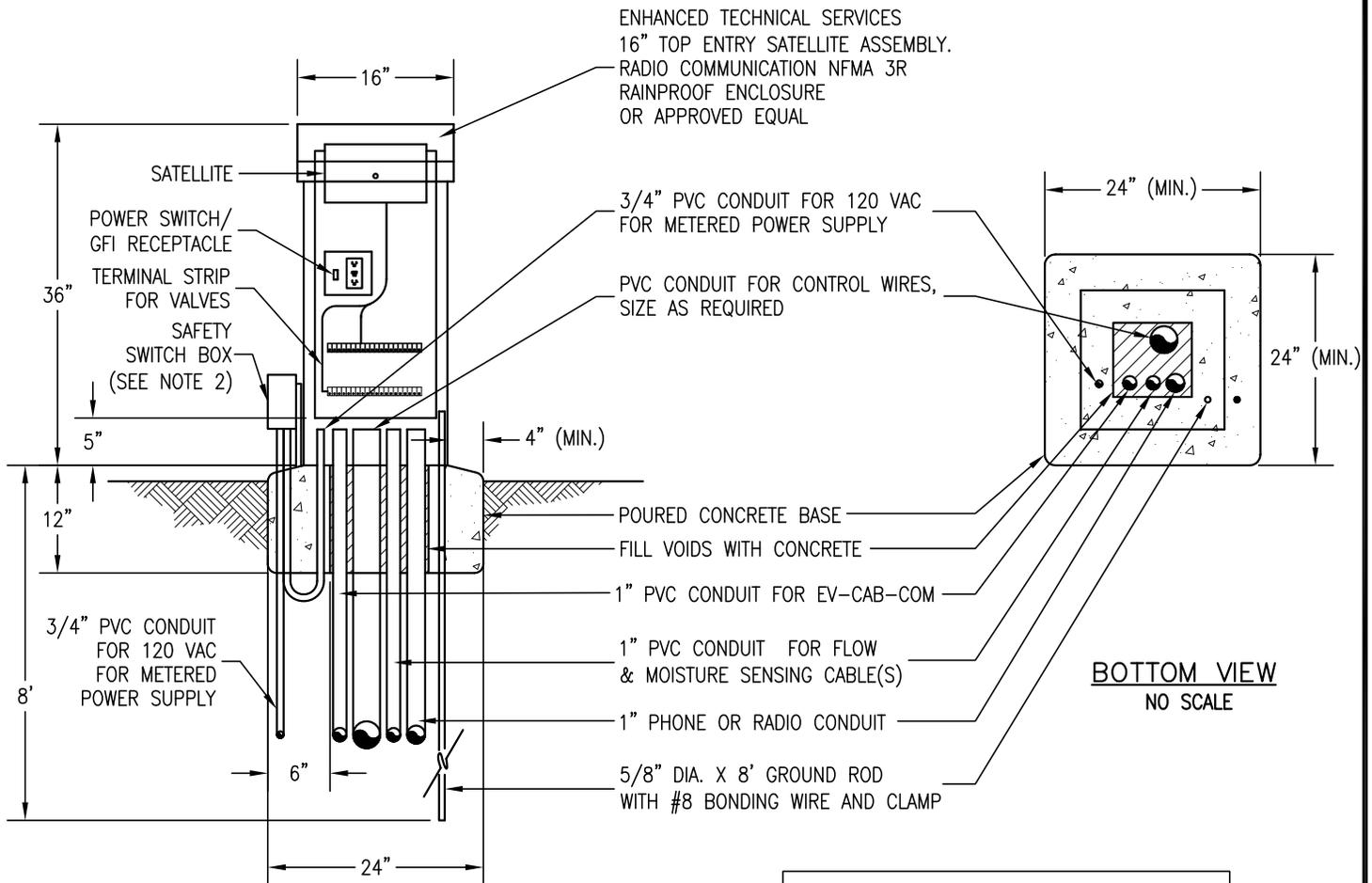
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**IRRIGATION
 VALVE BOX LOCATIONS**

CITY OF SANTA CLARA

LS-20

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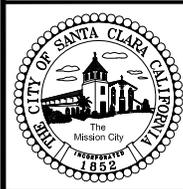


16" ENTRY SATELLITE ASSEMBLY
(SA6-RM8-(STA#)/DX3)
OR APPROVED EQUAL
ELEVATION VIEW
 NO SCALE

NOTES:

1. ENCLOSURE TYPE MAY VARY PER APPLICATION UPON APPROVAL.
2. SAFETY SWITCH BOX SHALL BE SERIES E3 RAINPROOF 30 AMPS TYPE 3R ENCLOSURE, OR APPROVED EQUAL.
3. SAFETY SWITCH BOX SHALL BE ATTACHED EITHER TO THE ENCLOSURE EXTERIOR OR TO APPROVED POST (1"x1" STEEL OR 4"x4" WOOD).

- SA ASSEMBLY TO INCLUDE**
- CONTROLLER MODEL AS SPECIFIED
 - ENCLOSURE MODEL AS SPECIFIED
 - OPTIONS AS SPECIFIED
 - TERMINAL STRIPS
 - TEMPLATE & BOLTS
 - 8' COPPER GROUND ROD
 - 5 YEAR LIMITED WARRANTY
 - CONTACT ENHANCED TECHNICAL SERVICES TO OBTAIN CERTIFICATION



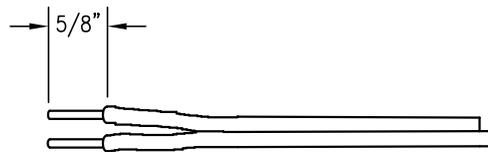
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IRRIGATION SATELLITE
(RADIO COMMUNICATION)

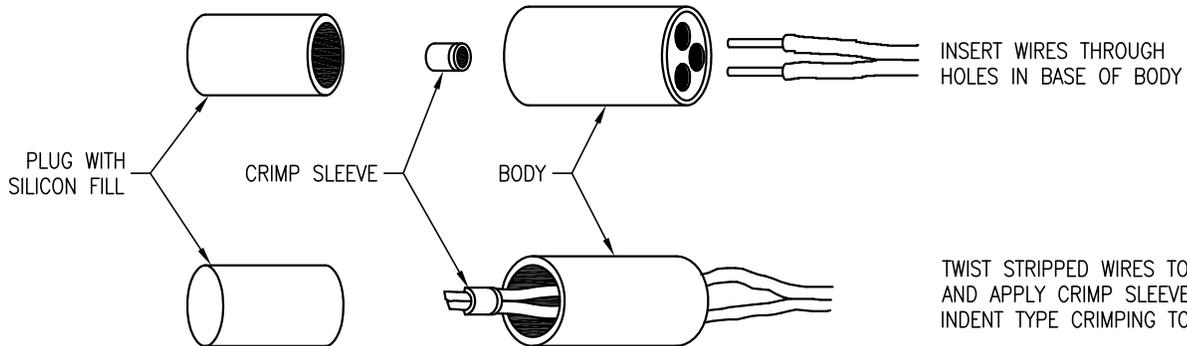
CITY OF SANTA CLARA

LS-21

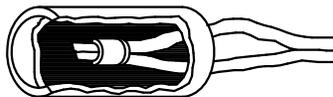
PAGE: **77**



STRIP WIRES TO APPROXIMATELY 5/8" FROM END.



TWIST STRIPPED WIRES TOGETHER AND APPLY CRIMP SLEEVE WITH AN INDENT TYPE CRIMPING TOOL.



PUSH WIRES BACK INTO BODY. INSERT PLUG INTO BODY UNTIL IT SNAPS TIGHT.

NOTES:

1. ONE CONNECTOR WILL HANDLE #10, #12 AND #14 AWG WIRES.
2. WIRE CONNECTOR WILL ACCEPT TWO OR THREE WIRE CONNECTIONS.
3. MANUFACTURED BY SPEARS, MODEL DS-400, OR APPROVED EQUAL.



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LOW VOLTAGE IRRIGATION
 WIRE CONNECTION

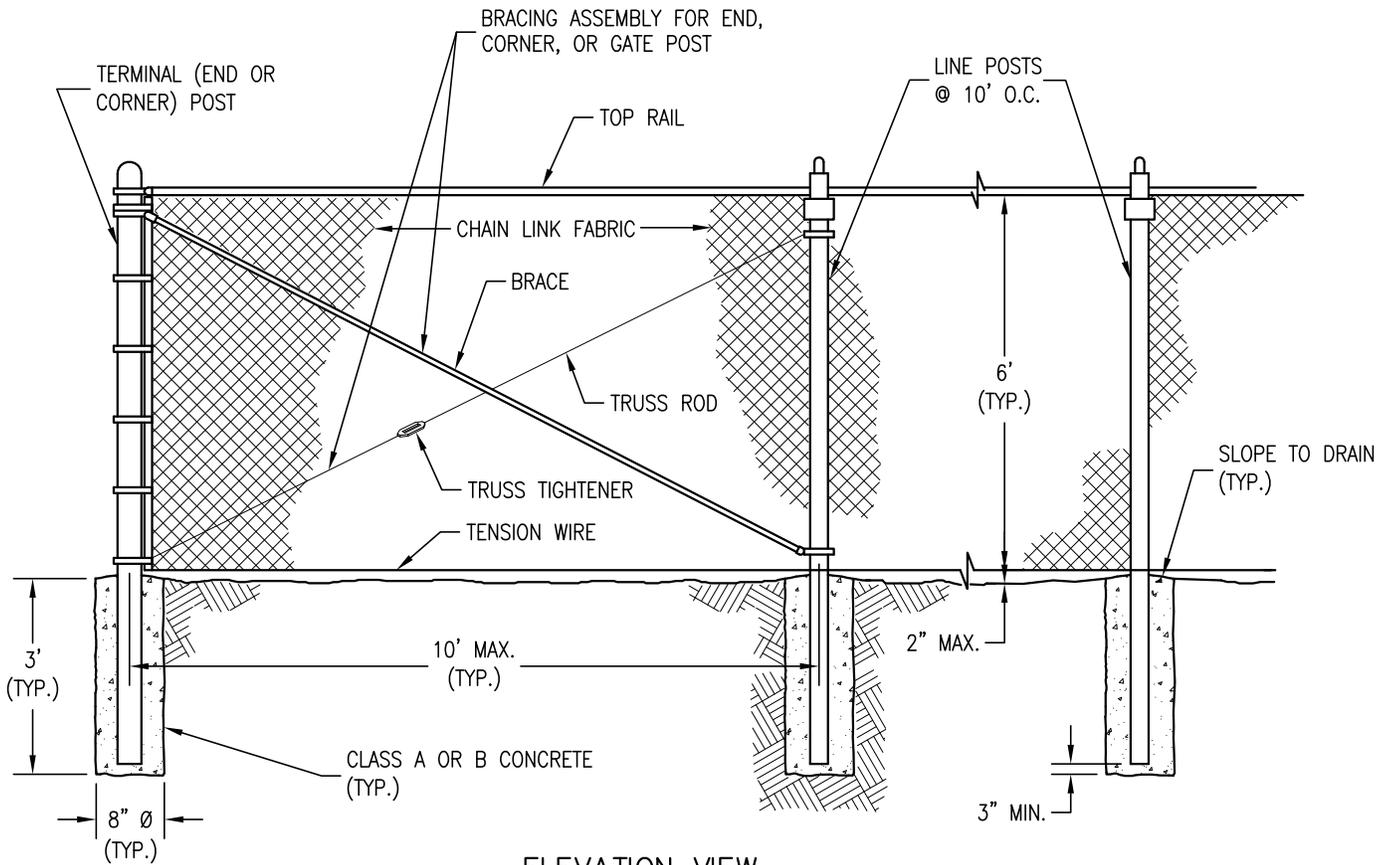
CITY OF SANTA CLARA

LS-22

Department of Public Works
City of Santa Clara, CA

STANDARD DETAILS

MISCELLANEOUS SECTION DETAILS MI-1 TO MI-4



ELEVATION VIEW
NO SCALE

NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO CALTRANS REQUIREMENTS FOR CHAIN LINK FENCE AS SPECIFIED IN SECTION 80-4 OF THE STANDARD SPECIFICATION EXCEPT THAT IN LIEU OF TOP TENSION WIRE, TOP RAIL SHALL BE USED. TOP RAIL SHALL BE GALVANIZED STEEL PIPE NOT LESS THAN 1.63" OUTSIDE DIA. AND WEIGHING NOT LESS THAN 1.93 LBS. PER LINEAL FOOT.
2. CHAIN LINK FABRIC WIRE SHALL BE 11-GAGE MINIMUM. IF SPECIFIED, THE PLASTIC COATED STEEL MESH AND STAINED REDWOOD SLATS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - A) PLASTIC COATED CHAIN LINK FABRIC SHALL BE 11-GAGE PLASTIC COATED COMMERCIAL QUALITY STEEL WIRE WOVEN INTO A 2" MESH CHAIN LINK FABRIC. PLASTIC COATING SHALL BE FIRMLY BONDED TO THE STEEL CORE WIRE AND PROVIDE A DENSE IMPERVIOUS COVERING AT LEAST 0.005" THICK. THE COATING SHALL BE OF A HIGH QUALITY AND SHOW NO DELETERIOUS EFFECTS FROM CHEMICALS SUCH AS AMMONIUM HYDROXIDE, SODIUM CHLORIDE, GASOLINE, PETROLIUM OILS, OR HYDROCHLORIC ACID, NOR SHALL IT SUPPORT COMBUSTION. THE COATING SHALL ALSO HAVE AN ESTHETICALLY PLEASING COLOR THAT WILL NOT FADE, CRACK, OR SPLIT FROM NORMAL AGE AND EXPOSURE.
 - B) REDWOOD PICKET CHAIN LINK FABRIC SHALL HAVE 9-GAGE HEAVILY ZINC COATED CHAIN LINK WIRE WOVEN IN A 3 1/2" X 5 1/2" MESH AND STANDARD GRADE "A" 3/8" X 2 1/2" STAINED REDWOOD PICKETS INSERTED VERTICALLY IN EACH MESH OF THE CHAIN LINK FABRIC FOR THE FULL HEIGHT OF THE FABRIC.



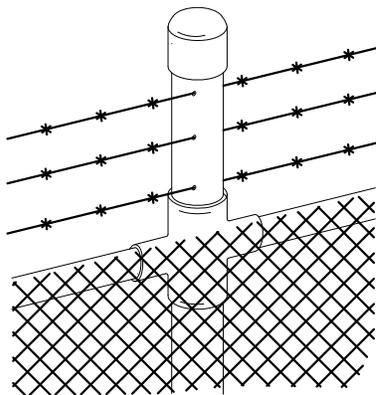
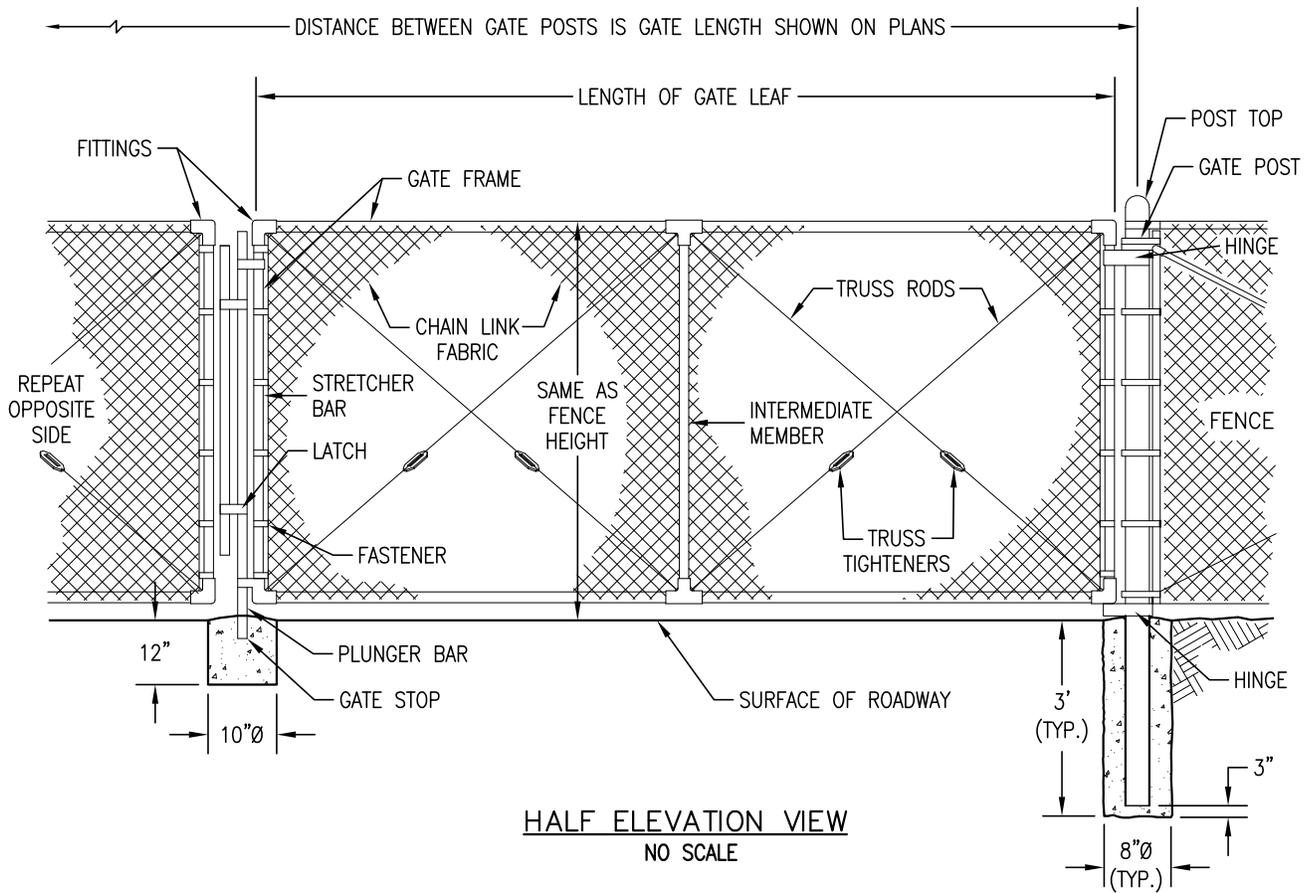
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CHAIN LINK FENCE

CITY OF SANTA CLARA

MI-1

PAGE: 79



**EXTENSION POST AND
BARBED WIRE DETAIL**
NO SCALE

NOTES:

1. ALL FOOTINGS SHALL BE CLASS "A" OR "B" CONCRETE.
2. EXTENSION POST AND BARBED WIRE SHALL BE INSTALLED ONLY WHEN SHOWN ON THE PLANS AND/OR WHEN CALLED FOR IN THE SPECIAL PROVISIONS.
3. CHAIN LINK FABRIC WIRE SHALL BE 11-GAGE MINIMUM. SEE DETAIL MI-1 FOR PLASTIC COATED STEEL MESH AND STAINED REDWOOD SLATS, IF SPECIFIED.



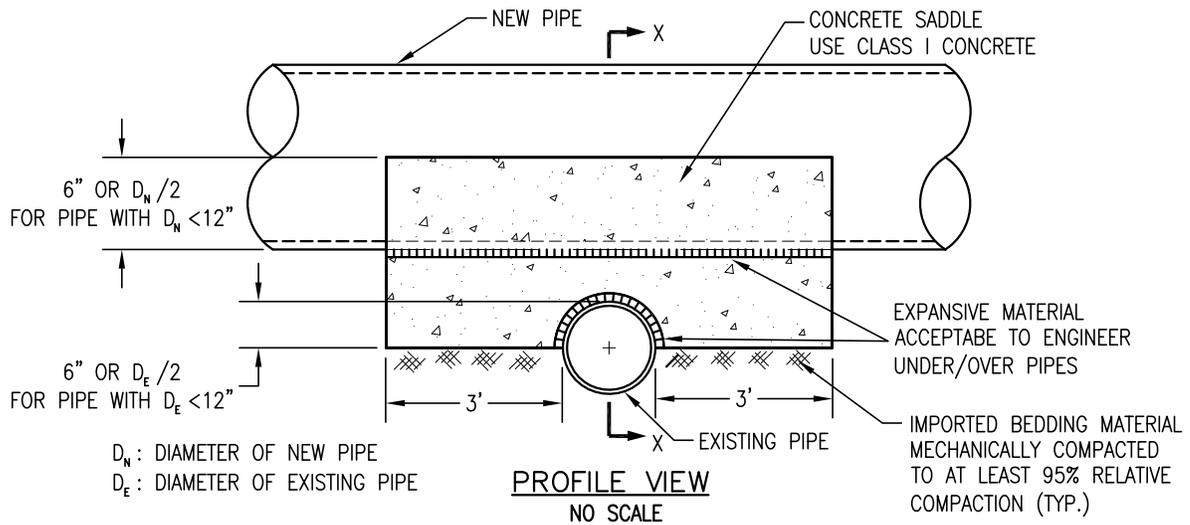
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**CHAIN LINK
DOUBLE SWING GATE**

CITY OF SANTA CLARA

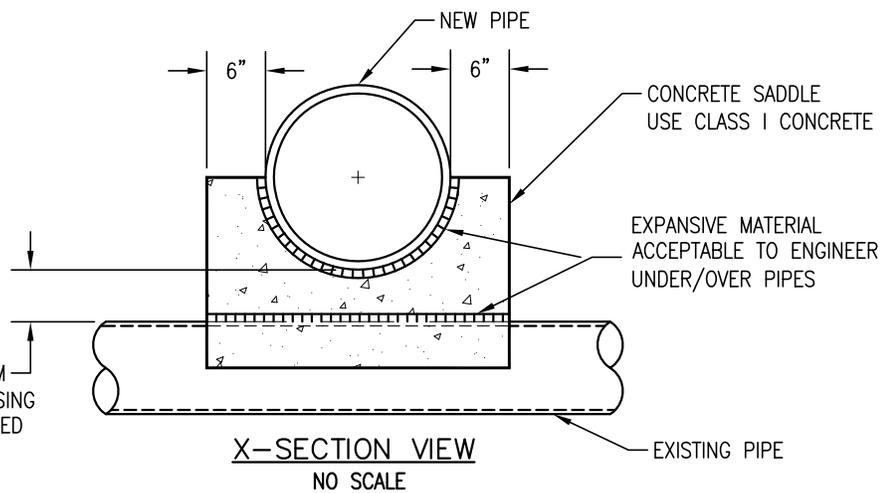
MI-2

PAGE: 80



D_N : DIAMETER OF NEW PIPE
 D_E : DIAMETER OF EXISTING PIPE

PROFILE VIEW
NO SCALE



SEE TABLE BELOW FOR MINIMUM REQUIRED CLEARANCE AT CROSSING OF VARIOUS FACILITIES, MEASURED FROM OUTSIDE OF PIPES.

X-SECTION VIEW
NO SCALE

NOTE: INSTALL CONCRETE SADDLE AT EACH LOCATION WHERE A NEW UTILITY CROSSES AN EXISTING UTILITY WITH LESS THAN 12" CLEARANCE.

TABLE: CONCRETE SADDLE MINIMUM REQUIRED CLEARANCE (INCHES)

	WATER	RECYCLED WATER	SANITARY SEWER	STORM DRAIN	GAS	ELECTRIC	COMMUNICATIONS	OTHER
WATER	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1
RECYCLED WATER	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1
SANITARY SEWER	SEE NOTE 1	SEE NOTE 1	3	3	6	SEE NOTE 1	6	SEE NOTE 1
STORM DRAIN	SEE NOTE 1	SEE NOTE 1	3	3	6	SEE NOTE 1	6	SEE NOTE 1
GAS	SEE NOTE 1	SEE NOTE 1	6	6	3	SEE NOTE 1	6	SEE NOTE 1
ELECTRIC	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1
COMMUNICATIONS	SEE NOTE 1	SEE NOTE 1	6	6	6	SEE NOTE 1	3	SEE NOTE 1
OTHER	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1

NOTE 1: CHECK WITH SPECIFIC UTILITY DEPARTMENT/AGENCY FOR CONCRETE SADDLE MINIMUM REQUIRED CLEARANCE.



DRAWN BY: K. TRAN
CHECKED BY: F. AMIN
APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013

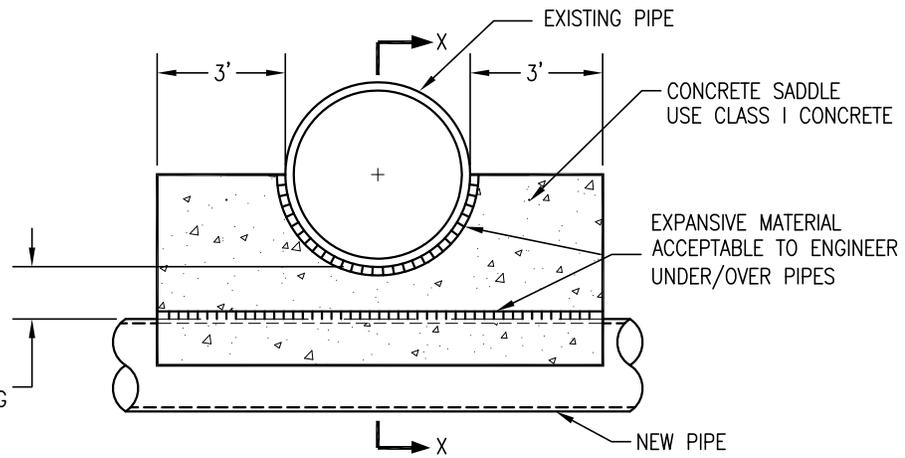
**CONCRETE SADDLE
UPPER PIPE INSTALLATION**

CITY OF SANTA CLARA

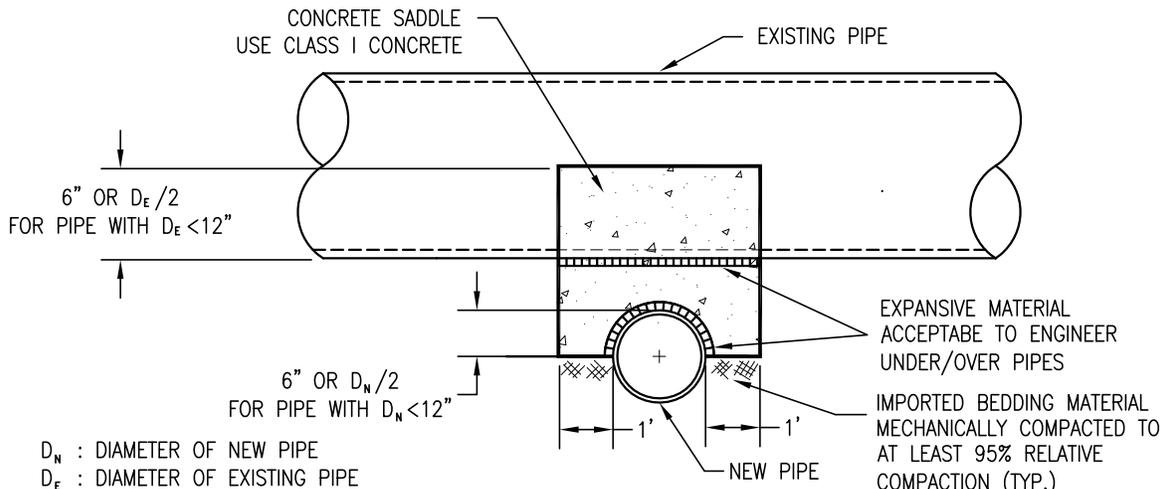
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SEE TABLE BELOW FOR MINIMUM REQUIRED CLEARANCE AT CROSSING OF VARIOUS FACILITIES, MEASURED FROM OUTSIDE OF PIPES.



PROFILE VIEW
NO SCALE



X-SECTION VIEW
NO SCALE

NOTE: INSTALL CONCRETE SADDLE AT EACH LOCATION WHERE A NEW UTILITY CROSSES AN EXISTING UTILITY WITH LESS THAN 12" CLEARANCE.

TABLE: CONCRETE SADDLE MINIMUM REQUIRED CLEARANCE (INCHES)

	WATER	RECYCLED WATER	SANITARY SEWER	STORM DRAIN	GAS	ELECTRIC	COMMUNICATIONS	OTHER
WATER	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1
RECYCLED WATER	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1
SANITARY SEWER	SEE NOTE 1	SEE NOTE 1	3	3	6	SEE NOTE 1	6	SEE NOTE 1
STORM DRAIN	SEE NOTE 1	SEE NOTE 1	3	3	6	SEE NOTE 1	6	SEE NOTE 1
GAS	SEE NOTE 1	SEE NOTE 1	6	6	3	SEE NOTE 1	6	SEE NOTE 1
ELECTRIC	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1
COMMUNICATIONS	SEE NOTE 1	SEE NOTE 1	6	6	6	SEE NOTE 1	3	SEE NOTE 1
OTHER	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1	SEE NOTE 1

NOTE 1: CHECK WITH SPECIFIC UTILITY DEPARTMENT/AGENCY FOR CONCRETE SADDLE MINIMUM REQUIRED CLEARANCE.



DRAWN BY: **K. TRAN**
 CHECKED BY: **F. AMIN**
 APPROVED BY: **G. GOMEZ**
 DATE: **OCTOBER 2013**

**CONCRETE SADDLE
LOWER PIPE INSTALLATION**

CITY OF SANTA CLARA

MI-4

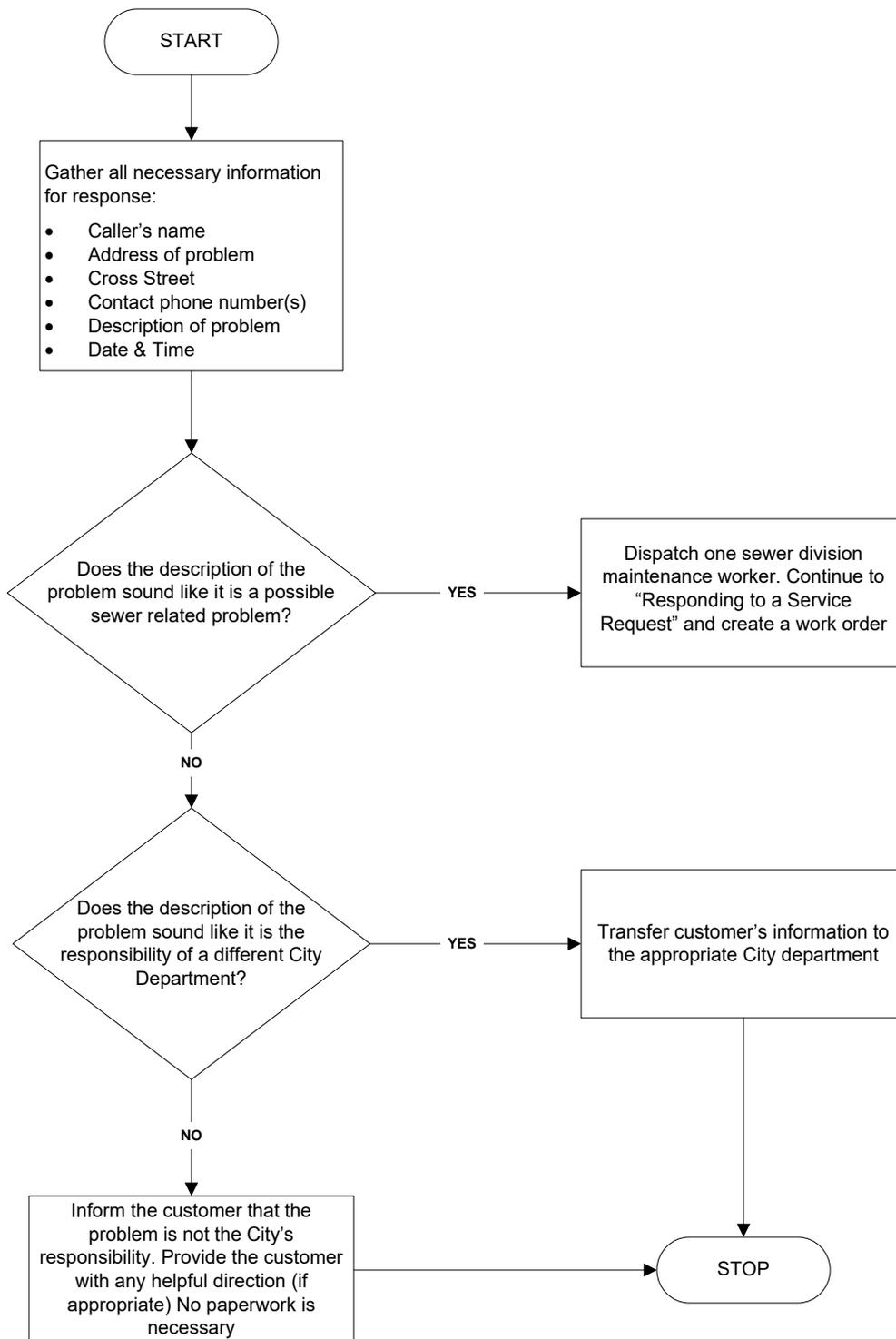
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Appendix H

Emergency Response Procedures

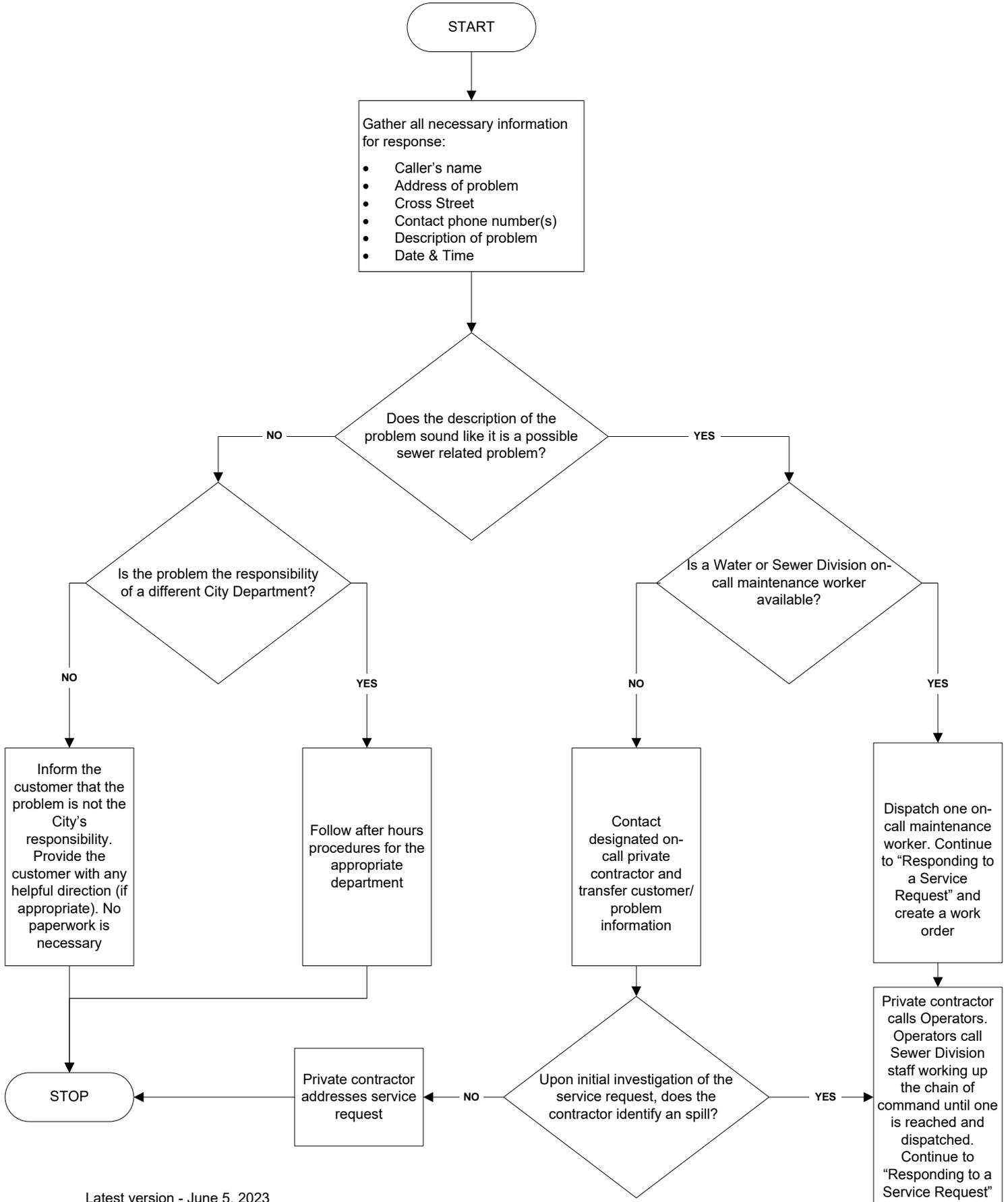
CITY OF SANTA CLARA SPILL EMERGENCY RESPONSE PLAN

RECEIVING A SERVICE REQUEST - DURING BUSINESS HOURS



CITY OF SANTA CLARA SPILL EMERGENCY RESPONSE PLAN

RECEIVING A SERVICE REQUEST – AFTER BUSINESS HOURS, WEEKENDS, AND HOLIDAYS



CITY OF SANTA CLARA SPILL EMERGENCY RESPONSE PLAN

SOP TITLE: SPILL RESPONSE

- Page 1

PURPOSE:

- 1. The goals of the outdoor backup response plan are to:**
 - a. Stop, contain, and recover spills as quickly and thoroughly as possible.
 - b. Protect public health, environment, and property.
 - c. Restore affected areas as quickly as possible.
- 2. Every effort must be made to prevent spills from reaching surface water.**

PPE REQUIRED:

- 1. General**
 - a. Gloves
 - b. Rubber Boots
 - c. Eye protection
 - d. Safety vest
- 2. Operating jet truck/ Vac-Con**
 - a. Hearing protection
 - b. Face protection

SPECIFIC HAZARDS:

- 1. Raw Sewage**
- 2. Traffic Control**
 - a. Foot
 - b. Automotive

SAFETY PRECAUTIONS:

- 1. Secure the area from the public and control traffic using:**
 - a. Cones
 - b. Arrow board
 - c. Warning signs

STANDARD OPERATING PROCEDURE:

OPERATING REQUIREMENTS:

- 1. Jet Truck**
 - a. Class A or B California Driver's License
- 2. Vac-Con**
 - a. Training
 - b. Class A or B California Driver's License

CITY OF SANTA CLARA SPILL EMERGENCY RESPONSE PLAN

SOP TITLE: SPILL RESPONSE - Page 2

PRE-CHECK OF EQUIPMENT:

1. Jet Truck

- a. Refer to "JET TRUCK" SOP

2. Vac-Con

- a. Refer to "VAC-CON" SOP

OPERATING PROCEDURE:

PRELIMINARY:

1. Secure the area from the public and control traffic using:

- a. Cones
- b. Arrow board
- c. Warning signs

2. Estimate the flow volume

- a. Refer to "ESTIMATE THE FLOW" SOP and/or
- b. Photograph the spill such that the flow rate can be determined later.

3. Troubleshoot the cause/location of the spill

- a. Check the Block Book to identify which manholes need to be checked.
 - i. Corner lots & properties with sewer easements might have lines on two or more sides.
 - ii. If there is more than one sewer main in front of or adjacent to the property, all of those mains should be checked.

4. Call for additional support and equipment as needed.

PROCEDURE:

1. Contain the spill

- a. Stop and contain the spill prior to storm drain entry.
- b. Cover drop inlets (DIs) with plastic sheeting.
- c. Sand bag area and gutter.
- d. Sand bag downstream storm drain if spill has already entered the storm system.

2. Resolve the problem

- a. If the spill is the result of a main line blockage:
 - i. Refer to "JET TRUCK" and "VAC-CON OPERATION" SOPs to clear the blockage.
 - ii. If the blockage cannot be cleared quickly, refer to "SETTING UP A BY-PASS" SOP.

CITY OF SANTA CLARA SPILL EMERGENCY RESPONSE PLAN

SOP TITLE: SPILL RESPONSE - Page 3

iii. After clearing the blockage, check to make sure that all high water subsides. It is possible that the main has plugged again, especially with large chunks of grease and root masses.

b. If the spill is the result of a blockage in the portion of the lateral between the property line cleanout and the main:

i. Refer to the "CUTTERS" SOP to clear the blockage.

ii. After clearing the blockage, flush the lower lateral to ensure that it is clear.

3. Perform final volume estimate

a. Refer to "ESTIMATE THE FLOW" SOP

4. Clean Up

a. Vacuum as much of the spill as possible

b. If the spill is near a clean out: sweep, rake, or wash debris and liquid back into the stand pipe.

c. Wash area as necessary and remove all debris. Refer to "CLEAN UP OF GUTTERS AND MANHOLES" SOP as appropriate.

d. Clean any contaminated storm drains. Contain and reclaim waters generated in the cleaning process.

e. Estimate spill volume reclaimed for reporting purposes.

f. Once the cleanup is complete, remove all sand bags and plastic sheeting and dispose of properly.

5. Documentation and notifications

a. Photograph the affected area.

b. Follow the "NOTIFY THE CUSTOMER" procedure.

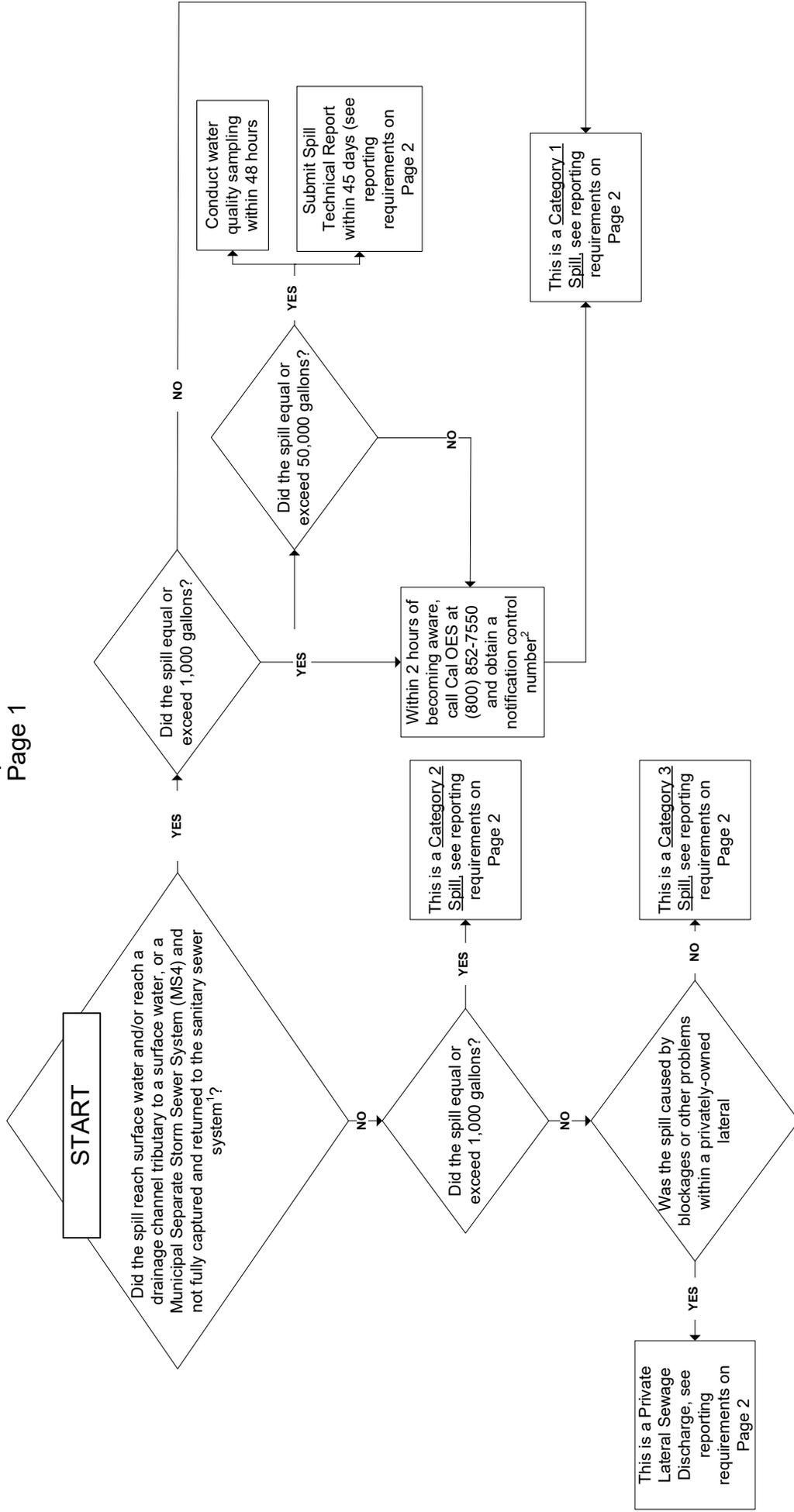
c. Follow the "COMPEL THE PAPERWORK" procedure.

d. Follow the "SPILL NOTIFICATION" procedure.

e. Notify the Assistant Superintendent of the backup immediately.

SIGNATURE BLOCK:

City of Santa Clara
 Spill Notification and Reporting
 Effective: September 9, 2013
 Page 1

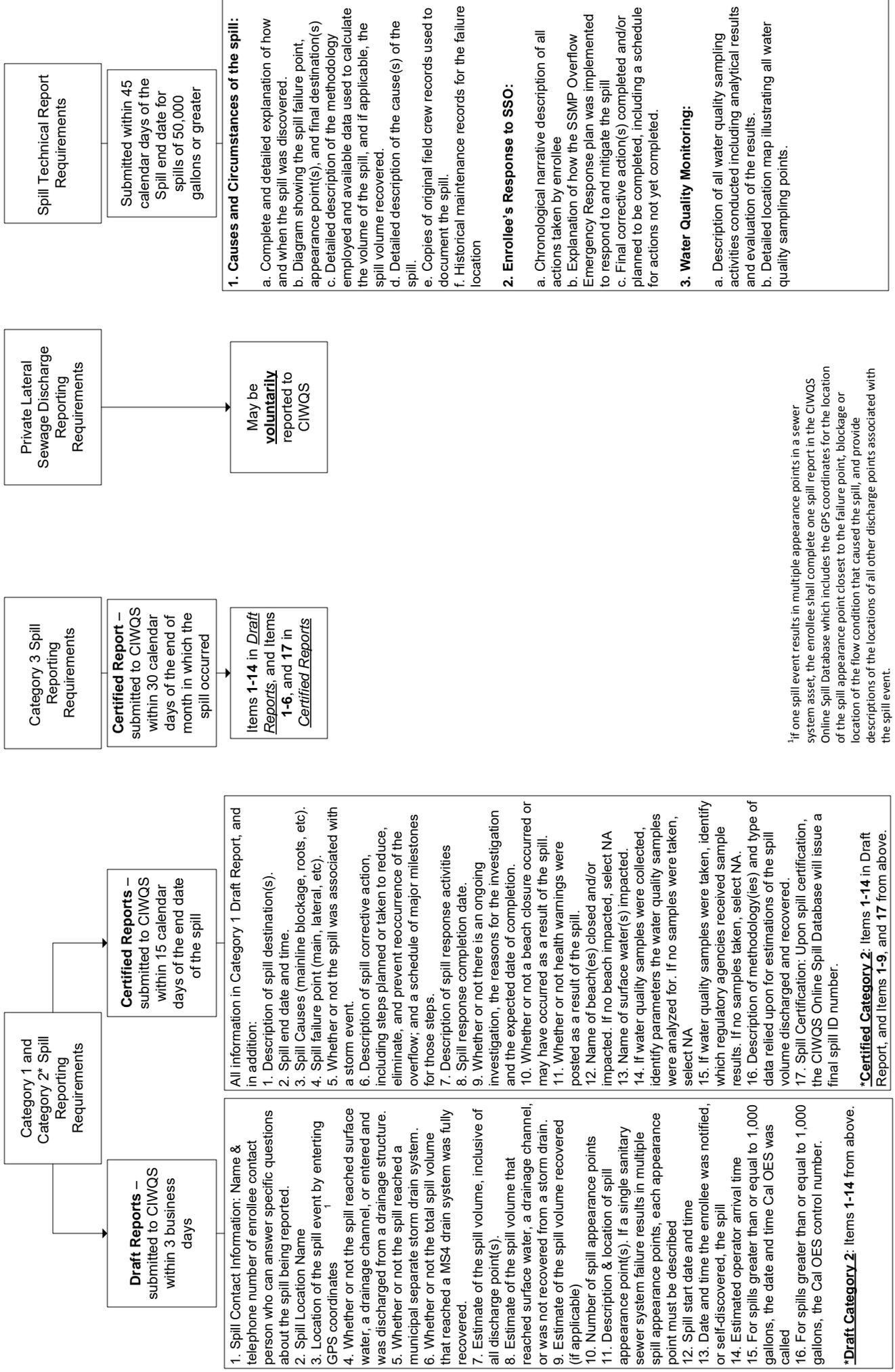


1. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin) e.g., infiltration pit, percolation pond).

2. Spill information requested may include:

- Name of person notifying Cal OES/direct return phone number
- Estimated spill volume discharged (gallons)
- If ongoing, estimated spill discharge rate (gallons per minute)
- Spill Incident Description
 - a. Brief narrative
 - b. On-scene point of contact for additional information
 - c. Date/time enrollee became aware of the spill
 - d. Name of sanitary sewer system agency causing the spill
 - e. Spill cause (if known)
- Indication of whether the spill has been contained
- Indication of whether surface water is impacted
- Name of surface water impacted by the spill, if applicable
- Indication of whether a drinking water supply is or may be impacted by the spill
- Any other known spill impacts
- Spill incident location (address, city, state, and zip code).

City of Santa Clara
 Spill Notification and Reporting
 Effective: September 9, 2013
 Page 2



SOP Title: *Jet Truck*

Purpose:

To clean sewer Lines to prevent grease, sediment build-up and root blockages.
To identify areas of excessive Fats, oils and grease discharges and root intrusion.

Specific Hazards:

Traffic Safety, working in and around open manhole, hazardous gases, and possible hazardous materials

Safety Precaution:

1. Traffic Hazards- evaluate traffic and set up safety precautions as needed
2. Gas detection monitor with trained individual
3. Working in manhole requires two people to be present

Standard Operating Procedure

1. Operating Requirements

- a. Must have a class A or B license

2. Pre-Check Equipment

- a. Perform Pre-Trip Inspection and fill out DOT tag
- b. Check and test truck safety features:
Arrow board, beacon and strobes
- c. Make sure fuel tank and DEF tank is adequate for the job
- d. Make sure water tank is full – can be filled from both sides of truck using the fill hose

3. Operating Procedure

Preliminary

1. Park Jet Truck with hose reel positioned over the downstream manhole from stoppage
 - a. Use back-up camera to help position truck
 - b. Hose reel extends out and pivots left and right

**CAUTION: DO NOT RUN WATER PUMP WITHOUT WATER
(THERE IS A LOW WATER LEVEL WARNING LIGHT)**

Procedure:

1. Truck in Neutral and Brake engaged, Engage PTO (Work Mode ON) inside the truck cab or on the rear Dash Controls
2. Place Tiger tail hose guide on jet hose
3. Select proper skid and jet head for the project
4. Lower hose down into the manhole facing upstream with Payout switch
5. Zero footage counter
6. Suction valve switch to Open
7. Water jet switch to High (pressure) or Low (pressure)
8. Throttle increase switch to raise motor RPM and Water pressure

9. Throttle Water Pressure up to suggested pressure for size of main

DO NOT pressurize more than 2500 psi

10. Jet upstream with Payout switch and Speed control knob
11. Once hose becomes slack the jet head has hit the blockage, allow for the jet head to work through blockage.
12. After blockage is cleared and the main is draining Decrease Throttle, switch to water jet off and suction valve closed
13. Allow for manholes to drain and check downstream manholes for flow
- 14.. After manhole(s) have drained, follow steps 5-9 to continue upstream jetting to next manhole
15. With Speed control knob and Retrieval hose switch clean main slowly back to starting manhole
16. Black Leader Hose indicates jet head is 20 feet from manhole
17. Throttle Decrease switch to Lower motor RPM and Water pressure
18. Water jet switch OFF
19. Suction valve switch to Closed
20. Retrieve remaining hose
21. Disengage PTO (Work Mode ON) inside the truck cab or on the rear Dash Controls

SOP TITLE: VAC-CON OPERATION

SSMP/SSO REQUIREMENT: If one thousand (1,000) gallons or more of sewage escapes the collection system or sewage reaches the water ways or storm system and is NOT recovered, the Superintendent or Assistant Superintendent must be notified IMMEDIATELY.

PURPOSE: To clean up, remove and properly dispose of any sewage that may have escaped from the collection system

PPE REQUIRED: Hard hat, gloves, safety vest, ear plugs (as needed), face shield (as needed)

SPECIFIC HAZARDS: Traffic safety, possible hazardous materials, working in and near open manhole, overhead lines (moving boom, lifting bed) suction tube

SAFETY PRECAUTIONS:

1. Any work to be done in the manhole must have at least 2 people
2. Evaluate traffic so proper safety can be set up
3. Gas detection monitor and trained operator

STANDARD OPERATING PROCEDURE:

OPERATING REQUIREMENTS:

1. Must have A/B license to operate

PRE-CHECK OF EQUIPMENT:

1. Do a pre-trip inspection and fill out DOT tag
2. Do a safety check: cones, arrow board, beacon, strobe
3. Check tank for water level/fill if needed - (fill hose on passenger side behind cab)

OPERATING PROCEDURE:

PRELIMINARY:

1. Position VAC-CON so that jet hose and vacuum tube are over downstream manhole\
2. Truck in neutral with brake engaged

A. JETTING PROCEDURE:

1. Turn ON secondary motor
2. Control joystick to hose reel control 1%, 25%, 50%, 75% 100% select what is needed
3. Choose proper head and skid to perform tasks
4. Place Tiger tail hose guide on jet hose
5. Lower jet hose into manhole facing upstream using Control Joystick
6. Engage hose reel (hose reel/lever to ON/pump control to ON)
7. Feed out jet hose in upstream direction

8. Throttle water pressure up to required PSI to jet – joystick right side buttons - GREEN Throttle up, RED Throttle down or toggle switch up or down
9. Zero footage counter
10. Throttle water pressure up to suggested pressure for size of main

CAUTION: DO NOT PRESSURIZE MORE THAN 2500 PSI

11. Jet upstream using Control Joystick
12. Once hose becomes slack the jet head has hit the blockage, allow for the jet head to work through blockage.
13. After blockage is cleared and the main is draining (Decrease Throttle, disengage hose reel (pump control to OFF/ hose reel/lever to OFF)
14. After manhole(s) have drained, follow steps 1 to 5 to continue upstream jetting to next manhole
15. Jet Downstream using Control Joystick
16. Black Leader Hose indicates jet head is 20 feet from manhole
17. Decrease Throttle, disengage hose reel (pump control to OFF/ hose reel/lever to OFF)
18. Retrieve remaining hose
19. Turn off Secondary motor if done with Jetting and Vacuuming

VACUUM PROCEDURE:

1. Main truck engine ON Secondary Motor ON
2. Engage Joystick to boom on display screen
3. Unlatch boom from Support Bracket
4. Attach vacuum tubes to vacuum hose using clamps
5. Engage Vacuum with display or have in Work mode/Vacuum breaker ON
6. Control boom Joystick in boom mode, pull trigger to control while jetting
7. Control vacuum with screen controls and Joystick left side buttons GREEN Throttle up, RED Throttle down or toggle switch up or down
Higher the Throttle stronger the Vacuum
8. Use Joystick to move Vacuum tube to location needed
9. When finished Throttle down
10. Remove Vacuum tubes and clamps
11. Relatch boom to Support Bracket
- 12.

EXCAVATING:

1. Display control – vacuum - make sure in work mode/vacuum breaker ON
2. Dirt and mud should have water added when sucking to prevent the tubes, hose and boom from getting clogged
3. Low pressure wand– ball valves x2 for low pressure, one valve on the front passenger bumper second near hose reel
4. High pressure hose – large ball valve near reel
5. Pump control to ON

6. Turn off reverse steps – Pump control to OFF, turn all ball valves to original position

DUMPING AND CLEAN UP:

1. VAC-CON should be cleaned after each use
2. VAC-CON should be dumped at Rabello dump site, right hand side
3. VAC-CON should be dewatered in a manhole using the blue dump hose before emptying the tank
 - a. To dewater tank, turn on secondary motor and check for overhead obstructions
 - b. Back up to manhole and place blue dump hose into open manhole
 - c. Open blue dump hose valve
 - d. Slowly raise tank to dewater
4. VAC-Con should be backed into the dump stall
5. To Dump debris from the tank check overhead for obstructions
6. The manual door locks for the tank should be released if equipped
7. Automatic door locks for the tank should be released (controls on passenger side)
8. Tank should be raised in order to dump solids and debris (controls on passenger side)
9. Inside of tank, door hatch and Exterior of VAC-CON should be washed well to remove additional solids and debris
10. Wash upper vacuum filters to be sprayed clean
11. Lower tank and engage all door locks for tank
12. Visually inspect all door locks have been engaged
13. Turn off secondary motor

ATTACHMENTS:

1. Low Pressure wand and hose
2. High pressure wand and hose
3. Pendant

SIGNATURE BLOCK:

CITY OF SANTA CLARA - SPILL EMERGENCY RESPONSE PLAN

SPILL REPORT - Page 1

SECTION 1: General Information / Background

Agency Name : City of Santa Clara
Cause Occurred in : Lateral ___ Main Line ___ Force Main ___
Incident Date : (MM/DD/YY)
Time of call:
Time of Arrival At Spill Site:
GPS Coordinates/Spill Orientation:
Multiple Appearance Points:
Blockbook page: Manhole #:
Weather Conditions: Wet ___ Dry ___
Street Address/Site : Cross Street.
City : Santa Clara County : Santa Clara Zip Code :
of Spill Appearance Points: if more than 1, describe each appearance point in section 6

SECTION 2: Estimated and Calculated Spill amounts

Estimated Spill Rate Upon Time Of Arrival1 : (GPM)
Estimated Spill Start Time And Date2:
Estimated Spill End Time And Date :
Pipe Size: (inches) Pipe Type/Material:
Estimated amount Spilled In Gallons3 : (Numeric Only)
Estimated amount Of Spill Mitigated
And Returned to Sanitary Sewer System
(not including the wash down water): (gallons)

SECTION 3: Spill Cause, Source, Destination

Spill Cause : Blockage -> If Spill Cause Is Blockage, Please Specify :
Infrastructure Failure Grease
Inflow Infiltration Debris
Electrical Power Failure Roots
Flow Capacity Deficiency Debris From Laterals
Natural Disaster Vandalism
Bypass Animal Carcass
Cause Unknown Construction Debris
Contractor Unknown
Multiple Causes

Source Of Spill : Manhole
Pipe
Clean Out
Pump Station
Flushing Inlet
Other
If Other, Please Specify :

Final Spill Destination: Storm Drain
Captured In Storm drain
Building Structure
Yard/Lawn
Street/Curb & Gutter
Surface Water Impact; Name: Est. Spill Volume:
Ground Water Impact
Unknown

SECTION 5: Incident Response and Notification

Incident Response:

Were response/ corrective actions taken: ___ Yes ___ No if yes, please describe in section 6
 Were clean-up actions taken: ___ Yes ___ No
 Were disinfection actions taking: ___ Yes ___ No
 Were samples taken: ___ Yes ___ No
 If yes, for what parameters? _____
 Which regulatory agencies received results? _____
 Any ongoing investigation: ___ Yes ___ No
 If yes, expected completion date: _____
 Reason for investigation: _____
 Any health or safety warnings posted: ___ Yes ___ No

Suspected Responsible Party:

Name: _____ Address: _____ Phone: _____
 City: _____ County: _____ Zip Code: _____

Notification: **(Category 1 only when ≥ 1,000 gal. reaching surface waters), contact manager/supervisor)**

OES date called: _____
 OES time called: _____
 OES contact name: _____
 OES Control Number: _____

SECTION 6: Additional Spill Calculation and Estimation information

How Was Spill Start Time Determined?

SSCSC Manhole Overflow Gauge: _____

Math Calculation: _____

Spill Location and Spread (Visually assess using photography and GPS)

1. Draw a sketch
2. Photography for:
 - a. Drainage conveyance system entry location
 - b. Location(s) if discharge into surface waters
 - c. Extent of spill spread
 - d. Location(s) of clean up
3. Total Spill Volume Estimation calculation: Rectangle: L x W x D **OR** Circle: 3.14 x r² x D
4. Receiving Water Visual Observations:
 - a. Estimated spill volume entering the receiving water
 - b. Photography of:
 - i. Waterbody bank erosion
 - ii. Floating matter
 - iii. Water surface sheen
 - iv. (potentially from oil & grease)
 - v. Discoloration of receiving water, and
 - vi. Impact of the receiving water, Date of Completion: _____ Time: _____

Description of Multiple Spill Appearance Points, if any:

Description of Spill Response Activities

Date of Completion: _____ Time: _____

Description of Spill Corrective Action

SPILL REPORT - Page 3

Comments / Witnesses / Address / Time

Person Completed _____ Date ____/____/____

NOTES:

¹ GPM is determined by using "CWEA Manhole Overflow Gauge" Worksheet

² Estimated Start Time shall be determined by either of the following: Time of call, arrival time or information contained in section 6

³ Calculation: Spill Start Time – Spill End Time = Duration of spill (minutes)
 Duration of spill (minutes) X Spill rate (gpm) = Spill amount (gallons)

CITY OF SANTA CLARA SPILL EMERGENCY RESPONSE PLAN

Additional Support for Emergency Operations

For All Emergency Services - Central Dispatch	
Emergency Services	911
Water and Sewer Department	(408) 615-2000
Water and Sewer Emergencies (Electric Control)	(408) 615-5640
Non-Emergency Dispatch	(408) 615-5580
City Police Department - Traffic	(408) 615-4760
County Health Officer	
During Business Hours - Contact Dr. Sara H. Cody, M.D.	(408) 792-3798 (Direct Line) (408) 792-5040 (General Office)
After business hours, contact County Communication and ask for the County Health Office on-call	(408) 998-3438
Regional Water Board - Spill Notification	(510) 622-2369
Regional Water Board - General Office:	(510) 622-2300
Office of Emergency Services	(800) 852-7550
PG&E	(800) 743-5000
AT&T	(800) 310-2355
Comcast XFINITY	(800) 945-2288
City Public Works/Engineering	(408) 615-3000
City Fire Department - Emergency Services	(408) 615-4900
City Street Department - Storm Drains	(408) 615-3080

STANDARD

X

CITY OF SANTA CLARA

WATER AND SEWER UTILITIES DEPARTMENT

DIVISION: SEWER UTILITY

**STANDARD OPERATION PROCEDURE:
SANITARY SEWER
OVERFLOW SAMPLING**



Revision History

Rev	Description of Change	Document Owner/Editor	Release Date
001	Initial Release: Sanitary Sewer Overflow Sampling SOP	Diane Foronda	4/30/13

If you have any questions about this program, please contact your immediate Supervisor. This plan is maintained by the Compliance Manager. All Managers and Supervisors are to ensure the policies are carried out and the program is effective.

Assistant Director of Water & Sewer Utilities

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Fecal coliform	
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1. Purpose and Scope

- 1.1. In the event of a sanitary sewer overflow, our utility has developed, implemented and maintains a Standard Operation Procedure to test for various parameters in the event that overflows greater than or equal to 50 gallons reach surface waters.
- 1.2. The Standard Operation Procedure: Sanitary Sewage Overflow Sampling is developed and implemented for department staff to follow a correct and standardized procedure if an overflow were to occur, and the employer make procedure available to department employees.
- 1.3. The scope of this procedure applies to the Sanitary Sewer Operations & Maintenance division and Compliance division employees in the City of Santa Clara Water and Sewer Utilities Department.

2. References

- 2.1. References for this program include the following:

- Thermo Scientific User Guide for:
 - Thermo Scientific Portable pH/RDO/DO Meter
 - RDO Optical Dissolved Oxygen Sensor
 - pH/ATC Triode

3. Acronyms and Definitions

Ammonia: A nutrient that contains nitrogen and hydrogen. Its chemical formula is NH_3 in the un-ionized state and NH_4^+ in the ionized form. Total ammonia is the sum of both NH_3 and NH_4^+ . Ammonia can be converted to nitrite and nitrate by bacteria. The neutral, un-ionized form (NH_3) is highly toxic.

CAM 17: A list of heavy metals in the California Administrative Manual, which includes antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc

Corrosive: A substance that causes visible destruction of, or irreversible alteration in, living tissue at the site of contact.

Department: City of Santa Clara Water and Sewer Utilities

Dissolved Oxygen: Oxygen is measured in its dissolved form as dissolved oxygen (DO). If more oxygen is consumed than is produced, dissolved oxygen levels decline and some sensitive animals may move away, weaken, or die. DO levels vary with water temperature and altitude.

Employee: Any regular, full-time, part-time or temporary employee employed by the department at any level in the organization, including Managers and Supervisors.

Fecal Coliform: Bacteria found in the intestinal tracts of mammals. Their presence in water or sludge is an indicator of possible contamination by pathogens

Managers: All unclassified employees in the department, including the Director of Water and Sewer Utilities, Assistant Director of Water and Sewer Utilities, Water and Sewer Superintendent, Assistant Water and Sewer Superintendent, Compliance Manager, Principal Engineer and any employee in an acting role or out of class assignment as a manager within the Water and Sewer Utilities Department.

pH: a measure of the number of hydrogen ions or a solution's acidity. In water, small numbers of water molecules will break apart into hydrogen ions (H⁺) and hydroxide ions (OH⁻). Other compounds entering the water may react with these, leaving an imbalance in the numbers of hydrogen and hydroxide ions. When more hydrogen ions react, more hydroxide ions are left in solution and the water is basic; when more hydroxide ions react, more hydrogen ions are left and the water is acidic.

POTW: Publicly Owned Treatment Works

Sampling Apparatus: Device used to obtain sample directly from surface water discharge site and transfer to appropriate containers.

Sanitary Sewer Overflow (SSO): A condition whereby untreated sewage is discharged into the environment prior to reaching the wastewater treatment plant.

Qualifying SSO: For purposes of this procedure a qualifying SSO shall mean any Sanitary Sewer Overflow greater than or equal to 50 gallons which reaches surface waters.

4. Responsibilities

4.1. Sanitary Sewer Operations & Maintenance Employees

- Are trained on how to correctly sample and record parameters needed for SSO discharge
- Follow standardized procedures
- Conduct sampling during a qualifying SSO event and notifying the San Mateo Lab upon becoming aware that sampling is necessary
- Request for additional sample kits and sample kit refills from the Compliance staff
- Notify Compliance staff for any equipment meter calibration, replacement, or maintenance which may include, but not limited to:

- Additional AA batteries for pH and DO meter. Battery level is displayed on the meter screen.
- Annual replacement of DO Probe RDO Cap (meter will notify when the cap needs to be replaced)
- For calibration procedures, refer to the Thermo Scientific meter manual on City Drive
- Ensure sample kits are prepared and ready for use at all times.
- Direct any additional questions to the Compliance Manager

4.2. Compliance Manager

- Reviews, implements and maintains this SOP
- Trains and ensures that employees follow the procedures of this SOP

5. Procedure Requirements

5.1. When to take SSO Samples

- 5.1.1. When an SSO results in an overflow of 50 gallons or greater and reaches surface waters (Qualifying SSO)
- 5.1.2. When sufficient flow exists to collect a representative, uncontaminated sample and whether weather or other conditions allow City staff to safely obtain a sample
- 5.1.3. If by March 21, 2015, there are no qualifying SSO event that meets the criteria of 50 gallons or more reaching surface waters, the sample collection for CAM17 analysis will no longer be required.

5.2. Bring Sample Kits to Discharge Location

- 5.2.1. Two sample kits are available at the Yard. One will be stored in the Sewer Shop and the other will be stored at the Assistant Sewer Superintendent's office.
- 5.2.2. The responding team shall bring the sample kit from the Sewer Shop.
- 5.2.3. As needed, the Superintendent(s) will bring the sample kit from the Assistant Sewer Superintendent's Office.

5.3. Where to take SSO Samples

- 5.3.1. Upstream of the surface water discharge location (within 150 feet if possible)
- 5.3.2. Surface water discharge location
- 5.3.3. Downstream of the surface water discharge location (within 150 feet if possible)

5.4. What to sample

- 5.4.1. Sample at each location identified in 5.3

5.4.2. Field Readings

- 5.4.2.1. pH
- 5.4.2.2. Dissolved Oxygen (DO)

5.4.3. Grab Samples

- 5.4.3.1. Fecal coliform
- 5.4.3.2. Ammonia
- 5.4.3.3. CAM17

5.5. How to take SSO Samples

5.5.1. Measuring Equipment Needed

- 5.5.1.1. Thermo Scientific Portable Reader (for pH and DO)
- 5.5.1.2. pH probe (Thermo Scientific ROSS Ultra pH/ATC Triode)
- 5.5.1.3. DO probe (Thermo Scientific RDO Optical Dissolved Oxygen Sensor)
 - Calibration sleeve (should already be attached to DO probe) and stainless steel protective guard (used during sampling)

5.5.2. Equipment Checklist

- 5.5.2.1. Sampling apparatus
- 5.5.2.2. Distilled water to rinse pH and DO probes

- 5.5.2.3. Potable water to rinse sampling apparatus
- 5.5.2.4. Ice packs
- 5.5.2.5. Permanent pen/marker
- 5.5.2.6. Nitrile gloves
- 5.5.2.7. 2 coolers (for Fecal coliform and Ammonia)
- 5.5.2.8. 1 box (for CAM17)
- 5.5.2.9. 3 – Site sampling bottle packs, each consisting of:
 - 1 – Fecal coliform bottle (100mL)
 - 1 – Plastic Ammonia bottle (500mL)
 - 1 – Plastic CAM17 bottles (250mL)

5.5.3. Forms

- 5.5.3.1. SSO Form (Attachment A)
- 5.5.3.2. 3 - Chain of Custody Report (for each lab and River Watch)

5.5.4. Using sampling apparatus

- 5.5.4.1. Wear all safety and protective gears
- 5.5.4.2. Collect all samples using sampling apparatus
- 5.5.4.3. Transfer surface water collected by sampling apparatus into sample bottles
- 5.5.4.4. Do not rinse out any of the sample bottles as they all have certain preservatives or reagents inside. As such, do not use sample bottles to collect water from surface water directly.

5.5.5. pH and Dissolved Oxygen (DO) analyses

- 5.5.5.1. Conduct pH and DO tests within 15 minutes of grabbing samples using sampling apparatus.
- 5.5.5.2. Perform both readings simultaneously using appropriate probes connected to Thermo Scientific Portable Reader
 - Ensure both probes are connected to the top of the Reader (pH→ATC/COND; DO→DO/RDO)

- Turn Reader on, wait for Reader to stabilize
- Loosen storage bottle solution cap to remove pH probe and immediately insert into water collected with sampling apparatus, probe must be immersed in solution at all times
- Unscrew white calibration sleeve from DO probe and attach stainless steel protective guard
- Insert DO probe into the same water sample as the pH probe, being careful to not touch the sensor on the bottom of the probe
- Press “Measure”
- Wait for readings to stabilize and record readings under pH and DO on SSO form (Attachment A)
- Carefully rinse pH probe with distilled water and return to storage bottle solution, ensuring storage bottle cap is screwed on tight
- Carefully rinse DO probe with distilled water

5.5.6. Fecal coliform samples

- 5.5.6.1. Record date and time on bottle label
- 5.5.6.2. Remove plastic cap and fill bottle past the 100mL fill line with water from sampling apparatus
- 5.5.6.3. Take care not to overfill bottle or contaminate container, leave enough head space to allow proper mixing of the sample
- 5.5.6.4. Replace bottle cap immediately and return to Fecal Coliform cooler

5.5.7. Ammonia samples

- 5.5.7.1. Record date and time on bottle label
- 5.5.7.2. Remove cap from plastic bottle
- 5.5.7.3. Fill bottle up to its shoulder with water collected with sampling apparatus
- 5.5.7.4. Replace cap and return to Ammonia cooler

5.5.8. CAM17 samples

- 5.5.8.1. Record date and time on bottle label
- 5.5.8.2. Remove cap from plastic bottle
- 5.5.8.3. Fill bottle up to its shoulder with water collected with sampling apparatus
- 5.5.8.4. Take care not to overfill bottle (contains corrosive material, may cause skin irritation)
- 5.5.8.5. Replace cap and return to CAM17 box

5.6. Equipment Care between Sample Locations

- 5.6.1. Rinse sampling apparatus with potable water upon finishing at each site before continuing on to the next sampling site
- 5.6.2. After the last site, remove stainless steel protective guard from DO probe and replace with white calibration sleeve. Open cap of calibration sleeve and moisten the gray sponge with distilled water before continued storage
- 5.6.3. Return completed Sanitary Sewer Overflow forms to the Compliance Manager
- 5.6.4. After the last samples and upon returning to the Yard, rinse sampling equipment with potable water and store sampling kit(s) to their storage location.

5.7. SSO Sample delivery to laboratory

5.7.1. Fecal coliform cooler

- 5.7.1.1. Place ice packs in cooler to ensure an environment of < 10°C (50°F)
- 5.7.1.2. Make a copy of the Chain of Custody Report (Attachment B) for the Compliance Manager and include original in cooler
- 5.7.1.3. **Samples need to be delivered to the laboratory within 4 hours of sample collection**
- 5.7.1.4. Return cooler to Yard and arrange pick up by San Mateo County Lab Courier.
- 5.7.1.5. Provide location where sample is to be picked up

5.7.1.6. San Mateo County Laboratory Phone Numbers:

- Business Hours – Lab Office: (650)-573-2500; June Wong: (650) 573-2456
- After Hours – June Wong (Cell): (650) 339-2322; (Home): (650) 594-1338
 - Sangeeta Singh – (650) 235-6755
 - Zelda Berrada – (650) 703-3935; (617) 512-9949; or (510) 778-1362

5.7.1.7. In the event that the courier service is not available to deliver samples within the 4-hour time frame, City Staff will deliver the samples to the Public Health Laboratory at:

- 225 West 37th Ave, Room 113. San Mateo, CA 94403

5.7.2. Ammonia cooler

5.7.2.1. Place ice packs in cooler to ensure an environment of < 6°C (39.2°F)

5.7.2.2. Make a copy of the Chain of Custody Report (Attachment D) for the Compliance Manager and include original in cooler

5.7.2.3. Sample has up to 28-day holding time.

5.7.2.4. Deliver cooler to Treatment Plant's Environmental Services Department Laboratory at:

- 700 Esteros Rd. San Jose, CA 95134 (see Attachment E for driving directions and lab location)
- Phone Number: (408) 945-3725
- Business Hours: Monday through Friday (7:00AM – 5:00 PM)
- After Hours/Weekends: Store in refrigerator located in Assistant Water & Sewer Superintendent's Office and hold until next available business day.

5.7.3. CAM17 box

5.7.3.1. Make a copy of the Chain of Custody Report (Attachment C) for the Compliance Manager and include original in box

5.7.3.2. Keep samples in ambient temperature. No ice is needed.

- 5.7.3.3. Sample has 6 months holding time
- 5.7.3.4. Return box to City Hall or release samples to Assistant Superintendent. Contact Compliance Manager to arrange pick up by River Watch.

5.8. Coordination with Compliance Staff

- 5.8.1. Notify Compliance Staff regarding the SSO.
- 5.8.2. Submit Chain of Custody forms (fecal coliform, ammonia and CAM 17) and CAM 17 samples to the Compliance Manager.
- 5.8.3. Compliance Staff to examine Sewer Overflow Sampling kit(s) and refill any materials including forms. Check pH storage reagent and replenish as necessary. Order more sample bottles as necessary from the respective laboratories.

6. Records

6.1. Standard Operating Procedure: Sanitary Sewer Overflow Sampling

- 6.1.1. This procedure will be reviewed by the Compliance Manager annually.
- 6.1.2. All records are to be retained for a minimum of 10 years for compliance purposes.

6.2. Training and Documentation

- 6.2.1. The Compliance Manager will periodically conduct sampling training for new employees or as a refresher.

7. Annual Inspection

- 7.1. On an annual basis, Compliance Staff shall inspect the two sample kits and perform the following:
 - 7.1.1. Replace membranes on the DO probes.
 - 7.1.2. Calibrate pH and DO probes.
 - 7.1.3. Check pH and DO meter batteries.
 - 7.1.4. Order more sample bottles as necessary.

Attachment A: Sanitary Sewer Overflow Form

Sanitary Sewer Overflow					
(When 50 gallons or greater reach surface water)					
Spill Location: _____					
Date: _____					
Upstream Location					
Description: _____					
Reading		Time Sample Taken:			Sampler Name:
pH (0.0-14.0)	Dissolved Oxygen (mg/l)	Ammonia	Fecal Coliform	CAM 17	
Surface Water Discharge Location (i.e SD MH#)					
Description: _____					
Reading		Time Sample Taken:			Sampler Name:
pH (0.0-14.0)	Dissolved Oxygen (mg/l)	Ammonia	Fecal Coliform	CAM 17	
Downstream Location					
Description: _____					
Reading		Time Sample Taken:			Sampler Name:
pH (0.0-14.0)	Dissolved Oxygen (mg/l)	Ammonia	Fecal Coliform	CAM 17	

Attachment B: Chain of Custody Report (Fecal Coliform
San Mateo Lab)

**City of Santa Clara
Sanitary Sewer System
CHAIN OF CUSTODY REPORT**

Client: City of Santa Clara		Report Results to: Nina Hawk / Lisa Au		Turnaround Time:	
Address: 1500 Warburton Avenue Santa Clara, CA 95050		Billing to: Same as Client		24 hr.	48 hr.
Telephone: (408) 615-2018		Purchase Order No. / Billing Reference:		5 day	72 hr.
Project Name / Site:				10 day	15 day
FAX: (408) 247-0784					8 hr.
Sampler:		ANALYSIS REQUESTED		* Send to San Mateo Lab.	
Date:		Fecal Coliform			
Sample Location	Sample Description	No. of Cont.	Type	Sampling Date / Time	Description
	Wastewater	1	PL		
	Wastewater	1	PL		
	Wastewater	1	PL		
Relinquished by:	Date:	Date:	Time:	Received by:	Date: Time: Laboratory:
Relinquished by:	Date:	Date:	Time:	Received by:	Date: Time: Laboratory:

Attachment C: Chain of Custody Report (CAM 17 – For Pick Up)

**City of Santa Clara
Sanitary Sewer System
CHAIN OF CUSTODY REPORT**

From: City of Santa Clara		Report Results to: Nina Hawk / Lisa Au		Turnaround Time:	
Address: 1500 Warburton Avenue Santa Clara, CA 95050					
Telephone: (408) 615-2018		FAX: (408) 247-0784			
Project Name / Site:					
Sampler:		Date:			
Sample Location	Sample Description	No. of Cont.	Type	Sampling Date / Time	Description
	Wastewater	1	PL		
	Wastewater	1	PL		
	Wastewater	1	PL		
Relinquished by:	Date:	Date:	Time:	Received by:	Date: Time: Laboratory:
Relinquished by:	Date:	Date:	Time:	Received by:	Date: Time: Laboratory:

ANALYSIS REQUESTED
* For River Watch Pickup

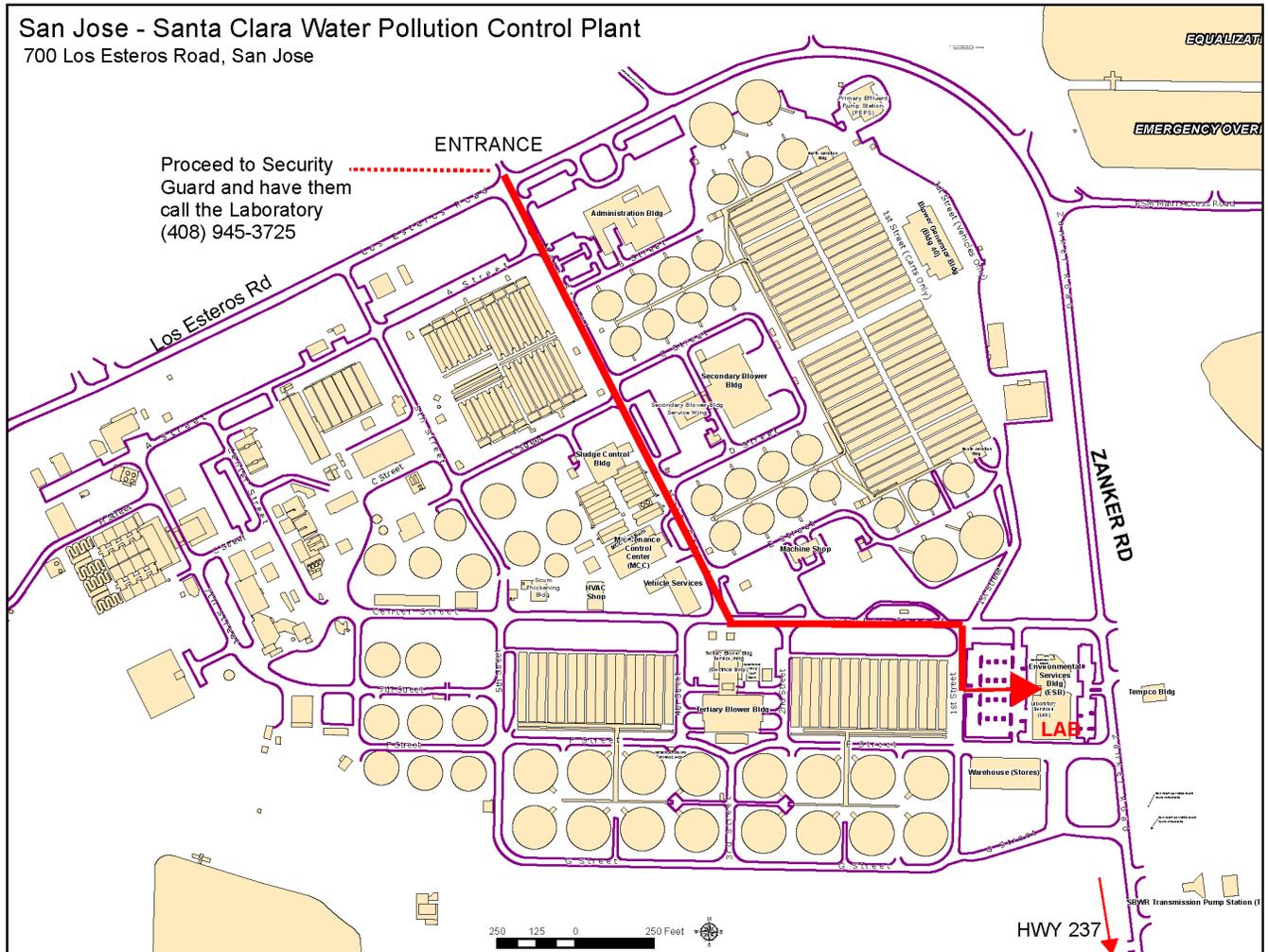
CAM 17

X

X

X

Attachment E: Driving Directions to Plant Lab

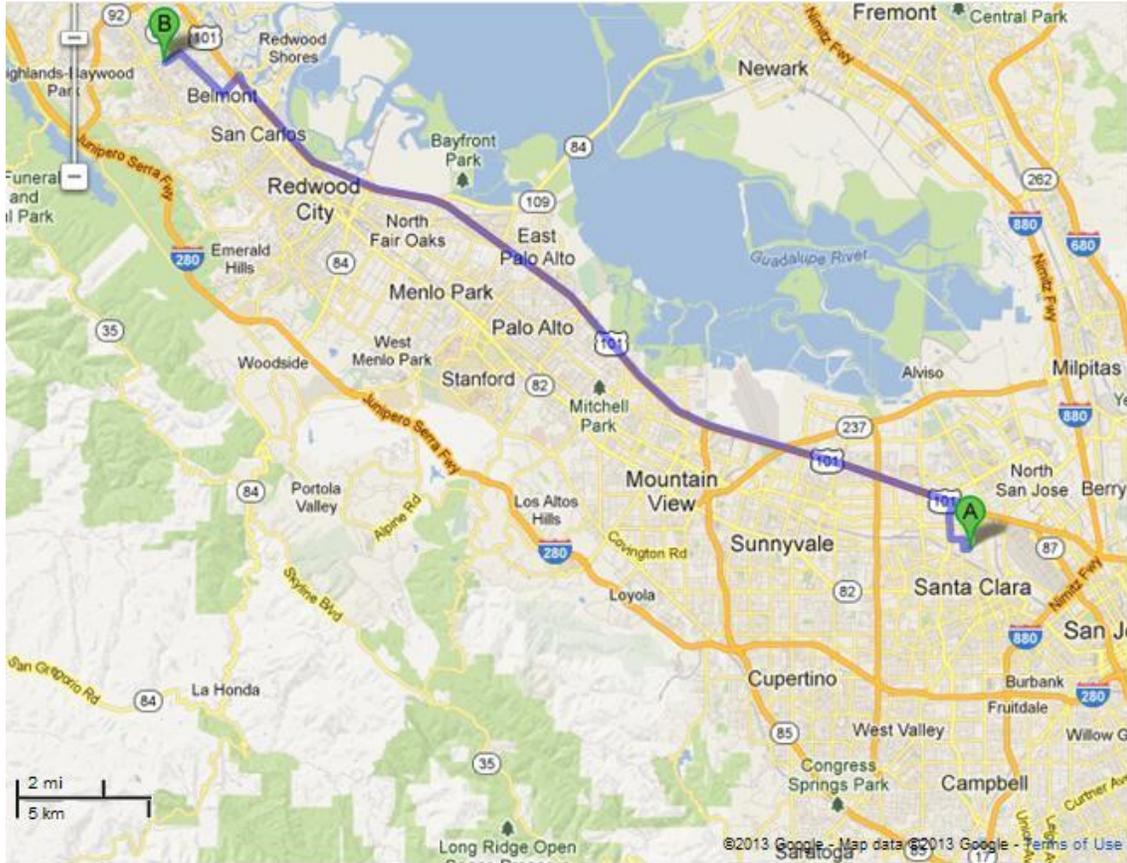


Address: **San Jose/Santa Clara Water Pollution Control Plant**. 700 Los Esteros Road, San Jose

Business Hours: Monday – Friday. 7 AM – 5 PM

- Stop at Main Gate
- Have Security Guard call Environmental Services Lab to grant access into facility at (408) 945-3725
- Continue into facility and park at the Environmental Services Lab parking lot

Attachment F: Driving Directions to San Mateo Lab



A 1705 Martin Ave, Santa Clara, CA 95050

	1. Head west on Martin Ave toward Richard Ave	go 0.1 mi total 0.1 mi
↗	2. Take the 1st right onto Scott Blvd About 53 secs	go 0.2 mi total 0.3 mi
↖	3. Turn left onto Walsh Ave About 1 min	go 0.3 mi total 0.6 mi
↘	4. Turn right onto San Tomas Expy About 2 mins	go 0.9 mi total 1.5 mi
↗	5. Take the U.S. 101 N ramp to San Francisco	go 0.2 mi total 1.7 mi
101	6. Keep left at the fork and merge onto US-101 N About 19 mins	go 19.8 mi total 21.5 mi
↘	7. Take exit 412 for Ralston Ave/Marine Pkwy	go 0.3 mi total 21.8 mi
↖	8. Turn left onto Ralston Ave About 2 mins	go 0.6 mi total 22.5 mi
↘	9. Turn right onto El Camino Real About 3 mins	go 1.4 mi total 23.9 mi
↖	10. Turn left onto 37th Ave Destination will be on the left About 2 mins	go 0.4 mi total 24.3 mi

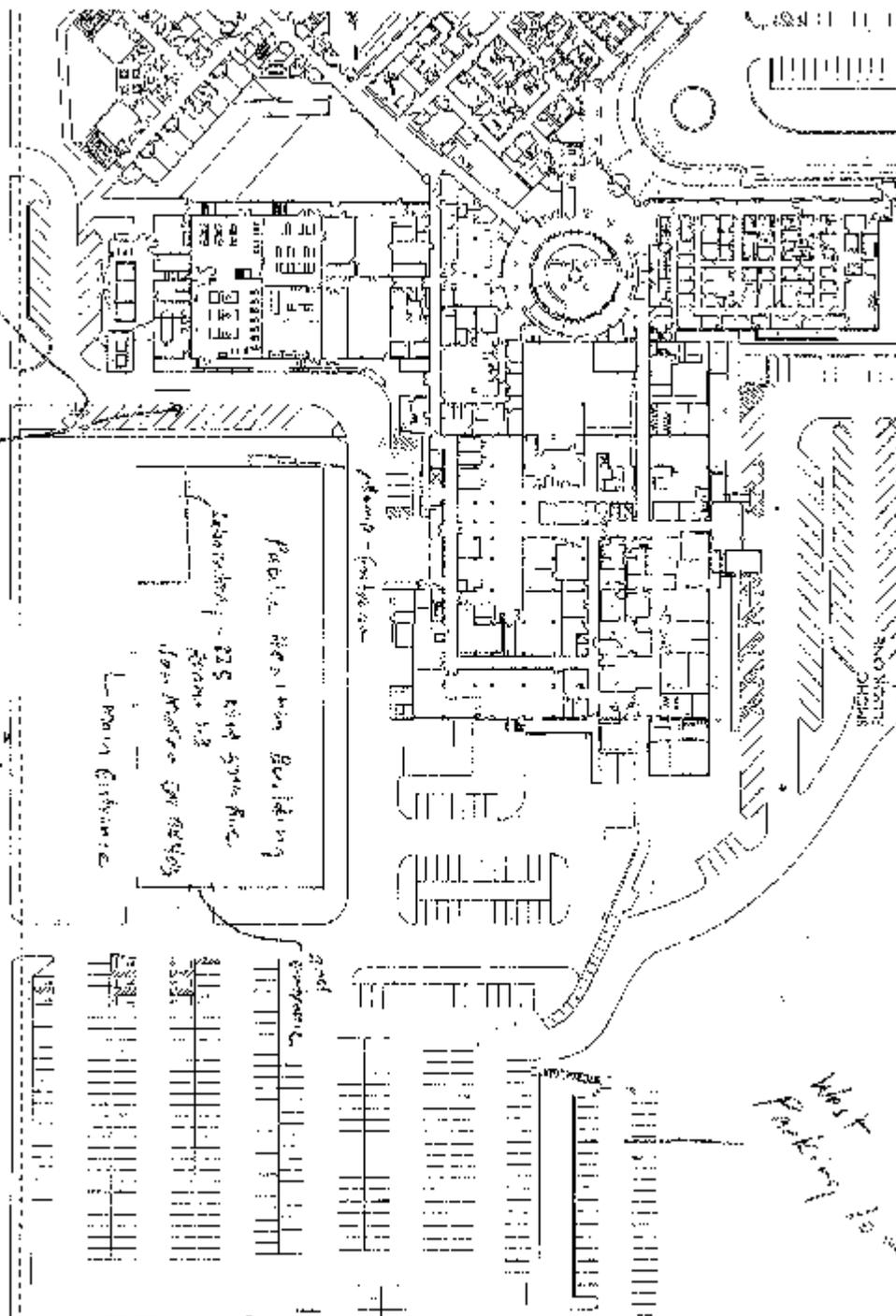
El Camino



Loading System

Administration Building

317th Avenue



Hacienda Avenue

Attachment G: MSDS Sheets

Material Safety Data Sheet

BDH3068-500MLP
BDH3070-2.5LPC
BDH3072-2.5LG
BDH3074-3.8LP
BDH3076-19L
BDH3078-56L
BDH3088-111L
BDH3090-185L
TXBDH307438CPI



Sulfuric Acid

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sulfuric Acid

Synonyms/Generic Names: Oil of Vitriol, Battery Acid, Sulphuric Acid, Dihydrogen Sulfate

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd. Columbus, WI. 53925

For More Information Call: 920-623-2140
(Monday – Friday 8:00-4:30)

IN CASE OF EMERGENCY CALL:
(24 Hours/Day, 7 Days/Week)

CHEMTREC
800-424-9300
703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component	CAS #	EINECS# / ELINCS#	Classification*
95 – 98%	Sulfuric Acid	7664-93-9	231-639-5	C; R35, **
Balance	Water	7732-18-5	N/A	N/A

*Symbol and R phrase according to EC Annex1

** Subject to the reporting requirements of SARA Title III Section 313

3. HAZARDS IDENTIFICATION

Clear, colorless solution with caustic odor.

R35 – Causes severe burns.

S1/2, S26, S30, S45

Routes of Entry: Skin, eyes, inhalation and ingestion.



Ingredients found on carcinogen lists:

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>	<u>ACGIH</u>
Sulfuric Acid	Known	Group 1	Not Listed	A2

4. FIRST AID INFORMATION

Inhalation: Inhalation of mists can cause corrosive action on mucous membranes. Symptoms include burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache or nausea. Move casualty to fresh air and keep at rest. Get medical attention if symptoms persist.

Eyes: Contact rapidly causes severe damage. Symptoms include eye burns, watering eyes. Permanent damage to cornea may result. In case of eye contact, rinse with plenty of water and seek medical attention immediately.

Skin: Severe and rapid corrosion from contact. Extent of damage depends on duration of contact. Symptoms include burning, itching, redness, inflammation and/or swelling of exposed tissues. Harmful if absorbed through skin. Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.

Ingestion: Do Not Induce Vomiting! Severe and rapid corrosive burns of the mouth, gullet and gastrointestinal tract will result if swallowed. Symptoms include burning, choking, nausea, vomiting and severe pain. Wash out mouth with water and give a glass of water or milk. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flash Point:	Not Flammable
Flash Point method:	Not Applicable
Autoignition Temperature:	Not Applicable
Upper Flame Limit (volume % in air):	Not Applicable
Lower Flame Limit (volume % in air):	Not Applicable

Extinguishing Media: Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water, keep away from common metals.

Special fire-fighting procedures: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. Material can react violently with water (spattering and misting) and react with metals to produce flammable hydrogen gas.

Hazardous combustion products: Emits toxic fumes under fire conditions. (See also Stability and Reactivity section).

Unusual fire and explosion hazards: Contact with organic material may cause fire. Material can react with metals to produce flammable hydrogen gas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: See section 8 for recommendations on the use of personal protective equipment.

Environmental precautions: Cleanup personnel need personal protection from inhalation and skin/eye contact. Evacuate and ventilate the area. Prevent spillage from entering drains. Cautiously add water to spill, taking care to avoid splashing and spattering. Neutralize diluted spill with soda ash or lime. Absorb neutralized spill with vermiculite or other inert absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Any release to the environment may be subject to federal/national or local reporting requirements. Dispose of all waste or cleanup materials in accordance with local regulations. Containers, even when empty, will retain residue and vapors.

7. HANDLING AND STORAGE

Normal handling: See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Storage: Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities). Drains for storage or use areas for this material should have retention basins for pH adjustment and dilution of spills.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: (consult local authorities for acceptable exposure limits)

<u>Chemical name</u>	<u>Regulatory List</u>	<u>Value and type</u>
Sulfuric Acid	UK OES	1 mg/m ³ TWA
	USA OSHA PEL	1 mg/m ³ TWA
	STEL	3 mg/m ³ (15 minutes)
	USA ACGIH	1 mg/m ³ TLV
	USA NIOSH	1 mg/m ³ REL
	USA OSHA IDLH	15 mg/m ³
	VME France	1 mg/m ³ TWA 8 hr
VLE France (STEL)	3 mg/m ³ (15 minutes)	

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

STEL: Short Term Exposure Limit during 15 minutes.

IDLH: Immediately Dangerous to Life or Health

Ventilation: Provide local exhaust, preferably mechanical.

Respiratory protection: If necessary use an approved respirator with acid vapor cartridges.

Eye protection: Wear chemical safety glasses with a face shield for splash protection.

Skin and body protection: Wear neoprene or rubber gloves, apron and other protective clothing appropriate to the risk of exposure.

Other Recommendations: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, colorless to slight yellow liquid
Physical state:	Liquid
Odor:	Caustic
Odor Threshold:	Unknown
Specific Gravity:	1.8427
pH:	1
Melting Point/Freezing Point:	10°C (51°F)
Boiling Point/Range:	330°C (626°F)
Flammability:	Not Flammable (See section 5)
Flash point:	Not Flammable (See section 5)
Evaporation Rate (Butyl Acetate =1):	Not Available
Explosive Limits:	Not Explosive (See section 5)
Vapor Pressure (at 20°C):	Not Available
Vapor Density (air =1):	3.4
Solubility:	Completely soluble in water
Partition coefficient/n-octanol/water:	Not Available
% Volatile:	Not Available
Autoignition Temperature:	See section 5

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to avoid: Uncontrolled addition of water.

Incompatibility: Moisture, bases, halides, organic material, metals, carbides, cyanides, chlorates, nitrates, picrates, permanganate, peroxides, zinc iodide, azides, perchlorates, phosphorus, nitrites and finely powdered metals.

Hazardous decomposition products: Oxides of sulfur, Hydrogen sulfide gas.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Effects: See section 4 for symptoms of exposure and effects. Likely routes of exposure are skin, eyes and inhalation.

Target organs: Teeth, blood, liver, bone marrow and cardiovascular system.

Acute Toxicity Data:

Sulfuric acid	Oral LD ₅₀ (rat): 2140 mg/kg
	LC ₅₀ (rat): 510 mg/m ³

Chronic Effects: Sulfuric Acid mists are listed as a possible carcinogen.

Teratogenicity: Inhalation (rabbit) 20 mg/m³/7hrs, 6-18 days pregnant, result-musculoskeletal deformities.

Mutagenicity: Hamster, 4 MMOL/L, ovary.

Embryotoxicity: Not Available

Synergistic Products/Effects: Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial): Data not available

Persistence and Degradability: Data not available

Bioaccumulative Potential: Data not available

Mobility in Soil: Data not available

Other Adverse Effects: Data not available

13. DISPOSAL CONSIDERATIONS

RCRA:

Hazardous waste? Yes RCRA ID number: DOO2

Waste Residues: Carefully dilute with water, neutralize per spill procedures in section 6. Neutralized material may be flushed to sewer (REGULATIONS PERMITTING!) or disposed of through a licensed contractor. Users should review their operations in terms of the applicable federal/nation or local regulations and consult with appropriate regulatory agencies before discharging or disposing of waste material.

Product containers: Containers, if thoroughly cleaned, preferably by rinsing three times and handling the rinse water as waste residues, may be disposed of or recycled as non-hazardous waste. Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies before discharging or disposing of waste material.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

DOT: UN1830, Sulfuric Acid, 8, pg II

TDG: UN1830, Sulfuric Acid, 8, pg II

PIN: Not Available

IDMG: UN1830, Sulphuric Acid, 8, pg II

Marine Pollutant: No

IATA/ICAO: UN1830, Sulphuric Acid, 8, pg II

RID/ADR: Class 8, Item 1(b), corrosive, Kemler plate: 80/1830

15. REGULATORY INFORMATION

TSCA Inventory Status: All ingredients are listed on the TSCA inventory.

Federal and State Regulations:

Pennsylvania RTK: Sulfuric Acid

Massachusetts RTK: Sulfuric Acid

SARA 302/304/311/312 extremely hazardous substances: Sulfuric Acid

SARA 313 toxic chemical notification and release reporting: Sulfuric Acid

CERCLA: Hazardous Substances: Sulfuric Acid

California Proposition 65: Yes - Strong inorganic acid mists containing sulfuric acid.

WHMIS Canada: Class E - corrosive liquid.

DSCL (EEC): R35 – Causes severe burns.

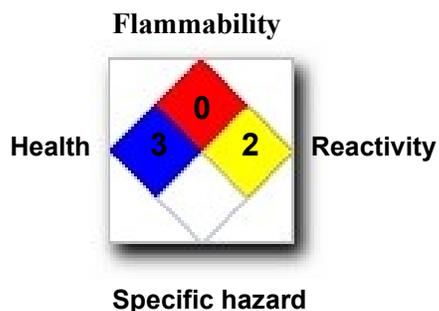
HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	0
Reactivity	3

National Fire

Protection

Association (U.S.A.)



Protective Equipment:



ADR (Europe):



TDG (Canada):



DSCL (Europe):



16. OTHER INFORMATION

Current Issue Date: December 10, 2010

Prepared by: S. Brock

Disclaimer: Columbus Chemical Industries, Inc. ("Columbus") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because Columbus has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. COLUMBUS MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE.

Material Safety Data Sheet

Nitric acid, 20-70%

ACC# 16550

Section 1 - Chemical Product and Company Identification

MSDS Name: Nitric acid, 20-70%

Catalog Numbers: AC124660000, AC124660010, AC124660011, AC124660025, AC124660026, AC124665000, AC124665001, AC133620000, AC133620010, AC133620011, AC133620025, AC133620026, AC424000000, AC424000025, AC424000026, AC424000250, AC424005000, AC424005001, AC613205000, A198C-212, A198C4X-212, A200-212, A200-500, A200-500LC, A200-612GAL, A200212LC, A200C-212, A200C212EA, A200C212LC, A200C4X-212, A200C4X212L, A200S-212, A200S-500, A200S212LC, A200SI-212, A206C-212, A206C4X-212, A467-1, A467-2, A467-250, A467-500, A483-212, A509-212, A509-212LC, A509-500, A509SK-212, A509SK-212LC, MCC-030822, NC9596579, S719721, S71972SC

Synonyms: Azotic acid; Engraver's acid; Aqua fortis.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7732-18-5	Water	30-80	231-791-2
7697-37-2	Nitric acid	20-70	231-714-2

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear to yellow liquid.

Danger! May be fatal if inhaled. Causes severe eye and skin burns. Causes severe respiratory and digestive tract burns. Strong oxidizer. Contact with other material may cause a fire. Acute pulmonary edema or chronic obstructive lung disease may occur from inhalation of the vapors of nitric acid. Corrosive to metal.

Target Organs: Lungs, eyes, skin, mucous membranes.

Potential Health Effects

Eye: Causes severe eye burns. Direct contact with liquid may cause blindness or permanent eye damage.

Skin: Causes skin burns. May cause deep, penetrating ulcers of the skin. Concentrated nitric acid dyes human skin yellow on contact.

Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. May cause systemic effects.

Inhalation: Effects may be delayed. Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Aspiration may lead to pulmonary edema. May cause systemic effects. May cause acute pulmonary edema, asphyxia, chemical pneumonitis, and upper airway obstruction caused by edema. Depending on the conditions, the vapor or fumes of nitric acid may actually be a mixture of nitric acid and various oxides of nitrogen. The

composition may vary with temperature, humidity, and contact with other organic materials.

Chronic: Exposure to high concentrations of nitric acid vapor may cause pneumonitis and pulmonary edema which may be fatal. Symptoms may or may not be delayed. Continued exposure to the vapor & mist of nitric acid may result in a chronic bronchitis, & more severe exposure results in a chemical pneumonitis. The vapor & mists of nitric acid may erode the teeth, particularly affecting the canines & incisors.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. May react with metal surfaces to form flammable and explosive hydrogen gas. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Flash Point: Not applicable.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 4; Flammability: 0; Instability: 0; Special Hazard: OX

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Provide ventilation. Evacuate unnecessary personnel. Approach spill from upwind. Use water spray to cool and disperse vapors and protect personnel.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Discard contaminated shoes. Do not use with metal spatula or other metal items. Use only with adequate ventilation or respiratory protection.

Storage: Do not store near combustible materials. Do not store in direct sunlight. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Store away from alkalies. Separate from organic materials. Inspect periodically for damage or evidence of leaks or corrosion.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use a corrosion-resistant ventilation system.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Water	none listed	none listed	none listed
Nitric acid	2 ppm TWA; 4 ppm STEL	2 ppm TWA; 5 mg/m ³ TWA 25 ppm IDLH	2 ppm TWA; 5 mg/m ³ TWA

OSHA Vacated PELs: Water: No OSHA Vacated PELs are listed for this chemical. Nitric acid: 2 ppm TWA; 5 mg/m³ TWA

Personal Protective Equipment

Eyes: Wear chemical splash goggles and face shield.

Skin: Wear butyl rubber gloves, apron, and/or clothing.

Clothing: Wear appropriate clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear to yellow

Odor: strong odor - acrid odor - suffocating odor

pH: 1.0 (0.1M soln)

Vapor Pressure: 51 mm Hg @ 25 deg C

Vapor Density: 2.17 (air=1)

Evaporation Rate: Not available.

Viscosity: 0.761 cps @ 25 deg C

Boiling Point: 86 deg C

Freezing/Melting Point: -42 deg C

Decomposition Temperature: Not available.

Solubility: Soluble in water.

Specific Gravity/Density: 1.4

Molecular Formula: HNO₃

Molecular Weight: 63.01

Section 10 - Stability and Reactivity

Chemical Stability: Stable. Decomposes when in contact with air, light, or organic matter. The yellow color is due to release of nitrogen dioxide on exposure to light.

Conditions to Avoid: High temperatures, light, confined spaces.

Incompatibilities with Other Materials: Metals, reducing agents, strong bases, acetic acid, alcohols, acetone, aniline, hydrogen sulfide, metal powders, carbides, aldehydes, organic solvents, combustible materials, chromic acid, flammable liquids, cyanides, sulfides, Incompatible with many substances.

Hazardous Decomposition Products: Nitrogen oxides.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 7732-18-5: ZC0110000

CAS# 7697-37-2: QU5775000; QU5900000

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg;

CAS# 7697-37-2:

Inhalation, rat: LC50 = 260 mg/m³/30M;

Inhalation, rat: LC50 = 130 mg/m³/4H;

Inhalation, rat: LC50 = 67 ppm(NO₂)/4H;

Carcinogenicity:

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7697-37-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: Terrestrial: During transport through the soil, nitric acid will dissolve some of the soil material, in particular, the carbonate based materials. The acid will be neutralized to some degree with adsorption of the proton also occurring on clay materials. However, significant amounts of acid are expected to remain for transport down toward the ground water table. Upon reaching the ground water table, the acid will continue to move, now in the direction of the ground water flow.

Physical: No information available.

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

US DOT

Canada TDG

Shipping Name:	NITRIC ACID	NITRIC ACID
Hazard Class:	8	8
UN Number:	UN2031	UN2031
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7732-18-5 is listed on the TSCA inventory.

CAS# 7697-37-2 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 7697-37-2: 1000 lb final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 7697-37-2: 1000 lb TPQ

SARA Codes

CAS # 7697-37-2: immediate, delayed, fire.

Section 313

This material contains Nitric acid (CAS# 7697-37-2, 20-70%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 7697-37-2 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS# 7697-37-2 is considered highly hazardous by OSHA.

STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7697-37-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

C

Risk Phrases:

R 35 Causes severe burns.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36 Wear suitable protective clothing.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7732-18-5: No information available.

CAS# 7697-37-2: 1

Canada - DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7697-37-2 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of E, C, D1A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7697-37-2 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/30/1998

Revision #16 Date: 2/11/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

Appendix I

FOG Program Materials and Handouts

FATS, OIL and GREASE

“It’s Easier than YOU Think!”

THE **WRONG WAY** La Forma Incorrecta



1
Do not pour cooking residue directly into the drain.

No tire residuos de cocinar directamente en el desagüe.



2
Do not dispose of food waste into the garbage disposal.

No ponga desperdicios de comida en el molidor de comida.



3
Do not pour waste oil directly into the drain.

No tire aceite usado directamente en el desagüe.



4
Do not wash floor mats where water will run off directly into the storm drain.

No lave tapetes de piso en un lugar donde el agua corra hacia el desagüe.

THE **RIGHT WAY** La Forma Correcta



1
Wipe pots, pans, and work areas prior to washing.

Limpie las ollas, sartenes, y áreas de trabajo con una toalla antes de lavarlos.



2
Dispose of food waste directly into the trash.

Deseche los desperdicios de comida en el bote de basura.



3
Collect waste oil and store for recycling.

Junte el aceite usado y guárdelo para que sea reciclado.



4
Clean mats inside over a utility sink.

Limpie los tapetes de piso dentro de una tina o fregador.

Courtesy of Sanitation Districts of Los Angeles County

PREVENT RAW SEWAGE IN YOUR HOME !

Grease was Removed From
Sewer Lines In Your Area!

DON'T

put cooking oil,
grease, or greasy food
down the drain.



DO

pour cooled grease
into disposable
containers and place
them into the garbage
once it has hardened.



Use a paper towel to
wipe and absorb
grease or oil on dishes
and pots before
washing them.



If you see a sewer overflow call
408.615.2000 immediately!



**City of
Santa Clara**

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**City of
Santa Clara**

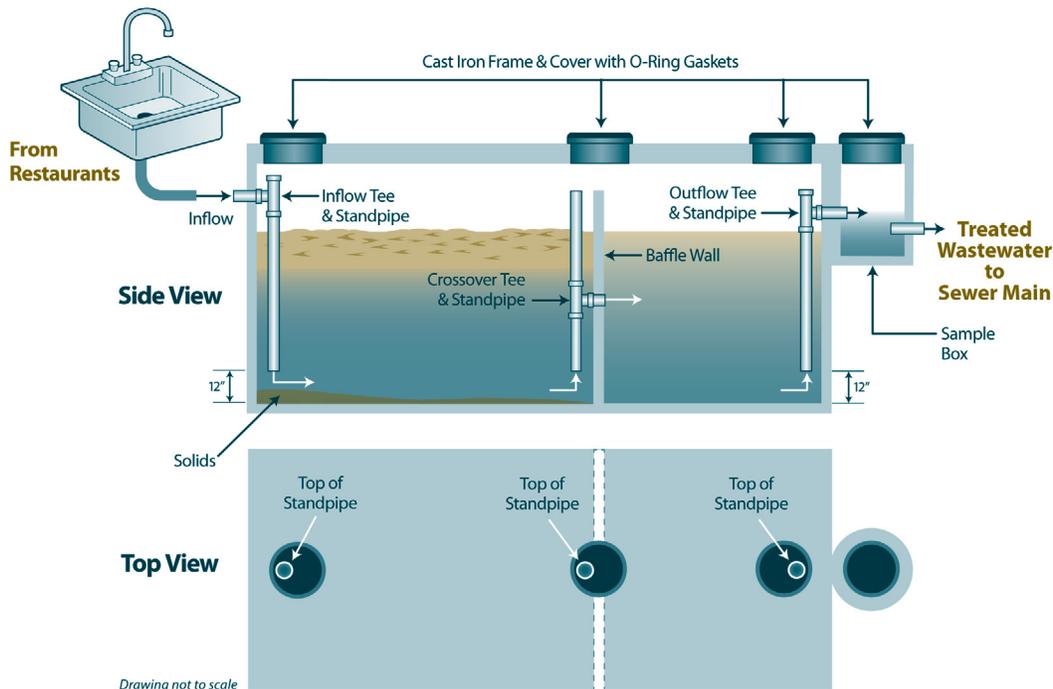


Acceptable Specifications for Grease Interceptors

KEEP **GREASE** OUT OF THE SYSTEM

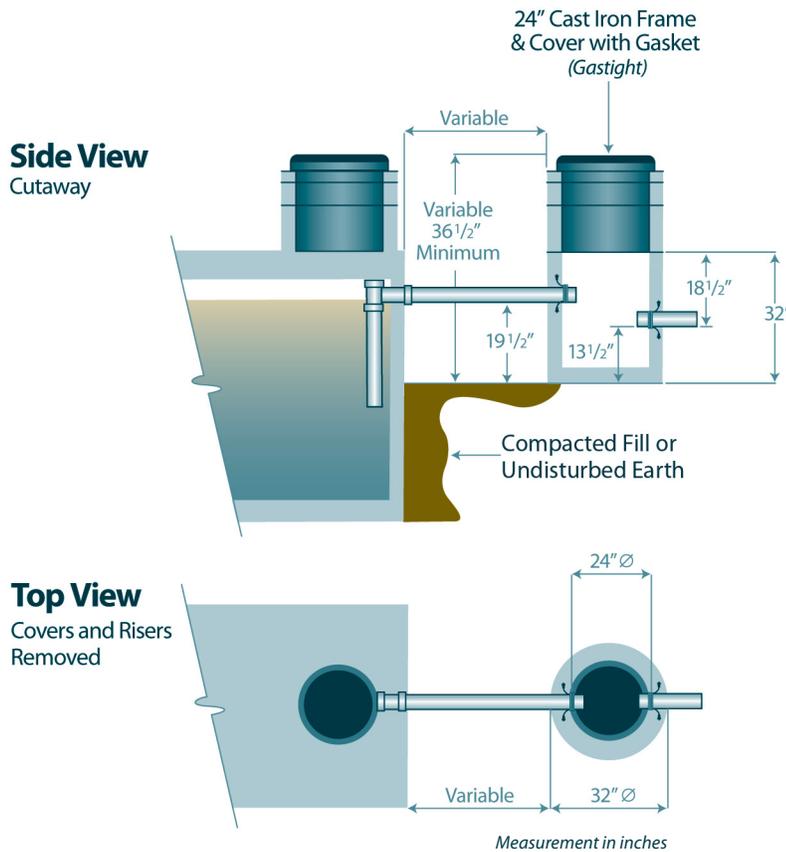
All Grease Interceptors (GIs) shall:

- Be approved by the International Association of Plumbing and Mechanical Officials (IAPMO) per the Sanitary Use Ordinance.
- Be installed to manufacturer's specifications and comply with current local, state, and federal requirements.
- Be sized by the City of Santa Clara (CSC)
- Be 500 gallons minimum (California Plumbing Code 1014.3.6) unless authorized by CSC
- Include manholes over the inlet, outlet, and baffle wall(s) standpipes for purposes of access, inspection, and cleaning.
- Include 24-inch diameter round access covers.
- Include a 12-inch gap from bottom floor of Grease Interceptors to bottom of standpipes.
- Include pre-test observation by the CSC prior to backfilling.
- Include connections to all grease generating fixtures.
- Include a sample box (see reverse side for illustration). The preferred type is a minimum 5-gallon capacity circular sample box and is located immediately downstream from the GI. The sample box shall have a hydraulic jump of approximately six (6) inches or a tee on the influent side of the sample box (similar to tee on influent side of GI).



Grease in the system causes problems in storm drains and sanitary sewers — and increases your operating costs.

Sample Box



List of Grease Interceptor vendors

- **Jensen Precast**
www.jensenprecast.com
(707) 429-5500
- **Don Chapin Company**
www.donchapin.com
(831) 449-4273
- **US Concrete – Precast Group**
www.us-concreteprecast.com
(925) 960-8740
- **Greenturtle – Proceptor**
www.greenturtletech.com
(877) 428-8187
- **MC Nottingham**
www.mcnottingham.com
(800) 834-9655

It is in no way to be implied or understood that City of Santa Clara - Water and Sewer Utilities Department endorses these companies or their quality of work. This list is provided as a courtesy and is only a partial list of GI vendors in this area. It is the responsibility of the person who is hiring any of these companies to verify their qualifications and references as well as their compliance with regulations on handling and transport of waste. This sheet is intended for use in the City of Santa Clara.

For more information:

City of Santa Clara
Water and Sewer Utilities
1500 Warburton Avenue
Santa Clara, CA 95050
408.615.2000

www.santaclaraca.gov

If you have any questions, please call **408.615.2000** to speak with a Code Enforcement Technician
This and other outreach materials are available at www.santaclaraca.gov

SAN JOSE/
SANTA CLARA
WATER POLLUTION
CONTROL PLANT

Serving the cities of San José, Santa Clara, and Milpitas, Cupertino Sanitary District, West Valley Sanitation District (including the cities of Campbell, Los Gatos, Monte Sereno, and Saratoga), County Sanitation District No. 2-3, and Burbank Sanitary District.



**City of
Santa Clara**



KEEP **GREASE** OUT OF THE SYSTEM

Grease Control Device Maintenance Recordkeeping

All food service establishments are required to keep maintenance records for their grease traps, interceptors, and mechanical grease control devices for a minimum of three years. Records must be readily available for review by Environmental Inspectors.



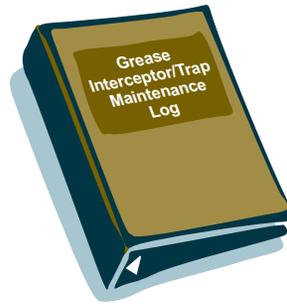
Failure to maintain records on site for a minimum of three years is a violation of the local sewer ordinance and may result in fines.

Device: Grease Interceptor
Cleaning Method: Professional Pumping Company Only

Establish and maintain a log to track maintenance and hold receipts from your professional pumping company. If you have more than one grease interceptor, establish and maintain a separate log for each one.

Receipts must include the following information:

- Pumping company name, address, and phone number.
- Truck IKG number.
- Date and time of pumping service.
- Name and address of your business.
- Location of each grease control device.
- Size and type of your grease control device.
- Approximate quantity of grease and solid food waste recorded in gallons, inches, or percentages.
- Pumping frequency.
- Details on any structural, maintenance, or repair issues.
- Grease disposal location.



Device: Grease Trap
Cleaning Method: Professional Pumping Company or Self-Cleaning

Establish and maintain a log to track maintenance and hold receipts from your professional pumping company if you use one. If you have more than one grease trap, establish and maintain a separate log for each one.

Logs must include the following information:

- Date of cleaning.
- Name of person who cleaned the trap.
- Approximate quantity of grease and solid food waste recorded in gallons, inches, or percentages.
- Location of each grease control device.
- Waste removal and disposal method.
- Grease disposal location.
- Any other relevant notes.
- Keep receipts with your self-cleaning log sheets if you use a professional cleaning service.



Whether you contract a professional pumping service, perform the cleaning yourself, or do both, you are responsible for keeping and maintaining maintenance records.

Example of a Recordkeeping Log for a Grease Control Device

Business: Acme Cafe Grease Control Device Size: 100 lbs Location of Grease Control Device: Underneath 3-pot sink

Date of Cleaning	Name	Waste Volume Observed/Removed	Maintenance Done	Disposal Method	Notes
07-07-11	John Smith	3-4 gallons FOG & solids removed	Trap emptied, cleaned	Solids dried, double-bagged, put in dumpster.	Patched hole in baffle wall



For more information:

City of Santa Clara
 Water and Sewer Utilities
 1500 Warburton Avenue
 Santa Clara, CA 95050
 408.615.2000

www.santaclaraca.gov

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**City of
 Santa Clara**



KEEP **GREASE** OUT OF THE SYSTEM

Grease Interceptor Maintenance

What is the Purpose of a Grease Interceptor?

- A grease interceptor is designed to separate Fats, Oils, and Grease (FOG) and solid food waste from your kitchen wastewater.
- Buildup of FOG and solid food waste in your plumbing may cause blockages in either your plumbing or the sanitary sewer lines. This can lead to a sanitary sewer overflow into your building, a neighbor's building, streets, or the environment. It is important to clean your grease interceptor regularly.

Cleaning Frequency

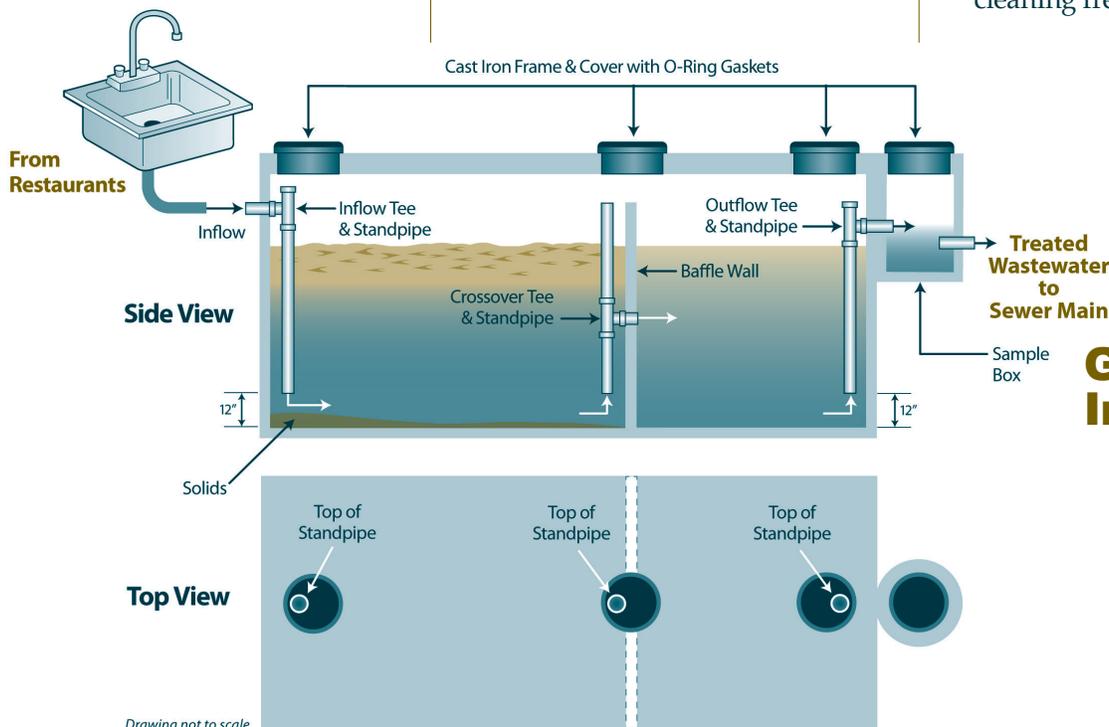
- Grease interceptors shall be cleaned **at least once every 90 days**. More frequent cleaning may be necessary to keep your interceptor operating properly.

Twenty-Five Percent Rule

- **Pump your interceptor when the final chamber is twenty-five percent (25%) full of FOG and solid food waste or within 90 days of the last pumping, whichever comes first.**

Standards for Evaluating Grease Interceptors

- Manhole and sample box lids should be easily removable for cleaning and inspections.
- The baffle wall and all three standpipes must be in place and unbroken, above and below the water and grease levels.
- If any standpipes are under water or grease, they must be raised above the grease level. High water or grease level could result from a blockage in the downstream pipes.
- Downstream blockages could indicate inadequate interceptor cleaning frequency.



Grease Interceptor

Failure to maintain records on site for a minimum of three years is a violation of your local sewer ordinance and may result in fines. See the “Grease Control Device Maintenance Recordkeeping” factsheet for more information.



*Discharging used cooking or deep fryer oil, rotisserie fat, or solid food waste into kitchen sinks, mop sinks, and floor drains in your kitchen that are connected to the **sanitary sewer system** is a violation of your local sewer use ordinances.*



*Discharging anything, including oil, grease waste, wash water, or rinse water to the **storm drain system** is a violation of the local sewer use ordinance.*

For more information:

City of Santa Clara
Water and Sewer Utilities
1500 Warburton Avenue
Santa Clara, CA 95050
408.615.2000

www.santaclaraca.gov

Kitchen Best Management Practices (BMPs)

- Grease and solid food waste can build up inside the interceptor and may cause the interceptor to operate less efficiently.
- Scraping grease and food waste to the garbage before washing dishes will minimize the amount of grease and solids going into the grease interceptor and will improve interceptor performance.

Tips on Routine Grease Interceptor Maintenance

- The pumping service should wash and scrape all sides, standpipes, and surfaces inside the interceptor and completely pump out all contents.
- The pumping service shall not decant (return) wastewater back into the interceptor; the grease concentration in interceptor wastewater is very high.
- Make sure your pumping service cleans the sample box and effluent standpipe of the interceptor. You may need to pump more often if you see fresh grease being discharged into your sample box.
- Require the pumping service to show the disposal destination for your waste on the pumping invoice. Your business may be liable for any illegal dumping or discharge of waste from your facility.
- Do visual inspections after pumping services are performed or when plumbers snake or hydro-jet plumbing or laterals to make sure the interceptor standpipes are not damaged.
- Keep grease interceptor pumping records on site for a minimum of three years. Refer to the Grease Control Device Maintenance Recordkeeping sheet for more information.

If you have any questions, please call **408.615.2000** to speak with a Code Enforcement Technician. This and other outreach materials are available at www.santaclaraca.gov



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**City of
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KEEP **GREASE** OUT OF THE SYSTEM

Grease Trap Maintenance

What is the Purpose of a Grease Trap?

- A grease trap is designed to separate Fats, Oils, and Grease (FOG) and solid food waste from your kitchen wastewater.
- Buildup of FOG and solid food waste in your plumbing may cause blockages in either your plumbing or the sanitary sewer lines. This can lead to an overflow into your building, a neighbor's building, streets, or the environment. It is important to clean your grease trap regularly.

Cleaning Frequency

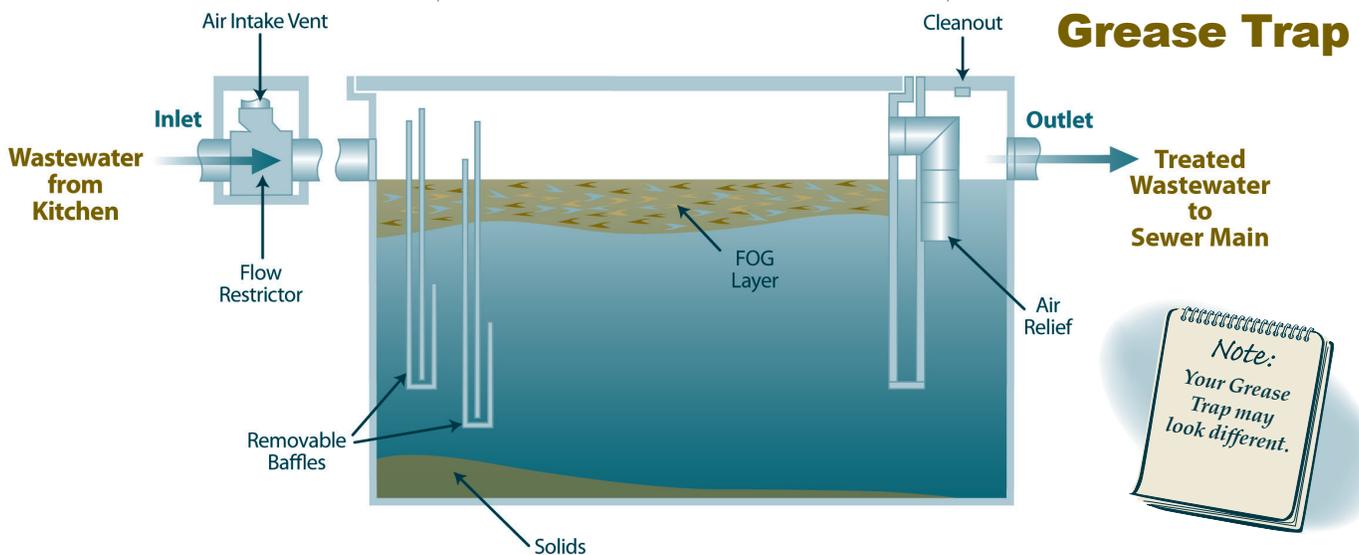
- Grease traps shall be cleaned **at least once every 30 days**. More frequent cleaning may be necessary if:
 - Your sinks are draining slowly, possibly due to buildups in the trap.
 - Water levels in the trap or floor drains are high, possibly due to grease-related blockages in your plumbing.
 - The grease trap smells bad because solids are filling the bottom of the trap quickly.
 - Your trap is not sized correctly for your restaurant operations, menu, or number of meals served.

Twenty-Five Percent Rule

- **Clean the trap when it is twenty-five percent (25%) full of FOG and solid food waste or within 30 days of the last pumping, whichever comes first.**

Common Problems Leading to Grease Trap Repair or Replacement

- Grease trap installed backwards, without flow controls, or otherwise in violation of plumbing codes or manufacturer specifications.
- Missing or damaged parts, such as the removable baffle plates.
- Leaks due to rust holes or punctures in the walls or floors.
- Illegal connection to the dishwasher or garbage grinder to the grease trap.



Grease in the system causes problems in storm drains and sanitary sewers — and increases your operating costs.

Failure to maintain records on site for a minimum of three years is a violation of your local sewer ordinance and may result in fines. See the "Grease Control Device Maintenance Recordkeeping" factsheet for more information.



*Discharging used cooking or deep fryer oil, rotisserie fat, or solid food waste into kitchen sinks, mop sinks, and floor drains in your kitchen that are connected to the **sanitary sewer system** is a violation of your local sewer use ordinances.*



*Discharging anything, including oil, grease waste, wash water, or rinse water to the **storm drain system** is a violation of the local sewer use ordinance.*

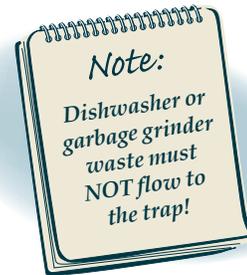
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Kitchen Best Management Practices (BMPs)

- Scraping grease and food waste to the garbage before washing dishes will minimize the amount of grease and solids going into the grease trap and will often improve trap performance.



Tips on Routine Grease Trap Maintenance

- To ensure proper maintenance, we recommend using a professional grease hauling company.
- Cleaning consists of emptying the entire trap, including FOG, wastewater, and solid food waste; making sure the removable baffle plates and parts are thoroughly cleaned and replaced properly after each cleaning.
- Keep a maintenance log sheet posted near the grease trap if you self-clean the trap.
- Melt ice in the sink plumbed to the grease trap an hour or two before cleaning. This helps cool and harden the grease in the trap, making cleaning easier and reducing odors.
- Have an extra gasket available for your grease trap lid and use allen screws (which resist stripping) to secure the lid.
- Run your hood fans during cleaning to reduce odors.
- Call a plumber to snake or hydro-flush your sewer lateral (plumbing) pipes to the street periodically to remove any blockages.
- If you choose to self-clean your grease trap, please see the "How to Clean Your Grease Trap" poster for guidance.

If you have any questions, please call **408.615.2000** to speak with a Code Enforcement Technician. This and other outreach materials are available at www.santaclaraca.gov



San José-Santa Clara
Regional
Wastewater
Facility

Serving the cities of San José, Santa Clara, and Milpitas, Cupertino Sanitary District, West Valley Sanitation District (including the cities of Campbell, Monte Sereno, Saratoga and the Town of Los Gatos), County Sanitation District No. 2-3, and Burbank Sanitary District.



**City of
Santa Clara**

HOW TO CLEAN YOUR GREASE TRAP

Keep grease out of the sanitary sewer by following these simple steps:

CÓMO LIMPIAR LAS TRAMPAS DE GRASA

¡Mantenga la grasa fuera del alcantarillado, y proteja nuestros arroyos y la Bahía siguiendo estos pasos sencillos:

CÁCH THỨC LÀM SẠCH BẦY DẦU MỠ CỦA BẠN

Giữ dầu mỡ ra khỏi cống rãnh bằng cách làm theo các bước đơn giản này:

1 Scoop top grease Saque la grasa acumulada en la parte superior con una pala / Vớt váng dầu

Let grease trap cool down. Scoop out oil and grease. Place waste in a plastic bag.

Deje que se enfríe la trampa de grasa. Saque el aceite y grasa y pongala en una bolsa de plástico.

Hãy để cho cái bẫy nguội. Vớt ra phần dầu và mỡ nổi trên mặt. Bỏ vào túi nhựa.



2 Remove water Saque el agua Đổ nước đi

Scoop out water. Leave solids and sludge behind. Pour water into a sanitary sewer (indoor) drain.

Saque el agua de la trampa. Deje detrás los sólidos y residuos. Tire el agua en un drenaje sanitario.

Mức nước ra. Chừa lại chất rắn và bùn. Đổ nước xuống hệ thống cống thoát nước vệ sinh (trong nhà).



3 Remove solids and sludge Remueva los sólidos y residuos Đổ đi chất rắn và bùn

Scrape waste from all sides and bottom of the grease trap. Place in a plastic bag.

Raspe los sólidos y residuos de las superficies de las paredes y del fondo de la grasa y pongala en una bolsa de plástico.

Cạo ra chất thải ở mặt trên, mặt dưới và xung quanh của cái bẫy dầu mỡ. Bỏ hết chất thải vào túi nhựa.



4 Clean all parts Limpie todas las partes Làm sạch các bộ phận

Check and clean all removable parts, baffles, and/or screens. Place waste in a plastic bag.

Inspeccione y limpie las partes y/o pantallas y pongala en una bolsa de plástico.

Kiểm tra và làm sạch các bộ phận rời, vách ngăn, và/hoặc màn lưới. Bỏ hết chất thải vào túi nhựa.



5 Make waste solid Solidifique los desechos Làm đặc

Pour cat litter into bag(s) of waste and mix until dry. Double-bag the waste.

Vierta arena para gatos en las bolsas con la grasa y residuos, y mezcle hasta que la grasa se solidifique o hasta que la grasa se seque. Después ponga los residuos con la arena de gato en bolsa doble.

Bỏ cát mèo (cat litter) vào trong các túi nhựa chất thải rồi trộn cho đến khi khô. Để túi vào trong một túi nhựa khác.



6 Dispose Deseche Vứt bỏ

Securely tie up bags of waste. Dispose in a trash can or dumpster. Close lid over trash.

Ate las bolsas de residuos de manera segura. Deshágase de las bolsas en un basurero o contenedor de basura. Cierre la tapa sobre la basura.

Cột chặt túi lại. Bỏ vào thùng rác. Đậy nắp thùng rác.



7 Reassemble and record Vuelva a ensamblar, rellene y registre Lắp ráp lại và ghi chép

Reassemble trap. Tighten lid. Record cleaning on maintenance log sheet.

Vuelva a ensamblar la trampa, apriete la tapa y anote en la hoja de registro de mantenimiento.

Ráp lại cái bẫy. Đậy nắp cho chặt. Ghi vào hồ sơ bảo trì mọi chi tiết làm sạch bẫy dầu mỡ.



COMPLIANCE WARNING: You are required by your sewer use ordinance to keep the grease trap in efficient operating condition. Failure to do so can result in fines or other penalties.

ADVERTENCIA: Usted esta obligado por la ordenanza del uso del alcantarillado sanitario a mantener la trampa de grasa operando en condiciones eficientes. Falta de mantener la trampa de grasa en condición eficiente puede resultar en multas o otros penales.

KHUYẾN CÁO: Về việc phải tuân giữ hợp lệ. Luật lệ về việc bảo trì cái bẫy dầu mỡ đòi hỏi bạn luôn luôn giữ gìn cái bẫy dầu mỡ trong điều kiện tốt và điều hành hiệu quả. Mọi thiếu sót trong việc tuân hành luật lệ này có thể đem lại việc bị phạt tiền và các hình phạt khác.



KEEP GREASE OUT OF THE SYSTEM

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San José-Santa Clara
Regional
Wastewater
Facility



City of
Santa Clara

408.615.2000
www.santaclaraca.gov



Hello,

I am a Code Enforcement Technician with the City of Santa Clara. I am here to perform an inspection of your business. Santa Clara conducts inspections of restaurants, cafeterias, and other food service operations. We inspect these businesses to ensure that they are:

1. In compliance with environmental laws, and
2. Not releasing excessive grease into the sanitary sewer that can cause sanitary sewer blockages, backups, and overflows.

The inspection will consist of asking you questions about your business activities, walking through your business site, and reviewing certain records. We will also provide you with educational materials and information that can help your business stay in compliance with water pollution laws and protect the environment.

We appreciate the opportunity to work with you to protect the sanitary sewer system and minimize pollution of our local creeks, rivers, and the Bay. For additional information on this inspection and ways you can help us protect our local waterways, please visit our website www.santaclaraca.gov or call our office at 408.615.2000

SAN JOSE/
SANTA CLARA
WATER POLLUTION
CONTROL PLANT

Tributary agencies served by the treatment plant: San José, Santa Clara, Milpitas, Cupertino Sanitary District, West Valley Sanitation District (including Campbell, Los Gatos, Monte Sereno, Saratoga), County Sanitation Districts 2-3, Burbank Sanitary District.



**City of
Santa Clara**



KEEP **GREASE** OUT OF THE SYSTEM

Prohibitions on using Chemicals, Enzymes, or Bacteria in Grease Traps and Interceptors



Chemicals: the use of chemicals to clean grease traps or interceptors is strictly prohibited because:

- Local sewer use ordinances prohibit the use of chemicals as a method to remove grease from your grease trap or interceptor.
- Cleaners, solvents, caustics, or other chemicals cannot be used to dissolve accumulated grease from your grease trap or grease interceptor. These chemicals cause grease to flow out of your trap or interceptor in violation of local ordinances. The grease may deposit on sewer pipes downstream of your business, obstructing them and contributing to sewer overflows.



Enzymes: the use of enzymes to clean grease traps or interceptors is strictly prohibited because:

- Whether produced synthetically or from animals, enzymes cannot be used to dissolve grease from your grease trap or interceptor.
- Enzymes can temporarily alter the chemical form of the grease, allowing it to dissolve into the water. However, the altered grease may reform into solid matter downstream from your business, obstructing sewer pipes.



Bacteria: the use of bacteria to clean grease traps or interceptors is strictly prohibited because:

- Bacteria need a reliable environment to grow and are sensitive to changes in temperature, pH, oil and grease loading, water flow changes, etc. It is difficult to maintain the conditions necessary for bacteria to thrive in a kitchen environment. Biological expertise and ongoing sampling are often needed for bacteria to be sustainable.
- Even if bacteria survive and flourish, their effectiveness in removing grease is limited. "Partially eaten" (i.e., not broken down completely) grease may still enter the plumbing and over time reform into solid matter downstream, obstructing the sewer pipes.



Per the sewer use ordinance:

“No person shall discharge...any substance of any kind whatsoever tending to obstruct or injure the sanitary sewer system, or to cause a nuisance or hazard, or which will in any manner interfere with the proper operation or maintenance of the sanitary sewer system.”

In general...

- Greasy wastewater may not be discharged to the sanitary sewer system unless it has been treated using a grease trap or interceptor approved by the Environmental Services Department.
- Floating or solid grease matter must be physically removed from your grease removal device by pumping, scraping, scooping, etc.
- Maintain your grease trap and interceptor in efficient operating condition by regular removal of accumulated grease.
- The minimum cleaning frequency required for grease interceptors installed in food service facilities is once every 90 days. However, more frequent cleaning may be necessary.
- The minimum cleaning frequency required for grease traps installed in food service facilities is once every 30 days. However, more frequent cleaning may be necessary.

For more information:

City of Santa Clara
Water and Sewer Utilities
1500 Warburton Avenue
Santa Clara, CA 95050
408.615.2000

www.santaclaraca.gov

If you have any questions, please call **408.615.2000** to speak with a Code Enforcement Technician.
This and other outreach materials are available at **santaclaraca.gov**

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KEEP GREASE OUT OF THE SYSTEM

Proper Cleaning and Rinse Water Disposal for Exhaust Hoods, Filters, Ducting, Roof Fans, and Floor Mats

Cleaning Exhaust Hoods and Exhaust Hood Filters On Site

- Dry-wipe and scrape grease off of all surfaces before washing.
- Empty and clean the grease collection trays located inside of the exhaust hoods regularly.

Cleaning Exhaust Hood Filters Off Site

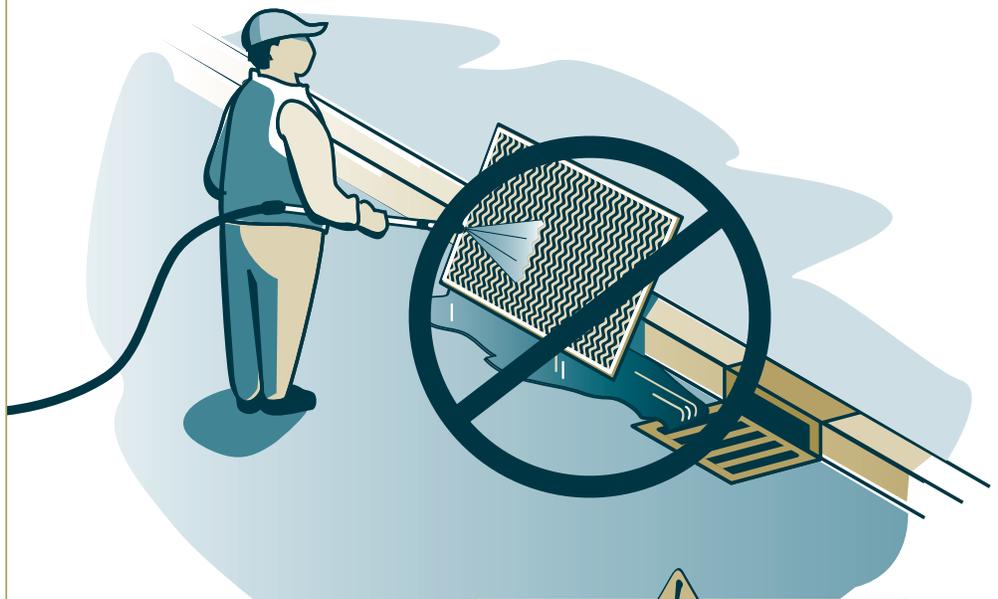
- The business owner may choose to use professional services to exchange dirty exhaust hood filters for clean ones.

Cleaning Frequency

- Check your lease agreements and fire insurance policies to determine the minimum frequency that you must clean your equipment.
- More frequent cleaning may be necessary if grease collects quickly.

Cleaning Exhaust Ducting and Rooftop Exhaust Fans

- Do not allow wash and rinse water to go into downspouts.
- Do not leave pooled wash and rinse water on the roof.
- Collect the wash and rinse water and discharge to the sanitary sewer drains inside your business.



Whether you contract with a professional service, perform the cleaning yourself, or do both, you are liable for any illegal disposal of waste or rinse water resulting from cleaning your exhaust hood, filters, ducting, and roof fans. This includes any cleaning that occurs off site.



Never clean exhaust hoods or filters outdoors where wash water may flow to a storm drain.



*Discharging used cooking or deep fryer oil, rotisserie fat, or solid food waste into kitchen sinks, mop sinks, and floor drains in your kitchen that are connected to the **sanitary sewer system** is a violation of your local sewer use ordinances.*



*Discharging anything, including oil, grease waste, wash water, or rinse water to the **storm drain system** is a violation of the local sewer use ordinance.*

For more information:

City of Santa Clara
Water and Sewer Utilities
1500 Warburton Ave
Santa Clara, CA 95050
408.615.2000

www.santaclaraca.gov

Proper Disposal of Filter Bath Solution

- Used bath solution from soaking exhaust hood filters (both hazardous and non-hazardous) should be taken to an off-site disposal facility. You and your property manager are liable for any illegal disposal of your waste.

Proper Disposal of Water from Equipment Cleaning

- Do not dispose of the concentrated solution, wash water, or rinse water from cleaning or degreasing equipment or exhaust hood surfaces into sinks leading to a grease trap or mechanical grease removal device.
- Do not dispose of the concentrated solution, wash water, or rinse water into a mop-sink, sink, or floor drain connected directly to the sanitary sewer system.
- Do not dispose of wastewater from steam cleaning without chemicals to a grease trap or mechanical grease removal device.
- Do not pour concentrated chemicals into sinks, mop sinks, or floor drains plumbed to grease control devices. This may cause liquefied grease to escape the grease control device and could cause a blockage in your drainage system.

Proper Disposal of Water from Cleaning Floor Mats

Wash water from cleaning floor mats must never flow out the back door, onto the parking lots, into a gutter, or into a storm drain. Clean mats:

- In a mop sink or near a floor drain, or
- Outside in a designated area that flows to a sanitary sewer drain, or
- In a garbage can; then dispose of the wash water into a mop sink.

If you have any questions, please call **408.615.2000** to speak with a Code Enforcement Technician.
This and other outreach materials, are available at santaclaraca.gov

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**City of
Santa Clara**

Do it Right

WASTE STORAGE AREA

Compactors / Dumpsters / Tallow Bins

Hágalo bien

ÁREA DE CONFINAMIENTO DE RESIDUOS

Compactadores / Contenedores / Recipientes de sebo

Làm Cho Đúng

Khu Vực Cất Giữ Rác

Máy Nén Rác / Thùng Lớn Đựng Rác / Thùng Đựng Dầu Mỡ



Maintain and clean waste enclosure area on a regular basis.

Mantenga limpias las áreas de confinamiento de residuos regularmente.

Thường xuyên giữ gìn vệ sinh chung quanh chỗ để rác.



Do not hose down dumpsters, compactors, tallow bins, or the enclosure area to the storm drain.

No lave con manguera los contenedores, los compactadores, recipientes de cebo o el área de residuos al desagüe pluvial.

Không được xịt nước để rửa các thùng đựng rác, các máy nén rác, các thùng đựng dầu mỡ, hoặc khu vực bao quanh xuống cống thoát nước mưa.



When you clean the enclosure, collect all wash water and dispose of it in the sanitary sewer.

Quando limpie el área de confinamiento de residuos recoja toda el agua sucia y dispóngala en el alcantarillado sanitario.

Khi dọn sạch khu vực đổ rác, thu lại nước rửa và đổ vào ống cống vệ sinh.



Do not put liquid waste in dumpster or compactor.

No ponga residuos líquidos en el contenedor o en el compactador.

Không đổ chất thải ướt vào thùng đựng rác lớn hoặc máy nén rác.



Train employees to keep waste enclosure area clean and prevent all wash water from going to the storm drain.

Entrene a los empleados para mantener limpia el área de residuos y evitar que el agua sucia vaya a los desagües pluviales.

Huấn luyện nhân viên về việc giữ cho khu vực bao quanh chỗ để rác được sạch sẽ, và giữ cho nước rửa không chảy vào cống thoát nước mưa.



Prevent spills and leaks, and have spill kit readily available for clean up.

Prevenga los derrames y fugas y tenga listo un kit de limpieza de derrames.

Phòng ngừa chất phế thải đổ ra, và chuẩn bị sẵn dụng cụ để lau dọn.



Clean up all spills and leaks immediately using spill kit. Sweep up absorbent right away; do not let it sit out overnight or in the rain.

Limpie todos los derrames y fugas inmediatamente usando el kit para derrames. Barra enseguida el absorbente, no lo deje de un día para otro o para cuando llueve.

Lau dọn ngay tất cả các chỗ đổ thải bằng dụng cụ để lau dọn. Quét dọn ngay chất thấm; không để chất này bên ngoài qua đêm hoặc dưới mưa.



Close lids on all containers after use.

Cierre las tapas de todos los contenedores después de su uso.

Đóng nắp đậy cho tất cả các thùng đựng sau khi dùng.



Double-bag wet waste. Mix dry absorbent in with wet waste, then tie off bags. Use buckets to transfer bagged wet waste to the dumpster.

Ponga los residuos líquidos en doble bolsa. Mézclelos con material absorbente, luego amarre las bolsas. Utilice baldes para pasar la bolsa de residuos líquidos al contenedor.

Đựng hai bao rác lỏng vào nhau để đựng rác ướt. Trộn chất thấm nước với rác ướt, và cột bao lại. Dùng xô đựng để chuyển bao rác ướt tới thùng đựng rác.



Call your hauler to replace leaky bins immediately.

Llame a su transportista para reemplazar los contenedores con fugas inmediatamente.

Gọi công ty kéo rác đến thay ngay các thùng đựng rác đã bị thủng.

Keep your waste storage area clean to protect the Bay

Mantenga limpia el área de confinamiento de residuos para proteger la bahía

Giữ cho khu vực đổ rác được sạch sẽ để bảo vệ cho Vùng Vịnh



408.615.2000

www.santaclaraca.gov

* Failure to be in compliance may subject your business to an Administrative Citation with a fine of \$500 or more.

*La falta de cumplimiento puede causarle a su negocio una medida administrativa con multa hasta de \$500 ó más.

*Cơ sở kinh doanh không tuân giữ có thể bị phạt tới \$500 hoặc hơn

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