Sewer System Management Plan

Public Works Department
345 North Foothill Road
Beverly Hills, California 90210

November 2017
Prepared by Cannon
SEWER SYSTEM MANAGEMENT PLAN

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Public Works Department
345 North Foothill Road
Beverly Hills, CA 90210

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Cannon
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INTRODUCTION

A Sewer System Management Plan (SSMP) is defined as a document that describes the activities an agency uses to effectively manage its wastewater collection system with the ultimate goal of protecting human health and the environment. Effective management of a wastewater collection system includes the following:

- Maintaining or improving the condition of the collection system infrastructure in order to provide reliable service into the future;
- Cost-effectively minimizing infiltration/inflow (I/I) and providing adequate sewer capacity to accommodate design storm flows; and
- Minimizing the number and impact of sanitary sewer overflows (SSO’s) that occur.

In order to achieve these management objectives, the State Water Resources Control Board and its subsidiary Regional Water Quality Control Boards require that each wastewater collection system agency develop and implement its own unique SSMP.

The City of Beverly Hills has prepared the following SSMP in accordance with the guidelines of the California Water Environment Association (CWEA). The resultant document is a compendium of the existing policies, procedures, and activities that are included in the planning, management, operation, and maintenance of the City’s sanitary sewer system.

The structure (section numbering and nomenclature) of this SSMP follows the General Waste Discharge Requirements for Wastewater Collection Agencies (GWDR), State Water Resources Control Board Order Number 2006-0003 dated May 2, 2006, and amended MRP Order Number WQ 2013-0058-EXEC. In summary, the required elements of this SSMP are:

1. Collection system management goals
2. Organization of personnel, including the chain of command and communications
3. Legal authority for permitting flows into the system, infiltration/infiltration control, as well as enforcement for proper design, installation, and testing standards, and inspection requirements for new and rehabilitated sewers
4. Operations and maintenance activities to maintain the wastewater collection system
5. Design and performance provisions
6. Overflow emergency response plan
7. Fats, Oils, and Greases (FOG) control program
8. System evaluation and capacity assurance program
9. Monitoring, measurement, and modifications plan for SSMP program effectiveness
10. Periodic internal SSMP audits
11. SSMP communication program
Wastewater Collection System Background
The City of Beverly Hills (City) is located in Los Angeles County, California, west of the City of West Hollywood and surrounded on all other sides by the City of Los Angeles. The City covers approximately 5.7 square miles and has a population of approximately 35,000.

The City owns, operates, and maintains a gravity sewer system to serve all of the residents and businesses within the City limits. The City’s sewer system is a gravity flow system consisting primarily of vitrified clay pipe dating back from 1920s to the present. The local sewer collection pipelines are predominantly 8-inch in diameter, but range from 6-inch to 36-inch and is approximately 100 miles, and includes 2,178 manholes. The general direction of flow in the City’s sewer system is from north to south. No sewer lift stations are required to convey flow.

Wastewater generated in the City of Beverly Hills is conveyed through service laterals to the City-owned gravity sewer (mains) pipelines, then into the sewer system owned by the City of Los Angeles and finally into the Hyperion Treatment Plant in Playa del Rey.

Table 1: Collection System Components

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Length (in feet)</th>
<th>Length (in miles)</th>
<th>Percent of System</th>
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<tbody>
<tr>
<td>Unknown</td>
<td>12,533</td>
<td>2.37</td>
<td>2.4</td>
</tr>
<tr>
<td>6 inch</td>
<td>37,213</td>
<td>7.05</td>
<td>7.2</td>
</tr>
<tr>
<td>8 inch</td>
<td>329,071</td>
<td>62.3</td>
<td>63.7</td>
</tr>
<tr>
<td>10 inch</td>
<td>58,871</td>
<td>11.1</td>
<td>11.4</td>
</tr>
<tr>
<td>12 inch</td>
<td>23,328</td>
<td>4.42</td>
<td>4.5</td>
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<tr>
<td>15 inch</td>
<td>29,514</td>
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<td>5.7</td>
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<tr>
<td>18 inch</td>
<td>11,384</td>
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<tr>
<td>21 inch</td>
<td>3,641</td>
<td>0.69</td>
<td>0.7</td>
</tr>
<tr>
<td>24 inch</td>
<td>6,974</td>
<td>1.32</td>
<td>1.4</td>
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<tr>
<td>27 inch</td>
<td>302</td>
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<td>0.1</td>
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<tr>
<td>30 inch</td>
<td>2,205</td>
<td>0.42</td>
<td>0.4</td>
</tr>
<tr>
<td>32 inch</td>
<td>42</td>
<td>0.008</td>
<td>0.0</td>
</tr>
<tr>
<td>33 inch</td>
<td>597</td>
<td>0.11</td>
<td>0.1</td>
</tr>
<tr>
<td>36 inch</td>
<td>519</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>516,194</strong></td>
<td><strong>97.8</strong></td>
<td><strong>100%</strong></td>
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Definitions/Acronyms

Terms That Appear in This Guide (Glossary)

Some terms and acronyms used in this document (and/or the Statewide GWDR), along with their definitions, are as follows:

Authorized Representative – The person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or a duly authorized representative of that person.

Blockage – Something that partially or fully blocks the wastewater from flowing through a sewer pipeline. The blockage can be caused by debris in the sewer, grease buildup, root intrusion, or a partial or full collapse of the pipeline. If not caught in time, the blockage may cause an overflow. This is also called a stoppage.

California Association of Sanitation Agencies (CASA) – CASA is a non-profit, statewide trade association representing 16 public agencies that provide wastewater collection, treatment, disposal, and water reclamation services to 90 percent of the sewered population in California. CASA’s mission is to provide proactive leadership, innovative solutions, timely education, and information to members, legislators, and the public, and to promote partnerships on wastewater issues with other organizations so that sound public health and environmental goals may be achieved. Website: http://casaweb.org/

California Emergency Management Agency (CalEMA) – A cabinet-level agency responsible for overseeing and coordinating emergency preparedness, response, recovery, and homeland security activities within the state.

California Integrated Water Quality System (CIWQS) – Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system.

California Water Environment Association (CWEA) – CWEA is an association of 8,000-plus professionals in the wastewater industry. CWEA is committed to keeping California’s water clean. CWEA trains and certifies wastewater professionals, disseminates technical information, and promotes sound policies to benefit society through protection and enhancement of the water environment. CWEA offers services at the state level and locally through 17 geographical local sections. Through their on-line bookstore, CWEA offers technical references for sewer system operation and maintenance. Website: http://www.cwea.org/

CIP – Capital Improvement Plan.

Closed Circuit Television (CCTV) – The use of video cameras to inspect the interior of the sewer system and record that data onto a DVD.
**Dynamic Model** – Computer hydraulic model simulation which solves the complete dynamic flow routing equations (St. Venant’s equations) for accurate simulation of backwater, looped connections, surcharging, and pressure flow in a collection system.

**Enrollee** – The legal public entity that owns a sanitary sewer system, as defined by the GWDR, which has submitted a complete and approved application for coverage under the GWDR. This is also called a sewer system agency or wastewater collection system agency.

**Environmental Protection Agency (EPA)** – Refers to the United States Environmental Protection Agency.

**Fats, Oils and Grease (FOG)** – Fats, oils, and grease that are discharged into the sanitary sewer collection system by food service establishments (FSE), homes, apartments and other sources. FOG is a major cause of blockages leading to increased maintenance and sometimes SSO’s.

**FOG Control Program** – To be implemented at the Enrollee’s discretion. May include public education program; plan and schedule for the disposal of FOG; legal authority to prohibit FOG related discharges; requirement to install grease removal devices; authority to inspect grease producing facilities; identification of sanitary sewer system sections subject to FOG blockages and the establishment of a cleaning schedule for each section; and development and implementation of source control measures for all sources of FOG.

**Geographical Information System (GIS)** – A database linked with mapping, which includes various layers of information used by government officials. Examples of information found on a GIS can include a sewer map; sewer features such as pipe location, diameter, material, condition, and last date cleaned or repaired. The GIS also typically contains base information such as streets and parcels.

**Governing Board** – This is the governing board of the sewer entity developing the SSMP. Examples would be the Board of Directors, the City Council, or the County Board of Supervisors.

**GWDR – General Waste Discharge Requirements** – Similar to a NPDES permit but with significant differences. A WDR is an authorization to discharge waste with certain conditions, which can be issued on an individual basis or to a group of dischargers. WDR’s do not sunset, unlike NPDES permits, and are most commonly issued by the Regional Water Boards. The Statewide General WDR for Sanitary Sewer Systems was adopted by the SWCRB and will be implemented by the Regional Water Boards and SWRCB.

**Groundwater Induced Infiltration (GWI)** – Infiltration attributed to groundwater entering the sewer system.
Infiltration – The seepage of groundwater into a sewer system, including service connections. Seepage frequently occurs through defective or cracked pipes, pipe joints, connections, or manhole walls and joints.

Inflow – Water discharged into a sewer system and service connections from such sources as, but not limited to, roof leaders, cellars, yard and area drains, foundation drains, cooling water discharges, drains from springs and swampy areas, around manhole covers or through holes in the covers, cross connections from storm and combined sewer system, catch basins, storm waters, surface runoff, street wash waters, or drainage. Inflow differs from infiltration in that it is a direct discharge into the sewer rather than a leak into the sewer itself.

I/I – Infiltration and Inflow.

Lateral – The portion of sewer that connects a home or business with the main line in the street. Sometimes sewer system agencies own or maintain a portion of the lateral.

*Upper Lateral:* Portion of lateral from building to property line (or easement line), usually privately owned and maintained.

*Lower Lateral:* Portion of lateral from property line (or easement line) to sewer mainline in the street or easement. This portion of the lateral is sometimes privately owned and maintained and sometimes publicly owned and maintained.

Los Angeles Regional Water Quality Control Board – Also known as Regional Water Board or RWQCB. The mission of this state regulatory agency is to: preserve, enhance, and restore the quality of California’s water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. Website: [http://waterboards.ca.gov/losangeles/](http://waterboards.ca.gov/losangeles/)

Manhole (MH) – Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

MRP – Monitoring and Reporting Program – The Monitoring and Reporting Program established in the WDR that establishes monitoring, record keeping, reporting, and public notification requirements for the GWDR.

OERP – Overflow Emergency Response Plan – Identifies measures to protect public health and the environment. A plan must include the following: notification procedure, appropriate response plan, regulatory notification procedures, employee training plan, procedures to address emergency operations, and a program that ensures all reasonable steps are taken to contain and prevent discharges.

Private Lateral – That portion of the Lateral that is owned and maintained by the private property owner that it serves. Based on an individual agency’s ordinance, this may just be the Upper Lateral, or can include the Lower Lateral.

Preventative Maintenance – Regularly scheduled servicing of machinery, infrastructure, or other equipment using appropriate tools, tests, and lubricants. This type of maintenance can prolong
the useful life of equipment, infrastructure, and machinery and increase its efficiency by
detecting and correcting problems before they cause a breakdown of the equipment, or failure
of the infrastructure.

R-Value – The amount of rainfall that reaches the collection system via infiltration and inflow. This value is typically expressed as a percentage of total rainfall volume that reaches the
collection system.

Rainfall Dependent Infiltration and Inflow (RDII) – Infiltration and Inflow that is attributed directly
to rainfall.

Regional Water Board – Short name for any of the nine regional boards, including the Los
Angeles Area Regional Water Quality Control Board.

Rehabilitation and Replacement Plan (also referred to as Capital Improvement Plan) – Identifies
and prioritizes system deficiencies and implements short-term and long-term rehabilitation
actions to address each deficiency.

Sanitary Sewer Overflow (SSO) – The Statewide GWDR defines an SSO as 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 water of the United States, and backups into buildings and/or
private property caused by conditions within the publicly-owned portion of the sewer system.

Sanitary Sewer Overflow Categories –
- **Category 1** – Discharges of untreated or partially treated wastewater of any volume
  resulting from an enrollee’s sanitary sewer system failure or flow condition that:
  - Reach surface water and/or reach a drainage channel tributary to a surface
    water; or
  - Reach a Municipal Separate Storm Sewer System (MS4) and are not fully
    captured and returned to the sanitary sewer system or not otherwise captured
    and disposed of properly. 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).

- **Category 2** – Discharges of untreated or partially treated wastewater of 1,000 gallons or
greater resulting from an enrollee’s sanitary sewer system failure or flow condition that
do not reach surface water, a drainage channel, or a MS4 unless the entire SSO
discharged to the storm drain system is fully recovered and disposed of properly.
- **Category 3** – All other discharges of untreated or partially treated wastewater resulting
  from an enrollee’s sanitary sewer system failure or flow condition.
- **Private Lateral Sewage Discharges (PLSD)** – Sewage discharges that are caused by
  blockages or other problems within a privately owned sewer lateral connected to the
  enrollee’s sanitary sewer system or from other private sewer assets. PLSDs that the
enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

**Sanitary Sewer Systems** – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly-owned treatment facility. Temporary storage and conveyance facilities are considered to be part of the sanitary sewer system and discharges into these temporary storage facilities are not to be considered SSO’s.

**Satellite Collection System** – The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.

**Sewer System Management Plan – SSMP** – A series of written site-specific programs that address how a collection system owner/operator conducts their daily business as is outlined in the WDR. Each SSMP is unique for an individual discharger. Includes provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer system, while taking into consideration risk management and cost benefit analysis. Also must contain a spill response plan. Certification is offered by technically qualified and experienced persons and provides a useful cost effective means for ensuring that SSMP’s are developed and implemented appropriately.

**Southern California Alliance of Publicly Owned Treatment Works (SCAP)** – SCAP is a non-profit organization comprised of Publicly Owned Treatment Works (POTW’s) including wastewater treatment plants (WWTP) and public collection system owner/operators dedicated to assisting its member cities and agencies in achieving regulatory compliance. Website: [http://scap1.org](http://scap1.org)

**State Water Resources Control Board (SWRCB)** – Also called the State Board. This is the State agency that developed and passed the GWDR for collection systems and the agency that maintains the SSO reporting web site.

**Static Model** – A computer hydraulic model that uses the Manning’s Equation to determine hydraulic capacity of the gravity pipelines and either the Manning’s or Hazen-Williams Equations to determine the hydraulic capacity of the pressure pipeline system. The capacity is compared to the peak hydraulic flow in the system to determine potential deficiencies. The static model assumes the peak hydraulic flow occurs at all locations within the collection system at the same time.

**Stoppage** – Something that partially or fully blocks the wastewater from flowing through a sewer pipeline. A stoppage can be caused by debris in the sewer, grease buildup, root intrusion, or a partial or full collapse of the pipeline. If not caught in time, a stoppage may cause an overflow. This is also called a blockage.

**System Evaluation and Capacity Assurance Plan** – A required component of an agency’s SSMP and an important part of any agency’s overall Capital Improvement Plan that provides hydraulic
capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event.

**Wastewater Collection System** – See Sanitary Sewer System.

**WDR – General Waste Discharge Requirements (GWDR)** – Similar to a NPDES permit but with significant differences. A WDR is an authorization to discharge waste with certain conditions, which can be issued on an individual basis or to a group of dischargers. WDR’s do not sunset, unlike NPDES permits, and are most commonly issued by the Regional Water Boards. The Statewide General WDR for Sanitary Sewer Systems was adopted by the SWCRB and is implemented by the Regional Water Boards and SWRCB.
SECTION 1. GOALS

1.1 Introduction

This section of the Sewer System Management Plan (SSMP) identifies goals the City has set for the management, operation, and maintenance of the sewer system and discusses the role of the SSMP in supporting these goals. These goals provide focus for City staff to continue high-quality work and to implement improvements in the management of the City’s wastewater collection system. This section fulfills the Goals requirement of the General Waste Discharge Requirements (GWDR) of the State Water Resources Control Board (SWRCB) Element 1 SSMP Requirements.

1.2 Regulatory Requirements for Goals Section

The summarized requirements for the Goals section of the SSMP are:

GWDR (Element 1 - Goals) Requirement:
The collection system agency must develop goals to properly manage, operate, and maintain all parts of its wastewater collection system in order to reduce and prevent SSO’s, as well as mitigate any SSO’s that occur.

Each wastewater collection system agency shall develop goals for the Sewer System Management Plan as follows:

- To properly manage, operate, and maintain all parts of the wastewater collection system;
- To provide adequate capacity to convey peak flows;
- To minimize the frequency of sanitary sewer overflows (SSO’s); and
- To mitigate the impact of SSO’s.

1.3 SSMP Goals

The goals of the City of Beverly Hills are to:

1. Properly manage, operate, and maintain the wastewater collection system;
2. Maintain design construction standards and specifications for the installation of new wastewater systems and upgrades to existing infrastructure;
3. Verify the wastewater collection system has adequate capacity to convey sewage during peak events;
4. Minimize the frequency of sanitary sewer overflows;
5. Respond to sanitary sewer overflows quickly and mitigate the impact of overflows;
6. Provide training on a regular basis for staff in collection system maintenance and operations;
7. Encourage and support participation in the California Water Environment Associations’ voluntary Wastewater Certification Program and on-going training programs;
8. Implement a regular, proactive Fats, Oil, and Grease (FOG) maintenance program to limit fats, oils, grease, and other debris that may cause blockages in the sewer collection system;
9. Identify and prioritize structural deficiencies and implement short-term and long-term maintenance and rehabilitation actions to address each deficiency;
10. Protect the environment and prevent public health hazards;
11. Use funds available for sewer operations in the most efficient manner;
12. Perform all operations in a safe manner to avoid personal injury and property damage;
13. Meet all applicable regulatory notification and reporting requirements;
14. Provide a fair and equitable method of imposing wastewater charges;
15. Facilitate the enactment of regulations for the wastewater system that are mandated by the Environmental Protection Agency and the State of California;
16. Maintain public education outreach in support of the SSMP program; and
17. Provide excellent customer service through efficient system operation and effective communication strategies.

This SSMP supplements and supports the City’s existing Operations & Maintenance program and goals by providing high-level, consolidated guidelines and procedures for all aspects of the City’s sewer system management. The SSMP will contribute to the proper management of the collection system and assist the City in minimizing the frequency and impacts of SSO’s by providing guidance for appropriate maintenance, capacity management, and emergency response.
SECTION 2. ORGANIZATION

2.1 Introduction
This section of the SSMP identifies City staff responsible for implementing this SSMP, responding to SSO events, and meeting the SSO reporting requirements. This section also includes the designation of the Authorized Representative to meet SWRCB requirements for completing and certifying spill reports. This section fulfills the Organization requirement of the GWDR Element 2 - Organization SSMP Requirements.

2.2 Regulatory Requirements for Organization Section
The summarized requirements for the Organization section of the SSMP are:

GWDR (Element 2 - Organization) Requirement:
The collection system agency’s SSMP must identify:

- The name of the responsible or authorized representative;
- The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and
- The chain of communication for reporting SSO’s, from receipt of a complaint or other information, including the person responsible for reporting SSO’s to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, and/or California Emergency Management Agency (CAL E.M.A.)).

2.3 Organization
2.3.1 Reporting Structure
The City of Beverly Hills is operated under the City Council/City Manager form of government. The City Manager reports to the Council and is responsible for city-wide operations. The Director of Public Works reports to the City Manager and is responsible for all Public Works aspects ranging from utilities, environmental programs, and park maintenance and provides updates to the City Council on the status of wastewater operations.

Within Public Works, the Wastewater Division oversees the operation and maintenance of the system. The Environmental Services Manager and Drainage System Supervisor evaluate the maintenance schedule and manage the wastewater supply and equipment. Sanitary Sewer Overflows are mitigated by the Wastewater Division and supported by the Environmental Compliance and Sustainability Programs Bureau for regulatory reporting and notification.

The Environmental Compliance & Sustainability Manager serves as the Legally Responsible Official (LRO), for the implementation and administration of the City’s SSMP. The Assistant Director of Public Works serves as the alternate LRO.
The Environmental Services Manager and the Environmental Compliance and Sustainability Programs Bureau Managers collaborate on enforcement, education, public outreach, and staff training related to the sanitary sewer systems. The Environmental Services Manager is currently covering the Drainage Systems Supervisor position as it is currently vacant, whose responsibilities include the management of the daily operation of the collection system. Collection System Operators (Operators) report to and are given direction from the Drainage Systems Supervisor. The Operators consist of Lead Drainage Workers and Drainage Maintenance Workers. The Lead Drainage Workers serve as secondary supervisors to the Drainage Maintenance Workers.

The organization chart for the management, operation, and maintenance of the City's wastewater collection system is shown on Figure 2-1.
Figure 2-1. Organization Chart
2.3.2 Service Calls/Sanitary Sewer Overflow Reporting

Service Calls:
The City of Beverly Hills operates two main communication centers (Public Works Customer Service Center and Police/Fire Dispatch) that receive calls from the general public. During normal business hours (7:30 a.m. to 5:30 p.m., Monday through Thursday and 8:00 a.m. to 5:00 p.m. on Fridays) all wastewater-related phone calls are received by the Public Works Customer Service Center and transferred to the Wastewater Division personnel to respond to the service call. For after business hours, the public can either call the Customer Service Center or the Police/Fire Dispatch Center to report an SSO or a service call. If the public calls the Customer Service Center, they will be hearing a detailed message to call the Police/Fire Dispatch Center to receive a live person to report the issue. The Police/Fire Dispatch personnel will then call the Wastewater Stand-By list to report the issue.

The collection system is staffed from 6:30 a.m. to 4:00 p.m. Tuesday through Thursday, and 6:30 a.m. to 5:00 p.m. Friday through Monday. SSOs or service calls received during business hours are directed to the Environmental Services Bureau Manager (Manager) or the Drainage System Supervisor. Currently, the Drainage System Supervisor position is vacant and therefore, these responsibilities are given to the Lead Drainage System Worker. When the Manager or the Supervisor receives service calls or SSO’s, they will assign all available Drainage System Workers, including Lead workers, to respond and mitigate the SSO or the service call.

For after business hours, the Wastewater Division has a Stand-By/On-Call list which is comprised of two Drainage System Workers that can respond to after-hours SSO or service calls (it can be a combination of a Lead Drainage System Worker or a Drainage System Worker). The Stand-By/On-Call list personnel are designated weekly and are given cellular telephones to receive calls for emergencies. In addition, both the Environmental Services Manager and the Environmental Compliance and Sustainability Programs Manager are also available to receive after-hour emergency calls from Police/Fire Dispatch. If the SSO event requires additional staffing, the managers and the Stand-By/On-Call personnel will be contacting the rest of the drainage workers to respond to the emergency.
Sanitary Sewer Overflow Reporting:
Once notified, Drainage Maintenance Workers on duty will be dispatched to the location for immediate response. The Drainage Maintenance Worker on duty will evaluate the situation and determine if additional help is necessary.

All Wastewater personnel shall document all spills in the following reports and actions. The reports shall be forwarded to the Environmental Services Bureau Manager and/or Environmental Compliance and Sustainability Programs Manager for investigation and/or follow-up.

- SSO Field Reporting Form
- Phone calls to CAL-Office of Emergency System (CAL-OES), LACDPH, and RWQCB
- Complete online reporting to CIWQS by designated data entry staff and certified by an LRO

2.3.3 Authorized Representative
The City’s Authorized Representative in all wastewater collection system matters is the Environmental Services Bureau Manager. The Assistant Director of Public Works and Environmental Compliance & Sustainability Bureau Manager are authorized to certify electronic spill reports submitted to the SWRCB.

The Drainage Systems Supervisor, currently vacant, is authorized to act in the Environmental Services Bureau Manager’s absence. The Drainage Systems Supervisor is authorized to submit SSO reports to the appropriate government agencies.

2.3.4 Responsibility for SSMP Development, Implementation, and Maintenance
The Public Works Department is responsible for implementing all elements of this SSMP. The Environmental Compliance & Sustainability Bureau Manager has the responsibility to lead and coordinate the development, periodically auditing and maintain the City’s SSMP.

2.3.5 SSO Reporting Chain of Communication
Figure 2-2 contains a flowchart depicting the chain of communication for responding to and reporting SSO’s, from observation of an SSO to reporting the SSO to the appropriate regulatory agencies. Table 2-1 lists contact phone numbers for the parties included in the chain of communication. The SSO Reporting process is described in more detail in Section 6: Overflow Emergency Response Plan.
<table>
<thead>
<tr>
<th>POSITION</th>
<th>CONTACT</th>
<th>TELEPHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Manager</td>
<td>Mahdi Aluzri</td>
<td>(310)285-1011</td>
</tr>
<tr>
<td>Assistant City Manager</td>
<td>George Chavez</td>
<td>(310)285-1155</td>
</tr>
<tr>
<td>Public Works Director</td>
<td>Shana Epstein</td>
<td>(310) 285-2494</td>
</tr>
<tr>
<td>Assistant Director of Public Works</td>
<td>Trish Rhay</td>
<td>(310) 285-2486</td>
</tr>
<tr>
<td>Environmental Services Manager</td>
<td>Colonel Burnley</td>
<td>(310) 285-2475</td>
</tr>
<tr>
<td>Environmental Compliance &amp; Sustainability Programs Manager</td>
<td>Josette Descalzo</td>
<td>(310) 285-2554</td>
</tr>
<tr>
<td>Drainage System Supervisor</td>
<td>VACANT</td>
<td>(310)285-2469</td>
</tr>
<tr>
<td>Lead Drainage System Worker</td>
<td>Fausto Zagal</td>
<td>(310)285-2467</td>
</tr>
<tr>
<td>Lead Drainage System Worker</td>
<td>Andrew Diaz</td>
<td>(310)285-2467</td>
</tr>
<tr>
<td>Lead Drainage System Worker</td>
<td>VACANT</td>
<td>(310)285-2467</td>
</tr>
<tr>
<td>Drainage Maintenance Worker II</td>
<td>D’Andre Williams</td>
<td>(310)285-2467</td>
</tr>
<tr>
<td>Drainage Maintenance Worker II</td>
<td>Gardner McKay</td>
<td>(310)285-2467</td>
</tr>
<tr>
<td>Drainage Maintenance Worker II</td>
<td>Paul Marquez</td>
<td>(310)285-2467</td>
</tr>
<tr>
<td>Drainage Maintenance Worker II</td>
<td>VACANT</td>
<td>(310)285-2467</td>
</tr>
<tr>
<td>Drainage Maintenance Worker II</td>
<td>Daniel S. Boyle</td>
<td>(310)285-2467</td>
</tr>
<tr>
<td>Drainage Maintenance Worker II</td>
<td>Jose Alvarez</td>
<td>(310)285-2467</td>
</tr>
</tbody>
</table>
Figure 2-2. SSO Response Chain of Communication

SSO OBSERVER

CUSTOMER SERVICE
(DURING BUSINESS HOURS)

POLICE DEPARTMENT
DISPATCH CENTER
(AFTER BUSINESS HOURS)

RAINAGE
MAINTENANCE CREW
RESPONS

ON-CALL DRAINAGE
MAINTENANCE CREW
RESPONS

DRAINAGE
MAINTENANCE CREW
COMPLETES INTERNAL
FORMS

ENVIRONMENTAL SERVICES
MANAGER/ENVIRONMENTAL
COMPLIANCE MANAGER

IS THIS A
REPORTABLE
SSO?

No

ENVIRONMENTAL
SERVICES MANAGER
FOLLOWS UP WITH SPILL
AS NECESSARY

Yes

ENVIRONMENTAL COMPLIANCE &
SUSTAINABILITY MANAGER
OR
ENVIRONMENTAL SERVICES
MANAGER

SSO NOTIFICATION AND
REPORTING TO
APPROPRIATE AGENCIES

After hours, calls are directed to Police Dispatch

After hours, Police Dispatch contacts On-Call Wastewater Staff
SECTION 3. LEGAL AUTHORITY

3.1 Introduction
This section of the SSMP discusses the City’s Legal Authority, including the Municipal Code and agreements with other agencies. This section fulfills the Legal Authority requirement of the GWDR Element 3 – Legal Authority SSMP Requirements.

3.2 Regulatory Requirements for Organization Section
The summarized requirements for the Legal Authority section of the SSMP are:

GWDR (Element 3 – Legal Authority) Requirement:
The wastewater collection system agency must demonstrate, through collection system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

- Prevent illicit discharges into its wastewater collection system (examples may include infiltration and inflow (I/I), storm water, chemical dumping, unauthorized debris and cut roots, etc.);
- Require that sewer and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the City;
- Limit the discharge of fats, oils, and grease and other debris that may cause blockages;
- Enforce violation of its sewer ordinances;
- Authority to inspect grease producing dischargers; and
- Authority to enforce sewer-related ordinances.

3.3 Municipal Code
The City of Beverly Hills’ City Code, Title 6, Chapter 1, Article 3, describes the City’s current legal authorities. The legal authorities provided by the City Code and other sources that address the regulatory requirements are summarized on Table 3-1. A copy of the current version of Chapter 1, Article 3 is included in Appendix 3-A.
### Table 3-1. Summary of Legal Authority in Municipal Code and Other Sources

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Municipal Code Reference</th>
<th>Meets GWDR Requirements?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevent illicit discharges into the wastewater collection system</td>
<td>Section 6-1-304.B</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Section 6-1-307.K</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Section 6-1-311.A</td>
<td></td>
</tr>
<tr>
<td>Limit the discharge of fats, oils, and grease and other debris that may</td>
<td>Section 6-1-311.C</td>
<td>Yes</td>
</tr>
<tr>
<td>cause blockages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require that sewer and connections be properly designed and constructed</td>
<td>Section 6-1-308.C</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Section 6-1-308.F.1-7</td>
<td></td>
</tr>
<tr>
<td>Require proper installation, testing, and inspection of new and rehabilitated</td>
<td>Section 6-1-307.A,B,C</td>
<td>Yes</td>
</tr>
<tr>
<td>sewers</td>
<td>Section 6-1-308.E</td>
<td></td>
</tr>
<tr>
<td><strong>Laters</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearly define City responsibility and policies</td>
<td>Section 6-1-306</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Section 6-1-307.A,B,C,D,E,F,G,H,I</td>
<td></td>
</tr>
<tr>
<td>Ensure access for maintenance, inspection, or repairs for portions of the</td>
<td>Section 6-1-307.C</td>
<td>Yes</td>
</tr>
<tr>
<td>service lateral owned or maintained by the City</td>
<td>Section 6-1-308.E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Section 6-1-315</td>
<td></td>
</tr>
<tr>
<td>Control infiltration and inflow (I/I) from private service laterals</td>
<td>Section 6-1-307</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>FOG Source Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requirements to install grease removal devices (such as traps or</td>
<td>Section 6-1-311.A</td>
<td>Yes</td>
</tr>
<tr>
<td>interceptors), design standards for the grease removal devices, maintenance</td>
<td>Section 6-1-311.C</td>
<td></td>
</tr>
<tr>
<td>requirements, BMP requirements, record keeping and reporting requirements</td>
<td>City Standard Plan (Industrial Waste Only)</td>
<td></td>
</tr>
<tr>
<td>Authority to inspect grease producing facilities</td>
<td>Section 6-1-307 A, B</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Section 6-1-315</td>
<td></td>
</tr>
<tr>
<td><strong>Enforcement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enforce any violation of its sewer ordinances</td>
<td>Section 6-1-305</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Section 6-1-316</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Sections 6-1-309 to 6-1-316 deal with industrial discharges.
3.4 Agreements with Other Agencies

1. **City of Los Angeles:** The City of Beverly Hills entered into an agreement with the City of Los Angeles on March 9, 1999 for the conveyance, treatment and disposal of wastewater. This agreement is included as Appendix 3-B in this SSMP.

2. **County of Los Angeles:** The City of Beverly Hills entered into an agreement with the County of Los Angeles on August 14, 1990 for the enforcement of the industrial waste provisions of the City’s Municipal code. These services include, but are not limited to providing inspections, filing of required reports, and issuing permits. The services shall also include the inspection of open sanitary spills only in the event that the City, by action of City Council, requests such services. This agreement is included as Appendix 3-C in this SSMP.
APPENDIX 3-A. CITY OF BEVERLY HILLS CITY CODE, CHAPTER 1, ARTICLE 3

ARTICLE 3
WASTEWATER SYSTEM

6-1-301: Title
6-1-302: Purpose
6-1-303: Definitions
6-1-304: Applicability
6-1-305: Penalties For Violation Of Provisions
6-1-306: Record Keeping By City
6-1-307: Wastewater System; General Regulations
6-1-308: Sewer Connection Regulations
6-1-309: Permit Requirements And Regulations For Industrial Discharge
6-1-310: Industrial Discharge Fees
6-1-311: General Requirements For Industrial Discharge
6-1-312: Industrial Waste And Discharge Limits
6-1-313: Environmental Impact Report
6-1-314: Self-Monitoring And Reporting
6-1-315: Compliance Inspection And Reporting
6-1-316: Remedial Actions, Revocations, And Suspensions

6-1-301: TITLE:

This article shall be referred to as the WASTEWATER ORDINANCE OF THE CITY OF BEVERLY HILLS. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304)

6-1-302: PURPOSE:

The purpose of this article is to protect the environment and public health by providing for the regulation of the construction and operation of wastewater systems and the discharge of wastewater into the city of Beverly Hills wastewater system, to provide a fair and equitable method of imposing wastewater charges, and to facilitate enactment of regulations for the wastewater system that are mandated by the environmental protection agency and the state of California. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304)

6-1-303: DEFINITIONS:

For the purpose of this article, the following words and phrases shall be construed herein as set forth in this section:

ACT: The federal water pollution control act, also known as the clean water act, as amended, 33 USC 1251, et seq. (40 CFR 403.3(B)).
AVERAGE DAILY FLOW: The number of gallons of sewage discharged into the public sewers during a twenty four (24) hour period.

BOD OR BIOCHEMICAL OXYGEN DEMAND: The measure of decomposable organic material in domestic or industrial wastewaters as represented by the oxygen utilized over a period of five (5) days at twenty degrees centigrade (20°C) and as determined by the appropriate procedure in "standard methods".

BACKWATER VALVE OR DEVICE: A valve installed in a house or industrial connection sewer to prevent sewage backflows into the internal plumbing facilities.

CITY BUILDING OFFICIAL: The chief administrative official for the building and safety department of the city or his duly authorized representative.

CLARIFICATION: The process of removal and retention of turbidity, settleable solids, and deleterious, hazardous, or undesirable matter from wastes by sedimentation or flotation.

CLARIFIER: A device or structure which separates and retains suspended solids, settleable solids, deleterious, hazardous, or undesirable matter from wastes prior to discharge into public sewer.

COMMERCIAL USE: Any commercial or business establishment, office, hotel, motel, or hospital.

DIRECTOR OF PUBLIC WORKS AND TRANSPORTATION: The chief administrative official of the transportation and engineering department of the city or his duly authorized representative.

DISCHARGER: Any person who discharges or causes a discharge to a public sewer.

DOMESTIC WASTEWATER: The water-carried wastes not produced from commercial or industrial activity and which result from normal human living processes.

EPA: The United States environmental protection agency.

FACILITY: A pipe or structure constructed for the purpose of collecting, conveying, pumping, treating, and disposing of industrial wastewater and sewage.

GREASE TRAP: A device that separates grease or oil from wastewater flows prior to discharge to the industrial connection sewer.

GROSS FLOOR AREA: The area included within the exterior of the surrounding walls of a building or portions thereof, exclusive of courts.

HOUSE CONNECTION SEWER: That part of the sewer piping that connects to the internal structure plumbing and connects with the public sewer in the public right of way.
INDIRECT CHARGE (Into A Sewer): The introduction of pollutants into a POTW from any nondomestic source regulated under section 307 (B), (C) or (D) of the act (40 CFR 401.11 (C)).

INDUSTRIAL CONNECTION SEWER: A house connection sewer used primarily for the discharge of industrial waste.

INDUSTRIAL USER: A source of indirect discharge.

INDUSTRIAL WASTE: Liquid or solid waste, except domestic sewage, including radioactive substances and explosives, and noxious or toxic gas in the sewer system.

INDUSTRIAL WASTE PRETREATMENT OR TREATMENT FACILITY: Any works or device for the treatment of industrial waste, prior to discharge into the public sewer.

INDUSTRIAL WASTEWATER: All water-carried wastes and wastewater excluding domestic wastewater and uncontaminated water, and shall include all wastewater from commercial, manufacturing, institutional, agricultural, or other operations where it includes significant quantities of wastes of nonhuman origin.

INSPECTOR: A person authorized by the public works administrator to inspect wastewater facilities.

INTERFERENCE: A discharge with, or in conjunction with, a discharge or discharges from other sources: a) inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal; and b) is therefore a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of a sewage sludge use or disposal in compliance with the following statutory provision and regulations or permits issued thereunder (or more stringent state or local regulation): section 405 of the clean water act, the solid waste disposal act (SWDA) (including title II, more commonly referred to as the resource conservation and recovery act (RCDA)), and including state regulations contained in any sludge management plan prepared pursuant to subtitle D of the SWDA, the clean air act, and the marine protection, research, and sanctuaries act (40 CFR 403.3 (l)).

LOT: Any parcel of land occupied or to be occupied for use permitted by this code.

NPDES PERMIT: A national pollution discharge elimination system permit issued pursuant to section 402 of the act (40 CFR 404.3 (K)).

NATIONAL CATEGORICAL PRETREATMENT STANDARD, NCPS, NATIONAL PRETREATMENT STANDARD, PRETREATMENT STANDARD, OR STANDARD: Any regulation containing pollutant discharge limits promulgated by the EPA in accordance with sections 307 (B) and (C) of the act which applies to industrial users. This term includes
prohibitive discharge limits established pursuant to section 403.5 of title 40 of the code of federal regulations (40 CFR 404.3 (J)).

NEW SOURCE: 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 act applicable to such source.

OFF SITE DISPOSAL: The disposal or removal of industrial wastes or other materials regulated by this article to a site other than the premises where the wastes are generated, whether or not such site is under the control of the industrial waste disposal permittee.

ON SITE DISPOSAL: The management, treatment, control or disposal, other than to the public sewer system, of industrial wastes or other materials within the premises named in an industrial waste permit whether or not the wastes were generated at the permitted site or by the permittee.

PASS THROUGH: A discharge which exits the POTW into the waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) (40 CFR 403.3 (N)).

PEAK FLOW OR PEAK FLOW RATE: The maximum thirty (30) minute rate of sewage flow to be generated from the premises as estimated by the public works administrator.

POLLUTION OF UNDERGROUND OR SURFACE WATERS: Affecting the chemical, physical, biological and radiological integrity of such waters by manmade or man-induced activities.

PRETREATMENT OR TREATMENT: The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW or disposal facility. The reduction or alteration can be obtained by physical, chemical, or biological processes or process changes by use of an industrial waste treatment facility or other means, except as prohibited by 40 CFR section 403.6 (D). (40 CFR 403.3 (Q).)

PUBLIC SEWER: A main line sanitary sewer, dedicated to public use and owned by the city.

PUBLIC WORKS ADMINISTRATOR: The chief administrative official of the public works department of the city or the duly authorized representative.

RESIDENTIAL USE: Any single-or multiple-family dwelling.

SEWAGE OR WASTEWATER: The wastewater of the community received by the sewer system consisting of the liquid and water-carried wastes from residences, commercial and industrial buildings, and institutions, and of such a character as to permit satisfactory disposal without special treatment into the public sewer system.
SEWER DISPOSAL: The disposal of industrial waste or other materials by means of a connection to the public sewer system from the premises named in an industrial waste permit.

SOLID WASTES: Wastes that are not water-carried and that are suitable for disposal with refuse at a sanitary landfill refuse disposal site.

STANDARD INDUSTRIAL CLASSIFICATION: A classification pursuant to the "Standard Industrial Classification Manual" issued by the Executive Office of the President, Office of Management and Budget, 1972, as amended.


SUSPENDED SOLIDS OR SS: The insoluble solid matter suspended in wastewater that is separable by filtration in accordance with the procedure described in "standard methods".

TAPPING: The forming of a connection to a public sewer after the sewer is in place.

TEE SADDLE: A short pipe fitting with a shoulder at one end to allow the application of the fitting to a hole tapped in the public sewer forming a ninety degree (90°) angle to the public sewer pipe.

UNCONTROLLED DISCHARGE: Any discharge, intentional or accidental, occurring in such a manner that the discharger is unable to determine or regulate the quantity, quality, or effects of the discharge.

WYE SADDLE: A short pipe fitting with a shoulder at one end to allow the application of a fitting to a hole tapped in the public sewer forming a forty five degree (45°) angle to the public sewer pipe. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304).

6-1-304: APPLICABILITY:

A. Facilities: This article shall apply to all sewer facilities in the city, including house connection sewers, industrial connection sewers, clarifiers, grease traps, and their appurtenances, except that nonconforming facilities may be continued in use as determined by the public works administrator in determining the best interests of the city.

B. Discharges: This article shall apply to the direct or indirect discharge of all liquid carried wastes to the sewer system of the city. Generally, liquid wastes originating within the city will be removed by the city sewer system, unless the wastes cause damage to structures, create nuisances such as odors, menace to public health, impose unreasonable collection, treatment or disposal costs on the city, violate quantity and quality requirements prescribed by state and federal laws, interfere with wastewater treatment processes, violate applicable state and federal laws, or detrimentally affect the environment.
C. Limitations On Effect Of Permit: Permits issued pursuant to this article and subsequent amendments do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from his liabilities under federal, state, or local law, nor guarantee the discharger a capacity right in the receiving waters. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304)

**6-1-305: PENALTIES FOR VIOLATION OF PROVISIONS:**

A. Penalties: It shall be unlawful to violate any provision of this article, the conditions or limitations or any permit issued under this article, or any rule or regulation prescribed and adopted pursuant to this article.

B. Unlawful To Violate: Violation of this article or any condition or limitation of the permits issued pursuant to this article is a misdemeanor punishable by a fine not exceeding one thousand dollars ($1,000.00) or six (6) months in jail, and may be prosecuted as a misdemeanor unless prosecuted as a civil administrative matter pursuant to title 1, chapter 3, article 3 or 4 of this code. Each day that a violation continues is a separate violation of this article. Violations of limitations or regulations of industrial waste permits are also subject to civil damages up to one thousand dollars ($1,000.00) per day per violation. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304; amd. Ord. 00-O-2356, eff. 11-3-2000)

**6-1-306: RECORD KEEPING BY CITY:**

The Director of Public Works and Transportation shall keep complete records of all permit applications and permits issued for sewer construction. All permit applications and permits issued under this article for industrial discharges shall be maintained by the public works administrator or his duly authorized representative. All applications shall include location, plans and specific description of the use, and the names and addresses of applicants and permittees. All records of fee payments made in compliance with this article shall be maintained by the director of finance administration. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304)

**6-1-307: WASTEWATER SYSTEM; GENERAL REGULATIONS:**

A. Inspection: Inspection of every facility involved with the discharge of wastewater to the city sewer system may be made by the public works administrator, or a duly authorized representative, as often as is deemed necessary for the proper operation of the city sewer system. These facilities shall include, but not be limited to, sewers, clarifiers, grease traps, pollution control devices, all industrial processes, industrial wastewater generation, conveyance and pretreatment facilities, and similar facilities. Inspection may be made to determine whether such facilities comply with the provisions of this article.

B. Required Access For Inspection: No person shall interfere with, delay, or refuse entrance to authorized city personnel attempting to inspect any facility connected directly or indirectly to the city sewer system.
Appendix 3-A
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C. Authority To Enter In Emergency: If the public works administrator has reasonable cause to believe that there are violations of this article occurring that are so hazardous, unsafe, or dangerous as to require immediate inspection to protect the public health or safety, the public works administrator shall have the right to immediately enter and inspect such property, and may use any reasonable means required to effect such entry and make such inspection, whether such property is occupied or unoccupied and whether or not permission to inspect has been obtained. If the property is occupied, he shall first present proper credentials, as authorized by the public works administrator, to the occupant and demand entry, explaining his reasons therefor and the purpose of his inspection. No person shall fail or refuse to permit reasonable inspection.

D. House Connection Sewers To Serve Only One Lot: No more than one lot shall be connected to any one house connection sewer.

E. Cesspools And Septic Tanks Prohibited: The disposal of sewage by means of septic tanks and cesspools or leach fields is a nonconforming sewer facility in the city and their use is to be discontinued within a time frame deemed reasonable by the city building official.

F. Maintenance Of Sewers, Clarifiers, Sewage Plants, And Appurtenances: All house connection sewers, house sewers, industrial connection sewers, clarifiers, sewage and industrial waste treatment facilities, private pretreatment plants, grease traps, and their appurtenances shall be maintained in good operating condition and in conformity with applicable law by the owner of the property to which such facilities serve.

G. Responsibility For Maintenance: Maintenance and repair of house connection sewers and industrial connection sewers from the point of connection with the internal facility plumbing to the connection to the public sewer shall be the sole responsibility of the property owner.

H. Disconnection Of Unlawful Connection: The Director of Public Works and Transportation may order disconnection of any house connection sewer installed or maintained in violation of the provisions of this article. Reconnection of such a disconnected sewer shall be made only upon issuance of a permit as provided in this article. Before such permit is issued or considered, the applicant shall reimburse the city for all cost resulting from the disconnection.

I. Cost Of Repair To A Public Sewer: Any person, who unlawfully obstructs, damages, destroys, or removes any public sewer, or appurtenance thereof, shall be liable for the reconstruction of the sewer and associated structures and/or the reasonable cost of necessary flushing, cleaning, and inspection.

J. Discharges Of Water On Streets Prohibited: No person shall negligently, willfully, or maliciously discharge, throw, or deposit water on any street or alley in such a manner as to obstruct or damage the street or alley, or to create a nuisance or hazard to persons or property, or to prevent or interfere with the free and uninterrupted use of the street by the public.
K. Unlawful Discharge Or Pollution: No person shall discharge any waste or sewage into any watercourse, flood control channel, or tributaries, or into the ground by percolation or injection.

1. No person shall discharge or deposit waste or sewage which creates a public nuisance, a menace to the public safety, pollution or contamination of underground or surface waters, or impairs the use of any public sewer, storm drain channel, or public or private property.

2. Any person who unlawfully discharges or causes wastewater to be discharged into the public sewer or storm drain systems is in violation of this article and shall be deemed to be liable for all damages, costs, fines, or charges incurred. (1962 Code §§ 5-6.01 et seq., 6-1.301-6-1.304)

6-1-308: SEWER CONNECTION REGULATIONS:

A. Permit: No person shall connect to or tap a public sewer of the city or maintain a connection or tap to such sewer without obtaining a permit from the transportation and engineering department.

B. Easement Requirements: No permit shall be issued to connect a house sewer or house connection sewer to a public sewer if the connection or any portion thereof is in, under, or on a lot not owned by the person whose house is to be connected, and no recorded easements exists authorizing the connection of such lot.

C. Capacity Requirements For Discharge Of Sewage: No permit shall be issued to connect to or tap a public sewer unless said sewer has sufficient sewage capacity to receive the intended discharge. The Director of Public Works and Transportation may require the discharger to restrict the discharge until sufficient capacity is available, or to construct a public sewer to provide sufficient capacity. The Director of Public Works and Transportation may refuse service to persons locating facilities in areas where their proposed quantity or quality of sewage or industrial wastewater is unacceptable to the available treatment facility.

D. Tapping Public Sewer: When, in the opinion of the Director of Public Works and Transportation, a house connection sewer should be connected to a public sewer at a point where there is no connection facility, application for a public sewer tap shall be submitted and upon approval by the Director of Public Works and Transportation a permit will be issued for construction of the house connection sewer.

E. Tapping To Be Performed In The Presence Of A City Employee: All tapping of public sewers shall be made by a licensed sewer contractor in the presence of and to the satisfaction of an inspector acting under the authority of the Director of Public Works and Transportation.

F. Specifications And Grades: Connections to public sewers shall comply with the following:
   1. House connection sewers shall be made with pipe of cast iron, clay or other material, approved by the city building official;
2. The pipe of the house connection sewer shall be laid in conformity with city specifications for public sewers as determined by the Director of Public Works and Transportation;

3. The pipe shall be laid in a straight alignment and at a uniform slope, and shall have a fall of at least one foot (1') in fifty feet (50') unless the Director of Public Works and Transportation determines that an exception is warranted;

4. The pipe must be at least three and one-half feet (31/2') below an established street or alley grade where it crosses the property line on the date of installation unless the Director of Public Works and Transportation determines that an exception is warranted;

5. A collar wye or tee saddle shall be installed in tapped public sewers by cutting a property proportioned hole in the public sewer and fitting the saddle tightly in place. Wye saddles shall be placed in the side of the public sewer with the wye branch so pointed as to direct the flow from the house connection sewer downstream at approximately a forty five degree (45°) angle with the public sewer, and tilted upward at approximately forty five degrees (45°) from the horizontal. Tee saddles shall be used for connections to twelve inches (12") diameter and larger public sewers and tilted upward at approximately forty five degrees (45°) from the horizontal or as approved by the Director of Public Works and Transportation;

6. No house or industrial waste connection to a public sewer shall be made, except through a wye or tee branch, without written permission from the Director of Public Works and Transportation;

7. The city building official may require the installation of a backwater valve by the property owner under conditions specified in the uniform plumbing code, section 409, or under other conditions that warrant installation as determined by the city building official.

G. Opening Manhole: No person shall open, enter, or allow to remain open, any manhole in any public sewer without a permit from the Director of Public Works and Transportation.

H. Disposal Of Effluent In Manhole; Prohibition: No person shall deposit cesspool effluent or any waste or sewage into a manhole. (1962 Code §§ 5-6.01 et seq., 6-1.301-6-1.304)

6-1-309: PERMIT REQUIREMENTS AND REGULATIONS FOR INDUSTRIAL DISCHARGE:

A. Purpose: The highest and best use of the city's wastewater system is the conveyance of domestic wastewater. The use of the city's wastewater system for the conveyance of industrial wastewater is subject to additional regulation and permits.

B. Industrial Waste Permit: No person shall discharge any industrial waste into any city sewer without first obtaining an industrial waste permit from the public works administrator.
C. Industrial Waste Disposal, Off Site: If a person chooses to dispose of industrial waste material by hauling said material to an authorized disposal site, they shall apply for an industrial waste permit as provided herein.

D. Industrial Waste Disposal, On Site: If a person chooses to operate a pretreatment facility for the disposal of industrial waste, they shall apply for an industrial waste permit as provided herein.

E. Application For Industrial Waste Permit: Applications for industrial waste permits shall be filed in writing with the public works administrator or his duly authorized representative and shall be supplemented by such additional information as he may require.

F. Permit Fee: Applications for industrial waste permits shall be accompanied by an application fee as set forth in section 6-1.310 of this article.

G. Review Of Applications: The public works administrator shall review all applications for industrial waste permits to determine that the proposed discharge of waste will not violate any provision of this article or state and federal laws.

1. Within thirty (30) days after the public works administrator receives an application for an industrial waste permit he shall, pursuant to this article, grant or deny the permit and notify the applicant of the action taken. Such time limit may be extended by mutual agreement between the public works administrator and the applicant.

H. Permit Conditions: The public works administrator, in granting a permit, may impose conditions consistent with the purpose of this article, including, but not limited to, pretreatment of wastewater before discharge, installation of clarifiers or grease traps, restriction of peak flow discharges or of discharge of certain substances, limitation of discharge to certain hours, and payment of additional charges to defray increased costs to the city created by the discharge. The public works administrator may establish a maximum permissible rate of discharge for each permittee.

1. Whenever the operators of the treatment facilities, through which effluent from the city's wastewater system is discharged, require any modification of the conditions or composition of the effluent, the public works administrator may impose conditions upon any industrial waste permit in order to conform with such requirements.

I. Permit Expiration: The public works administrator shall have the authority to impose a permit expiration date not to exceed a term of five (5) years, where he determines such a date is necessary to ensure compliance with all applicable laws and regulations governing the disposal of industrial wastes. Application for renewal of such a permit shall be made not later than one hundred eighty (180) days prior to the expiration date of the existing permit.

J. Permit Transfer Prohibited: Permits issued under this article are not transferable from one location to another.
K. Confidential Information; Public Access: Information and data concerning an industrial user obtained from reports, questionnaires, permit application, permits, monitoring programs and inspections shall be available to the public or other governmental agency without restriction unless the user specifically requests and is able to demonstrate to the satisfaction of the public works administrator that the release of such information would divulge information, processes, or methods of production entitled to protection as trade secrets of the user, as exempted by the California public records act or applicable federal regulations (40 CFR 403.14). Wastewater constituents and characteristics will not be recognized as confidential information. (1962 Code §§ 5-6.01 et seq., 6-1.301–6-1.304)

6-1-310: INDUSTRIAL DISCHARGE FEES:

A. Fees; General: The fees established in this article and subsequent amendments shall be set annually by council in the resolution of the council of the city of Beverly Hills amending comprehensive schedule of municipal fees and charges. All fees established in this article shall be applicable to all sewer connections within the city, except that, those portions of the city within the Los Angeles County sanitation district no. 4 shall not be subject to any of the fees set forth in the foregoing sections where a fee for similar service is imposed by the Los Angeles County sanitation district no. 4.

B. Industrial Waste Permit Fees: Each applicant for an industrial waste permit shall pay a fee, at the time of application, that shall be separate and apart from any fee or deposit collected for industrial waste plan review or imposed under any other provisions of this article, or other city ordinance or regulation or by reason of any license, agreement, or contract between the applicant and other public agency. Such application fee shall not be refundable even though the application is denied.

C. Industrial Waste Plan Review Fee: A plan review fee shall be paid to the city, at the time of submittal, for each set of plans received for any single site or location. Such fee shall be separate and apart from any fee or deposit collected for any permit or inspection or imposed by any other city ordinance or regulation. Such plan review fee shall be applied to any submittal required by the public works administrator and shall not be refundable even though the submittal may be rejected or project terminated.

1. The public works administrator may impose a reinstatement fee of one-half (1/2) of the plan review fee if the applicant fails to correct any plans or submittal upon written notice of correction or request for additional information by the public works administrator after three (3) attempts have been made to gain such correction.

D. Annual Inspection Fee: Every person granted an industrial waste permit under this article shall pay a fee to the city for inspection and control, and such fee shall be fixed and established from time to time by the city council.
1. Immediately upon issuance of a new permit, the permittee shall be billed a percentage of the inspection fee, determined by the days remaining in the billing period, as scheduled below:

<table>
<thead>
<tr>
<th>Days Remaining</th>
<th>Fee Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 60</td>
<td>0%</td>
</tr>
<tr>
<td>61 – 120</td>
<td>25%</td>
</tr>
<tr>
<td>121 – 210</td>
<td>50%</td>
</tr>
<tr>
<td>211 – 300</td>
<td>75%</td>
</tr>
<tr>
<td>301 – 365</td>
<td>100%</td>
</tr>
</tbody>
</table>

E. Inspection Classifications: The public works administrator may establish a classification system based on the minimum number of inspections per year which the public works administrator determines to be necessary for the property enforcement of this article and subsequent amendments.

F. Due Dates: The annual inspection fee shall be paid annually in advance of one of four (4) dates as follows:

<table>
<thead>
<tr>
<th>If the permit is granted between:</th>
<th>Due Date Of Annual Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1 and March 31, inclusive</td>
<td>April 1</td>
</tr>
<tr>
<td>April 1 and June 30, inclusive</td>
<td>July 1</td>
</tr>
<tr>
<td>July 1 and September 30, inclusive</td>
<td>October 1</td>
</tr>
<tr>
<td>October 1 and December 31, inclusive</td>
<td>January 1</td>
</tr>
</tbody>
</table>

G. Wastewater Sampling And Analysis Fee: The public works administrator may charge the discharger a fee for each analysis performed by or on behalf of the city on wastewater samples taken from the discharger. Said fee shall be set by city council and reflect the city's cost for sampling. The sampling and analysis fee shall be paid by the discharger within thirty (30) days of the statement date.

H. Quality Surcharge Fee: The city council may establish a charge for each pound of suspended solids and for each pound of biochemical oxygen demand. Every person granted an industrial waste permit under this article shall pay an annual quality surcharge fee for wastes discharged into the sanitary sewer system pursuant to the following formula:

\[ C = V \left[ a(\text{SS} - 250) + b(\text{BOD} - 230) \right] k \]

Where:

- C is the quality surcharge fee.
V is the chargeable volume of waste discharged in gallons, based on: 1) the volume of water supplied to the premises less an amount determined by the public works administrator to account for water not discharged into the sanitary sewer system, or 2) the metered volume of waste discharged into the sanitary sewer system according to a measuring device approved by the public works administrator, or 3) a figure determined by the public works administrator based on any other equitable method.

SS is the suspended solids in the waste discharged, expressed in milligrams per liter.

BOD is the five (5) day biochemical oxygen demand of the waste discharged, expressed in milligrams per liter.

a is the cost assessed for each pound of suspended solids, and such cost shall be fixed and established from time to time by the city council.

b is the cost assessed for each pound of biochemical oxygen demand, and such cost shall be fixed and established from time to time by the city council.

k is a dimensional constant to convert C to dollars.

If the term containing SS or BOD is negative, a value of zero shall be used for that term.

SS and BOD analyses shall be made in accordance with "standard methods". In determining the quality surcharge fee, the public works administrator may use industrial averages for SS and BOD values. The public works administrator may group permit holders into discharge volume ranges where volume measurement at the premises of a permit holder is impractical for physical, economic or other reasons, these volume ranges may be used in establishing the quality surcharge fee.

I. Appeal From Quality Surcharge Fee: Any permit holder whose quality surcharge fee has been determined in the manner provided may appeal the fee amount by submission of engineering data to the public works administrator. If the public works administrator finds the discharge of the permit holder differs significantly from the volume range which was applied, he may adjust the fee.

J. Due Date For Quality Surcharge Fee: The quality surcharge fee will be a separate charge to be included in the bimonthly water/wastewater utility billing and due in full on the day the notice is received. Water/wastewater utility bills not paid within fifteen (15) days of receipt are delinquent.

K. Penalty For Delinquency: All fees required by this article shall be due and payable on the billing date established by the director of finance administration. Fees not paid within thirty (30) calendar days from the billing date shall be subject to a ten percent (10%) penalty fee for each thirty (30) day period beyond the billing date that the fee is due. Permits for which the inspection
fee is delinquent for ninety (90) days or more are subject to suspension. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304)

6-1-311: GENERAL REQUIREMENTS FOR INDUSTRIAL DISCHARGE:

A. Unlawful Discharge Of Industrial Waste: No person shall directly or indirectly discharge industrial waste into the city sewer system unless the public works administrator has determined that the substance to be discharged will not violate the provisions of this article or the water quality standard for receiving waters established by other government agencies.

B. Facility Maintenance: The discharger shall maintain in good working order and operate as efficiently as possible any pretreatment or monitoring facility or control system installed by the discharger to achieve compliance with the permit requirements.

1. Access to such pretreatment or monitoring facilities by authorized personnel will remain unobstructed at all times.

C. Facility Requirements: All permittees shall comply with the following regulations and restrictions:

1. The industrial waste discharger shall provide, install, and operate a clarifier or grease trap of adequate capacity and at a location, as determined by the public works administrator, prior to connection with the public sewer, unless it is waived by the public works administrator. Approval for the size, type, and location of clarifier shall be obtained from the public works administrator and the building official prior to installation.

2. Sanitary wastes from rest rooms, lavatories, drinking fountains, showers, etc., shall be segregated from the process wastewaters, until necessary pretreatment and/or clarification, flow, and quality monitoring steps are completed.

3. Cleansers utilized in wastes discharged into the public sewer shall be limited to soap, similarly acting biodegradable synthetic detergents, and/or sodium or potassium compounds of phosphates, polyphosphates, silicates, sulfates, carbonate, bicarbonate, or hydroxide. No organic solvents shall be discharged into the public sewers.

4. A copy of the industrial waste permit shall be maintained at the facility so as to be available at all times to operating personnel and inspectors.

5. Any change in the applicant's industrial process or an increase in volume of wastes to a level in excess of twenty five thousand (25,000) gallons per day shall require notification of the public works administrator before initiation of the proposed change in the waste discharge. The public works administrator may require a new application for the issuance of an industrial discharge permit pursuant to section 6-1-309 of this article.
6. In the event of any change in name, ownership, or control of the company, or any change referred to in subsection C5 of this section, the discharger shall notify the public works administrator of such change, and shall notify the succeeding owner or operator of the existence of this permit by letter, a copy of which shall be forwarded to the public works administrator, at least thirty (30) days prior to such change. The public works administrator may require a new application to be submitted and compliance with all applicable sections of this article.

7. The top of the pretreatment facilities, clarifier, and inspection chamber shall be at least one inch (1") above the ground level when provided in an unroofed area. Provisions shall also be made to divert storm water away from the pretreatment facilities, clarifier, and inspection chambers.

8. If changes should occur in plumbing layout subsequent to the issuance of an industrial waste permit, the discharger shall submit as built plumbing plans of the building showing clearly the origin of wastewater, identifying the process creating the wastewater, and listing accurately for each wastewater discharge point the total daily flow in gallons and the peak flow rate in gallons per minute, including the location and details of pretreatment facilities, clarifier, and its connection to the public sewer system for approval by the public works administrator and the building official.

9. A means shall be provided to effect immediate cessation of discharge of liquid chemicals, process solutions, or spent process solutions into the city sewer as a result of spills, overflows, leaks, failure of containers, or inadvertent discharges. Such means of cessation shall include, but not be limited to, installation of automatic valves, gates, or bypasses to impervious containers, which when activated will stop water supply to and the discharge from industrial processes. The discharger shall submit details of the proposed measures and drawings before installation and obtain approval from the public works administrator and the building official.

D. Uncontrolled Discharge: In the event of an uncontrolled discharge, the discharger or permittee shall immediately notify the public works administrator of the incident by telephone. The notification shall include the location of the discharge, type of material, concentration and volume, and corrective action.

1. Within ten (10) working days after the uncontrolled discharge, the discharger or permittee shall submit to the public works administrator a detailed written report describing the cause of the discharge, the corrective action taken and the measures to be taken to prevent future incidents. Such notification shall not relieve the discharger or permittee of liability or fines that may result from the uncontrolled discharge. (1962 Code §§ 5-6.01 et seq., 6-1.301-6-1.304)

6-1-312: INDUSTRIAL WASTE AND DISCHARGE LIMITS:

A. List Of Allowable Concentrations Of Certain Wastes: The public works administrator shall from time to time prepare a list of allowable quantities or concentrations of certain constituents in industrial wastewater flows and shall issue directions for meeting the requirements of this section.
B. Scope And Compliance: No person shall introduce wastewater in the sewer system or POTW that exceeds local limits, which have been developed by the treatment system NPDES permit holder. Said local limits shall not apply where more restrictive limitations are imposed by permit or NCPS limitations. Except as provided above, dischargers tributary to the Hyperion POTW operated by the city of Los Angeles shall comply with the following local limits:

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Value</th>
<th>Units</th>
<th>Existing Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>mg/l</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>mg/l</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Chromium - total</td>
<td>mg/l</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>mg/l</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>mg/l</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>mg/l</td>
<td>Essentially none</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>mg/l</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>mg/l</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Silver</td>
<td>mg/l</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Cyanide - total</td>
<td>mg/l</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Cyanide - free</td>
<td>mg/l</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Oil and grease - total</td>
<td>mg/l</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Dispersed</td>
<td>mg/l</td>
<td>None visible</td>
<td></td>
</tr>
<tr>
<td>Floatable</td>
<td>mg/l</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td>mg/l</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Chlorinated hydrocarbons</td>
<td>mg/l</td>
<td>Essentially none</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>mg/l</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Dissolved sulfides</td>
<td>mg/l</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>pH ranges</td>
<td></td>
<td>5.5-11</td>
<td></td>
</tr>
<tr>
<td>Temperatures</td>
<td></td>
<td>140 °F</td>
<td></td>
</tr>
</tbody>
</table>

*Values for phenol and selenium and other constituents not shown, such as fluoride, boron, aluminum, iron, tin, cobalt, etc., have been established for general application. They are not critical constituents at this time for existing sources. The board of public works of the city of Los Angeles will impose such limits as it may find necessary to ensure compliance with treatment plant discharge limits and more restrictive pretreatment standards for new sources prescribed by the environmental protection agency (EPA).
The above limitations shall not apply where more restrictive limitations are imposed by permit or national categorical pretreatment standards.

1. In addition to the concentration limits for heavy metals and toxicants in this subsection B of this section, the discharge shall also comply with the maximum allowable daily mass emission rate and the maximum allowable monthly mass emission rates.

C. Concentration Limits And Prohibitions: The total daily mass emission rate for effluent concentrations that are defined by this section shall be limited by the following:

1. The daily mass emission rate for each constituent shall be calculated from the total waste flow occurring in each specific day, and the maximum concentration limit. The mass emission rate of the discharge during any twenty four (24) hour period shall not exceed the product of the proposed daily average discharge in million gallons per day, maximum concentration limit, and a constant 8.34.

2. The monthly mass emission rate for each constituent shall be calculated from the total waste flow occurring in each specific month, and the average concentration limit or the maximum concentration limit, if average concentration limit is not prescribed. The mass emission rate of discharge during any month shall not exceed the product of proposed monthly average discharge in million gallons per month, average concentration limit, or the maximum concentration limit, if average concentration limit is not prescribed, and a constant 8.34.

3. The pH of wastes discharged shall at all times be within the range of 5.5 to 11. No person shall discharge acids or alkaline materials to the public sewers until the pH has been controlled to a level not less than 5.5 nor higher than 11.0. No discharge shall have any corrosive or detrimental characteristics that may cause injury to wastewater treatment, inspection, or maintenance personnel, or may cause damage to structures, equipment, or other physical facilities of the public sewer system.

4. The temperature of the wastes discharged shall not exceed one hundred forty degrees Fahrenheit (140°F), nor shall the temperature exceed one hundred four degrees Fahrenheit (104°F) at the point of entry into the POTW treatment facility.

5. Radioactivity in the effluent shall not exceed the limits specified in ordinance 17, chapter 5, subchapter 4, group 3, article 5, section 30287, of the California Code of Regulations.

6. Discharge of the following wastes into public sewer system is prohibited:

   a. Any solids or viscous substances of such size or in such quantity that may cause obstruction to the flow in the sewer or be detrimental to proper wastewater treatment plant operations. These objectionable substances include, but are not limited to, asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, plastics, wood, whole blood, bones, hair, coffee grounds, egg shells, seafood shells, fleshings, entrails,
paper dishes, paper cups, milk containers, grease or fats, or other similar paper products either whole or ground.

b. Any pollutant released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.

c. Any nonbiodegradable cutting oil, commonly called soluble oil, which forms persistent water emulsions.

d. Any wastes with excessively high BOD, COD or decomposable organic contents.

e. Any strongly odorous waste or waste which can create odors in receiving waters of the sewerage system.

f. Any excessive amounts of organic phosphorous type compounds.

g. Any excessive amounts of deionized water, steam condensate, or distilled water.

h. Any waste containing substances that may precipitate, solidify, or become viscous at temperatures between fifty degrees Fahrenheit (50°F) and one hundred forty degrees Fahrenheit (140°F).

i. Any waste producing excessive discoloration of wastewater or treatment plant effluent.

j. Any blow down or bleed off water from cooling towers or other evaporation coolers exceeding one-third (1/3) of the makeup water.

k. Any single pass cooling water.

l. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than one hundred forty degrees Fahrenheit (140°F) or sixty degrees centigrade (60°C) using the test methods specified in 40 CFR 261.21.

m. Any rainwater, storm water, ground water, street drainage, surface drainage, roof drainage, yard drainage, water from the yard fountains, swimming pools or lawn sprays, or any other uncontaminated water.

7. The discharge of any radiological, chemical, or biological warfare agent or radiological waste is prohibited.

D. Compliance With Standards: The discharger shall comply with applicable toxic and pretreatment standards promulgated in accordance with sections 307 and 308 of the federal water pollution control act, or amendments thereto. The discharger shall submit periodic notices (over intervals not to exceed 3 months) of progress toward compliance with applicable toxic and
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pretreatment standards developed pursuant to the federal water pollution control act, or amendments thereto.

E. National Categorical Pretreatment Standards (NCPS): Upon promulgation of mandatory NCPS for any industrial subcategory, the NCPS, if more restrictive than limitations imposed by this section, shall apply. The public works administrator may impose a phased compliance schedule to ensure that affected industries meet the NCPS. Failure to meet the phased compliance schedule may result in permit suspension or revocation. Those dischargers subject to NCPS shall comply with all reporting requirements in accordance with the general pretreatment regulations for existing and new sources of pollution (title 40, code of federal regulations, part 403).

F. Prohibited Material Disposal: All wastes which are prohibited from being discharged into public sewers, including, but not limited to, chemical solutions, acids, caustic wastes, solvents, oil and grease, screenings, sludges, and other solids removed from liquid wastes, etc., shall be held in impervious containers and disposed of at a legal point of disposal, and in accordance with the provisions of division 7.5 of the California Water Code. For the purpose of this requirement, a "legal point of disposal" is defined as one for which waste discharge requirements have been prescribed by a regional water quality control board, and which is in full compliance therewith.

G. Off Site Disposal; Reporting: The discharger shall submit a hazardous waste manifest, as required by the public works administrator, by the fifteenth day of the month following the reporting period. A statement to that effect shall be submitted to the public works administrator.

H. New Standard Enforcement: If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the federal water pollution control act, or amendments thereto, for a toxic pollutant which is present in the discharge authorized by the permit, and such standard or pollutant in the permit, the public works administrator shall revise or modify the permit in accordance with such toxic effluent standard or prohibition, and so notify the discharger. Compliance with the new standard or prohibition shall be in accordance with the prescribed timetables stated in such regulation or within a reasonable time as determined by the public works administrator.

I. Dilution Prohibited: No person shall discharge or cause to be discharged any water or other substance added for the purpose of diluting any industrial waste to achieve compliance with limitations imposed by the provision of this section. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304; amd. Ord. 05-O-2478, eff. 8-5-2005)

6-1-313: ENVIRONMENTAL IMPACT REPORT:

A. Requirements: No permit to connect to or tap a public sewer to discharge industrial wastes shall be issued if the proposed use of the public sewer may have a significant effect on the environment unless the environmental review process has been completed pursuant to the
requirements of the California environmental quality act. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304)

6-1-314: SELF-Monitoring AND REPORTING:

A. Requirement For Reporting: Industrial waste permit holders must implement a self-monitoring and reporting program in compliance with 40 CFR section 403.12. The nature of sampling and frequency of analysis and reporting will be based on the size of discharge and type of industrial operation.

B. Requirement For Monitoring Equipment: The public works administrator may require the discharger to install, use, and maintain, at user expense, adequate continuous monitoring equipment or methods.

C. Record Maintenance By Discharger: The discharger shall retain for a minimum period of three (3) years records of monitoring activity and results including all original strip charts, calibration, and maintenance records. The public works administrator may require the discharger to submit such records for review.

D. Person Responsible To Report: Self-monitoring reports shall be signed by a duly authorized representative responsible for the overall operation of the facility from which discharge originates; in the case of a partnership, by the general partner, and in case of a sole proprietorship, by the proprietor.

Each report shall contain the following declaration:

I declare under penalty of perjury that the forgoing is true and correct.

Executed on the day of ___, at ___.

Signature

(1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304; amd. Ord. 05-O-2478, eff. 8-5-2005)

6-1-315: COMPLIANCE INSPECTION AND REPORTING:

A. Installation Of Control Manhole: The public works administrator may require a control manhole of a design approved by the public works administrator to be furnished and installed by any industrial wastewater discharger to facilitate inspection and sampling by the city or other governmental agencies. Such manholes shall be constructed at locations approved by the public works administrator and authorized city personnel shall have unrestricted access thereto at all times consistent with the provisions of this article. Access of others to such manholes shall be restricted by appropriate security measures.
B. Inspection: The public works administrator may, as herein provided, enter private property to exercise any power vested in the public works administrator by this article, including the power to inspect and copy records, sample, and determine:

1. The size, depth, and location of any connection with a public sewer or storm drain;

2. The quantity, quality, and nature of industrial waste, sewage, or surface waters being discharged into a public sewer, storm drain, or watercourse;

3. The effectiveness of any device used to prevent waste prohibited by this article from entering any sewer, storm drain, or watercourse;

4. The location of roof, swimming pool, and surface drains, and whether they are connected to a street gutter, storm drain, or sewer;

5. The nature of liquids and the condition of processing equipment which are a potential hazard to the city sewer system;

6. Whether there is compliance with the provisions of this article.

C. Reporting Requirements: Dischargers shall furnish additional reports to the public works department concerning the disposal of industrial wastes as required by the public works administrator.

D. Standard Methods: All wastewater constituents, including BOD and SS, shall be determined in accordance with the standard methods. (1962 Code §§ 5-6.01 et seq., 6-1.301_6-1.304; amd. Ord. 05-O-2478, eff. 8-5-2005)

6-1-316: REMEDIAL ACTIONS, REVOCATIONS AND SUSPENSIONS:

A. Notice To Correct Violations: The public works administrator shall serve notice of violation upon the person owning, occupying or operating premises which notice shall describe the conditions and require prompt correction thereof, when he finds that:

1. Industrial waste, effluent, or any other material is being maintained, discharged, or deposited in such a manner as to create one or more of the following conditions:

   a. A public nuisance;

   b. A menace to public health and safety;

   c. Pollution of underground or surface waters;

   d. Adverse effect or damage to any public sewer, storm drain, channel, or public or private property; or
2. The permittee had failed to conform with conditions or limitations of any permit issued in accordance with this article; or

3. The industrial waste permit was issued in error, or on the basis of incorrect information supplied, or in violation of ordinance, regulation, or law.

B. Injunctive Relief: The public works administrator may seek injunctive relief for noncompliance with any provision of this article or the conditions and limitations of any permit issued pursuant to this article.

C. Suspension Of Permit: The public works administrator shall suspend the permit of any permit holder who fails to comply with the conditions of his permit or any provision, rule, or regulation of this article, which failure creates an emergency condition that is a threat to the health, welfare and safety of the community. Any person whose permit has been suspended shall immediately discontinue the discharge of industrial waste, until the public works administrator verifies that the permit holder is in compliance.

1. The public works administrator shall reinstate a suspended permit when all violations have been corrected and all new conditions have been met to alleviate the emergency. Before any revoked permit is reissued, all delinquent fees and additional charges due and owing to the city shall be paid. Any discharger notified of a suspension of that discharger's industrial wastewater permit shall immediately cease and desist the discharge of all industrial wastewater to the sewer system.

2. In the event of a failure of the discharger to comply voluntarily with the suspension order, the public works administrator may take such steps as are reasonably necessary to ensure compliance. These include, but are not limited to, immediate blockage or disconnection of the discharger's connection to the sewer system.

D. Appeals To The Suspension Of Permit: Any discharger suspended or served with a notice of an intended order of suspension may file with the city clerk a request for a city council hearing with respect thereto. Filing of such a request shall not stay a suspension. In the event of a suspension of a permit due to imminent hazard related to continued discharge, the discharger may request a hearing, and the city council or a hearing examiner designated by the city council for that purpose shall conduct a hearing within five (5) days of receipt of the request. In the event of hearing requests, for other than an imminent hazard suspension, the city council shall hold a hearing on the suspension within thirty (30) days of receipt of the request. At the close of the hearing, the city council shall make its determination whether to terminate, or conditionally terminate the suspension imposed by the public works administrator, or the city council may cause the permit to be revoked. Except in the case of a hearing within five (5) days being required as above provided, reasonable notice of the hearing shall be given to the suspended discharger in the manner provided for in this article.
E. Reinstatement Of Permit: The public works administrator shall reinstate the industrial wastewater permit upon proof of compliance which ends the emergency nature of the hazard created by the discharge that had been cause for the public works administrator to initiate the suspension, provided that the public works administrator is satisfied that all discharge requirements of this article and any city council order will be implemented.

F. Revocation Of Industrial Wastewater Permit: The city council may revoke an industrial wastewater permit by the following procedures:

1. A finding that the discharger has violated any provision of this article. No revocation shall be ordered until a notice and hearing on the question has been held by the council as provided in this section.

2. Any discharger whose industrial wastewater permit has been revoked shall immediately cease and desist all discharge of any wastewater covered by the permit. The public works administrator may disconnect or permanently block the discharger's connection if such action is necessary to ensure compliance with the order of revocation.

3. After revocation of a discharger's industrial waste permit, there shall be no further discharge of industrial wastewater by that discharger into the sewer system, the storm drain system, or the waters of the state unless there has been a new application filed, all fees and charges that would be required upon an initial application and all delinquent fees, charges, penalties and other sums owed by the discharger and/or the applicant to the city have been paid to the city, and a new industrial wastewater permit has been issued. Any costs incurred by the city, including administrative costs and investigative fees, in revoking the permit and disconnecting the connection, if necessary, shall also be paid for by the discharger before issuance of a new industrial wastewater permit.

4. Notice of the hearing shall be given to the discharger at least ten (10) days prior to the date of hearing. Unless otherwise provided herein, any notice required to be given by the public works administrator under this article shall be in writing and served in person or by registered or certified mail addressed to the addressee's last known address with request for return receipt. Where no address is known, service may be made upon the owner of record of the property upon which the alleged violation occurred or by posting the notice conspicuously on the property.

G. Emergency Remedial Measures: The public works administrator shall have full power and authority to take any necessary precautions in order to protect life, protect property, or prevent further damage resulting from a condition that is likely to result in a discharge which presents an imminent hazard to the public health, safety or welfare; or which either singularly or by interaction with other discharges, is an imminent hazard to the sewer system. The public works administrator may order cessation of water service to the property on which the hazardous condition exists and may order the sealing of the industrial sewer connection through which the hazardous discharge is conveyed. In the pursuit of such an operation, city personnel, or duly
authorized representative of another government agency shall have immediate access to the premises.

H. Public Notice Of Violation: The public works administrator shall provide annual public notification, in the largest daily newspaper published in the municipality in which the POTW is located, of industrial users of the POTW which during the previous twelve (12) months, were significantly violating applicable standards or other pretreatment requirements, as provided in 40 CFR 403.8. (Ord. 90-O-2092, eff. 4-26-1990)
APPENDIX 3-B. AGREEMENT WITH CITY OF LOS ANGELES
AGREEMENT
BETWEEN THE CITY OF LOS ANGELES
AND THE CITY OF BEVERLY HILLS
FOR THE CONVEYANCE, TREATMENT
AND DISPOSAL OF WASTEWATER
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AGREEMENT

THIS AGREEMENT ("Agreement") is made and entered into this 9th day of March 1999, by and between the CITY OF LOS ANGELES ("Los Angeles") and the CITY OF BEVERLY HILLS ("Contracting Entity") (collectively referred to herein as the "Parties" or individually as "Party").

RECITALS

WHEREAS, Contracting Entity currently contracts with Los Angeles for the conveyance, treatment, and disposal of wastewater; and

WHEREAS, disputes have arisen between Los Angeles and Contracting Entity in regard to a number of matters pertaining to the conveyance, treatment, and disposal of wastewater as well as charges regarding the same. Some of these disputes have resulted in a lawsuit, which has been consolidated with lawsuits between Los Angeles and other entities receiving wastewater service into a single case, LASC Case No. BC 034185 ("Consolidated Action"), and a related case, LASC Case No. BC 128412 (collectively "Pending Actions"); and

WHEREAS, Los Angeles and Contracting Entity desire to resolve these issues and enter into a new contract for conveyance, treatment, and disposal of wastewater; and

WHEREAS, under the existing contracts, Contracting Entity is authorized to discharge wastewater up to a specified flow. Under the existing contracts, the charges imposed on Contracting Entity for operation and maintenance are based on actual volume of discharge and for capital are based on allowable volume of discharge; and

WHEREAS, Los Angeles acknowledges that the wastewater system currently has unused system capacity; and

WHEREAS, Los Angeles and Contracting Entity desire to eliminate discharge entitlements and make all unused capacity in the wastewater system available to either of the Parties as that Party's discharge increases, subject to the requirements and limitations set forth in this Agreement; and

WHEREAS, Los Angeles and Contracting Entity desire to eliminate discharge entitlements in return for proportionally sharing future Sewerage Facility Charges, as hereinafter defined below, and for proportionally sharing in the capital costs for both the upgrade of existing facilities and the construction of new facilities; and

WHEREAS, Los Angeles acknowledges that it is operating a regional wastewater system and is obligated to assess charges on a fair and equitable basis because Los Angeles has received state and federal grant funding; and
WHEREAS, Los Angeles and Contracting Entity desire to base all treatment and disposal charges on actual discharge and to comply with federal and state requirements by measuring discharge in terms of flow and strength; and

WHEREAS, Los Angeles and Contracting Entity desire to base all conveyance charges on actual flow and distance; and

WHEREAS, Los Angeles and Contracting Entity desire to have all wastewater dischargers of the Amalgamated System, as more fully described herein below, pay equivalent rates for all fees and charges related to the Amalgamated System;

NOW, THEREFORE, in consideration of the mutual promises specified herein and for other good and valuable consideration, Los Angeles and the Contracting Entity agree as follows:

I. DEFINITIONS

"Agency" or "Agencies" means any Entity(ies), other than Los Angeles, that is(are) signatory to an agreement or contract for wastewater services that complies with the Universal Terms.

"Amalgamated System" (See "Los Angeles' Wastewater Treatment and Collection System")

"Amalgamated System Expenses" means those expenses used to determine the Amalgamated System Sewerage System Charge pursuant to Section II.B.2.

"Amalgamated System Revenues" means those revenues used to determine the Amalgamated System Sewerage System Charge pursuant to Section II.B.3 of this Agreement.

"Amalgamated System Sewerage Facilities Charge" means the charge, as determined in Section II.C.3, levied on new or expanding dischargers to recover the full cost of constructing Amalgamated System capacity to accommodate the anticipated increase in wastewater discharge.

"Amalgamated System Sewerage System Charge" means the charge levied on an Entity to recover that Entity’s Proportionate Share of the Net Amalgamated System Expenses.

"Available Treatment Plant Effluent" means all treatment plant effluent that meets all applicable discharge standards and is not committed for the maintenance or preservation of a biological habitat as mandated by a county, state, or federal agency.
"Biochemical Oxygen Demand" or "BOD" means the measure of the biochemically decomposable material in wastewater as represented by the oxygen uptake as determined by the procedures specified in Standard Methods.

"Boundary Line Connection" means any wastewater discharge that is generated within the territorial boundaries of one Entity but is directly discharged to the sewer system of another Entity, and ultimately is treated by the Amalgamated System.

"By-product" means any product, excluding Reclaimed Water, produced incidental to the process of treating wastewater. By-products may include, but are not limited to, electricity, digester gas, and biosolids products.

"Capital Improvement Program" means Los Angeles' planned expenditures for capital projects in the Los Angeles Wastewater Treatment and Collection System.

"Commercial Discharger" means any commercial user as defined in Appendix G, Revenue Program Guidelines of the Policy for Implementing the State Revolving Fund for the Construction of Wastewater Treatment Facilities published by the California State Water Resources Control Board, dated February 21, 1996 or as it may be revised from time to time.

"Contracting Entity" means the City of Beverly Hills.

"Date of Execution" or "Execution" means the date the last Original Contracting Entity executes an agreement complying with the Universal Terms or the date Los Angeles executes an agreement complying with the Universal Terms with the last of the Original Contracting Entities, whichever occurs last.

"Default" means those actions as specified in Section VIII.A.

"Entity" or "Entities" means Los Angeles or any local governmental organization(s), whether a city or a sanitation district, any state or federal jurisdiction, or any other jurisdiction or organization, public or private, which is located outside Los Angeles' jurisdictional boundaries and receives wastewater conveyance, treatment, and disposal services from the Los Angeles Wastewater Treatment and Collection System pursuant to a contract with Los Angeles, except as provided in Section IX.B.1.b.

"Fiscal Year (FY)" means the 12-month period beginning on July 1 of one calendar year and ending on June 30 of the following calendar year or any other 12 month period mutually agreed to by the Parties. The designation for the Fiscal Year shall be based on the two partial calendar years included in the Fiscal Year (e.g. 1998-99).
"Flow Year" means the fourth quarter of one Fiscal Year and the first three quarters of the next Fiscal Year. The designation of the Flow Year (e.g. 1998-99) shall be the same as that of the Fiscal Year from which the three quarters are utilized.

"General Fund Reimbursement Charge" means the charge levied pursuant to Section II.D for reimbursement of the costs of emergency response services that are provided to the Amalgamated System but are paid for by Los Angeles' General Fund, separate and apart from costs that are reimbursed pursuant to Section II.B.2.a.(3).

"Incremental Cost Approach" means the method of calculating the Amalgamated System Sewerage Facilities Charge in which the rate is based on the sum of (a) the value of that capacity of the Amalgamated System facilities that is unused and therefore available to provide service to new customers and (b) the present value of projected future costs within any Los Angeles' Capital Improvement Plan that are related to expanding the Amalgamated System capacity, all divided by the sum of the unused capacity plus the future capacity of the projects identified in any Los Angeles' Capital Improvement Plan.

"Industrial Discharger" means any industrial user as defined in Appendix G, Revenue Program Guidelines of the Policy for Implementing the State Revolving Fund for the Construction of Wastewater Treatment Facilities published by the California State Water Resources Control Board, dated February 21, 1996 or as it may be revised from time to time.

"Local System" (See "Los Angeles' Wastewater Treatment and Collection System").

"Los Angeles" means the City of Los Angeles, a municipal corporation and the individual organizational components thereof.

"Los Angeles' Wastewater Treatment and Collection System" or "System" means all present and future facilities, including but not limited to plants, pipelines, pump stations, structures, tanks, valves, support facilities such as laboratories and maintenance yards, and other appurtenances owned by Los Angeles to manage, operate, maintain, collect, convey, treat, store, distribute, and dispose of wastewater, treatment plant effluent, and By-products.

"Amalgamated System" means that portion of the Los Angeles' Wastewater Treatment and Collection System exclusive of the Local System.

"Local System" means the following facilities:

a. One half of the Los Angeles-Glendale Water Reclamation Plant, the costs of which are paid by the City of Glendale.
b. Pumping stations, pipelines, and other facilities needed to distribute Reclaimed Water to the extent that the facilities are not also needed to discharge treatment plant effluent to the ocean, Los Angeles River, or other receiving water in the event that the treatment plant effluent is not reused.

c. Sewers less than 30 inches in diameter.

d. Pumping plants and associated force mains, siphon structures and piping, diversion structures and junction structures with single influent sewers less than 30 inches in diameter, or, in the case of multiple influent sewers, where the equivalent single influent sewer is less than 30 inches in diameter as set forth in Section II.B.2.d.

e. The Los Angeles Zoo treatment plant.

f. The Japanese Garden at the Donald C. Tillman Water Reclamation Plant.

"MGD-miles" means the product of the quantity of flow of an area of Los Angeles as set forth in Section III.G.7, Contracting Entity, or other Entity discharging wastewater to the Amalgamated System and the distance between the Point of Discharge, as hereinafter defined, of that area of Los Angeles, Contracting Entity, or other Entity into the Amalgamated System and the point(s) of treatment as more fully described in Section III.G.

"Net Amalgamated System Expenses" means the difference between the Amalgamated System Expenses and the Amalgamated System Revenues.

"Nonpayment Charge" means the charge levied on an Agency to collect its share, as determined pursuant to Section II.E, of any Unpaid Amounts.

"Original Contracting Entities" means collectively all of the following Entities which execute a contract for wastewater service complying with the Universal Terms, as herein defined, with Los Angeles by April 1, 1999: the City of Beverly Hills, the City of Culver City, County Sanitation Districts Nos. 4, 5, 9, 16, and 27 of Los Angeles County, the City of El Segundo, the City of San Fernando, and the City of Santa Monica.

"Party" or "Parties" means Contracting Entity and/or Los Angeles.

"Pass Through Flow" means any wastewater discharge other than Boundary Line Connections, either measured or estimated, that is generated within one Entity’s jurisdiction and is subsequently included in another Entity’s measured discharge.
"Point of Discharge" means either (a) the population centroid of Contracting Entity or (b) the population centroid of a drainage area within Los Angeles, of an Agency other than Contracting Entity, or of an Entity not signatory to an agreement complying with the Universal Terms.

"Prime Rate" means the base rate on corporate loans posted by at least 75% of the nation’s 30 largest banks, as published in the Wall Street Journal or its successor publication.

"Proportionate Share" means (a) for treatment/disposal, the quantity of wastewater discharged directly or indirectly by an Entity into the Amalgamated System measured in terms of flow and Strength, as calculated pursuant to Section III.F, divided by the total quantity of wastewater discharged into the Amalgamated System comprised of the same parameters, calculated pursuant to Section III.A.2, and (b) for conveyance, the quantity of wastewater discharged directly or indirectly by an Entity into the Amalgamated System measured in terms of MGD-miles, calculated pursuant to Section III.G, divided by the total MGD-miles from all Entities discharging wastewater to the Amalgamated System. Proportionate Share for the City of Glendale shall include the flow, Strength and MGD-miles for its share of sludge from the Los Angeles/Glendale Water Reclamation Plant.

"Reclaimed Water" means Available Treatment Plant Effluent that is put to beneficial reuse in accordance with applicable laws and regulations.

"Revenue Program" means the rate schedule and analysis that demonstrates that each class of wastewater discharger is paying its fair and equitable share of the cost of operating and maintaining the Amalgamated System, complying with the Revenue Program Guidelines of the Policy for Implementing the State Revolving Fund for the Construction of Wastewater Treatment Facilities published by the California State Water Resources Control Board, dated February 21, 1996 or as it may be revised from time to time.

"Standard Methods" means the most recent edition of "Standard Methods for the Examination of Water and Wastewater," published by the American Public Health Association, the American Water Works Association, and the Water Environment Federation or their successors, or the successor publication which establishes the standards in the wastewater disposal industry.

"Strength" means, upon Execution of this Agreement, the parameters of Biochemical Oxygen Demand and Suspended Solids, and, subsequently, as these parameters are modified or augmented pursuant to Section II.B.1.d.

"Surface Water Runoff" means water contained in publicly-owned streambeds, channels or other catchments located on the ground surface or in publicly-owned storm sewers. Surface Water Runoff does not include groundwater, except for groundwater that has seeped
into publicly-owned streambeds, channels or other catchments located on the ground surface or into publicly-owned storm sewers.

"Suspended Solids" or "SS" means the insoluble solid matter in wastewater that is separable by laboratory filtration as determined by the procedures specified in Standard Methods.

"System Buy-in Approach" means the method of calculating the Amalgamated System Sewerage Facilities Charge in which the rates are based on the value of the Amalgamated System capital facilities, whether in service or still to be placed into service, calculated pursuant to Section II.C.4.a, divided by the total Amalgamated System flow and Strength capacity.

"System Buy-out Approach" means the method of calculating the payment to an Agency for completely removing its wastewater from the Amalgamated System in which the rates are based on the value of the Amalgamated System facilities constructed subsequent to June 30, 1984, whether in service or still to be placed into service, calculated pursuant to Section II.C.4.a, divided by the total Amalgamated System flow and Strength.

"Universal Terms" means those terms and conditions of this Agreement that were negotiated between Los Angeles and the Original Contracting Entities or, in the case of federal entities, provides the same cost recovery of Net Amalgamated System Expenses. These terms and conditions are set forth in detail in the Sections I through IX of this Agreement and as those terms and conditions may be amended pursuant to Sections VII and IX.P.

"Unpaid Amount" means the difference between what Los Angeles has billed an Entity for Net Amalgamated System Expenses under its wastewater services contract or agreement, including any month-to-month charges levied pursuant to Section VII.I, and what the Entity actually has paid.

"Value Engineering" means the process by which an independent engineer or group of engineers reviews and evaluates plans, specifications, and supporting engineering documents for a capital project, including the project’s cost effectiveness.

II. CHARGE SYSTEM

A. General

Los Angeles agrees to implement and Contracting Entity agrees to abide by a new charge system. The new charge system will:
1. allow Los Angeles to equitably recover, from each Agency, that Agency's Proportionate Share of the Net Amalgamated System Expenses by implementation of an Amalgamated System Sewerage System Charge,

2. provide for the collection and crediting of Amalgamated System Sewerage Facilities Charges,

3. provide for the collection of General Fund Reimbursement Charges, and

4. provide for the collection of Nonpayment Charges.

B. Amalgamated System Sewerage System Charge

The Amalgamated System Sewerage System Charge shall be based on the operation and maintenance (O&M) costs and capital costs of the Amalgamated System for the Fiscal Year in which service is provided. The charge shall include credits for all Amalgamated System Revenues as discussed in Section II.B.3.

1. Allocation of Expenses & Revenues

The Net Amalgamated System Expenses shall be allocated to either conveyance or treatment/disposal as more fully defined in Section III.A.1. The allocated expenses shall then be divided by the appropriate Amalgamated System loading(s) to determine unit rates.

a. The unit rate for conveyance shall be equal to the net conveyance expense divided by the Amalgamated System MGD-miles as calculated pursuant to Section III.A.2.c.

b. The treatment/disposal expenses shall be further allocated among the parameters of flow and Strength in accordance with the procedures set forth in Section III.A.1. The unit rate for each parameter shall be equal to the portion of the Net Amalgamated System Expenses allocated to that parameter divided by the total Amalgamated System loading for that parameter.

c. The total Amalgamated System quantities and loadings for MGD-miles, flow and Strength shall be determined in accordance with the procedures set forth in Section III.A.2.

d. The Strength parameters shall be modified or augmented by Los Angeles as necessary to conform with state and federal requirements or, upon mutual consent of the Parties, to account for a constituent that causes the
Amalgamated System to incur a significant cost that would otherwise not be incurred.

2. Amalgamated System Expenses

a. The Amalgamated System Expenses, projected for the forthcoming Fiscal Year, used to determine the Amalgamated System Sewerage System Charge shall include the following:

(1) The direct O&M costs of the Amalgamated System, including direct salary costs incurred by Los Angeles General Fund on behalf of the Amalgamated System and later charged to the Amalgamated System.

(2) The direct capital costs of the Amalgamated System, whether for the purpose of upgrading existing facilities or for providing new and expanded facilities, including direct salary costs incurred by the General Fund on behalf of the Amalgamated System and later charged to the Amalgamated System.

(3) Costs of administrative, management and support activities at the program, bureau, department and city-wide levels which are directly charged or allocated as overhead to the Amalgamated System, including the costs of administering any agreement for wastewater services that complies with the Universal Terms.

(4) The costs associated with support facilities such as laboratories and maintenance yards to the extent that those facilities are used to support the Amalgamated System.

(5) The costs of portable equipment, such as vehicles and computers, to the extent that the equipment is used to support the Amalgamated System.

(6) Compensated time off, retirement and fringe benefits added to the labor component of O&M and capital costs, to the extent that they are not already included in either the direct O&M or capital costs or in the overhead allocated to the Amalgamated System.

(7) Costs associated with the operation, maintenance and construction of capital facilities relating to the processing, distribution or sale of By-products, which costs are incurred by Los Angeles and are related to the Amalgamated System, including the associated administrative and overhead costs.
(8) Principal and interest payments on and the costs of obtaining any loan that is attributable to the Amalgamated System, the proceeds of which are Amalgamated System Revenues pursuant to Section II.B.3.a.(4).

(9) Costs resulting from compliance with any program mandated by another governmental agency, or a court decree, settlement agreement or consent decree with a regulatory agency that are related to the Amalgamated System provided that Los Angeles shall make good faith efforts to make any such program available to Contracting Entity. However, the costs shall not be included if that program is mandated to be separately implemented and locally funded by any of the Agencies.

(10) Liability as provided in Sections VI.B and C.

(11) Costs of preparing Los Angeles’ Wastewater Revenue Program, developing charging and billing procedures and ordinances, calculating the charges and preparing the invoices pursuant to the provisions of this Agreement, and investigating adjustments and providing customer service related to service charges. Those activities which are related to Los Angeles’ internal customers that were being performed by the Los Angeles Department of Water and Power as of the Date of Execution of this Agreement shall not be included regardless of who shall perform those activities in the future.

(12) The capital and O&M costs of the Moss Avenue Pumping Station and portions of the Coastal Interceptor Sewer owned, managed, operated, maintained, and controlled by the City of Santa Monica at its sole and exclusive discretion, as set forth in Exhibit A.

(13) Any fee or charge that is legally levied by an Agency on Amalgamated System sewers or pumping plants that are located within that Agency.

(14) The compensation paid to an Agency removing its wastewater discharge from the Amalgamated System pursuant to Section VII.L, including any interest paid by Los Angeles for late payment pursuant to Section VII.L.

b. The expenses used to determine the Amalgamated System Sewerage System Charge shall not include the following:
(1) Costs related to the Local System.

(2) Costs of issuance, interest and retirement of principal related to the Los Angeles capital financing program, except as identified in Section II.B.2.a.(8).

(3) Costs related to the inspection, monitoring and enforcement programs for the Industrial Dischargers either located in Los Angeles or monitored by Los Angeles on behalf of another Entity, including associated administrative and laboratory services.

(4) Costs of billing, collection, and enforcement activities which are related to Los Angeles' internal customers that were being performed by the Los Angeles Department of Water and Power as of the Date of Execution of this Agreement regardless of who shall perform those activities in the future.

c. The conveyance portion of the capital and O&M costs included as Amalgamated System Expenses shall be equal to the sum of the total cost of all facilities 30 inches in diameter and greater and the total cost of all facilities 36 inches in diameter and greater, divided by two.

d. For purposes of determining the conveyance costs included in the Amalgamated System Expenses pursuant to Section II.B.2.c and for inclusion as an Amalgamated System facility, the diameter of a pump station and associated force main, siphon structure and piping, diversion structure, junction structure, or sewage storage facility shall be considered to be equal to the diameter of the influent sewer to the pump station, siphon, diversion structure, junction structure, or sewage storage facility. The diameter of a vent station, manhole, or other appurtenance to a sewer shall be equal to the diameter of the sewer to which the appurtenance is connected. A pump station and force main, diversion structure, junction structure, or siphon structure and piping with multiple influent sewers shall be considered to have an equivalent single influent sewer of 30 inches or greater if:

$$\sum_{i=1}^{n} d_i^{8/3} \geq 8,689$$

and shall be considered to have an equivalent single influent sewer of 36 inches or greater if:

$$\sum_{i=1}^{n} d_i^{8/3} \geq 14,130$$
Where \( d_i \) is the diameter of the \( i^{th} \) influent sewer, in inches, and \( i = 1, 2, \ldots, n \) influent sewers.

e. The treatment portion of the capital and O&M costs included in the allowable expenses set forth in Sections II.B.2.a shall include only one-half of the costs related to the Los Angeles-Glendale Water Reclamation Plant.

3. Amalgamated System Revenues

a. The revenues to be credited against expenses in determining the Amalgamated System Sewerage System Charge shall include the following:

(1) Amalgamated System Sewerage Facilities Charges - The Amalgamated System Sewerage Facilities Charges received from all Agencies and determined for Los Angeles pursuant to Section III.D.2 as new or anticipated burdens are placed on the Amalgamated System.

(2) Any of the following penalties or interest:

(a) Reimbursement for any liability for non-compliance with state or federal regulatory requirements included as an Amalgamated System Expense for which a Party is solely responsible pursuant to Section VI.C.

(b) Penalties paid by an Agency for violating the conditions of the month-to-month relationship pursuant to Section VII.K.

(c) Interest paid by an Agency for late payment of amounts owed to Los Angeles in excess of compensation for the Agency’s past capital payments pursuant to Section VII.L.

(d) Proceeds of any penalty not otherwise allocated pursuant to this Agreement.

(3) Any grant receipts, FEMA funds, or other state or federal appropriations that offset Amalgamated System Expenses.

(4) Any receipts of loans from the federal and/or state governments (e.g. from the State Revolving Fund) that are used to offset Amalgamated System Expenses, provided that Contracting Entity does not separately receive loans to offset its share of Amalgamated System Expenses.

(5) Revenue from the sale of By-products.
b. The revenues used to determine the Amalgamated System Sewerage System Charge shall exclude the following:

(1) Proceeds from the Los Angeles capital financing program, including any bonds, certificates, commercial paper or other securities, except as included pursuant to Section II.B.3.a.(4).

(2) Interest and penalties for late payments pursuant to Section III.E.

(3) Interest from a joint account established because an Agency disputes a portion of a bill pursuant to Section VIII.C.3.

Amalgamated System Sewerage System Charges related to monitoring penalty amounts, imposed pursuant to Sections IV.A.2, IV.F, and IV.G, shall not be considered as Amalgamated System Revenues because the penalty amounts are used to adjust the Proportionate Shares attributable to each Agency and Los Angeles.

4. Reclaimed Water

Los Angeles and Contracting Entity shall share in the Available Treatment Plant Effluent produced by the Amalgamated System, as expressly set forth herein.

a. Los Angeles shall have a proportionate right to all Available Treatment Plant Effluent produced by the Amalgamated System. The quantity of Available Treatment Plant Effluent to which Los Angeles has a right shall be equal to the total Available Treatment Plant Effluent produced by the Amalgamated System multiplied by the proportion its quantity of flow discharged into the Amalgamated System for the latest completed Flow Year, calculated pursuant to Section III.F.1.b, bears to the total Amalgamated System flow for the latest completed Flow Year calculated pursuant to Section III.A.2. For purposes of determining Los Angeles' proportionate right to Available Treatment Plant Effluent produced by the Amalgamated System, the quantity of flow discharged by Los Angeles shall include any flow discharged by an organization not having an agreement or contract that complies with the Universal Terms pursuant to Section IX.B.1.b.

b. Contracting Entity shall have a proportionate right to Available Treatment Plant Effluent produced by the Amalgamated System. The quantity of Available Treatment Plant Effluent to which Contracting Entity has a right shall be equal to the total Available Treatment Plant Effluent produced by the Amalgamated System multiplied by the proportion its quantity of flow discharged into the Amalgamated System for the latest completed Flow Year.
Year, calculated pursuant to Section III.F.1.a, bears to the total Amalgamated System Flow for the latest completed Flow Year, calculated pursuant to Section III.A.2.

c. The maximum amount of Available Treatment Plant Effluent which a Party may obtain from any individual Amalgamated System facility shall be limited to its proportionate right to Available Treatment Plant Effluent produced by the entire Amalgamated System, determined pursuant to Section II.B.4.a or b, multiplied by the total Available Treatment Plant Effluent produced at that Amalgamated System facility and divided by the total Available Treatment Plant Effluent produced by the entire Amalgamated System, except as allowed by Section II.B.4.e.

d. In no event shall a Party have a right to more Available Treatment Plant Effluent from a combination of all treatment facilities in the Amalgamated System than its proportionate right to Available Treatment Plant Effluent produced by the entire Amalgamated System, determined pursuant to Section II.B.4.a or b. This limitation on a Party’s right shall not restrict a Party’s ability to acquire Available Treatment Plant Effluent from any other Entity that has a right to Available Treatment Plant Effluent.

e. Any Available Treatment Plant Effluent to which a Party has a right, but is not being utilized by that Party, may be utilized by the other Party at no cost until such time as the first Party utilizes the Available Treatment Plant Effluent or, if the first Party sells its share, until such time as the buyer of the first Party’s share utilizes the Available Treatment Plant Effluent.

f. Los Angeles shall provide Contracting Entity access to the Available Treatment Plant Effluent supply, as set forth above, at no cost to Los Angeles. Contracting Entity shall be responsible for acquiring any easements, rights-of-way, and permits as necessary and for constructing any facilities necessary for the Contracting Entity to receive Available Treatment Plant Effluent from any Amalgamated System facility. Los Angeles shall not unreasonably withhold the approval of nor unreasonably charge for any easements, rights-of-way, or permits requested by Contracting Entity.

g. Los Angeles may impose reasonable conditions on granting access to the Available Treatment Plant Effluent supply as are necessary to ensure that such access does not interfere with its treatment operations.
C. Amalgamated System Sewerage Facilities Charges

1. Requirements for Amalgamated System Sewerage Facilities Charges

   a. Each Party shall be responsible, pursuant to Section III.D, for Amalgamated System Sewerage Facilities Charges for any net increase in anticipated wastewater discharge, as determined pursuant to Section II.C.2, arising from new development, changes in land use, or increases in discharges from Industrial Dischargers within its jurisdiction or within jurisdictions for which it has assumed full responsibility.

   b. Although a Party is responsible for Amalgamated System Sewerage Facilities Charges, it is not obligated to levy the same or any charge upon individual dischargers within its jurisdiction.

   c. Surface Water Runoff discharged directly or indirectly to the Amalgamated System may be exempted from the Amalgamated System Sewerage Facilities Charge requirement pursuant to Section II.F.4.

2. Net Increase in Anticipated Discharge

For purposes of determining whether an Amalgamated System Sewerage Facilities Charge will be required of a Party, the net increase in anticipated wastewater discharge shall be determined on a parcel by parcel basis, except where more than one parcel has been consolidated into a single development. In this case, the net increase will be based on the entire development. The net increase in anticipated wastewater discharge for any parcel or development shall be equal to the difference between the anticipated discharge and the baseline discharge for the parcel or development.

   a. Anticipated Discharge

For Industrial Dischargers, the anticipated discharge shall be based on the new permitted flow and the anticipated discharges of Strength. If the Industrial Discharger’s discharge permit does not contain more accurate information, the anticipated discharges of Strength shall be equal to the discharges contained in the Los Angeles Sewage Generation Factor Table, established in accordance with Section III.F.4.a, proportioned by the amount of flow.

For residential parcels and for Commercial Dischargers, the anticipated discharge shall be equal to the theoretical quantities of discharge for each of the parameters of flow and Strength based on the total square footage or
other unit of measure, as adopted pursuant to Section III.F.4.a, and the intended use of the proposed project.

b. Baseline Discharge

The baseline discharge shall be the greater of:

(1) For an Industrial Discharger, the highest annual flow, BOD, and SS measured during the five Flow Years preceding the Date of Execution of this Agreement.

For residential parcels and for Commercial Dischargers, the theoretical quantity of discharge, established in accordance with Section III.F.4.a, for each of the parameters of flow, BOD, and SS at the time this Agreement is executed, or

(2) the theoretical or permitted discharge that has been acquired through the payment of Amalgamated System Sewerage Facilities Charges pursuant to this Agreement.

c. Future Strength Parameters

Any future Strength parameter will be established for baseline discharge at the time the parameter is adopted pursuant to Section II.B.1.d.

3. Amalgamated System Sewerage Facilities Charge

The Amalgamated System Sewerage Facilities Charges shall be calculated as follows:

\[ ASFC = \left\{ TSFCR_Q + (CSFCR_Q)(D_{\text{Miles}})\right\}(ID_Q) + \sum(TSFCR_{\text{Strength}})(ID_{\text{Strength}}) \]

Where:

\[ ASFC = \text{The Amalgamated System Sewerage Facilities Charge}; \]

\[ TSFCR_Q = \text{The Amalgamated System Sewerage Facilities Charge rates for flow related to treatment, calculated in terms of dollars per million gallons per day pursuant to Section II.C.4}; \]
\[ \text{TSFCR}_{\text{Strength}} \quad = \quad \text{The Amalgamated System Sewerage Facilities Charge rates for each Strength parameter related to treatment, calculated in terms of dollars per 1000 pounds per day pursuant to Section II.C.4;} \]

\[ \text{CSFCR}_{q} \quad = \quad \text{The Amalgamated System Sewerage Facilities Charge rate related to conveyance, calculated in terms of dollars per MGD-mile pursuant to Section II.C.4;} \]

\[ \text{ID}_0 \text{ and ID}_{\text{Strength}} \quad = \quad \text{Party's net increase in anticipated annual average flow, and annual average Strength loading for each parameter, in terms of million gallons per day and 1000 pounds per day, respectively; and} \]

\[ D_{\text{Miles}} \quad = \quad \text{Party's total MGD-miles for the latest completed Flow Year, calculated pursuant to Section III.G, divided by the Party's flow for the latest completed Flow Year, calculated pursuant to Section III.F.1.} \]

4. Rate Calculation

The Amalgamated System Sewerage Facilities Charge rates levied upon a Party shall be based on the System Buy-in Approach as described below. Pursuant to the provisions of Section VII.A, following the initial ten year non-renegotiation period, either Party may initiate renegotiations to change the basis of the Amalgamated System Sewerage Facilities Charge to the Incremental Cost Approach provided that the conditions of Section VII.E are met.

a. Value of Facilities

(1) The value of any Amalgamated System facility in service shall be equal to the full cost of that facility inflated to reflect present costs and then depreciated.

(2) The value of any Amalgamated System facility under construction or not yet in service, also known as "Construction Work In Progress" shall be equal to the full cost of that facility inflated to reflect present costs but not depreciated.
(3) The remaining principal on any loan from the federal and/or state governments that was used to offset the cost of an Amalgamated System facility, pursuant to Section II.B.3.a.(4) shall be subtracted from the value of that facility.

(4) The full cost shall be equal to the original acquisition cost, including all direct and indirect costs and all design and construction management costs, of those Amalgamated System facilities contained in Los Angeles' wastewater fixed asset register and Los Angeles' wastewater Construction Work in Progress.

(5) Inflation to present worth shall be calculated using the Engineering News Record Construction Cost Index or its equivalent.

(6) Depreciation shall be calculated using the straight-line depreciation method with the same asset lives used by Los Angeles in its accounting reports.

b. Design Capacity of Amalgamated System Facilities

(1) Treatment-related Facilities

The design capacities for flow and Strength used to calculate the Amalgamated System Sewerage Facilities Charge rate shall be equal to:

(a) the sum of the average influent flow and Strength capacities, respectively, of the Donald C. Tillman Water Reclamation Plant, the Terminal Island Treatment Plant, the Hyperion Treatment Plant, and any other reclamation or treatment plant that is incorporated into the Amalgamated System, plus

(b) one-half of the average influent flow and Strength capacities, respectively of the entire Los Angeles-Glendale Water Reclamation Plant, less

(c) the sum of the design flow and Strength, respectively, of the sludge returned to the Amalgamated System conveyance system from the Donald C. Tillman Water Reclamation Plant and any other reclamation plant that is incorporated into the Amalgamated System, less
(d) one-half of the design flow and Strength, respectively, of the sludge returned to the Amalgamated System conveyance system from the entire Los Angeles-Glendale Water Reclamation Plant.

The average influent flow and Strength capacities for the treatment and reclamation plants shall be the design values as adopted by Los Angeles' Board of Public Works or any revised values adopted by Los Angeles' Board of Public Works where the revised values reflect changes in regulation by a county, state, or federal agency or where the revised values more accurately reflect the true capacities of the plants as demonstrated by Los Angeles. The standard flow and Strength loadings in the sludge returned to the Amalgamated System conveyance facilities from the reclamation plants shall be the values used in the planning and/or design of the Amalgamated System facilities as adopted by Los Angeles' Board of Public Works or any revised values adopted by Los Angeles' Board of Public Works where the revised values more accurately reflect the average flow and Strength loadings of the sludge produced by the reclamation plants when they are operated at their influent capacities, as demonstrated by Los Angeles.

(2) Conveyance-related Facilities

The capacity of conveyance-related facilities, measured in terms of MGD-miles, shall be equal to the Amalgamated System flow capacity, calculated pursuant to Section II.C.4.b.(1), multiplied by the average distance of the Amalgamated System. The average distance of the Amalgamated System shall be equal to the sum of the MGD-miles of Los Angeles, Contracting Entity, and all other Entities discharging wastewater to the Amalgamated System, calculated pursuant to Section III.G, divided by the total flow in the Amalgamated System, calculated pursuant to Section III.A.2. The MGD-miles and total flow in the Amalgamated System shall be determined using data for the latest Flow Year completed prior to the adoption of the Amalgamated System Sewerage Facilities Charge rates pursuant to Section III.A.3.

c. Rates

(1) The value of each facility that is part of the Amalgamated System, either by its inclusion in the fixed asset register or the Construction Work In Progress, shall be allocated to conveyance and to treatment flow and Strength by cost centers and using the same allocation factors adopted by Los Angeles pursuant to Section III.A.1.b.
(2) The Amalgamated System Sewerage Facilities Charge rates shall be calculated by dividing the allocated costs of all capital facilities that are part of the Amalgamated System by the Amalgamated System design conveyance and treatment flow and Strength capacities as determined pursuant to Section II.C.4.b.

D. General Fund Reimbursement Charge

1. Contracting Entity shall pay a General Fund Reimbursement Charge to compensate the Los Angeles general fund for the Contracting Entity’s share of providing emergency response services to the Amalgamated System. The General Fund Reimbursement Charge shall be calculated based on the formula ("Formula") set forth in Exhibit B, which is attached hereto and is incorporated herein by this reference as if it were set forth fully herein.

In no case shall the General Fund Reimbursement Charge exceed an amount equal to the O&M portion of the Amalgamated System Sewerage System Charge levied upon Contracting Entity times the lesser of: (1) 5%, or (2) the percentage of operating revenues levied upon the Los Angeles’ wastewater enterprise fund as general fund reimbursement, pursuant to Los Angeles Municipal Code Section 64.60 and as that Section may be amended from time to time.

Los Angeles shall not initiate any action to revise or invalidate the Formula. The Formula may only be amended or revised under the following circumstances: (a) the State Water Resources Control Board or the Environmental Protection Agency, on its own initiative, requires or mandates the change; or (b) a court of competent jurisdiction rules in final, binding judgment that the Formula is invalid or illegal. Prior to any change in the Formula, and before implementation of any revised Formula, Los Angeles must obtain the written approval of the State Water Resources Control Board or the Environmental Protection Agency, or their successor agencies, stating that the proposed change and the revised Formula comply with the Revenue Program Guideline requirements.

2. Provided that Contracting Entity interpleads or otherwise names Los Angeles in any court challenge, Contracting Entity shall not be responsible for any General Fund Reimbursement Charge that is held to be invalid or illegal, or any amount that is held to be excessive for Los Angeles or any Agency by a court of competent jurisdiction.

3. If, in finding that the General Fund Reimbursement Charge is invalid, illegal, or excessive, a court of competent jurisdiction rules that monies collected for this purpose must be returned, Los Angeles shall within 90 days return or credit all General Fund Reimbursement Charges paid by Contracting Entity that are ordered to be returned by the court.
E. Nonpayment Charges

As of October 1 following the end of each Fiscal Year, Los Angeles shall determine all of the Unpaid Amounts which have became more than 120 days delinquent since the previous October 1. Contracting Entity shall pay a Nonpayment Charge equal to the Unpaid Amounts multiplied by Contracting Entity's Proportionate Share of the Net Amalgamated System Expenses for the Fiscal Year and divided by the total Proportionate Shares of the Net Amalgamated System Expenses for the Fiscal Year for Los Angeles and all Agencies without any Unpaid Amounts.

F. Surface Water Runoff

1. Privilege to Discharge

   a. Either Party may discharge Surface Water Runoff, directly or indirectly, to the Amalgamated System, subject to the conditions set forth in Section II.F.

   b. Discharge of Surface Water Runoff during the period of November 1 through March 31 shall be prohibited.

   c. Discharge of Surface Water Runoff shall be prohibited unless Los Angeles has obtained a waiver from the U.S. Environmental Protection Agency or has otherwise demonstrated that the discharge of Surface Water Runoff complies with the state and federal revenue program guidelines.

2. Limitation of Discharge

   a. The total Surface Water Runoff discharge to all treatment and reclamation plants in the Amalgamated System from all dischargers shall not exceed 5% of the Amalgamated System flow capacity, as defined in Section II.C.4.b.

   b. The Surface Water Runoff discharge to any treatment or reclamation plant other than the Hyperion Treatment Plant shall be limited to an aggregate amount from all dischargers that does not exceed 5% of the flow capacity of that treatment or reclamation plant, as defined in Section II.C.4.b.

   c. The Surface Water Runoff discharge to any treatment or reclamation plant shall not exceed the difference between the flow capacity at that treatment or reclamation plant, as defined in Section II.C.4.b, and the influent flow, exclusive of Surface Water Runoff, at that treatment or reclamation plant.
3. Amalgamated System Sewerage System Charges

Any Party who discharges Surface Water Runoff to the Amalgamated System shall be responsible for the full Amalgamated System Sewerage System Charge for the total amount of Surface Water Runoff discharged by the Party to the Amalgamated System.

4. Amalgamated System Sewerage Facilities Charge

a. Treatment Facilities

(1) If the aggregate amount of Surface Water Runoff discharged by all Agencies and Los Angeles does not cause any of the limitations as set forth in Section II.F.2 to be violated, no payment of Amalgamated flow System Sewerage Facilities Charges shall be required.

(2) If the aggregate amount of Surface Water Runoff discharged by all Agencies and Los Angeles causes any of the limitations as set forth in Section II.F.2 to be violated, the discharges shall be divided into categories and prioritized as follows:

Category 1 - Mandated by a responsible agency of the County of Los Angeles, the State of California, or the United States

Category 2 - Voluntary discharge

Beginning with all of the dischargers in Category 2 and then moving to Category 1, the full Amalgamated System Sewerage Facilities Charge must be paid or the flow removed from the Amalgamated System until the remaining Surface Water Runoff no longer causes the limitations as set forth in Section II.F.2 to be violated. The portions of their discharges for which the dischargers shall be required to pay the Amalgamated System Sewerage Facility Charge or remove flow from the Amalgamated System shall correspond to the proportions of the total Surface Water Runoff in their respective categories that they discharge. For purposes of this calculation, any Surface Water Runoff for which an Amalgamated System Sewerage Facilities Charge has been paid shall not be included. Once any discharger within a given category has been required to pay the Amalgamated System Sewerage Facilities Charge, all subsequent dischargers in that category shall also be required to pay the Amalgamated System Sewerage Facilities Charge.
(3) For purposes of this Section, the flow capacities of the treatment or reclamation plants and of the Amalgamated System shall be as determined pursuant to Section II.C.4.b, the plant influent flow shall be the average plant influent flow for the most recently completed Flow Year, and the amount of Surface Water Runoff shall be the average discharge. The average discharge shall be defined as the total discharge during a Flow Year divided by the number of days of actual discharge during that same Flow Year.

b. Conveyance Facilities

(1) Each Fiscal Year before discharging Surface Water Runoff into a conveyance system owned by the other Party, a Party wishing to discharge Surface Water Runoff shall first obtain permission from the other Party.

(2) If the individual Surface Water Runoff discharge from any given point of diversion of a Party causes the total peak dry weather flow in the receiving conveyance system to exceed the capacity of any part of the system, the Party owning the receiving conveyance system with insufficient capacity may deny the other Party the right to discharge that portion of the Surface Water Runoff which causes the exceedence. For purposes of this paragraph, the capacity of any sewer within the receiving conveyance system shall be that peak dry weather flow which causes the sewer to flow at three-quarters (3/4) of its full depth. The capacity of any pumping station within the receiving conveyance system shall be ninety (90) percent of the rated capacity of the plant.

III. ADMINISTRATION

A. Amalgamated System Sewerage System Charge Rate Development

1. Expense and Revenue Allocation

a. The allocation of O&M costs to flow and strength shall be determined by using updated cost accounting information for individual cost centers, typically unit processes, and distribution of the O&M expenditures utilizing process-specific O&M distribution factors adopted by the Los Angeles Board of Public Works for each cost center. The cost accounting information shall be updated for the first full Fiscal Year following completion of secondary treatment facilities under construction at the Hyperion Treatment Plant as of the Date of Execution of this Agreement.
Thereafter, this information shall be updated not less than once every two years using the average O&M expenditures from the two most recently completed Fiscal Years. Plant-wide allocation percentages shall be calculated by dividing the distributed O&M costs by the total costs and shall be used to allocate anticipated O&M costs in Los Angeles' Revenue Program.

b. The allocation of capital costs to flow and Strength shall be determined by assigning anticipated capital expenditures for the forthcoming Fiscal Year to individual cost centers, typically unit processes, and distribution of these anticipated expenditures utilizing process-specific distribution factors adopted by the Los Angeles Board of Public Works for each cost center and shall be incorporated into Los Angeles' Revenue Program.

2. Amalgamated System Loadings

a. The Amalgamated System flow and Strength loadings, respectively, shall be equal to:

(1) the sum of the influent flow and Strength loadings, respectively, at the Donald C. Tillman Water Reclamation Plant, the Terminal Island Treatment Plant, the Hyperion Treatment Plant, the entire Los Angeles-Glendale Water Reclamation Plant and any other reclamation or treatment plant that is incorporated into the Amalgamated System, less

(2) the sum of the flow and Strength loadings, respectively, in the sludge returned to the Amalgamated System conveyance system from the Donald C. Tillman Water Reclamation Plant, the entire Los Angeles-Glendale Water Reclamation Plant and any other reclamation plant that is incorporated into the Amalgamated System, less

(3) the City of Glendale’s share of the influent flow and Strength loadings, respectively, at the Los Angeles-Glendale Water Reclamation Plant, plus

(4) the flow and Strength loadings, respectively, in Glendale’s share of the sludge that is returned to the Amalgamated System conveyance system from the Los Angeles-Glendale Water Reclamation Plant.

Glendale’s share of the influent flow at the Los Angeles-Glendale Water Reclamation Plant shall be equal to one-half (1/2) of the total influent flow at the plant. Glendale’s share of the influent Strength loadings, measured in pounds per day, shall be equal to Glendale’s share of the influent flow,
measured in million gallons per day, multiplied by the average concentrations of Strength discharged from Glendale, measured in milligrams per liter, and multiplied by 8.34, a conversion factor.

Glendale’s share of the sludge flow from the Los Angeles-Glendale Water Reclamation Plant shall be equal to one-half (½) of the total sludge flow from the Los Angeles-Glendale Water Reclamation Plant for the latest completed Flow Year. Glendale’s share of the Strength loadings in the sludge from the Los Angeles-Glendale Water Reclamation Plant shall be equal to the Strength loadings in Glendale’s share of the influent to the plant multiplied by the Strength loadings in the sludge of the plant, and divided by the total Strength loadings in the plant influent.

b. For purposes of calculating the Amalgamated System Sewerage System Charge rates and for determining the flow and Strength loadings from Los Angeles pursuant to Section III.F.1.b, the Amalgamated System flow and Strength loadings shall be equal to the quantities determined in Section III.A.2.a plus the sums of any penalty amounts determined pursuant to Sections IV.A.2, IV.F.2.a, IV.F.3.b, IV.G.2.a, and IV.G.3.b.

c. The Amalgamated System MGD-miles shall be equal to the sum of the MGD-miles for all areas as set forth in Section III.G.

3. Rate Adoption Ordinance

Los Angeles shall annually adopt, by ordinance, in conformance with the requirements and provisions of this Agreement, the rates to determine the Amalgamated System Sewerage System Charges and Amalgamated System Sewerage Facilities Charges for the use of the Amalgamated System. This rate setting process will begin with the first full Fiscal Year following Execution of the Agreement and continue every Fiscal Year thereafter. The rates for the first partial year, if any, after Execution of the Agreement shall be those that were mutually agreed to by the Parties prior to Execution of this Agreement.

a. Rate Adoption Time Frame - Los Angeles shall adopt rates for service to be provided in the next Fiscal Year prior to the start of that Fiscal Year. To allow sufficient time for the Contracting Entity to adopt corresponding rates for its own jurisdiction, Los Angeles shall provide the adopted rates no later than four (4) months prior to the start of the Fiscal Year for which they are to become effective. If there are less than four (4) months between the Execution of this Agreement and the start of the next Fiscal Year, Los Angeles shall provide preliminary rates within one (1) month of Execution of this Agreement and shall adopt rates within four (4) months of the Execution of this Agreement.
b. Breakdown of Charges to O&M and Capital - The rate adoption ordinance shall provide a breakdown of the Amalgamated System Sewerage System Charge rates into the categories of O&M and capital.

c. At the same time that Los Angeles submits information on the forthcoming annual rates, Los Angeles shall provide an estimate of Amalgamated System Sewerage Service Charges for the following five year period. This estimate shall not be binding and shall only be used by the Agencies for planning purposes.

4. Modification of Adopted Rates

If during a given Fiscal Year it becomes apparent that the actual expenditures in that Fiscal Year will exceed the anticipated expenditures used to establish the rates for the Amalgamated System Sewerage Service Charge in that Fiscal Year, Los Angeles may adopt a new rate ordinance to reflect the increased costs and subsequent payments will be based on the newly adopted rates. If Los Angeles adopts new rates pursuant to this Section, Los Angeles shall also prepare new invoices pursuant to Sections III.B.1, 2 and 3 for any remaining periods within the Fiscal Year for which the new rates will apply.

B. Billing

1. Los Angeles shall prepare an annual estimated bill containing bimonthly installments for the Amalgamated System Sewerage System Charge and the General Fund Reimbursement Charge to the Contracting Entity. The bill shall be postmarked to Contracting Entity no later than 30 days prior to the start of the Fiscal Year for which the bill applies.

2. The Amalgamated System Sewerage System Charge portion of the bimonthly installments shall be calculated as follows:

\[
\text{Bimonthly Amount} = [(R_Q \times D_Q) + \sum (R_{\text{strength}} \times D_{\text{strength}}) + (R_C \times D_C)] \times \frac{F}{6}
\]

where:

- \(R_Q\) = The Amalgamated System Sewerage System Charge rate for the Fiscal Year which is attributable to flow in terms of dollars per million gallons;
The Amalgamated System Sewerage System Charge rate for the Fiscal Year which is attributable to each Strength parameter in terms of dollars per 1000 pounds;

The Amalgamated System Sewerage System Charge rate for the Fiscal Year which is attributable to MGD-miles in terms of dollars per MGD-mile;

The wastewater flow, including any treatment sludge, discharged by Contracting Entity during the latest completed Flow Year;

The quantity of each Strength parameter, including any treatment sludge, discharged by Contracting Entity during the latest completed Flow Year;

The MGD-miles attributable to Contracting Entity for the latest completed Flow Year, calculated pursuant to Section III.G;

Payment factor equal to the ratio of actual expenditures to budgeted expenditures, averaged over the three most recently completed Fiscal Years, multiplied by 0.9.

3. The General Fund Reimbursement Charge portion of the bimonthly installments shall be calculated pursuant to Section II.D.

4. Within six months following the conclusion of a Fiscal Year, Los Angeles shall submit to Contracting Entity a reconciliation invoice for the Amalgamated System Sewerage System Charge and the General Fund Reimbursement Charge for services provided during that Fiscal Year. For purposes of calculating the reconciliation invoice, the Proportionate Share shall be determined using quantities for the Flow Year with the designation corresponding to the same Fiscal Year for which service is provided and for which the reconciliation invoice applies. The reconciliation invoice shall include the following:

a. the Contracting Entity’s reconciled Amalgamated System Sewerage System Charge which shall be calculated as its Proportionate Share of the actual Net Amalgamated System Expenses for that Fiscal Year, including credit for all Amalgamated System Sewerage Facilities Charges paid by the Agencies and determined for Los Angeles, although not paid by Los Angeles, pursuant to Section III.D.2, less any payments already made pursuant to Section III.C.1. This part of the bill will also break the total actual Net Amalgamated Expenses for the Fiscal Year into expenses
attributable to O&M and expenses attributable to capital in accordance with Los Angeles’ adopted policy on capitalization.

b. the Contracting Entity’s reconciled General Fund Reimbursement Charge for that Fiscal Year which shall be calculated pursuant to Section II.D.1, less any General Fund Reimbursement Charge payments already made by Contracting Entity during the Fiscal Year pursuant to Section III.C.

c. any Nonpayment Charge for the past Fiscal Year pursuant to Section II.E.

d. a statement of the flow and Strength, including any penalty amounts, of each Entity discharging into the Amalgamated System.

e. a statement of the final Amalgamated System rates.

C. Payment

1. Contracting Entity shall make the payments for the bimonthly installments of the Amalgamated System Sewerage System Charge and the General Fund Reimbursement Charge, prepared pursuant to Section III.B.1, for each Fiscal Year in a timely manner so that they are postmarked by the last business day of July, September, November, January, March, and May, respectively, or within 30 days of receipt of the annual bill by Contracting Entity, which ever comes later.

2. Contracting Entity shall pay the reconciliation invoice within 30 days of its receipt.

D. Amalgamated System Sewerage Facilities Charge Payment

1. Beginning on the Date of Execution of this Agreement, Contracting Entity and Los Angeles shall be responsible for Amalgamated System Sewerage Facilities Charges in accordance with Section II.C.1.

2. All of Contracting Entity’s Amalgamated System Sewerage Facilities Charges for its increased flow and strength during each bimonthly billing period shall be calculated by Contracting Entity and submitted along with the next bimonthly payment made pursuant to Section III.C.1. The Amalgamated System Sewerage Facilities Charges for which Los Angeles is responsible shall be calculated by Los Angeles after the end of each Fiscal Year. Los Angeles’ and Contracting Entity’s Amalgamated System Sewerage Facilities Charge shall be calculated pursuant to Section II.C using rates adopted pursuant to Section III.A.3. These amounts are Amalgamated System Revenues and shall be subtracted from the Net
Amalgamated System Expenses when determining the reconciliation invoices pursuant to Section III.B.4.a.

3. Within 60 days following the end of each Fiscal Year, Contracting Entity shall submit a report to Los Angeles listing all new development, changes in land use, or increases in discharges from Industrial Dischargers which could result in a net increase in wastewater discharge during the Fiscal Year or partial Fiscal Year following the Date of Execution. The report shall total the increased flow, strength loadings and MGD-miles resulting from the development, changes in land use and increases in discharges from Industrial Dischargers listed in the report. Within 60 days following the end of each Fiscal Year, Los Angeles shall submit to Contracting Entity a report listing all of the new development, changes in land use and increases in discharges from Industrial Dischargers in the areas for which Los Angeles has responsibility and which could result in a net increase in wastewater discharge during the Fiscal Year or partial Fiscal Year following the Date of Execution. The report shall total the increased flow, strength loadings and MGD-miles resulting from the development, changes in land use and increases in Industrial discharges listed in the report for Los Angeles. Either Party may, at its own cost, audit the other Party's records to assess compliance with the foregoing requirement.

4. Los Angeles shall notify Contracting Entity in writing if Contracting Entity's wastewater discharges are increasing at a rate that exceeds the growth rate upon which Los Angeles' long-range capacity plans for the System are based. If Los Angeles' wastewater discharges are increasing at a rate greater than the growth rate upon which the long-range capacity plans are based, Los Angeles shall notify Contracting Entity in writing.

5. By February 1 of each year, Contracting Entity shall provide Los Angeles with an estimate of the long-term increased flow and strength loadings arising from new development, changes in land use and increases in discharges from Industrial Dischargers within its jurisdiction during the forthcoming Fiscal Year. This information shall be used for planning purposes only; there is no implied warranty as to its accuracy.

E. Late Payment

1. Any payments of Amalgamated System Sewerage System Charges, General Fund Reimbursement Charges, Nonpayment Charges or Amalgamated System Sewerage Facilities Charges that are late shall be subject to interest on the original amounts due at the Prime Rate in effect when the payment first became due plus one (1) percent for payments that are 1 to 30 days late, the Prime Rate in effect when the payment first became due plus five (5) percent for payments 31 to 60 days late, and the Prime Rate in effect when the payment first became
due plus ten (10) percent for payments more than 60 days late, not to exceed the maximum rate allowed by law. As long as payment, including applicable interest and penalties, is made within 120 days, Contracting Entity shall not be deemed to be in Default.

2. Los Angeles shall credit Contracting Entity for any Unpaid Amount that is subsequently paid by an Agency other than Contracting Entity, provided that Contracting Entity has paid a Nonpayment Charge corresponding to its share of the original Unpaid Amount. Los Angeles shall notify Contracting Entity of the credit within ten (10) business days of receiving the payment of the Unpaid Amount. Contracting Entity shall deduct the amount of the credit from its next bimonthly payment of Amalgamated System Sewerage System Charges, provided the payment of the Unpaid Amount was received no less than ten (10) days before the due date of the next bimonthly payment. If the payment of the Unpaid Amount is received less than ten (10) days before the due date of the next bimonthly payment, Contracting Entity shall deduct the credit from its second bimonthly payment of the Amalgamated System Sewerage System Charges following the payment of the Unpaid Amount. Noticing shall be pursuant to the requirements of Section IX.O. The credit shall be equal to:

a. The amount of the previous Nonpayment Charge, plus

b. Any related interest and penalties paid by the delinquent Agency over the period of time from when Contracting Entity is billed the Nonpayment Charge to when the Unpaid Amount is recovered, multiplied by Contracting Entity's Proportionate Share of the Net Amalgamated System Expenses for the Fiscal Year divided by the total Proportionate Shares of the Net Amalgamated System Expenses for the Fiscal Year for Los Angeles and all Agencies without any late or delinquent payments.

3. If Los Angeles does not notify Contracting Entity within ten (10) days of receipt of the payment of an Unpaid Amount by an Agency, Los Angeles shall credit Contracting Entity with interest at a rate equal to the Prime Rate in effect when the credit first became due plus ten (10) percent over the period of time from when the Unpaid Amount was paid to the date that Los Angeles notifies Contracting Entity of the credit.
F. Discharge Flow and Strength

1. Discharge Quantities

The quantity of wastewater flow and Strength discharged by each Party, including any wastewater treatment sludge and Surface Water Runoff, shall be calculated at the end of each Flow Year as follows:

a. The total quantity of flow and Strength discharged from Contracting Entity shall be equal to:

   (1) the sum of all quantities measured, pursuant to Sections III.F.2 and IV.B, at gauging stations located on sewers discharging from Contracting Entity either directly or indirectly to the Amalgamated System, less

   (2) any quantities from Surface Water Runoff, Pass Through Flows, and Boundary Line Connections which originate from any Entity besides Contracting Entity that pass through a gauging station located on sewers discharging from Contracting Entity, less

   (3) any wastewater or Surface Water Runoff that is generated within the territorial boundaries of jurisdictions or organizations for which Los Angeles has assumed responsibility pursuant to Section IX.B.1.b that passes through a gauging station located on sewers discharging from Contracting Entity, plus

   (4) the quantities, pursuant to Section III.F.3, that are generated in Contracting Entity’s ungauged areas and discharged either directly or indirectly to the Amalgamated System, including Boundary Line Connections.

b. The total quantity of flow and Strength discharged by Los Angeles shall be equal to:

   (1) the total Amalgamated System flow and Strength loadings, calculated as set forth in Section III.A.2, less

   (2) the sum of all quantities discharged by the Agencies and other Entities to the Amalgamated System.
2. Measurement Methodology

a. The measurement of the quantity of flow or Strength of any discharge pursuant to Section IV.B shall be performed in accordance with the requirements of Section IV.D. Strength shall be measured following the sampling and analysis protocols recommended in Standard Methods. All analyses of Strength samples shall be performed by a laboratory certified to conduct such analyses by the California State Department of Health Services pursuant to the Environmental Laboratory Act of 1988, and as that Act may be amended from time to time.

b. The total mass emission of Strength at any given monitoring station shall be equal to the daily average pounds per day of Strength measured at the monitoring station multiplied by the number of days in the Flow Year. The daily average pounds per day shall be equal to the straight average of the samples taken, as follows:

(1) For the first three years following Execution of this Agreement, it shall be based on all samples taken from the Date of Execution through the end of the Flow Year.

(2) After the first three years following Execution of this Agreement, it shall be based on samples taken only during the three most recently completed Flow Years.

3. Estimation Methodology

The quantity of flow or Strength of any discharge that is not measured pursuant to Section IV.B, including the discharge from Boundary Line Connections and Pass Through Flows, shall be equal to the sum of the estimated discharges from each of the individual dischargers within the ungauged area, except that Los Angeles need not estimate the quantities of Pass Through Flows or Boundary Line Connections if they are tributary to unmeasured areas for which the discharges are estimated. However, if requested by Contracting Entity for purposes of its facilities planning, Los Angeles shall make this information available to Contracting Entity.

a. The flow and Strength discharges for residential customers shall be estimated using the theoretical factors adopted pursuant to Section III.F.4.b.

b. Where a Party bases its service charges to Commercial/Industrial Dischargers on their metered water usage, the flows for those dischargers shall be estimated based on their metered water usage and the percentage
of water usage that is discharged to the sewer, which percentage is as adopted by Los Angeles for use in charging the dischargers within its corporate limits and included in its Wastewater Revenue Program. Where a Party monitors Industrial Dischargers’ flows directly, those dischargers’ estimated flows shall be based on the monitored flows. Where a Party does not base its service charges to Commercial/Industrial Dischargers on metered water usage or monitored flows, the flows for those dischargers shall be estimated using the theoretical factors adopted pursuant to Section III.F.4.b.

c. The Strength discharged by Commercial/Industrial Dischargers shall be estimated using the theoretical factors adopted pursuant to Section III.F.4.b, except where Strength concentrations are monitored. Where a Party monitors Industrial Dischargers’ Strength concentrations, those customers’ estimated Strength shall be based on the monitored concentrations.

4. Estimation Factors

a. For purposes of determining estimated discharges for the calculation of Amalgamated System Sewerage Facilities Charges, Los Angeles’ Board of Public Works shall adopt a list of user categories and assumed loadings per unit of usage for each category. This list of user categories and assumed loadings shall be known as the Los Angeles Sewage Generation Factor Table.

b. For purposes of determining estimated discharges for ungauged areas and Boundary Line Connections, Los Angeles’ Board of Public Works shall adopt another list of user categories and an assumed flow and Strength per unit of usage for each category. This list of user categories and assumed loadings shall be based on the Los Angeles Sewage Generation Factor Table, however, the number of user categories shall be condensed to conform with the classifications set forth in the Los Angeles County Assessor’s tax roll or as may otherwise be mutually agreed to by the Parties. This list shall be known as the Amalgamated System Sewage Generation Factor Table.

G. MGD - miles

Until Contracting Entity and Los Angeles can develop a more accurate method of allocating the costs of the conveyance portion of the Amalgamated System, the MGD-miles shall be based on a straight-line centroidal approach. Los Angeles shall use the following formulas and procedures to determine the centroidal MGD-miles for
Contracting Entity, Los Angeles, other Agencies and any other Entities discharging wastewater to the Amalgamated System:

1. For an area whose flow is tributary to the Donald C. Tillman Water Reclamation Plant but not tributary to any future treatment or water reclamation plant that may be operated by Los Angeles, that area’s MGD-miles shall be equal to the sum of:

   a. the portion of that area’s flow that is treated at the Donald C. Tillman Water Reclamation Plant, including the area’s share of sludge returned to the sewer from any upstream treatment or water reclamation plant that may be operated by Los Angeles, multiplied by the straight-line distance from the area’s Point of Discharge to the Donald C. Tillman Water Reclamation Plant, plus

   b. the portion of that area’s flow that is treated at the Los Angeles-Glendale Water Reclamation Plant, including the area’s share of sludge returned to the sewer from any upstream treatment or water reclamation plant that is operated by Los Angeles, multiplied by the straight-line distance from the area’s Point of Discharge to the Los Angeles-Glendale Water Reclamation Plant, plus

   c. the portion of that area’s flow that is treated at the Hyperion Treatment Plant, including the area’s share of sludge returned to the sewer from any upstream treatment or water reclamation plant that is operated by Los Angeles, multiplied by the sum of the straight-line distance from the area’s Point of Discharge to the Valley Spring Forman Diversion Structure and the straight-line distance from the Valley Spring Forman Diversion Structure to the Hyperion Treatment Plant.

2. For an area whose flow is tributary to the Valley Spring Forman Diversion Structure but not tributary to the Donald C. Tillman Water Reclamation Plant or any future treatment or water reclamation plant that may be operated by Los Angeles, that area’s MGD-miles shall be equal to the sum of:

   a. the portion of that area’s flow that is treated at the Los Angeles-Glendale Water Reclamation Plant, including the area’s share of sludge returned to the sewer from any upstream treatment or water reclamation plant that may be operated by Los Angeles, multiplied by the straight-line distance from the area’s Point of Discharge to the Los Angeles-Glendale Water Reclamation Plant, plus

   b. the portion of that area’s flow that is treated at the Hyperion Treatment Plant, including the area’s share of sludge returned to the sewer from any
upstream treatment or water reclamation plant that is operated by Los Angeles, multiplied by the sum of the straight-line distance from the area’s Point of Discharge to the Valley Spring Foreman Diversion Structure and the straight-line distance from the Valley Spring Foreman Diversion Structure to the Hyperion Treatment Plant.

3. For an area whose flow is tributary to the Los Angeles-Glendale Water Reclamation Plant, but not tributary to the Donald C. Tillman Water Reclamation Plant, the Valley Spring Foreman Diversion Structure or any future treatment or water reclamation plant that may be operated by Los Angeles, that area’s MGD-miles shall be equal to the sum of:

a. that portion of that area’s flow that is treated at the Los Angeles-Glendale Water Reclamation Plant, including the area’s share of sludge returned to the sewer from any upstream treatment or water reclamation plant that may be operated by Los Angeles, multiplied by the straight-line distance from that area’s Point of Discharge to the Los Angeles-Glendale Water Reclamation Plant, plus

b. the portion of that area’s flow that is treated at the Hyperion Treatment Plant, including the area’s share of sludge returned to the sewer from any upstream treatment or water reclamation plant that is operated by Los Angeles, multiplied by the straight-line distance from the area’s Point of Discharge to the Hyperion Treatment Plant.

For the City of Glendale, the area’s flow shall include its share of sludge from the Los Angeles-Glendale Water Reclamation Plant, calculated pursuant to Section III.A.2.a.

4. For an area whose flow is tributary to the Hyperion Treatment Plant, but not tributary to the Donald C. Tillman Water Reclamation Plant, the Valley Spring Foreman Diversion Structure, the Los Angeles-Glendale Water Reclamation Plant or any future treatment or water reclamation plant that may be operated by Los Angeles, that area’s MGD-miles shall be equal to that area’s flow multiplied by the straight-line distance from that area’s Point of Discharge to the Hyperion Treatment Plant.

5. For an area whose flow is tributary to the Terminal Island Treatment Plant but not tributary to any future treatment or water reclamation plant that may be operated by Los Angeles, that area’s MGD-miles shall be equal to that area’s flow multiplied by the straight-line distance from that area’s Point of Discharge to the Terminal Island Treatment Plant.
6. For an area whose flow is tributary to any future treatment or water reclamation plant that may be operated by Los Angeles, that area's MGD-miles shall be equal to the MGD-miles calculated in Sections III.G.1 through 5, as applicable, plus the amount of that area's flow that is treated at the future treatment or reclamation plant multiplied by the straight-line distance from that area's Point of Discharge to the future treatment or reclamation plant.

7. In order to determine the MGD-miles attributable to Los Angeles, Los Angeles shall first be divided into sub-areas tributary to the Donald C. Tillman Water Reclamation Plant, the Valley Spring Forman Diversion Structure, the Los Angeles-Glendale Water Reclamation Plant, the Hyperion Treatment Plant, the Terminal Island Treatment Plant and any future treatment or water reclamation plant that may be operated by Los Angeles, respectively. The sub-area tributary to the Terminal Island Treatment Plant shall be further subdivided into the Harbor, Terminal Island and Wilmington areas. The MGD-miles for each sub-area shall be determined using the same procedures in Sections III.G.1 through 6, as applicable. The total MGD-miles attributable to Los Angeles shall be equal to the sum of the MGD-miles attributable to each of the sub-areas.

8. In calculating MGD-miles pursuant to Section III.G.1 through 7, each area's flow shall consist of the total wastewater generated within the area, including infiltration and inflow and the sludge from any treatment facility operated by the Entity that is not included in the Amalgamated System, which sludge is discharged by the Entity into the Amalgamated System.

IV. DISCHARGE MEASUREMENT

A. Responsibility for Monitoring, Estimating, Evaluating, and Reporting

1. The discharging Party, i.e. the Party discharging wastewater to the other Party, shall be responsible for all monitoring, evaluating, and reporting of wastewater discharge measurements at the locations required by Section IV.B. The discharging Party shall also be responsible for estimating, evaluating and reporting flow and Strength where estimation is allowed pursuant to Section IV.B.

2. The receiving Party, i.e. the Party receiving the wastewater discharge from the other Party, shall have the option of monitoring, evaluating, and reporting of discharge measurements when the discharging Party fails to execute its responsibility pursuant to Sections IV.A.1 and IV.E. In this case, the cost of monitoring, estimating, evaluating, and reporting shall still be the sole responsibility of the discharging Party and not attributable to the Amalgamated System. If the receiving Party exercises its option due to the discharging Party's
failure, the data shall not be considered missing, but penalty amounts equal to 5% of the quantities measured by the receiving Party shall be added to the measured quantities.

3. If the receiving Party exercises its option for monitoring, evaluating, and reporting, the discharging Party may resume its responsibility after it demonstrates compliance with the monitoring, evaluating, and reporting requirements for a period of 30 days. During the demonstration period, the receiving Party shall still have the right to monitor the discharge at the expense of the discharging Party, but no penalty amounts shall apply.

B. Criteria for Measurement

1. The flow and Strength shall be measured for any discharge that meets one of the following criteria:

   a. The discharge is Surface Water Runoff.

   b. The wastewater discharged through a single sewer, excluding Pass Through Flow, Surface Water Runoff, and Boundary Line Connections from another Entity, exceeds 0.5 cfs for the prior three consecutive flow years.

2. All flow and Strength not measured pursuant to Section IV.B.1 shall be estimated pursuant to Section III.F.3, except as follows:

   a. The receiving Party, at its discretion, may measure flow and Strength from a discharging Party with a discharge less than 0.5 cfs, provided that the cost of such measurement will be the sole responsibility of the receiving Party and not be attributable to the Amalgamated System.

   b. The discharging Party may elect to measure the flow and Strength of any discharge in lieu of estimating the flow and Strength. The discharging Party shall inform the receiving Party of its election before the Flow Year in which it will begin such measurement or within two months after the Date of Execution, whichever comes later. The discharging Party may also elect to begin estimating the flow and Strength of any discharge it has previously elected to measure, but is not required to measure, in which case it shall inform the receiving Party of this election before the Flow Year in which it will begin such estimation. Whether it elects to estimate or measure the discharge, the discharging Party shall use the elected method to determine the flow and strength it reports to the receiving Party pursuant to Section IV.C for the entire Flow Year.
C. Flow and Strength Reporting

1. Quarterly reports of all measured flow and Strength data collected during a quarter shall be submitted within 30 days of the end of the quarter.

2. Annual reports of the estimated flow and Strength, including all Boundary Line Connections, and the last quarterly report of measured flow and Strength data shall be submitted within 30 days of the end of the Flow Year.

3. Submission of quantity measurements and estimates shall constitute the discharging Party’s verification that such data is an accurate representation of the Party’s wastewater flow and Strength and acknowledgment that such data will be used to calculate a Party’s total quantity of wastewater pursuant to Section III.F.1.

D. Flow and Strength Measurement

1. Frequency
   
   a. Flow shall be monitored continuously.

   b. Strength shall be sampled monthly for the first two years after Execution of this Agreement and then quarterly thereafter. Strength samples shall be collected for 24 uninterrupted hours each month or quarter such that each day of the week is represented over a seven sample period and no day of the week is represented in more than four out of twelve consecutive 24-hour samples. Each 24-hour composite sample shall consist of 24 individual samples which are combined such that each sample represents the volume of wastewater discharged during the time between samples.

2. Physical Requirements
   
   a. A permanent and continuous flow metering station shall be installed at each location where flow and Strength is measured pursuant to Section IV.B and at each location where Surface Water Runoff is discharged to the sanitary sewer system.

   b. A temporary flow metering device may be used to measure flow while the permanent station is being repaired or replaced. If a temporary flow metering device is used, the Party shall make reasonable efforts to ensure the timely repair or replacement of the permanent flow metering device.

   c. All Strength samples shall be taken at the same location as the flow measurement station using an automatic sampling device.
3. Weather

No Strength samples shall be collected within 72 hours of a rainfall event which records more than ½ inch of rain within a 24 hour period.

4. Flow Monitoring

a. Flow metering equipment installed at each station shall be of a type that will accurately measure the range of flows passing the gauging station.

b. Flow metering equipment shall include redundant measuring techniques over the entire range of flows for which the station is intended to measure.

c. Procedures for the measurement, data collection, and flow calculation shall be documented for each gauging station.

d. If multiple methods of measurement can be utilized, the most accurate method for the particular device being used and the quantity of flow being measured shall be consistently utilized and reported. In the event of a measurement sensor failure, an alternate method of measurement and flow calculation may be utilized until such time as the sensor failure is corrected.

E. Verification of Procedures

1. The discharging Party shall provide the receiving Party with its flow database via computer disk or other electronic means. The database shall include all of the discharging Party’s unprocessed data for each measuring technique employed in measuring its flows pursuant to Section IV.D.4.b. The discharging Party shall provide the data collected each month within fifteen (15) working days after the end of the month. If the discharging Party fails to provide the data within the fifteen day period, the receiving Party shall have the option of monitoring the flow itself at the expense of the discharging Party pursuant to Section IV.A. Any data not submitted within thirty (30) days following the end of each quarter shall be considered missing pursuant to Sections IV.F and G. Provision of the database to the receiving Party does not release the discharging Party of its obligation to evaluate the data pursuant to Section IV.A.

2. If the receiving Party desires to conduct an audit of the discharging Party’s quantity measurements and/or estimations, it shall notify the discharging Party of its intent to audit within 30 days of receiving the measured or estimated quantities. The receiving Party’s costs of performing the audit shall be borne by the receiving Party. The discharging Party shall provide the receiving Party access to all monitoring data and records within 15 days of the notice of intent to audit. The receiving Party shall notify the discharging Party of the results of
the audit within 45 days of the notice of intent to audit. If the receiving Party's audit of the data and records reveals discrepancies in the discharging Party's data and records, the Parties shall meet for the purpose of resolving, to the mutual satisfaction of both Parties, the discrepancy in the data and records. If the Parties cannot arrive at a satisfactory resolution, the Parties shall resolve the issue via the dispute resolution process set forth in Section VIII.C. Routine questions regarding quantity measurement and estimation shall not be considered to be audits for purposes of this Section and shall be considered to be an expense of the Amalgamated System.

3. A representative of the receiving Party, at its own cost, shall be authorized to accompany the discharging Party and observe the discharging Party’s practice in setting the Strength sampling device, in retrieving the device and in compositing the samples, for one sampling each year and at all locations discharging Party is required to sample. Discharging Party shall notify receiving Party of the date, time and location(s) of the next sampling after being notified of receiving Party’s desire to observe the sampling.

4. The discharging Party shall split each composite sample and shall make available a preserved half to the receiving Party within six hours of retrieval of the sampling device if so requested by the receiving Party at no cost to the discharging Party.

5. If the Parties cannot arrive at a satisfactory solution to any disputes over sampling and measurement, the Parties shall resolve the issue via the dispute resolution process set forth in Section VIII.C. Routine questions shall not be considered audits for purposes of this Section and shall be considered expenses of the Amalgamated System.

F. Missing Flow Data

1. If no more than 30 days are missed during any Flow Year and no more than 14 days are missed during any 30 day period at any individual monitoring station, then:

   a. No penalty shall apply.

   b. The data for the missing days shall be assumed to be equal to the average of all measured days.

   c. A letter shall be submitted explaining the cause for any missed data that exceeds 7 consecutive days.
2. If the number of missed days is between 30 and 90 days during any Flow Year, is no more than 30 days during any 45 day period, or is no more than 20 consecutive days at any individual monitoring station, then:

a. The data for the missing days shall be assumed to be equal to the average of all measured days. To this amount shall be added a penalty equal to 10% of the assumed amount.

b. A letter shall be submitted explaining the cause for any missed data that exceeds 7 consecutive days.

3. If the number of missed days exceeds 90 days during any Flow Year, is more than 30 days during any 45 day period, or is more than 20 consecutive days at any individual monitoring station, then:

a. The Party will be deemed to be in Default upon compliance with the noticing requirements of Section VIII.A.1.c or Section VIII.A.2.b.

b. The missing data shall be assumed to be equal to either (1) the average of all measured days, if at least 200 days were measured or (2) the average of the preceding Flow Year, if less than 200 days were measured. To this amount shall be added a penalty equal to 25% of the assumed amount.

c. The receiving Party shall have the right to measure the flow at the expense of the discharging Party. The receiving Party shall have the right to continue to meter the flow at the expense of the discharging Party until the discharging Party has shown, to the reasonable satisfaction of the receiving Party, that it can and will comply with all of the flow metering requirements.

G. Missing Strength Data

1. If no more than 2 non-consecutive months of sampling are missed during the first two Fiscal Years and no quarterly samples thereafter at any individual monitoring station, then:

a. No penalty shall apply.

b. The data for the missing months or quarters shall be assumed to be equal to the average of all measured months or quarters.

c. A letter shall be submitted explaining the cause for any missed data.
2. If the number of missed samples is between 2 and 4 months and no more than 2 consecutive months during the first two Fiscal Years and no more than one quarterly sample thereafter at any individual monitoring station, then:

a. The data for the missing months or quarters shall be assumed to be equal to the average of all measured months or quarters. To this amount shall be added a penalty equal to 10% of the assumed amount.

b. A letter shall be submitted explaining the cause for any missed data.

3. If the number of samples missed is more than four months or more than two consecutive months during the first two Fiscal Years or more than one quarterly sample thereafter at any individual monitoring station, then:

a. The Party will be deemed to be in Default upon compliance with the noticing requirements of Section VIII.A.1.c or Section VIII.A.2.b.

b. The missing data shall be assumed to be equal to either (1) the average of all measured months or quarters or (2) the average of the preceding year, whichever is higher. To this amount shall be added a penalty equal to 25% of the assumed amount.

c. The receiving Party shall have the right to measure Strength at the expense of the discharging Party. The receiving Party shall have the right to continue to measure the strength at the expense of the discharging Party until the discharging Party has shown, to the reasonable satisfaction of the receiving Party, that it can and will comply with all of the Strength measuring requirements.

H. Conditions for Waiver of Penalties

If conditions beyond the reasonable control of a discharging Party prevents that Party from meeting any of the measurement requirements, the discharging Party may petition the receiving Party for a waiver of the penalty provisions. The discharging Party shall provide documentation of the reasons that caused the problems and the steps being taken to correct the problems. The receiving Party shall not unreasonably deny the petition for waiver.

I. Implementation

1. Each discharging Party shall have 12 months from the Execution of this Agreement to install and operate the flow monitoring stations required under the terms of this Agreement. Each discharging Party shall report the completion of
the flow monitoring stations. Upon notification of completion, the flow monitoring requirements shall become effective.

2. For locations that meet the requirements for measuring flow pursuant to Section IV.B.1 or where the discharging Party elects to measure the flow and Strength of its discharge pursuant to Section IV.B.2.b subsequent to the Date of Execution, the discharging Party shall have one year from the date that the location meets the requirements or from the date that the discharging Party notifies the receiving Party of its election to install the appropriate flow metering equipment. Each discharging Party shall report the completion of the flow monitoring stations. Upon notification of completion, the flow monitoring requirements shall become effective.

3. The provisions for the collection of flow data in the agreements in effect prior to the Date of Execution of this Agreement shall continue in effect until the new flow measurement stations are operable.

V. MEETINGS

A. Contracting Entity/Los Angeles Meetings

1. Within 30 days of a written request of Contracting Entity, but in no case less than semi-annually, Los Angeles shall meet with a representative or representatives of Contracting Entity to discuss issues of mutual interest relative to this Agreement, including but not limited to:

   a. The operation and maintenance costs pertaining to the Amalgamated System;

   b. The capital program pertaining to the Amalgamated System;

   c. Written policies pertaining to the administration of the charge system;

   d. Disputes between Los Angeles and the Agencies, pursuant to Section VIII of this Agreement;

   e. The risk management practices pertaining to the Amalgamated System;

   f. Regulatory updates.

At any such meeting, two representatives from Los Angeles shall be present. One Los Angeles representative shall be an employee from Los Angeles with knowledge of the Amalgamated System and the second Los Angeles
representative shall be appointed by the President of the City Council. The representative from Contracting Entity must be an Assistant Manager, Division Head, City Manager, Department Head or their duly authorized representative. In no case shall the representative(s) from either Party be legal counsel. The foregoing requirements, however, shall not prevent either Party from designating other representatives to be present at any such meeting, including additional staff, consultants and attorneys. Los Angeles’ costs of preparing for and attending any such meeting shall be considered a contract administration cost and shall be included as Amalgamated System Expenses pursuant to Section II.B.2.a.(3).

2. In submitting the Revenue Program and annual Capital Improvement Program to the Council and the Mayor for approval, Los Angeles Staff shall identify and summarize any issues where the Contract Entity disagrees with the proposed Revenue Program or Capital Improvement Program and shall expressly state the reasons for those disagreements.

3. If matters are deemed to be of general interest to all Agencies who have wastewater conveyed and treated by Los Angeles, Los Angeles shall have the right to meet with the representatives of the Agencies collectively to discuss the issues of common interest. If Los Angeles meets with the Agencies collectively, this shall not preclude either Contracting Entity or Los Angeles from requesting a meeting to discuss an issue or issues limited in scope to the interest of Contracting Entity and Los Angeles.

4. If requested by two or more Agencies, those Agencies shall have the right to meet collectively with Los Angeles. If Los Angeles meets collectively with the Agencies, this shall not preclude either Contracting Entity or Los Angeles from requesting a meeting to discuss an issue or issues limited in scope to the interest of the Contracting Entity and Los Angeles.

B. Value Engineering

1. The Agencies have the right, collectively, to meet at least once with any Value Engineering team hired by Los Angeles to review a proposed capital project for the Amalgamated System. For each project, Los Angeles’ cost of the first of any such meeting shall be considered to be an Amalgamated System Expense. Contracting Entity shall pay the cost incurred by the Value Engineering team as a result of any subsequent meetings in proportion to its flow discharged to the Amalgamated System divided by the total flow discharged to the Amalgamated System by those Agencies requesting the subsequent meetings. The first meeting shall take place, if at all, within 30 days of the date of the letter requesting such meeting and at a mutually convenient time and place.
2. Los Angeles shall provide the Agency representatives with a copy of any Value Engineering study for an Amalgamated System project within 30 days of the completion of the study.

C. Financial Auditing

1. The Agencies have the right, collectively, to meet at least once each auditing cycle with the auditor of the System’s financial statement. The meeting shall take place, if at all, within 30 days of the date of the letter requesting such meeting and at a mutually convenient time and place. The cost of a single meeting shall be considered to be an Amalgamated System Expense. Contracting Entity may have further meetings with the auditors of the Amalgamated System’s financial statement, provided that Contracting Entity reimburses Los Angeles for any additional auditor’s cost incurred as a result of the additional meetings, in proportion to its flow discharged to the Amalgamated System divided by the total flow discharged to the Amalgamated System by those Agencies requesting the subsequent meetings. Los Angeles may require that the auditors bill the Agencies directly for the additional costs.

2. Contracting Entity shall have the right to audit those System financial records that are made available to the auditor of the System’s financial statements for audit purposes and to review the audit work papers at its own expense.

VI. OPERATION, LIABILITY, AND COMPLIANCE

A. Ownership and Operation

1. Los Angeles is recognized as the sole owner and sole operating authority of the Amalgamated System. As such, Los Angeles shall exercise reasonable care and skill and shall act as a prudent manager of the Amalgamated System to ensure compliance with all federal, state, and local laws, regulations, and rules pertaining to the discharge of wastewater, including without limitations all applicable pretreatment standards and effluent limits, if any.

2. With regard to the inspection, maintenance, and operation of the Local System or of facilities owned by either Los Angeles or Contracting Entity and all discharges within each Party’s respective jurisdiction or territorial boundaries, each Party shall exercise reasonable care and skill and shall act as a prudent manager to ensure compliance with all federal, state, and local laws, regulations, and rules pertaining to the discharge of wastewater, including without limitation, all applicable pretreatment standards and effluent limitations, if any.
3. Contracting Entity hereby waives any present and future claims to any equity interest in the Amalgamated System. Los Angeles agrees that any future agreement or contract with any other Entity shall not give that Entity any equity interest in the Amalgamated System.

B. Liability

1. Regulatory Liability

Liability, federal or state, whether related to water or air, including fines, penalties, increased costs due to more stringent regulations as a result of the regulatory liability, and/or the cost of any alternative project in lieu of, or in addition to, any fine or penalty shall be treated as an expense of the Amalgamated System if said liability results from the construction or operation of the Amalgamated System. This would include, but not be limited to: operator error, negligence, sewage spills or other discharges resulting from clogs, breaks in pipes, lack of capacity, or electrical outages, equipment failure or breakdown, discharges into the air in violation of any SCAQMD rule or regulation, or any other action or inaction by Los Angeles in constructing or operating the Amalgamated System which results in liability assigned to any portion of the Amalgamated System.

2. General Liability

Unless otherwise stated in this Agreement, third party liability, including compensatory damages, shall be treated as an expense of the Amalgamated System if said liability results from the operation of the Amalgamated System.

3. Liability Related to Non-Amalgamated System Facilities

Contracting Entity will not be responsible for liability which results solely from construction and operation of the Local System. Similarly, Los Angeles will not be responsible for liability which results solely from construction and operation of Contracting Entity's wastewater collection system. If liability results from a combination of activities involving the Amalgamated System and other wastewater facilities, the Net Amalgamated System Expenses shall include the costs related to that portion of the liability attributable to the activities involving the Amalgamated System which is the basis for the liability.

4. Gross Negligence

Liability which results from gross negligence and/or the willful and/or intentional acts of an individual or individuals charged with the operation of a facility which is part of the Amalgamated System shall not be chargeable as an expense of the
Amalgamated System but shall be borne by Los Angeles or the successor jurisdiction responsible for the operation of the Amalgamated System.

5. Notification of Claims

Los Angeles shall provide written notification to all Agencies of any and all claims and Notices of Dispute submitted to Los Angeles which refer, relate, or pertain to the Amalgamated System within thirty (30) days of receipt of such claim, provided that such claims are for amounts exceeding $500,000, excluding construction claims. Notification of construction claims shall only be required if so requested by Contracting Entity.

C. Compliance with State and Federal Regulatory Requirements

1. The Parties shall satisfy all state or federal requirements for preparing and updating their Revenue Programs.

2. In any circumstance where (i) Los Angeles as owner of the System is mandated by a state or federal requirement to establish a program, prepare a study, or undertake some other action and (ii) such action would require Los Angeles to enter Contracting Entity’s jurisdiction, Contracting Entity shall be responsible for complying with such requirement and shall report to Los Angeles all actions undertaken to comply.

a. Los Angeles shall provide written notification to Contracting Entity of any state or federal requirements that are applicable to Contracting Entity in the foregoing circumstances.

b. If Contracting Entity fails to take the necessary action after having been duly notified of its obligations by Los Angeles and if Contracting Entity’s failure to take the necessary action would result in any liability payable from the Amalgamated System, then Los Angeles shall have the authority to enter Contracting Entity’s jurisdiction to perform the required actions on behalf of Contracting Entity and to directly charge Contracting Entity for any costs necessarily incurred to achieve compliance.

c. If Contracting Entity’s failure to take the actions necessary to comply with the state or federal requirements results in any liability payable from the Amalgamated System, Contracting Entity shall bear full financial responsibility for any fines or penalties that are levied as a result of Contracting Entity’s failure to comply.

d. If Los Angeles and Contracting Entity are both required to take actions to comply with state and federal requirements and Los Angeles fails to take
the necessary actions to comply with the state and federal requirements and if Los Angeles' failure to take the necessary actions results in any liability payable from the Amalgamated System, Los Angeles shall bear full financial responsibility for any fines or penalties that are levied as a result of Los Angeles' failure to comply.

VII. TERM OF AGREEMENT

The term of this Agreement is thirty (30) years unless it is modified in writing by mutual consent of the Parties and shall commence upon full Execution.

A. Reasons to Initiate Renegotiations

During the unexpired term of this Agreement, either Party may request that the other Party negotiate, in good faith, modifications of the Agreement which the requesting Party believes are necessary because of any of the following changed circumstances:

1. There is a material change in the regulatory framework for wastewater that renders one or more of the terms or conditions of the Agreement to no longer be fair and equitable;

2. There is a proposed change in the physical configuration of the Amalgamated System that the existing terms or conditions of the Agreement do not adequately address;

3. There is a material change in the financial framework of Los Angeles' wastewater conveyance and/or treatment system which either renders any of the terms or conditions of the Agreement to no longer be fair and equitable or creates a condition that the existing terms or conditions cannot accommodate;

4. There is any change in the regulatory, operating or financial framework of Los Angeles' wastewater conveyance and/or treatment system, which in the view of either Party, will or has caused the charge system described in Section II of this Agreement to no longer be fair and equitable.

5. If, after ten (10) years from the Date of Execution of this Agreement, Los Angeles requests the Contracting Entity to contribute money towards capital facilities or improvements for the Amalgamated System which are valued at $100 million or more, including direct and indirect costs, in any one fiscal year and whose useful life is greater than the length remaining on the term of the then existing Agreement.
B. Initial Time Prohibitions on Negotiations

Notwithstanding the provisions of Section VII.A above, and excepting the provisions within this Agreement concerning Reclaimed Water and Surface Water Runoff, the Parties hereby knowingly and expressly waive the right to renegotiate any provision of this Agreement for a period of ten (10) years from the Date of Execution, irrespective of the cause, rationale or circumstances. The Parties further acknowledge and agree that the existing charge system will be used to recover the Amalgamated System Expenses during the initial ten (10) years of this Agreement even if either Party believes that the charge system may not be fair and equitable. The Parties acknowledge and agree that they have reached this Agreement following a period of lengthy and complicated negotiations and they are unwilling and further find it imprudent to revisit the subject-matter herein for a period of ten (10) years. With respect to the renegotiation of the Reclaimed Water and Surface Water Runoff provisions, the Parties knowingly and expressly waive the right to renegotiate these provisions for a period of five (5) years from the Date of Execution of this Agreement. Thereafter, either Party may seek to renegotiate Reclaimed Water and Surface Water Runoff provisions at any time. However, if after two years of good faith negotiations, the Parties fail to agree on new Reclaimed Water and Surface Water Runoff provisions, this Agreement shall not terminate within the initial ten (10) years of this Agreement.

C. Negotiation Completion Requirements

If after two years of good faith negotiations concerning any of the above proposed changes to a then existing Agreement, pursuant to Sections VII.A and B, the Parties have been unable to reach a mutual agreement on any proposed changes to a then existing Agreement, the then existing Agreement shall, unless otherwise stated, terminate and the relationship of the Parties shall be governed by Section VII.I below.

D. Negotiations at Expiration of the Term

At least two calendar years prior to the expiration date of a then existing Agreement, the Parties shall begin good faith negotiations to extend the relationship of the Contracting Entity with Los Angeles for the conveyance and treatment of the Contracting Entity's wastewater. If, at the time set for expiration of the then existing Agreement, the Parties have not been able to reach a new agreement or have not agreed to extend the then existing Agreement, the Agreement shall, unless otherwise stated in Sections VII.A or B, terminate and the relationship of the Parties shall be governed by Sections VII.I and L below.
E. Conditions for Modification Proposals

In the renegotiation of any provision in this Agreement pursuant to Section VII.A or in the negotiation of any extension to this Agreement or any new agreement pursuant to Section VII.D, all Los Angeles proposals to the Contracting Entity shall include a restatement of this Section VII.E in its entirety and shall comply with the following:

1. The charge system must be fair and equitable to Los Angeles and Contracting Entity;

2. The charge system for the Contracting Entity within the Amalgamated System must be substantially similar to and consistent with the charge system for the internal users of Los Angeles’ wastewater conveyance and/or treatment system within the Amalgamated System;

3. There shall be a fair and equitable cost recovery methodology to fully reimburse Los Angeles and the Contracting Entity for capital payments for the Amalgamated System capacity needed to serve new dischargers; and

4. There shall be a fair and equitable term (period of years) as measured by the capital needs and revenue requirements of the Contracting Entity.

F. Requirement for Good Faith Renegotiations

Los Angeles’ obligation to, in good faith, negotiate an extension of its relationship with the Contracting Entity pursuant to Section VII.D or renegotiate any matter under this Agreement pursuant to Section VII.A shall not be discharged unless and until it has presented in good faith a proposal which complies with the requirements set forth in Section VII.E above.

G. Non-binding Mediation

It shall be the right of either Party to request, in writing, a formal, non-binding mediation concerning the renegotiation of any provision of this Agreement or negotiation of any extensions hereto up to and including the one hundred eightieth (180th) calendar day prior to termination of this Agreement pursuant to Sections VII.C and D above. The non-requesting Party must accept a timely written request for non-binding mediation. The good faith negotiations shall not be deemed complete until the formal, non-binding mediation process has concluded by written statement of the mediator or the term of this Agreement has terminated pursuant to Sections VII.C and D above.
H. Termination Restriction

In the event Los Angeles fails to propose provisions or an extension pursuant to Sections VII.C and D above that satisfy the requirements of Section VII.E or fails to participate in a formal, non-binding mediation process upon timely request by the Contracting Entity, the then existing Agreement shall not terminate and it shall continue in full force and effect until Los Angeles presents, in good faith, a proposal to the Contracting Entity that satisfies the requirements of Section VII.E.

I. Month to Month Relationship

The Parties recognize that withdrawal from the Amalgamated System is a serious and complex undertaking and as such agree to follow the procedure for such withdrawal as set forth herein. If the Parties are unable to reach a mutual agreement on changes to the then existing Agreement proposed pursuant to Section VII.C above and the then existing Agreement is terminated as provided, or if the term of the then existing Agreement expires as described in Section VII.D above, or if a Party remains in Default for more than ninety (90) days, the result in any of these instances shall be a month to month relationship between the Parties wherein Los Angeles agrees to transport and treat the wastewater of the Contracting Entity provided that the Contracting Entity:

1. pays its fair and equitable share of the wastewater conveyance and treatment costs, including O&M and capital, in an amount and according to a charge system as determined by Los Angeles consistent with the requirements of Section VII.E above;

2. complies with all then existing regulatory requirements, rules, regulations, laws and directives of the federal and state government concerning wastewater, including all Industrial Waste pretreatment requirements, rules, regulations and laws; and

3. actively and in good faith works towards extricating its wastewater discharge from the Amalgamated System.

J. Termination of the Month to Month Relationship

The month to month relationship shall terminate if:

1. the Parties agree to a written agreement which supersedes the month to month relationship;

2. the Contracting Entity removes its wastewater discharge from the Amalgamated System;
3. the Contracting Entity violates one of the provisions of the month to month relationship set forth above; or

4. five years expires from the date that the month to month relationship commences. However, this five year cap on the month to month relationship may be extended by mutual written agreement of the Parties.

K. Penalties for Violation of the Month to Month Relationship Conditions

If the Contracting Entity violates the terms and conditions of the month to month relationship, the Contracting Entity shall move, with all due deliberate speed, to remove its wastewater discharge from the Amalgamated System and shall be liable to pay the Amalgamated System a 10% penalty on all wastewater conveyance and treatment provided by the Amalgamated System from the time the Contracting Entity violates the terms of the month to month relationship to the time that the Contracting Entity no longer discharges wastewater to the Amalgamated System. If the Contracting Entity takes longer than one year from the date that it violates the month to month relationship to remove its wastewater from the Amalgamated System, then the penalty for conveyance and treatment of the Contracting Entity’s wastewater shall increase to 15% and shall increase 5% each year until the Contracting Entity’s wastewater is removed from the Amalgamated System.

L. Contracting Entity Capital Investment Buyout

If the Contracting Entity removes its wastewater discharge from the Amalgamated System pursuant to any of the scenarios set forth above, then the Amalgamated System will reimburse the Contracting Entity for the remaining value of it’s past capital payments for the Amalgamated System. The compensation for the past capital payments shall be based on the System Buy-out Approach as described below:

1. The values of Amalgamated System facilities in service or included in Construction Work in Progress from Fiscal Year 1984-85 forward shall be determined using the procedure contained in Section II.C.4.a.

2. The value of each facility determined pursuant to Section VII.L.1 shall be allocated to conveyance and to treatment flow and Strength by cost centers and using the same allocation factors adopted by Los Angeles pursuant to Section III.A.1.b.

3. The compensation rates shall be calculated by dividing the totals of the values allocated pursuant to Section VII.L.2 by the Amalgamated System MGD-miles and flow and Strength loadings determined pursuant to Section III.A.2 for the latest completed Flow Year. Los Angeles shall calculate the compensation rates
and include the rates in its Revenue Program whenever it prepares and adopts a Revenue Program.

4. The amount of compensation shall be calculated by multiplying Contracting Entity's MGD-miles and flow and Strength discharges for the latest completed Flow Year by the compensation rates and summing the results.

5. Los Angeles shall subtract the following from Contracting Entity's compensation for its past capital payments calculated pursuant to Section VII.L.1 through 4:
   
a. Any Amalgamated System Sewerage System Charges, General Fund Reimbursement Charges, and Amalgamated System Sewerage Facilities Charges owed by Contracting Entity pursuant to Sections III.C and D.
   
b. Any interest owed for late payments pursuant to Section III.E.
   
c. Any surcharges owed for wastewater service provided to Contracting Entity after it is required to remove its wastewater from the Amalgamated System pursuant to Section VII.K.
   
d. Any amounts owed by Contracting Entity for meetings with any Value Engineering team or the System's financial auditor beyond the first such meeting, pursuant to Sections V.B.1 and V.C.1.

6. Contracting Entity shall pay to Los Angeles any negative net amount calculated above within 90 days of removing its flow. Los Angeles shall pay to Contracting Entity any positive amount calculated above within 90 days of Contracting Entity removing its flow. If payment is made after 90 days but before 120 days, interest shall be added at the Prime Rate in effect at the time Contracting Entity removes its flow plus one (1) percent. If payment is made after 120 days but before 150 days, interest shall be added at the Prime Rate in effect at the time Contracting Entity removes its flow plus five (5) percent. If payment is made after more than 150 days, interest shall be added at the Prime Rate in effect at the time Contracting Entity removes its flow plus ten (10) percent. In no case shall interest exceed the maximum rate allowed by law.
VIII. CONFLICTS

A. Default

1. Events Constituting a Default by Contracting Entity

Each of the following constitutes a "Default" by Contracting Entity under this Agreement.

a. Contracting Entity fails to pay any amount of an undisputed invoice, including any applicable interest and penalties, within 120 days of the due date.

b. Contracting Entity fails to pay at least eighty-five (85) percent of the total amount due on any disputed invoice by the due date and to place the withheld amount into a joint account within ten (10) business days from the due date, as required pursuant to Section VIII.C.3.a.

c. Contracting Entity fails to perform or observe any term, covenant, or undertaking in this Agreement that it is to perform or observe and such failure continues for ninety (90) days from a Notice of Default being sent in the manner prescribed in Section IX.O.

2. Events Constituting a Default by Los Angeles

Each of the following constitutes a "Default" by Los Angeles under this Agreement.

a. Los Angeles fails to accept and treat the wastewater discharged into the Amalgamated System by Contracting Entity.

b. Los Angeles fails to perform or observe any term, covenant, or undertaking in this Agreement that it is to perform or observe and such failure continues for ninety (90) days from a Notice of Default being sent in the manner prescribed in Section IX.O.
B. Remedies

In the event of a Default, the Parties shall have the following rights and remedies:

1. Specific Performance

Contracting Entity and Los Angeles agree and recognize that the rights and obligations set forth in this Agreement are unique and of such a nature as to be inherently difficult or impossible to value monetarily. If one Party does not perform in accordance with the specific wording of any of the provisions in this Agreement applicable to that Party, Defaults, or otherwise breaches this Agreement, an action at law for damages or other remedies at law would be wholly inadequate to protect the unique rights and interests of the other Party to the Agreement. Accordingly, in any court controversy concerning this Agreement, the Agreement’s provisions will be enforceable in a court of equity by specific performance, including a month to month relationship and termination thereof as provided in Sections VII.1 and J. This specific performance remedy is not exclusive and is in addition to any other remedy available to the Parties.

2. Cumulative Rights and Remedies

The Parties do not intend that any right or remedy given to a Party on the breach of any provision under this Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise or delays in exercising any right or remedy, the non-breaching Party does not thereby waive that right or remedy. Furthermore, no single or partial exercise of any right, power, or privilege precludes any further exercise of a right, power, or privilege granted by this Agreement or otherwise.

3. Attorneys’ Fees

In any adversarial proceedings between the Parties other than the dispute resolution procedure set forth below, the prevailing Party shall be entitled to recover their costs, including reasonable attorneys’ fees. If there is no clear prevailing party, the Court or arbitrator shall determine the prevailing party and provide for the award of costs and reasonable attorneys’ fees. In considering the reasonableness of either Party’s request for attorneys’ fees as a prevailing party, the Court or arbitrator shall consider the quality, efficiency, and value of the legal services and similar/prevaling rate for comparable legal services in the local community. If Los Angeles is awarded its legal fees/costs, then any proceeds therefrom shall first be applied so as to reduce legal fees/costs, if any, incurred by the Amalgamated System and then, to the extent there is any remaining balance, to the legal fees/costs incurred by Los Angeles.
C. Dispute Resolution

1. Scope of Dispute Resolution

Disputes ("Disputes") between the Parties other than those constituting a "Default", or "Exclusion" (defined below), shall be resolved pursuant to the provisions of this Section.

2. Exclusions

a. Emergency

An emergency event which, if not promptly resolved, may result in imminent danger to the public health, safety or welfare shall not be subject to dispute resolution.

b. Complete Discretion

Those matters reserved to the complete discretion of Los Angeles or Contracting Entity under this Agreement shall not be subject to dispute resolution.

3. Procedures for Disputes Regarding Invoices

a. Contracting Entity may dispute any portion of a bill for service provided by Los Angeles only because it disagrees with the methodology or calculation of such charges. When disputing a bill, Contracting Entity shall tender the undisputed amount, but in no case less than 85% of the total amount billed, to Los Angeles when the payment is due, along with a written notice stating the amount of the bill which is being disputed, explaining the reason for the disputed amount and identifying the proposed banking institution for the joint account. Contracting Entity shall deposit the withheld amount in an interest bearing joint account within 10 business days of the date of the Contracting Entity's written notice. The joint account shall be at a banking institution selected by both Parties and shall be in the joint names of Contracting Entity and Los Angeles. Disbursements from the joint account shall be made only at the written direction of an authorized representative of each Party. The withheld funds shall remain in the joint account until such time as the dispute is resolved. Failure to pay at least 85% of the total amount billed by the due date and to place the withheld amount into a joint account shall invalidate the dispute and shall be considered a failure to make payment.

b. Within 30 calendar days of receipt of a written notice of the amount being disputed and the explanation for the dispute, Los Angeles shall notify Contracting Entity in writing that it: (1) agrees that Contracting Entity is correct in its assertion concerning the disputed amount; (2) disagrees with
Contracting Entity's assertion concerning the disputed amount and shall provide an explanation for its disagreement; or (3) needs an additional 15 calendar days to investigate the assertion by Contracting Entity. If requesting an additional 15 days, Los Angeles must provide an explanation as to why the additional time is required to complete its investigation. Failure to respond in writing within 30 calendar days, or within 45 days if an extension is requested, of receipt of Contracting Entity's written notice will result in Los Angeles being deemed to have agreed with the assertion of Contracting Entity.

c. If Los Angeles notifies Contracting Entity that it disagrees with Contracting Entity's position on the disputed amount, Los Angeles shall simultaneously provide written notification to Contracting Entity of a date and time for a meet and confer. The dispute resolution process described in this Section and in Section VIII.C.4 may only be initiated if Contracting Entity has paid at least 85% of the invoice and deposited any remaining disputed amounts into an interest bearing joint account. Any costs or attorney's fees associated with pursuit of a billing dispute will be borne by the Party incurring said costs or attorney's fees.

d. Contracting Entity and Los Angeles shall receive interest from the joint account in proportion to the amount of principal of the joint account that they receive upon resolution of the dispute. The Parties agree to provide written authorization for release of the funds within 30 days following the resolution of the amount in dispute in accordance with the agreement. If the disputed amount was greater than the 15% withheld pursuant to Section VIII.C.3.a above, Los Angeles shall return any amounts due to Contracting Entity within 30 days following the resolution of the dispute together with interest at the same rate that the joint account was earning.

4. Other Disputes

a. Each Party to this Agreement may submit any Dispute related to or arising under this Agreement to non-binding mediation by delivering a Notice of Dispute to the other Party.

b. The written Notice of Dispute prepared by the Party shall be delivered to the other Party in accordance with Section IX.0. The Notice of Dispute shall clearly describe the basis of the Dispute and the Sections of the Agreement under which the Dispute arises.

c. The non-binding mediation shall be conducted by Judicial Arbitration Mediation Services (JAMS) or an equivalent mediation service agreed to by the Parties.

d. Unless otherwise agreed, a mediator shall be appointed within forty-five (45) days of the date the Notice of Dispute is delivered to hear the Dispute and provide a written determination. The mediator shall be chosen jointly by the Parties. If the Parties cannot agree, the Los Angeles County
Superior Court shall appoint the mediator. Employees or agents of Los Angeles or Contracting Entity are ineligible to serve as the mediator.

e. The mediation shall be held within ninety (90) days of the date the Notice of Dispute is delivered.

f. Any statute of limitations applicable to any claims, rights, causes of action, suits, or liabilities of whatever kind or nature, in law, equity or otherwise, whether known or unknown, shall be tolled during the mediation process. For purposes of this Section, the mediation process shall commence upon the service of a Notice of Dispute to the other Party pursuant to Section VIII.C.4.a above. For purposes of this Section, the mediation process shall be deemed complete ten (10) days after service of the mediator’s written notice of the conclusion of the mediation.

IX. GENERAL PROVISIONS

A. Supersedence

Upon execution of this Agreement, any and all existing agreements or contracts between Los Angeles and Contracting Entity concerning the use of the Amalgamated System are hereby rescinded, except for a settlement agreement relating to the Pending Actions and for those provisions relating to flow monitoring pursuant to Section IV.I.3.

B. Applicability To Others

1. Future Wastewater Service Contracts or Agreements

a. After the Date of Execution, Los Angeles agrees that any other agreement or contract relating to wastewater service entered into by and between Los Angeles and any Entity shall comply with the Universal Terms, the Federal Clean Water Act, the Clean Water Grant Revenue Program, and the State Revolving Fund Loan Program requirements, and as they may be amended from time to time, or any other such statutes or regulations as mutually agreed by the Parties, except as otherwise provided in Section IX.B.1.b.

b. Los Angeles may enter into wastewater service agreements or contracts with jurisdictions or organizations that do not comply with the Universal Terms provided that:

(1) all flow originating from any jurisdiction or entity signing such an agreement shall be considered to have originated from Los Angeles,

(2) any jurisdiction or entity signing such an agreement shall be billed an equivalent General Fund Reimbursement Charge unless otherwise prohibited by law, and
(3) there will be no additional costs to the Contracting Entity.

c. Los Angeles shall not authorize or permit any Entity which is not signatory to a wastewater service agreement or contract that complies with the Universal Terms to acquire or use any capacity in excess of the amount said Entity is expressly authorized to use by virtue of its wastewater service agreement or contract with Los Angeles in effect on the Date of Execution of this Agreement. If an Entity which is not signatory to a wastewater service agreement or contract complying with the Universal Terms discharges in excess of the amount of flow or Strength to which it is entitled by the wastewater service agreement or contract in effect on the Date of Execution of this Agreement, Los Angeles will undertake legal proceedings to invalidate the existing agreement or contract and/or force the Entity to return their flow to within the contract limits and/or remove their wastewater discharge from the Amalgamated System.

2. Copies of New Agreements

If Los Angeles, after the Date of Execution, proposes to enter into any new wastewater service agreement or contract or to supplement, revise, or add an addendum to any existing wastewater service agreement or contract, then Los Angeles shall provide Contracting Entity with a copy of the same, in its final form, at least thirty (30) days prior to either the date the matter is presented to the governing body of Los Angeles or the date of execution by Los Angeles, whichever is earlier.

C. Revenue Program

Each Party shall prepare a Revenue Program as required by state and federal requirements. Following the initial approval of the Party’s Revenue Program by the State Water Resources Control Board, or the successor agency, subsequent revisions or modifications shall only be required to maintain compliance with state and/or federal requirements.

D. Admissions by Parties

Nothing in this Agreement constitutes an admission of liability by either Party. This Agreement and any documents prepared in connection herewith may not be used as evidence in any litigation, except as necessary to interpret or enforce the terms of this Agreement.
E. Construction of Agreement

Each Party, with the assistance of competent legal counsel, has participated in the drafting of this Agreement and any ambiguity should not be construed for or against any Party on account of such drafting.

F. Each Party Bears Own Costs

Each Party is to bear its own costs, expenses, and attorneys' fees arising out of or in connection with the subject matter of this Agreement and the negotiation, drafting, and execution of this Agreement. Each of the Parties understands that this Agreement includes all claims for loss, expense and attorneys' fees, taxable or otherwise, incurred by it or arising out of the Pending Actions.

G. Waiver of Breach

No waiver or indulgence of any breach or series of breaches of this Agreement shall be deemed or construed as a waiver of any other breach of the same or any other provision hereof or affect the enforceability of any part or all of this Agreement. No waiver shall be valid unless executed in writing by the waiving Party.

H. Awareness of Contents/Legal Effect

The Parties expressly declare and represent that they have read the Agreement and that they have consulted with their respective counsel regarding the meaning of the terms and conditions contained herein. The Parties further expressly declare and represent that they fully understand the content and effect of this Agreement and they approve and accept the terms and conditions contained herein, and that this Agreement is executed freely and voluntarily.

I. Agreement Binding on All

This Agreement shall be binding upon and shall inure to the benefit of each of the Parties, and each of their respective agents, employees, directors, officers, attorneys, representatives, principals, shareholders, sureties, parents, subsidiaries, affiliates, successors, predecessors, assigns, trustees or receivers appointed to administer their assets, and attorneys of any and all such individuals and entities. All the covenants contained in this Agreement are for the express benefit of each and all such persons described in this Section. This Agreement is not intended to benefit any third parties.

J. Counterparts

This Agreement may be executed in counterparts. This Agreement shall become operative as soon as one counterpart hereof has been executed by each Party. The counterparts so executed shall constitute one Agreement notwithstanding that the signatures of all Parties do not appear on the same page.
K. Severability

Should any non-material provision of this Agreement be held invalid or illegal, such invalidity or illegality shall not invalidate the whole of this Agreement, but, rather, the Agreement shall be construed as if it did not contain the invalid or illegal part, and the rights and obligations of the Parties shall be construed and enforced accordingly.

L. Captions

The captions contained herein are included solely for convenience and shall not be construed as part of this Agreement or as full or accurate descriptions of the terms hereof.

M. Choice of Law

This Agreement shall be construed and enforced pursuant to the laws of the State of California.

N. Authority to Enter into This Agreement

Each Party represents and warrants that its respective obligations herein are legal and binding obligations of such Party, that each Party is fully authorized to enter into this Agreement, and that the person signing this Agreement hereinafter for each Party has been duly authorized to sign this Agreement on behalf of said Party.

O. Notice

1. Any notice required under this Agreement shall be written and shall be served either by personal delivery, mail or fax.

2. In the case of service by personal delivery or fax, no additional time, in days, shall be added to the time in which a right may be exercised or an act may be done.

3. In the case of service by mail, notice must be deposited in a post office, mailbox, subpost office, substation, or mail chute, or other like facility regularly maintained by the United States Postal Service, in a sealed envelope, with postage paid, addressed to the representative(s) of the Party on whom it is to be served, at the office set forth in Section IX.O.4 below. The service is complete at the time of deposit. Any period of notice and any right or duty to do any act or make any response within any period or on a date certain after service of notice by mail shall be extended five days. Any period of notice and any right or duty to do any act or make any response within any period or on a date certain
after service of notice by Express mail or other method of delivery providing for overnight delivery shall be extended by two court days.

4. Any notice required by this Agreement shall be served on the following representative(s) of the Parties:

City of Los Angeles:

City of Los Angeles
Bureau of Sanitation
433 S. Spring Street, Fourth Floor
Los Angeles, CA 90014

Attention: Financial Management

Contracting Entity:

City of Beverly Hills
342 North Foothill Rd.
Beverly Hills, CA 90210

The Parties may, upon written notice, add or substitute representatives or addresses.

P. Amendments and/or Changes to Agreement

Any amendments and/or changes to this Agreement must be in writing, signed by a duly authorized representative of the Parties hereto, and must expressly state the mutual intent of the Parties to amend this Agreement as set forth herein. The Parties to this Agreement recognize that the terms and conditions of this Agreement which are set forth herein in the Sections preceding this Section have been arrived at through the collective negotiations of the following entities: The City of Los Angeles and the City of Beverly Hills, the City of Culver City, County Sanitation Districts Nos. 4, 5, 9, 16 and 27 of Los Angeles County, the City of El Segundo, the City of San Fernando and the City of Santa Monica. The Parties hereby agree that no amendments and/or changes may be made to the Universal Terms of this Agreement as set forth in the Sections which appear in this Agreement preceding this Section without the negotiated, collective agreement of Los Angeles and either seventy five percent (75%) of the Agencies or Agencies representing seventy five percent (75%) of all the flow discharged by the Agencies. The Parties also hereby recognize that each Agreement between Los Angeles and an Agency named herein shall contain this requirement as part of said Agreement. The Parties further recognize that the Agreements between Los Angeles and each of the Agencies named herein may contain terms and conditions set forth in Sections which appear after this Section which are necessitated by the relationship between Los Angeles and the individual Contracting Entity. However, any such additional Sections shall not alter, modify or change the terms and conditions of the Agreement as set forth in the Sections preceding this Section.
X. EFFECTIVE DATE

A. To become effective, both this Agreement and a settlement agreement relating to the Pending Actions must be executed by Contracting Entity and Los Angeles. The effective date shall be the latter of the Date of Execution of this Agreement or the date of execution of the settlement agreement.

B. For purposes of billing and payment, the provisions of Sections I through X of this Agreement shall not become effective until July 1, 1999. The charges for Fiscal Year 1998-99 shall be calculated in the same manner that the charges for Fiscal Year 1997-98 were determined.

1. By May 1, 1999 Los Angeles shall prepare an estimated invoice for Fiscal Year 1998-99 in an amount equal to 90% of the total invoice for Fiscal Year 1997-98. By July 1, 1999 Contracting Entity shall pay the estimated invoice for Fiscal 1998-99.

2. By December 1, 1999 Los Angeles shall prepare a reconciliation invoice for Fiscal Year 1998-99 in an amount equal to the total charges for Fiscal Year 1998-99 less the estimated payment previously made. Contracting Entity shall pay the reconciliation invoice within 30 days of its receipt.

ATTEST:

[Signature]
J. Michael Carey
City Clerk
4/21/99

Approved as to Form:

James K. Hahn
Los Angeles City Attorney

CITY OF LOS ANGELES

[Signature]
Richard Riordan, Mayor

Date: APR 16, 1999

Christopher M. Westhoff
Assistant City Attorney
CITY OF BEVERLY HILLS

By ______________

Les Bronte, Mayor

ATTEST:

By ______________

Nina Udy, City Clerk

Approved as to Form:

HATCH AND PARENT

By ______________

Scott S. Slater, Esq., Hatch and Parent, Attorneys for the City of Beverly Hills

APPROVED AS TO CONTENT:

________________________

Mark Scott
City Manager

________________________

Dan Webster
Director of Public Works
<table>
<thead>
<tr>
<th>REACH</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA-1 TO B</td>
<td>PCH FROM N'LY CITY BNDRY TO IDAHO 60&quot; GRAVITY LINE</td>
</tr>
<tr>
<td>B TO J</td>
<td>PCH FROM IDAHO TO S. OF ARIZONA 60&quot; GRAVITY LINE</td>
</tr>
<tr>
<td>J TO C</td>
<td>PCH/APPN FROM S. OF ARIZONA TO MOSS AVE, PUMPING STATION, 60&quot; GRAVITY LINE</td>
</tr>
<tr>
<td>C TO G</td>
<td>MOSS AVE, PUMPING STATION AND FORCE MAINS FROM STATION TO OCEAN AVE, 2-30&quot; FORCE MAINS</td>
</tr>
<tr>
<td>G TO H</td>
<td>OCEAN AVE FROM FORCE MAIN TO PICO BLVD./MAIN ST. 39&quot; GRAVITY WITH REHABILITATED 39&quot; GRAVITY</td>
</tr>
<tr>
<td>H TO SM-1</td>
<td>MAIN ST. FROM PICO BLVD. TO S'LY CITY BNDRY REHABILITATED 30&quot;/30&quot; GRAVITY LINES WITH 54&quot; RELIEF LINE IN NELSON AVE. FROM PICO BLVD. TO S'LY CITY LIMITS</td>
</tr>
</tbody>
</table>
EXHIBIT B

General Fund Reimbursement Charge = \((V_{ERS} - V_{PI}) \times (V_{AS} \div V_{CLA}) \times (V_{PT} \div V_{DI}) \times P_{CE}\)

Where:

\(V_{ERS}\) = Value of emergency response services based on the operating budget as set annually by the Los Angeles City Council;

\(V_{PI}\) = Value of Los Angeles pre-designated income for emergency response services operation expenses, including income from county, state or federal grants, allowances, revenue sharing, etc. which are designated or restricted to funding emergency response services operating expenses; fees and charges specifically charged by Los Angeles for emergency response services; income from any assessment or tax specifically designated for emergency responses services; and any other income which may only be used for the benefit of emergency response services operation expenses;

\(V_{AS}\) = Value of the Amalgamated System, calculated by inflating the original costs of acquiring the assets by two percent (2%) per year and then depreciating the costs using the same asset lives used by Los Angeles in its accounting reports. The value of the Amalgamated System shall exclude the value of land, easements, underground sewers and interceptors, facilities replaced by newer facilities, and unused or abandoned facilities;

\(V_{CLA}\) = Total assessed value of all real and personal property, excluding the assessed value of land, in Los Angeles. This value includes the value of all county assessed real and personal property minus the assessed value of the included land; the value of all state assessed real and personal property minus the value of the included land; and the value of all Los Angeles real and personal property minus the value of the included land. The value of Los Angeles property, excluding land, should be the total for the assets in the Los Angeles fixed asset register, excluding underground pipes and land. The asset values shall be calculated by inflating the original costs of acquiring the assets by two percent (2%) and then depreciating the costs using the same asset lives used by Los Angeles in its accounting reports;

\(V_{PT}\) = Value of property tax revenue available for general fund expenditures. This amount excludes property taxes collected for debt service as well as property tax assessments approved by a popular vote that are collected for a specific purpose, or property tax assessments collected for another agency;

\(V_{DI}\) = Value of all discretionary income received by Los Angeles from property taxes, sales taxes, business taxes, license fees, grants, allotments, income sharing, investment income, etc. This value excludes income collected for debt service and income collected for a specific service (such as water, sewer, electric service charges, etc.); and

\(P_{CE}\) = Contracting Entity's Proportionate Share
APPENDIX 3-C. AGREEMENT WITH COUNTY OF LOS ANGELES
AGREEMENT BETWEEN THE CITY OF BEVERLY HILLS AND THE
COUNTY OF LOS ANGELES FOR ENFORCEMENT OF THE CITY'S
WASTEWATER ORDINANCE

THIS AGREEMENT is made and entered into this 14th
day of August, 1990, by and between the CITY OF BEVERLY HILLS,
hereinafter referred to as "CITY", and the COUNTY OF LOS ANGELES,
hereinafter referred to as "COUNTY".

RECITALS

WHEREAS, CITY has adopted Ordinance No. 90-0-2092 entitled
the "Wastewater Ordinance of the City of Beverly Hills" governing
the disposal of industrial wastes to the sanitary sewer and storm
drain systems of CITY; and

WHEREAS, CITY is desirous of contracting with COUNTY for the
enforcement of such Ordinance provisions and the performance of
services with respect to industrial waste as set forth in the
Ordinance; and

WHEREAS, COUNTY represents that it is capable, ready and
willing to render such services on the terms and conditions set
forth in this Agreement; and

WHEREAS, this contract is authorized and provided for by the
provisions of Section 56-1/2 of the Charter of the County of
Los Angeles and Article 1, Chapter 1, Part 2, Division 1, Title 5,
of the California Government Code.

NOW, THEREFORE, it is agreed as follows:

Section 1. Services

A. COUNTY agrees, through its Department of Public Works
(DEPARTMENT) of the County of Los Angeles, to provide enforcement
of the industrial waste provisions of CITY'S Wastewater Ordinance and the necessary services incident thereto. Such services shall only encompass duties and functions of the type coming within the jurisdiction of, and customarily rendered by, DEPARTMENT under the County Charter statutes of the State and various COUNTY ordinances.

B. The level of service provided shall be that same basic level of service that now is and shall be hereafter, during the term of this Agreement, provided for in the unincorporated area of the County of Los Angeles by DEPARTMENT and shall be sufficient to ensure compliance with applicable California and Federal laws.

C. COUNTY shall retain full control over providing services, establishing standards of performance governing the provision of the services and all matters incidental to the performance of such services, including, but not limited to, the controlling of personnel employed to provide the services.

D. The services provided under the terms of this Agreement shall include the enforcement of any applicable State statutes and all provisions of the above-referred to City Code Chapter as described in its current or future form. The services include, but are not limited to, providing inspections, filing of required reports and issuing permits. The services shall also include the inspection of open sanitary fills only in the event that CITY, by action of its Council, requests such services.

E. In the event a dispute arises between the parties to this Agreement, as to the extent of the duties and functions to be
rendered as a part of any service provided or the level or manner of performance of such service, the determination made by the Director of Public Works of the COUNTY shall be final and conclusive as between the parties.

Section 2. CITY Cooperation. To facilitate the performance of said functions, it is agreed that COUNTY shall receive the full cooperation and assistance from CITY, its officers, agents and employees.

Section 3. Supplies. COUNTY shall furnish and supply all necessary labor, supervision, equipment and supplies necessary to provide contract services rendered under the terms of this Agreement. Notwithstanding any other section in this Agreement, it is further agreed that in all instances wherein special supplies, stationery, notices, forms and the like must be prepared and issued in the name of CITY, CITY shall supply them at its own cost and expense.

Section 4. Status of COUNTY Employees

A. All persons employed in the performance of the services and functions described under the terms of this Agreement for CITY shall be COUNTY employees and no CITY employee shall be considered an employee of COUNTY, and no person employed hereunder shall be entitled to any CITY pension, civil service, or any other status or right as a CITY employee.

B. For the purpose of performing such services and functions and for the purpose of giving official status to the performance
thereof where necessary, every COUNTY officer and employee engaged in the performance of any service hereunder shall be deemed to be an officer or employee of said CITY while performing services for said CITY, which services are within the scope of this Agreement and are purely municipal functions.

Section 5. Liability for COUNTY Employees. CITY shall not be called upon to assume any liability for the direct payment of any salaries, wages or other compensation to any COUNTY personnel performing services hereunder for said CITY or any liability other than that provided for in this Agreement. CITY shall not be liable for compensation or indemnity to any COUNTY employee for injury or sickness arising out of his employment.

Section 6. Ordinance Compliance with COUNTY Code. This contract is entered into with the understanding that CITY will maintain in full force and effect an ordinance substantially identical with the provisions of COUNTY Code, Title 20, Division 2. This Agreement may be terminated by COUNTY without notice if CITY does not enact amendments to said ordinance in accordance with amendments to COUNTY Code, Title 20, Division 2, within 120 days after request to do so by COUNTY. The DEPARTMENT, acting on behalf of COUNTY, may use discretion and need not request CITY to adopt amendments which do not apply to CITY.

Section 7. Collection and Transfer of Fees Collected. COUNTY agrees to collect fees called for in the CITY'S ordinance and to pay CITY, within 60 days following each calendar quarter, all of the fees collected during such quarter and CITY agrees to pay COUNTY
monthly within 30 days after receipt of an invoice for expenditures relating to those services rendered during the billing period. The COUNTY'S charges for services rendered under the terms and purposes of this Agreement shall include currently effective percentages added to total salaries, wages and equipment costs to cover overhead, administration and depreciation in connection with any or all of the aforementioned items.

Section 8. Books and Records. COUNTY agrees to keep such books and records and in such form and manner as Auditor of COUNTY shall specify. Said books shall be open for examination by CITY at all reasonable times.

Section 9. Term and Termination. This Agreement shall become effective on the date first mentioned above and shall expire June 30, 1991. This Agreement shall be automatically renewed from year to year for successive one-year periods thereafter. Notwithstanding the provisions of this paragraph, COUNTY may terminate this Agreement at any time by giving 30 days prior written notice to CITY. CITY may terminate this Agreement as of the first day of July of any year upon giving 30 days prior written notice to COUNTY.

Section 10. Assumption of Liability. The Assumption of Liability Agreement executed by the parties to this Agreement and approved by the Board of Supervisors on December 27, 1977 currently in effect is hereby made a part of and incorporated into this Agreement as if set out in full herein unless said Assumption of Liability Agreement is expressly superseded by a subsequent Agreement hereafter entered into between the parties hereto.
IN WITNESS WHEREOF, the CITY by Resolution duly adopted by its City Council, caused this Agreement to be signed by its Mayor and attested by its Clerk; and the County of Los Angeles, by order of its Board of Supervisors, has caused this Agreement to be subscribed by the Chairman of said Board and the seal of said Board to be affixed thereto and attested by the Clerk of said Board, all on the day and year first above written.

ATTEST:  LARRY J. MONTEILH
EXECUTIVE OFFICER-CLERK
OF THE BOARD OF SUPERVISORS

COUNTY OF LOS ANGELES

By __________________________
DEPUTY

CITY OF BEVERLY HILLS

By __________________________
MAYOR

APPROVED AS TO FORM
DE WITT W. CLINTON
County Counsel

By __________________________
DEPUTY

APPROVED AS TO FORM:

By __________________________
ass. CITY ATTORNEY

APPROVED AS TO CONTENT:

By __________________________
CITY MANAGER
IN WITNESS WHEREOF, the CITY by Resolution duly adopted by its
City Council, caused this Agreement to be signed by its Mayor and
attested by its Clerk; and the County of Los Angeles, by order of
its Board of Supervisors, has caused this Agreement to be sub-
scribed by the Chairman of said Board and the seal of said Board to
be affixed thereto and attested by the Clerk of said Board, all on
the day and year first above written.

ATTEST: LARRY J. MONTIELH
EXECUTIVE OFFICER-CLERK
OF THE BOARD OF SUPERVISORS

by Luana C. Walton
DEPUTY

CHAIRMAN, BOARD OF SUPERVISORS

CITY OF BEVERLY HILLS

APPROVED AS TO FORM:
by De Witt W. Clinton
County Counsel

by Richard P. Chastony
DEPUTY

APPROVED AS TO FORM:

by Joseph E. Comic
City Attorney

APPROVED AS TO CONTENT:

by Mark Scott
CITY MANAGER

ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

SEP 18 1990

Vary J. Montielh
EXECUTIVE OFFICER
SECTION 4. OPERATION AND MAINTENANCE PROGRAM

4.1 Introduction
This section of the SSMP is intended to provide an overview of the City’s sewer system operations and maintenance program.

4.2 Regulatory Requirements for the Operations and Maintenance Program Section
The requirements for the Operations and Maintenance Program section of the SSMP are:

GWDR (Element 4 – Operations and Maintenance) Requirement:
The GWDR requirements for the Operations and Maintenance Program are:

- Maintain an up-to-date map of sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities;
- Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;
- Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
- Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and
- Provide equipment and replacement part inventories, including identification of critical replacement parts.

4.3 Operations and Maintenance Program
Operations and maintenance activities and programs are critical to ensuring the effectiveness and longevity of a healthy sanitary sewer collection system. The following sections describe the City of Beverly Hills’ efforts to operate and maintain its system in the most efficient and effective manner.
4.3.1 Collection System Maps

The Requirement: Maintain an up-to-date map of sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities.

In 2017, the City of Beverly Hills switched over from using its 1959 hard copy sewer atlas system to the City’s Geographical Information System (GIS) Program to manage the sewer system. Staff has access to the GIS maps using the City’s computer network system. Hard copies of these maps are located in the sewer bureau offices and also in the operator’s vehicles. From time to time, staff still uses the 1959 sewer atlas to verify the information in the GIS maps and also reference changes in the sewer system. The GIS system maps and hard copy maps display pipe length, size, material type, date built, flow direction, rim elevation, invert locations, manhole/cleanout locations, lateral locations, and unique identification (ID) numbers, and approximate locations of property lines so that limits of the City-owned facilities can be identified. A complete electronic and hard-copy inventory of existing sewer drawings and information is recorded and backed-up to ensure the safe storage of this valuable information for future generations.

The City’s entire collection system is broken down into 21 “Districts” for ease of understanding and equally dividing the crews’ responsibilities to complete maintenance of seven (7) “Districts” annually.

The City comprehensively updated their 1959 sewer Atlas as part of the 2010 Sanitary Sewer Master Plan (Master Plan). The Master Plan converted the 1959 sewer Atlas into an electronic format which is the origin of the GIS sewer Atlas system. The GIS atlas system is comprised of 50 total sheets consisting of an overview sheet and 49 zoomed sheets (Tiles 7-55): The overview sheet is at a scale of 1 in = 1,000 ft and Tiles 7-55 are at a scale of 1 in = 100 ft. The scale and accuracy of the maps provide sufficient enough information to be useful to field staff in their day-to-day operations and maintenance of the collection system. Sewer system maps are field checked on a continuous basis to ensure that the data is correct and complete. Operators are responsible for field-checking the accuracy of the system maps and these corrections are forwarded to the City’s GIS team to update the GIS system maps.

By the Fall of 2017, staff will be working to implement the wastewater operations into a Computerize Maintenance Management System (CMMS). The work will include incorporating a maintenance schedule based on historical data and GIS maps into CMMS. The City expects to complete the implementation between two to three years. The implementation of the CMMS will improve the division’s ability to thoroughly evaluate the collection system, enhance the maintenance schedule, and thoroughly plan for improvements. At the end of the implementation, the CMMS will be the record keeping system for operations.

Currently maintenance operations are recorded daily on a field report form and then entered into the Line Maintenance Database. The Line Maintenance Database was completed in 2016 and the operators are required to enter the following information to the database:

1. Line Number (Team Number)
2. District
3. FrMH (From Manhole)
4. ToMH (To Manhole)
5. Footage (in ft.)
6. Shots (number of passes needed to clean the sewer line)
7. Method (jet rodder, mechanical rodder, combination truck, auger, root saw, or hand rodder)
8. Factor (root or grease and a factor scoring from 0-3. 0 being non-noticeable to 3 as severe)
9. Truck No. (Truck No. used for task)
10. Operators
11. Pipe Type
12. Comments (Noticeable observation during maintenance)

The database interface is structured so that all of this information can be uploaded to the CMMS when implementation starts. Likewise, the database is programmed so staff can download the information into a workable Excel sheet. The workable Excel sheet allows staff to manipulate the data to provide performance measures and quickly identify problematic areas.

4.3.2 Preventive Operation and Maintenance

The Requirement: Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders.

The elements of the City's sewer system Operation & Maintenance program include:

- Proactive, preventive, and corrective maintenance of gravity sewers;
- Closed-Circuit Television (CCTV) inspection;
- Rehabilitation and replacement of sewers that are in poor condition; and
- Periodic inspection and preventive maintenance

The details of the City's Operation & Maintenance programs consist of the following:

**Maintenance Equipment:**

- The Wastewater Division operates the hydrojet truck, mechanical rodder and combination truck (hydrojet truck with vacuum) to maintain the sewer system. The hydrojet and combination truck are used in the central and southern areas of the City because there are no weight restrictions on this equipment. The mechanical rodder is used in the northern areas because it meets the weight restrictions on the hillside and has the greatest range in steep hill areas.
Operation and Maintenance Program
Rev. 1

City of Beverly Hills
Sewer System Management Plan

• The standard operating procedures for this equipment is in Appendix 4-C.

Regular Maintenance Schedule
• The Wastewater Division’s goal is to complete the maintenance of the 21 Districts on an annual basis. The 21 districts are broken up into three maintenance crews per Table 4-1 of which each crew is responsible to complete 7 districts on an annual basis.
• There are problematic areas within the sewer system. These areas are placed on a 30-60-90 Days Maintenance Schedule.

Table 4-1. Maintenance Crews

<table>
<thead>
<tr>
<th>Crew Name</th>
<th>Location</th>
<th>Districts</th>
<th>Equipment Truck</th>
<th>No. of Maintenance Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 3</td>
<td>Southern</td>
<td>1-7</td>
<td>Hydrojet Truck/ Combination Hydrojet Truck</td>
<td>2</td>
</tr>
<tr>
<td>Line 2</td>
<td>Central</td>
<td>8-14</td>
<td>Hydrojet Truck/ Combination Hydrojet Truck</td>
<td>2</td>
</tr>
<tr>
<td>Line 1</td>
<td>Northern</td>
<td>15-21</td>
<td>Mechanical Rodder Truck</td>
<td>2</td>
</tr>
</tbody>
</table>

30-60-90 Maintenance Schedule
• Problematic areas are placed into a 30 day, 60 day, and 90 day preventative maintenance schedule. The schedule was developed from historical sewer maintenance assessments and needs that are updated periodically based on maintenance factors (i.e. R3, G3; See Appendix 4-B: 30-60-90 Table). This schedule has been entered into a spreadsheet/database format which includes District number, manhole numbers, pipe material type, and sewer footages. This information is provided to each operator and the entire inventory can be found at the wastewater offices.

Smart Cover Monitoring Systems
On top of routine cleaning and inspection of the sewer system, the City purchased ten (10) SmartCover systems for manholes to help improve operation and monitoring of the sewer system. The SmartCover system is a web-based smart technology that provides real-time remote sewer overflow monitoring via a reliable satellite communications system. SmartCover units were installed on the underside of existing manhole covers and can be moved to various locations as monitoring needs change.

The SmartCover systems provide real-time monitoring of sewage levels in manholes and notify staff of potential sewer overflows. An alarm is transmitted to staff and allows staff to respond to these areas and perform maintenance before a sewer overflow occurs. The SmartCover units are placed strategically under manholes in areas were staff, through experience, have identified
to be susceptible to overflow based on land use (i.e. commercial, multifamily, mixed-use) or engineering/design issues (i.e. dropped lines). The City has been using these Smart Covers since July 1, 2016 and has prevented potential sewer overflows in these areas. The SmartCover systems have proven to be a valuable and beneficial asset to the City by reducing SSOs, improving response times, and enhancing service to customers.

SmartCover units are at the following current locations:

- 1128 Schuyler Road
- 1148 Pickfair Way
- 1156 Calle Vista Drive
- 1288 Monte Cielo Drive
- 514 Maple Drive
- 608 North Roxbury Drive
- 630 Doheny Road
- Benedict MH 18-137
- Horseshoe
- Roxbury Park

**Figure 4-1. SmartCover Monitoring System Locations**

**Visual/CCTV Inspections**
- The City’s collection system is inspected using closed circuit television (CCTV) using the Pipeline Assessment and Certification Program (PACP). The PACP rating system includes the following assessments:
  - Structural Rating
Data gathered during CCTV inspections is critical for scheduling predictive and preventative maintenance activities and repairs to avoid sanitary sewer overflows. Staff places the CCTV camera into a gravity sewer line and transmits video of the sewer line to a nearby service vehicle where the operators can inspect and evaluate the system. Problem coding (see Table 4-2) entered as part of the inspection includes:

- Structural Rating
- Condition Rating
- Joint Condition
- Root Intrusion
- Debris/Grease
- Inflow/Infiltration
- Alignment
- Leak Size
- Leak Description
- Crack Coding
### Table 4-2. CCTV Inspection Coding

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Crack</td>
</tr>
<tr>
<td>D</td>
<td>Broken</td>
</tr>
<tr>
<td>H</td>
<td>Hole</td>
</tr>
<tr>
<td>D</td>
<td>Deformed</td>
</tr>
<tr>
<td>S</td>
<td>Surface Damage</td>
</tr>
<tr>
<td>L</td>
<td>Linings</td>
</tr>
<tr>
<td>P</td>
<td>Pipe</td>
</tr>
<tr>
<td>R</td>
<td>Reinforcement</td>
</tr>
</tbody>
</table>

#### NASSCO'S PIPELINE ASSESSMENT CERTIFICATION PROGRAM (PACP®)

**Section 4 — Structural Defect Coding**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Crack</td>
</tr>
<tr>
<td>D</td>
<td>Broken</td>
</tr>
<tr>
<td>H</td>
<td>Hole</td>
</tr>
<tr>
<td>D</td>
<td>Deformed</td>
</tr>
<tr>
<td>S</td>
<td>Surface Damage</td>
</tr>
<tr>
<td>L</td>
<td>Linings</td>
</tr>
<tr>
<td>P</td>
<td>Pipe</td>
</tr>
<tr>
<td>R</td>
<td>Reinforcement</td>
</tr>
</tbody>
</table>

**Appendix B - Color Coded Chart**

### Pipeline Assessment Certification Program
Version 7.0.2 September 2018

City of Beverly Hills
Sewer System Management Plan

4-7

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Currently, the City has CCTV’d approximately 84 miles (84%) of the sewer system as part of the Sewer System Master Plan and also part of the pre & post rehabilitation work for each CIP project.

The City’s goal is to complete the assessment of the following lines in a five year cycle:

1. Lines that have not been assessed in the past CIP projects.
2. Lines that have not been assessed in the past five years.
3. Lines that are newly installed or rehabilitated within ten years.

Issues identified from these assessments will be added to future CIP projects to be repaired, rehabilitated or replaced.

Data gathered during CCTV inspection is critical for increasing the frequency of preventative maintenance activities, site outreach, and repairs to avoid sanitary sewer overflows. As part of the CCTV inspection, the City is also inspecting the conditions of private lateral connections to the sewer systems. Laterals that have structural and maintenance issues will be tagged, and the property owner will be notified to correct the
issue immediately. Failure to maintain private laterals will result in additional enforcement actions prescribed by the municipal code. Thus far, property owners have been quick to resolve lateral issues.

- City staff currently has two staff operators that are PACP certified. In addition to the routine CCTV inspection, CCTV is done after a sewer overflow to determine the cause and also in response to a residential complaint about the sewer system. Typical CCTV inspections show that private lateral connections are obstructed by roots and sometimes connection failure.
- The City is also utilizing CCTV inspections to provide quality control and quality assurance for maintenance work.
- Roots, grease or debris issues identified by CCTV inspections are resolved by maintenance.
- Structural issues identified by CCTV inspections are resolved by placing it to the repair or replacement list for the next CIP project.
- Significant structural issues are repaired through emergency contracts.

Rehabilitation and Replacement Program

The Requirement: Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan.

Each year, the City evaluates the number and severity of the lines that are identified to be replaced, repaired, and rehabilitated. Based on an annual assessment, the City will plan to start a CIP project to correct these issues. If the number of lines is determined to be minimal, repairs and rehabilitation of these lines are included into an existing CIP project where the contractor is capable of repairing the sewer system.

As part of this program, the City allocates sufficient funds in the CIP program to make these repairs as necessary and as planned. Table 4-3 summarizes the CIP through FY 2020/21.
### Table 4-3. Capital Improvement Program, Sanitary Sewer, FY 2016/2017 through 2021/2022

<table>
<thead>
<tr>
<th>Project</th>
<th>16/17 Revised Budget</th>
<th>17/18 Proposed</th>
<th>18/19 Proposed</th>
<th>19/20 Proposed</th>
<th>20/21 Proposed</th>
<th>21/22 Proposed</th>
<th>5-Year Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer System Repairs</td>
<td>$14,648,101</td>
<td>$1,807,900</td>
<td>$1,807,900</td>
<td>$1,807,900</td>
<td>$1,807,900</td>
<td>0</td>
<td>$7,231,600</td>
</tr>
<tr>
<td>Hyperion Plant - Capital Component</td>
<td>$5,022,610</td>
<td>$3,118,800</td>
<td>$1,363,100</td>
<td>$1,363,100</td>
<td>$1,363,100</td>
<td>0</td>
<td>$7,208,100</td>
</tr>
<tr>
<td>Public Works Asset Management System</td>
<td>$89,642</td>
<td>$53,000</td>
<td>$53,000</td>
<td>$53,000</td>
<td>$53,000</td>
<td>0</td>
<td>$212,000</td>
</tr>
<tr>
<td>Total</td>
<td>$19,760,353</td>
<td>$4,979,700</td>
<td>$3,224,000</td>
<td>$3,224,000</td>
<td>$3,224,000</td>
<td>0</td>
<td>$14,651,700</td>
</tr>
</tbody>
</table>

Funds that support the sanitary sewer portion of the Capital Improvement Program come from the City’s Wastewater Enterprise Fund (Fund 84). The sewer fund is an enterprise fund by which reserves are generated from connection fees and monthly user fees based on the current rate structure.

#### 4.3.3 Training

**The Requirement:** *Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.*

The City uses a combination of in-house classes; on the job training; and conferences, seminars, and other training opportunities to train its wastewater collection system staff. Table 4-4 displays the City's trainings and frequencies. All staff working on the City's collection system are Certified Wastewater Operators.

The City sought the services of Nezat and Consulting Services, Inc. to evaluate the City’s wastewater maintenance program. The evaluation included methods, equipment, and maintenance scheduling. The training formalized the maintenance program by producing a “Sewer Cleaning Training Workbook” for staff reference and re-training. The Sewer Cleaning Training Workbook is located in the Wastewater Division Offices at the Public Works Building. The following recommended actions were provided to improve and reduce the City’s SSO frequency:

- Provide “eyes in the pipe” to improve lateral cleaning, the biggest issue with sewer blockages. This can be completed by either using the CCTV inspection simultaneously during maintenance or purchase state of the art maintenance nozzles that have camera accessories.
- Orifices on nozzles should be replaced with a warthog nozzle to improve cutting roots and removing blockages
- Truck gauges should be replaced
- Improve lighting on service trucks
### Table 4-4. Wastewater Collection Safety Training

<table>
<thead>
<tr>
<th>Training Workshop</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPR</td>
<td>Required Annually</td>
</tr>
<tr>
<td>Confined Space Training</td>
<td>Required Annually</td>
</tr>
<tr>
<td>Lock-out/Tag-out</td>
<td>Required Annually</td>
</tr>
<tr>
<td>Competent Person Training</td>
<td>Required Annually</td>
</tr>
<tr>
<td>First Aid</td>
<td>Required Every 3 Years</td>
</tr>
<tr>
<td>Safety Tailgate Meetings</td>
<td>Weekly or Bi-Weekly</td>
</tr>
<tr>
<td>Environmental Safety</td>
<td>Required Annually</td>
</tr>
<tr>
<td>Hazardous Waste Operations and Emergency Response – Operations Level</td>
<td>Required Annually</td>
</tr>
<tr>
<td>Bloodborne Pathogens/Fire Extinguisher Operation</td>
<td>Required Annually</td>
</tr>
<tr>
<td>Hearing Conservation/Heat Stress</td>
<td>Required Annually</td>
</tr>
<tr>
<td>Respirator Certification</td>
<td>Required Annually</td>
</tr>
<tr>
<td>Hazardous Materials Handling</td>
<td>Required Every 3 Years</td>
</tr>
<tr>
<td>Forklift Operator Training</td>
<td>Recommended Annually</td>
</tr>
<tr>
<td>OSHA Recordkeeping</td>
<td>Recommended Annually</td>
</tr>
<tr>
<td>Trench Safety Awareness</td>
<td>Recommended Every 3 Years</td>
</tr>
<tr>
<td>Hazard Communication</td>
<td>Recommended Every 3 Years</td>
</tr>
<tr>
<td>Aerial Lift Operator Training</td>
<td>Recommended Every 3 Years</td>
</tr>
<tr>
<td>Backhoe Operator Training</td>
<td>Recommended Every 3 Years</td>
</tr>
<tr>
<td>Crane Operator Training</td>
<td>Recommended Every 3 Years</td>
</tr>
<tr>
<td>Flagging Safety</td>
<td>Recommended Every 3 Years</td>
</tr>
<tr>
<td>Driver Awareness</td>
<td>Recommended Every 2 Years</td>
</tr>
<tr>
<td>Ergonomics – Field and Transit Personnel</td>
<td>Recommended Every 2 Years</td>
</tr>
<tr>
<td>Ergonomics – Office Personnel</td>
<td>Recommended Every 2 Years</td>
</tr>
<tr>
<td>Preventing Substance Abuse in the Workplace</td>
<td>Recommended Every 2 Years</td>
</tr>
<tr>
<td>Safe Workplaces – When Being Nice Isn’t Working</td>
<td>Recommended Every 2 Years</td>
</tr>
<tr>
<td>Technology – Managing Risks in Email, Internet, Blogs and Cell Phones</td>
<td>Recommended Every 2 Years</td>
</tr>
<tr>
<td>Hand and Portable Power Tool Safety</td>
<td>As Needed</td>
</tr>
<tr>
<td>Introduction to Cal-OSHA/Conducting Safety Inspections</td>
<td>As Needed</td>
</tr>
<tr>
<td>Fall Protection Awareness</td>
<td>As Needed</td>
</tr>
</tbody>
</table>

Safety meetings are documented in a safety log.
4.3.4 Contingency Equipment and Replacement Inventories

The Requirement: Provide equipment and replacement part inventories, including identification of critical replacement parts.

Maintenance Equipment

The equipment identified in Table 4-5 is utilized to respond during emergency conditions, such as an SSO, as well as for conducting area and preventive maintenance activities.

Table 4-5. Wastewater Collection Equipment

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>TYPE</th>
<th>YEAR</th>
<th>SPECIFICATIONS</th>
<th>USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 FREIGHTLINER M2</td>
<td>Hydro-jet Truck</td>
<td>2011</td>
<td>Hydro-jet</td>
<td>Hydrojet maintenance</td>
</tr>
<tr>
<td>2015 FREIGHTLINER 114 SD</td>
<td>Combination Truck (Hydro-Jet)</td>
<td>2015</td>
<td>Hydro-jet truck and 4000 gallon vacuum truck</td>
<td>Hydrojet maintenance, SSO Cleanup, and catch basin cleaning</td>
</tr>
<tr>
<td>2006 GMC C7500</td>
<td>Mechanical Rodder</td>
<td>2006</td>
<td>Mechanical Rodder</td>
<td>Hillside and root maintenance.</td>
</tr>
<tr>
<td>2015 Pacific Tek PV-500-WB-T</td>
<td>Vacuum Trailer</td>
<td>2015</td>
<td>200 gallon vacuum tank</td>
<td>SSO Cleanup and catch basin cleaning</td>
</tr>
<tr>
<td>2008 FORD F450</td>
<td>CCTV Vehicle</td>
<td>2008</td>
<td>CCTV equipment with POSM software</td>
<td>CCTV of sewer system</td>
</tr>
<tr>
<td>Ford / F450</td>
<td>Service Truck</td>
<td>2012</td>
<td>Dump-Truck</td>
<td>Supervisor response vehicle to service calls</td>
</tr>
<tr>
<td>Dodge Ram 1500</td>
<td>Service Truck</td>
<td>2002</td>
<td>Pick-Up Truck</td>
<td>Staff response vehicle to service calls.</td>
</tr>
<tr>
<td>2014 MUTLIQUIP QP-4TH</td>
<td>Water Pumps</td>
<td>2015</td>
<td>Water Pumps</td>
<td>Emergency backup pump and divert to sewer line</td>
</tr>
<tr>
<td>2015 MULTIQUIP QP-4TH</td>
<td>Water Pumps</td>
<td>2015</td>
<td>Water Pumps</td>
<td>Emergency backup pump and divert to sewer line</td>
</tr>
</tbody>
</table>
Replacement Part Inventories

The City of Beverly Hills’ collections system is comprised of gravity sewer lines ranging in size from 6- to 36-inches in diameter. When emergency repairs are needed, the City of Beverly Hills activates its emergency repair contract to resolve these emergencies. The City’s contractor has a sufficient inventory of pipes, repair couplings, and fittings and by-pass equipment to repair or replace sewer lines. In addition, the City has inventory on replacement and supplemental parts for its maintenance equipment. Tables 4-6 through 4-10 are wastewater equipment and part inventories.

Table 4-6. Wastewater Equipment and Part Inventory List for Combo Hydrojet Truck and Hydrojet Truck

<table>
<thead>
<tr>
<th>PART NAME</th>
<th>DESCRIPTION</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader Hose</td>
<td>Black Hose</td>
<td>2</td>
</tr>
<tr>
<td>Hose Guide</td>
<td>Tiger Tail</td>
<td>5</td>
</tr>
<tr>
<td>Fill Water Hose</td>
<td>30 ft. length</td>
<td>3</td>
</tr>
<tr>
<td>Manhole Roller</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Wire Gauge 6 in.</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Wire Gauge 8 in.</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Wire Gauge 10 in.</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Nozzle Extension Metal Pipe</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Warthog Nozzle</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Finishing Nozzle</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Flushing Nozzle</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Rotational Nozzle</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Penetrating Nozzle</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>General Cleaning Nozzle</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Extension Tool Fiber Glass Pole</td>
<td>Orange and Yellow</td>
<td>12</td>
</tr>
<tr>
<td>Heavy Duty Water Hose. 2500 PSI</td>
<td>600 ft. length</td>
<td>1</td>
</tr>
<tr>
<td>Vacuum Hose Green 4 inch dia, 10 ft. length</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Vacuum Hose Green 6 inch dia, 20 ft. length</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>PVC Discharge Hose Blue 6 inch dia., 50 ft. length</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Vacuum Extension Pipe Metal 5 ft. length</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Water Hose Coupling Male</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Water Hose Coupling Female</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Bumps Orange and Textile Fiber</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Heavy Duty Water Hose 2500 PSI</td>
<td>800 ft. length</td>
<td>1</td>
</tr>
<tr>
<td>Diamond Tap Cutter and Kits 6 in. and 8 in.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Curve Blade for Root and Grease 6 in. and 8 in.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>T-Handles Metal</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>
Table 4-7. Wastewater Equipment and Part Inventory List for Mechanical Rodder Truck

<table>
<thead>
<tr>
<th>PART NAME</th>
<th>DESCRIPTION</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hose Guide</td>
<td>Heavy duty guide hose</td>
<td>4</td>
</tr>
<tr>
<td>Hose Guide Bell</td>
<td>Metal</td>
<td>2</td>
</tr>
<tr>
<td>Manhole Hook</td>
<td>Metal</td>
<td>6</td>
</tr>
<tr>
<td>Hydrant Wrench</td>
<td>Metal</td>
<td>8</td>
</tr>
<tr>
<td>Coupling for Sectional Rod</td>
<td>Metal</td>
<td>14</td>
</tr>
<tr>
<td>Sewer Rod Complete with Coupling</td>
<td>Metal</td>
<td>125</td>
</tr>
<tr>
<td>Coupling for Sectional Rod</td>
<td>Metal</td>
<td>35</td>
</tr>
<tr>
<td>Adapter Rods</td>
<td>Metal</td>
<td>14</td>
</tr>
<tr>
<td>Concave Root Saw</td>
<td>8 in.</td>
<td>10</td>
</tr>
<tr>
<td>Concave Root Saw</td>
<td>6 in.</td>
<td>8</td>
</tr>
<tr>
<td>Concave Root Saw</td>
<td>10 in.</td>
<td>7</td>
</tr>
<tr>
<td>Concave Root Saw</td>
<td>12 in.</td>
<td>3</td>
</tr>
<tr>
<td>Concave Root Saw</td>
<td>15 in.</td>
<td>2</td>
</tr>
<tr>
<td>Pickup Tool</td>
<td>Metal</td>
<td>10</td>
</tr>
<tr>
<td>Spear Head</td>
<td>Metal</td>
<td>5</td>
</tr>
<tr>
<td>Assembly Wrench</td>
<td>Metal</td>
<td>8</td>
</tr>
<tr>
<td>Sand Cork Screw</td>
<td>4 in.</td>
<td>4</td>
</tr>
<tr>
<td>Corkscrew</td>
<td>Metal</td>
<td>4</td>
</tr>
<tr>
<td>Sand Leader</td>
<td>Metal 3 in.</td>
<td>4</td>
</tr>
<tr>
<td>Turn Type Brush</td>
<td>6 in.</td>
<td>4</td>
</tr>
<tr>
<td>Turn Type Brush</td>
<td>8 in.</td>
<td>3</td>
</tr>
<tr>
<td>Turn Type Brush</td>
<td>4 in.</td>
<td>3</td>
</tr>
<tr>
<td>Turn Type Porcupine</td>
<td>6 in.</td>
<td>1</td>
</tr>
<tr>
<td>Turn Type Porcupine</td>
<td>8 in.</td>
<td>1</td>
</tr>
<tr>
<td>Auger</td>
<td>6 in.</td>
<td>7</td>
</tr>
<tr>
<td>Auger</td>
<td>8 in.</td>
<td>4</td>
</tr>
<tr>
<td>Auger</td>
<td>3 in.</td>
<td>2</td>
</tr>
<tr>
<td>Double Corkscrew</td>
<td>6 in.</td>
<td>2</td>
</tr>
</tbody>
</table>
### Table 4-8. Wastewater Equipment and Part Inventory List for CCTV Truck

<table>
<thead>
<tr>
<th>PART NAME</th>
<th>DESCRIPTION</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tires Set</td>
<td>6 in.</td>
<td>12</td>
</tr>
<tr>
<td>Tires Set</td>
<td>8 in.</td>
<td>12</td>
</tr>
<tr>
<td>Tires Set</td>
<td>10 in.</td>
<td>12</td>
</tr>
<tr>
<td>Cable Pin Male Set</td>
<td>Pick tail (yellow)</td>
<td>4</td>
</tr>
<tr>
<td>Electric Heavy Duty Extension Cord</td>
<td>60 ft. length</td>
<td>2</td>
</tr>
<tr>
<td>Backup Camera for 798</td>
<td>Video Camera (sewer)</td>
<td>1</td>
</tr>
<tr>
<td>Push Camera</td>
<td>300 ft. length cable</td>
<td>1</td>
</tr>
<tr>
<td>T-Handle</td>
<td>Metal</td>
<td>2</td>
</tr>
<tr>
<td>Tripod</td>
<td>Tripod and rescue kit</td>
<td>1</td>
</tr>
<tr>
<td>Oxygen Tank</td>
<td>Fiber Glass</td>
<td>4</td>
</tr>
<tr>
<td>Pump Container</td>
<td>Industrial Cleaner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Degreaser Pump</td>
<td>4</td>
</tr>
</tbody>
</table>

### Table 4-9. Manhole Replacement Part Inventory

<table>
<thead>
<tr>
<th>PART NAME</th>
<th>DESCRIPTION</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Manhole Cover</td>
<td>24 in.</td>
<td>12</td>
</tr>
<tr>
<td>Metal Manhole Cover</td>
<td>36 in.</td>
<td>4</td>
</tr>
<tr>
<td>Metal Ring</td>
<td>24 in.</td>
<td>12</td>
</tr>
<tr>
<td>Metal Ring</td>
<td>36 in.</td>
<td>4</td>
</tr>
<tr>
<td>Composite Manhole</td>
<td>Ring 24 in.</td>
<td>18</td>
</tr>
<tr>
<td>Composite Manhole</td>
<td>Cover 24 in.</td>
<td>18</td>
</tr>
<tr>
<td>Composite Manhole</td>
<td>Ring 36 in.</td>
<td>6</td>
</tr>
<tr>
<td>Composite Manhole</td>
<td>Cover 36 in.</td>
<td>6</td>
</tr>
<tr>
<td>Lamphole</td>
<td>Metal Ring and Cover</td>
<td>10</td>
</tr>
</tbody>
</table>

### Table 4-10. Wastewater Equipment and Part Inventory List for Vacuum Trailer

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APPENDIX 4-A. CITY OF BEVERLY HILLS SEWER ATLAS SYSTEM
EVERY REASONABLE EFFORT HAS BEEN MADE TO ASSURE THE ACCURACY OF THIS MAP. HOWEVER, NEITHER THE LA COUNTY PARTICIPANTS NOR ANY OTHER GOVERNMENT AGENCY ASSUMES ANY LIABILITY ARISING FROM ITS USE. THIS MAP IS PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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1 inch = 100 feet

PHASE 1

TILE-49

Date Plotted: 04-04-2016

CITY OF BEVERLY HILLS - "Sanitary Sewer System Atlas"
APPENDIX 4-B. 30-60-90 TABLE
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<td>15</td>
<td>15104</td>
<td>15103</td>
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<tr>
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<td>15101</td>
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<td>Year</td>
<td>Code</td>
<td>Time</td>
<td>Work</td>
<td>Code</td>
<td></td>
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<tr>
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<tr>
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<td>8</td>
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<td>8</td>
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<td>1891</td>
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<td>239</td>
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<td></td>
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<td>1937</td>
<td>D1936</td>
<td>8</td>
<td>310</td>
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<td></td>
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<tr>
<td>3</td>
<td>19</td>
<td>D1936</td>
<td>1935</td>
<td>8</td>
<td>291</td>
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<td></td>
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<td>20</td>
<td>2019</td>
<td>2019</td>
<td>8</td>
<td>186</td>
<td>VCP</td>
<td></td>
</tr>
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<td>3</td>
<td>21</td>
<td>2146</td>
<td>2147</td>
<td>8</td>
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<td>3</td>
<td>21</td>
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<td>2140</td>
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<td>VCP</td>
<td></td>
</tr>
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<td>21-69</td>
<td>21-70</td>
<td>8</td>
<td>246</td>
<td>VCP</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 4-C
Rev. 1

APPENDIX 4-C. STANDARD OPERATING PROCEDURES “HYDRO JET OPERATOR”
Connecting the trailer to the truck

- The 2011 Ford F 450 is the sanitary sewer truck.
- Select the proper size hitch ball.
- Assure the two safety chains are connected to the Class III hitch.
- Assure the electrical plug is properly connected, and check the operation of the lights.
- Install the pin in the hitch latching mechanism.
- Check the engine oil, hydraulic fluid, and the fuel.

Driving the trailer

- Assure the mirrors on the truck are adjusted properly.
- Have a spotter when backing.
- Adjust the trailer brakes.
- Give more time for stopping due to the heavy weight of the trailer.
- Give more of a turning radius.
- Perform driver test prior to pulling the trailer.

Work site safety

- Wear an orange traffic vest at all times.
- Identify potential traffic hazards.
- Use flashers and overhead warning lights.
- Use traffic cones at all times when in the street.
- Use the Stop/Slow sign when controlling traffic, do not use hand signals.
- Use the vehicle as a barrier between workers and traffic.
- Use warning signs when appropriate, Ex. ROAD WORK AHEAD.
- Be aware of your surroundings at all times.
- It’s your responsibility to control the flow of traffic.

Hydro Jet operation

- Use a spotter, back the hydro jet, centering the hose reel over the manhole.
- Use proper lifting technique when removing the manhole cover.
- Start the engine and bleed the air from the pump.
- Select the proper nozzle for cleaning.
- Insert the leader hose into the tiger tail, and insert nozzle into the sewer line, running to the upstream manhole.
- Assure the nozzle is in the line, and engage the pump and slowly throttle up the engine.
- Run the hose out slowly (keep in mind the footage of the run).
- When at the end of the run, begin retracting the hose slowly to assure a good clean.
- Inspect the hose condition when retracting.
- Once the leader hose is in sight, run the unit for a few minutes to clear debris from the end of the line.
- Throttle down the engine and disengage the pump.
- Retract the hose the rest of the way.
• Remove the nozzle and wash down the inside of the manhole.
• Replace the manhole cover and pick up all traffic equipment.

**Clean up**
• Prior to returning the hydro jet to the shop, wash it down and ensure the water tank is ¾ full.
• Close the water feed valve and clean the pump water filter.
• Remove any nozzles from the hose.
• Return the keys to 2011 Ford F 450 (a spare key is located at the WWTP in the key lock box).

*Wear the proper Personal Protective Equipment at all times, including gloves, boots, safety glasses, and hearing protection.*
SECTION 5. DESIGN AND PERFORMANCE PROVISIONS

5.1 Introduction
This section of the SSMP provides standards for installation, rehabilitation, and repair of the sewer collection system, as well as standards for inspection and testing of new, rehabilitated, and repaired facilities. The standards are intended to ensure that new construction, replacement, and rehabilitation of the sewer collection system uses the most recent and relevant standards of the industry.

5.2 Regulatory Requirements for Design and Performance Provisions
The requirements for the Design and Performance Provisions section of the SSMP are:

GWDR (Element 5 – Design and Performance Provisions) Requirement:
The GWDR requirements for the Design and Performance Provisions are:

- Identify design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations, and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and
- Identify procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

5.3 Design and Construction Standards for Sewers, Pump Stations, and Appurtenances
The Requirement: The SSMP must identify design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations, and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems.

5.3.1 Design Standards for Sewers, Pump Stations, and Appurtenances
The City of Beverly Hills design criteria (such as pipe material, size and location, etc. – City Standard Detail Drawing, Section II) is outlined in Appendix 5-A. The system design criteria provides guidelines for sewer pipe alignment, pipeline location, minimum depth, manhole criteria, allowable head loss in manholes, and horizontal and vertical separation between sewer and water mains. In addition, Appendix 5-A provides additional design criteria to be used for new pipelines that covers the minimum velocity requirements, slope, and Inflow/Infiltration standards.

With respect to system rehabilitation and repair, the City uses a combination of measures (spot repairs, linings, coatings, etc.) depending on site-specific conditions to restore system performance to acceptable levels. Part 5, System Rehabilitation, of the Standard Specifications for Public Works Construction (Greenbook) is used as the basis of design.

5.3.2 Construction Standards for Sewers, Pump Stations, and Appurtenances
Currently, the City of Beverly Hills has established construction standards for the major components of the City’s sewer system. The requirement for conforming to the City’s construction standards is described in the City Code, Section 9, Articles 9-B-1 and 9-2B-5. The City’s Director of Public Works and engineering staff review the construction standards for accuracy and update the standards as needed. The last full issuance of all the City’s construction standard details was in July 2009. Many of the City’s standards have since been revised as recently as November 2010 and November 2011.

The City relies on a number of base standards to supplement their standard details, including the State of California, Department of Transportation (Caltrans) Standards, ASTM Standard Specifications, and the Standard Specifications for Public Works Construction (Greenbook). In the event that no City of Beverly Hills Standard Detail addresses a certain aspect of construction, the standards of the County of Los Angeles, Caltrans, or the Design Engineering Firm performing the design are used to develop appropriate details.

The City’s standard details for construction are located on the City’s website at http://www.beverlyhills.org. The standard details are specifically located at http://www.beverlyhills.org/citygovernment/departments/publicworkstransportation/civilengineering/, and include the following list of drawings (a copy of each is also included in Appendix 5-B.)

Section II – Sewer and Sanitation

| BH 201 | Drop Manhole “S” |
| BH 202 | Large Manhole “B” |
| BH 203 | Junction Chamber “F” |
| BH 204 | Junction Chamber “G” |
| BH 205 | Junction Chamber “H” |
| BH 206 | Terminal Manhole “Q” |
| BH 207 | Modified Junction Chamber “F” |
| BH 208 | Non-Rocking Manhole Frame and Cover |
| BH 209 | Large Manhole Frame and Cover |
| BH 210 | Pipe Supports Across Trenches |
| BH 211 | Pipe Bedding in Trenches |
| BH 212 | Sewer and Water Main Separation (Parallel and Perpendicular) < 10’ |
| BH 213 | Cradling and Encasement |
| BH 214 | Lateral Connect to Lined Sewer Main |
5.4 Inspection and Testing Standards for the Installation of Sewers, Pump Stations, and Appurtenances

The Requirement: The SSMP must identify the procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances, and for rehabilitation and repair projects.

Poor design and/or improper construction of newly constructed or rehabilitated sewer lines can sometimes lead to sanitary sewer overflows and operating problems. An effective program that confirms new sewers are properly designed and installed can minimize system deficiencies that could create or contribute to future overflows or operation and maintenance problems.

All components of the sewer system are inspected, and tests are reviewed before a system (or component of the system) is accepted by the City. Inspection and testing requirements for sewer system components are fully described in appropriate sections of the Greenbook and include closed-circuit video inspection to identify grade variations or other construction defects (before and after), air-pressure test to identify leakage, mandrel testing to identify deflection in flexible pipe, and hydrostatic testing of pressure mains to identify leakage. The most frequently used sections of the Greenbook include:

- Section 207 – Pipe
- Section 306 – Underground Conduit Construction
- Section 500 – System Rehabilitation

The City has the authority to enforce inspection and testing for new, rehabilitated, and repaired facilities, as described in Section 3 of this SSMP. The City employs full-time Public Works staff to perform inspections and also contracts-out for additional inspectors as needed.
APPENDIX 5-A. SEWER SYSTEM DESIGN CRITERIA

Alignment: Sewer pipelines shall be designed so as to have a minimum of curvature both horizontal and vertical.

Whenever possible, sewer lines shall be laid out in a straight line between structures. Curved sewer lines will be allowed under the following conditions:

- All curve data shall be shown on the plans.
- Minimum radius of curvature and joint deflections shall be as recommended by the pipe manufacturer and approved by the City Engineer.
- All deflections shall be at the pipe joints or by specially manufactured mitered pipe sections.

Pipeline Location: Whenever possible, the pipe is to be located along the street centerline. Pipe shall not be located in median strips or parking lanes. However, in all cases the pipeline location shall comply with applicable county and state requirements.

Minimum Depth: Minimum depth from finish street grade to top of sewer main pipe shall be 5 feet. If 5 feet of cover is not feasible due to the depth of the existing Main Connection Point, the City will consider lesser depths on a case-by-case basis and may require appropriate protective cover such as slurry.

Manhole Criteria: Manhole locations are at:

- Changes of slope in sewers.
- Changes of direction of sewers.
- Junctions of main sewers.
- Termination of sewers.
- Junction of main sewer and lateral sewer if lateral is same size as main sewer.
- Pipe size change.
- Other locations specified by the City.

Maximum manhole spacing shall be 400 feet.

Allowable head losses in manholes:

- Straight run through manholes based on 0.00 foot loss.
- Right angle turn in manholes based on 0.5 velocity head loss, or 0.10 foot, whichever is greater.

Horizontal and Vertical Separation: The City, in accordance with requirements of the State of California, Department of Health Services, requires minimum horizontal and vertical separation
between sewer and water mains. The regulations in place at the time of construction shall apply to the work.

Additional Sewer Design Criteria is outlined in Section 4 of the September 2010 Master Plan.

Section 4 is included on the following page.
Section 4—Sewer Design Criteria

The use of design criteria and standards are to ensure that sewer facilities meet a certain requirement in order to maintain a properly functioning sewer system. Design criteria for a sewer system is the basis for determining if a pipeline is deficient and requires improvement.

4.1 Existing City Design Criteria

Design criteria was established in the 1997 Master Plan as the basis for the system analysis and recommendation for capital improvement projects. The design criteria included flow coefficients, collection system design criteria, and inflow and infiltration assumptions.

4.1.1 Wastewater Flow Coefficients

Wastewater flow coefficients are developed to determine the quantity of wastewater flow generated by a specific land use type. Flow coefficients can be based on the land use area, dwelling count, population or building square footage. Flow coefficients are used to help estimate existing flows and predict future flows. They are used to allocate system flow inputs at manholes/nodes in a hydraulic model. The 1997 Master Plan derived individual flow coefficients for the major land uses throughout the City based on published data and other local agency standards. The flow coefficients utilized in the 1997 Master Plan are listed in Table 4-1. The flow coefficients are provided in ranges depending on the density.

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Flow Coefficient (gpd/ac)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Res.</td>
<td>700 - 900</td>
</tr>
<tr>
<td>Multi Family Res.</td>
<td>5,700 - 6,500</td>
</tr>
<tr>
<td>Commercial</td>
<td>10,000 – 13,600</td>
</tr>
<tr>
<td>Municipal/Industrial</td>
<td>7,000 - 8,725</td>
</tr>
<tr>
<td>Education/Religious</td>
<td>500 – 1,000</td>
</tr>
</tbody>
</table>
4.1.2 Collection System Design Criteria

The 1997 Master Plan established “depth to diameter” (d/D) criteria for both dry weather and wet weather conditions. The d/D ratio represents the depth of flow in relation to the overall diameter of the pipe. The following d/D criteria from the 1997 Master Plan were used as the basis for determining hydraulic deficiencies.

Table 4-2: 1997 Master Plan Collection System Design Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Dry Weather</th>
<th>Wet Weather</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 15&quot;</td>
<td>d/D = 0.50</td>
<td>d/D = 0.90</td>
</tr>
<tr>
<td>&gt; 15&quot;</td>
<td>d/D = 0.75</td>
<td>d/D = 0.90</td>
</tr>
</tbody>
</table>

4.1.3 Inflow and Infiltration

There are two components to inflow and infiltration used in the 1997 Master Plan. Base inflow and infiltration (BII) refers to the additional flow in the sewer system that is not a direct result of water usage. It typically is a result of pipe cracks and faulty plumbing. BII is present in the sewer system at all times. Rainfall induced inflow and infiltration (RFII) is the additional flow in the sewer system that is a direct result of rainfall, and is only accounted for in the wet weather analysis.

4.2 Recommended City Design Criteria

The design criteria established in this report was used as the basis for the system analysis, as discussed in Section 6. Flow coefficients were developed based on water billing data and refined with flow monitoring data. Flow loading based on the anticipated defect flow was also refined with the flow monitoring data. Collection system criteria was used to determine deficient pipelines and as the basis for the capital improvement program. Inflow and infiltration was determined based on flow monitoring data during storm events.

4.2.1 Wastewater Flow Coefficients

As a part of this analysis, the previously established wastewater flow coefficients were evaluated. The City provided water billing data for the previous three complete fiscal years (07/08, 08/09, 09/10). The water billing data was evaluated to determine annual water use and water usage per land use. On average, the metered records indicate City customers use 8.7 million gallons of water per day. Based on the system-wide wastewater generation determined from flow monitoring data, it was
calculated that approximately 73% of the billed water is returned to the sewer system. The calculations did not include water specifically used for irrigation purposes and it excluded wastewater generated from the treatment plant. The return to sewer ratios for each major land use type were calculated and identified in Table 4-3.

Table 4-3: Return to Sewer Ratios

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Return to Sewer Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Res.</td>
<td>60</td>
</tr>
<tr>
<td>Multi Family Res.</td>
<td>90</td>
</tr>
<tr>
<td>Commercial</td>
<td>95</td>
</tr>
<tr>
<td>Municipal/Industrial</td>
<td>95</td>
</tr>
<tr>
<td>Education/Religious</td>
<td>90</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
</tr>
</tbody>
</table>

The return to sewer ratios were multiplied by the billed water data for each land use type to calculate a wastewater flow coefficient. The calculated wastewater coefficients are identified in Table 4-4.

Table 4-4: Wastewater Flow Coefficients

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Flow Coefficient (gpd/ac)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Res.</td>
<td>1,000 -1,500</td>
</tr>
<tr>
<td>Multi Family Res.</td>
<td>6,500 -8,000</td>
</tr>
<tr>
<td>Commercial</td>
<td>5,000 – 6,600</td>
</tr>
<tr>
<td>Municipal/Industrial</td>
<td>10,000 – 13,500</td>
</tr>
<tr>
<td>Education/Religious</td>
<td>2,500 – 3,000</td>
</tr>
</tbody>
</table>

Wastewater flow loading for the hydraulic model was based on anticipated defect and wastewater flow. The defect flow analysis used the data from the temporary and permanent flow monitors. The model was
loaded with wastewater flows to replicate the results of the temporary flow monitors.

4.2.2 Collection System Design Criteria

Table 4-5 identifies the design criteria used in this master plan and as the basis for the Capital Improvement Program (CIP), based on future (2030) wet weather flow.

Table 4-5: Design Criteria for Existing Pipelines

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>d/D Ratio</th>
<th>0.50 to 0.75</th>
<th>0.75 to 0.90</th>
<th>≥ 0.90</th>
</tr>
</thead>
<tbody>
<tr>
<td>(inches)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 18”</td>
<td>Watch</td>
<td>Schedule</td>
<td>Replace</td>
<td></td>
</tr>
<tr>
<td>≥ 18”</td>
<td>OK</td>
<td>Watch</td>
<td>Replace</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. “Watch” indicates that special attention needs to be paid to increased flows that are tributary to this pipe. A proposed development may create a situation where the performance criteria is exceeded.
2. “Schedule” indicates that a replacement project needs to be considered but can be scheduled at some point in the future.
3. “Replace” indicates that an immediate project funding and design should begin.

Table 4-6 identifies the minimum design criteria to be used for all new pipelines.

Table 4-6: Design Criteria for New Pipelines

<table>
<thead>
<tr>
<th>Pipe Dia. (in)</th>
<th>Min. Slope</th>
<th>Max. d/D</th>
<th>Min. Velocity (ft/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>0.0040</td>
<td>d/D = 0.50</td>
<td>2.0</td>
</tr>
<tr>
<td>10</td>
<td>0.0028</td>
<td>d/D = 0.50</td>
<td>2.0</td>
</tr>
<tr>
<td>12</td>
<td>0.0022</td>
<td>d/D = 0.50</td>
<td>2.0</td>
</tr>
<tr>
<td>≥15</td>
<td>0.0015</td>
<td>d/D = 0.75</td>
<td>2.0</td>
</tr>
</tbody>
</table>

The maximum allowable slope shall be the slope which generates a maximum flow velocity of 8.0 feet per second at the peak flow rate.

4.2.3 Inflow and Infiltration

The effect of inflow and infiltration on the City sewer system was determined based on evaluation of previous reports and studies, as well as the flow monitoring that took place from January 16, 2009 to February 12, 2009 (28 days). An extensive inflow and infiltration analysis was described in Section 3. For future analyses, average dry weather flows shall be increased by a factor of 1.5 to predict defect flows, or flows
4.2.4 Mannings Roughness Coefficient (“n”)

For future analyses, a value of 0.013 shall be used for Manning’s Roughness Coefficient (“n”). This is the industry accepted value for vitrified clay pipe and concrete pipe, which represent essentially all of the sewer system.
APPENDIX 5-B. CITY CONSTRUCTION STANDARDS
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| BH 201 | Drop Manhole “S” |
| BH 202 | Large Manhole “B” |
| BH 203 | Junction Chamber “F” |
| BH 204 | Junction Chamber “G” |
| BH 205 | Junction Chamber “H” |
| BH 206 | Terminal Manhole “Q” |
| BH 207 | Modified Junction Chamber “F” |
| BH 208 | Non-Rocking Manhole Frame and Cover |
| BH 209 | Large Manhole Frame and Cover |
| BH 210 | Pipe Supports Across Trenches |
| BH 211 | Pipe Bedding in Trenches |
| BH 212 | Sewer and Water Main Separation (Parallel and Perpendicular) < 10’ |
| BH 213 | Cradling and Encasement |
| BH 214 | Lateral Connect To Lined Sewer Main |

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#### Landscaping and Irrigation

| BH 501 | Not Used |

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#### General Facilities

| BH 601 | Parking Space Markings |
| BH 602 | Crosswalks |
| BH 603 | Speed Hump Detail |
| BH 604 | Temporary Curb Ramp |
| BH 605 | Survey Monument Cover |
| BH 606 | Parking Meter Post Installation - Concrete Setting |
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**Section VII**

**Water Pipe Line Installations**

| BH 701 | Legend |
| BH 702 | Abbreviations |
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| BH 704 | Fire Hydrant Installation  
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| BH 710 | Trench for Water Line |
| BH 711 | Jacked Casing with Water  
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| BH 712 | 13"x24" Water Meter Box and  
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Lid - Non Traffic Rated |
| BH 714 | 10"x17" Water Meter Box and  
Lid - H/20 Loading |
| BH 715 | 13"x24" Water Meter Box and  
Lid - H/20 Loading |
| BH 716 | 17"x30" Water Meter Box and  
Lid - H/20 Loading |
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Lid |
| BH 718 | 2'-6" x 4' Water Vault Box and  
Lid |
| BH 719 | Sewer and Water Main  
Separation (Parallel and  
Perpendicular) |
Section I

Street Improvements
NOTES:
1. DRIVEWAY APPROACH, INCLUDING SIDEWALK SHALL BE CLASS 520-C-2500 PCC MONOLITHIC POUR.
2. ANY EXISTING TRAFFIC OR ELECTRICAL BOXES SHALL BE RELOCATED OUTSIDE OF DRIVEWAY APPROACH.
3. NO PORTION OF A PROPOSED DRIVEWAY APPROACH SHALL BE CONSTRUCTED CLOSER THAN TEN (10) FEET FROM THE CENTER OF ANY CITY TREE WITHOUT A WRITTEN APPROVAL OF THE CITY ARBORIST.
4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
CITY OF BEVERLY HILLS
RESIDENTIAL DRIVEWAY APPROACH SPECIFICATIONS AND GENERAL REQUIREMENTS
IN REFERENCE TO BEVERLY HILLS MUNICIPAL CODE SEC. 8-4-4

Definition: An approach is located between the edge of the gutter and property line. It is composed of an apron and flair (see sheet 1 of 2).

1. Any variation from this Driveway Approach Standard must be approved in writing by the City Director of Public Works or his designee. Permits are required for all activities on public right-of-way.

2. Proposal Plan: A drawing shall be provided by the applicant to include: Width of proposed apron(s), width of proposed transitional flair areas at side of apron(s), measurement to nearest trees, street lights, other curb cuts, location of property line extension at each side of the site, location of any adjacent neighboring approach, height of the street curb in front of the property, width of the sidewalk, width of the pathway (landscaped area) and any other useful information.

Note: If the project is part of a work to be performed on a private property, the drawing submitted must be stamped with the approval of the Building and Safety Department prior to issuance of an Engineering Driveway Approach permit.

3. Location: No portion of a driveway approach shall be closer than three feet (3') from any lighting standard, public utility, another driveway, or other device erected in the parkway. Except in single family residential zones, driveway approaches are restricted to access which lead directly to a carport, garage, or parking area located beyond the setback area. Two (2) driveway approaches authorized for any lot or parcel shall not be less than twenty eight feet (28') apart, and each such driveway approach shall be a minimum of two feet (2') from the side property line as measured at the beginning of the full height curb. Any circular driveway shall have a minimum outer radius of twenty six (26') feet. The transportation/engineering official may approve a driveway approach closer to the side property line, or closer to any tree, lighting standard, public utility, another driveway or a device erected in the parkway where necessary to accommodate existing topography or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. No portion of a proposed driveway approach shall be constructed closer than ten (10) feet from the center of any city tree without written approval of the City Arborist.

4. Concrete Finish: Approaches shall have a wood float, rotor finish. Sidewalk and curb faces shall be troweled and light broom finished. Broken or defective public sidewalk, curb, and gutter adjacent to approaches shall be replaced if found necessary during the inspection of the work by Public Works Inspectors.

5. Adjacent Approach: No raised curb will be permitted between two approaches which are adjacent to a common property line and less than 4 feet apart. The approaches shall be continuous. A written consent of adjacent property owner is required to construct a joint approach. Construction of a joint approach includes the removal of the existing adjacent approach and reconstruction of the entire shared approach.

6. Width: The maximum overall width of any residential driveway approach shall not exceed twenty feet (20'), and the maximum width of two (2) adjacent residential driveway approaches which are combined shall not exceed twenty six feet (26'). The minimum overall width of any driveway approach shall be sixteen feet (16'). The transportation/engineering official may approve driveway approaches which vary from the widths designated herein to accommodate existing topography, or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. Driveway approach widths shall be the transition distance, measured along the curb, from the full height curb on one side to on the opposite side.

Number: Only one driveway approach shall be permitted in any residential zone on any lot or parcel with less than seventy five feet (75') of frontage, or with a front setback of less than twenty five feet (25'); with the exception that a circular driveway requiring two (2) driveway approaches shall be permitted where the parcel frontage is within four percent (4%) of the seventy five feet (75') minimum required for two (2) driveway approaches, and further, that no other deviation from the provisions of this code or discretionary action is required for such circular driveway.


RESIDENTIAL DRIVEWAY APPROACH

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY ENGINEER DATE 11-19-10
APPROVED BY PUBLIC WORKS DIRECTOR DATE 11-18-10

STANDARD DRAWING BH 101 SHEET 2 OF 2
1. DRIVEWAY APPROACH, INCLUDING SIDEWALK SHALL BE CLASS 520-C-2500 PCC MONOLITHIC POUR.
2. ANY EXISTING TRAFFIC OR ELECTRICAL BOXES SHALL BE RELOCATED OUTSIDE OF DRIVEWAY APPROACH.
3. NO PORTION OF A PROPOSED DRIVEWAY APPROACH SHALL BE CONSTRUCTED CLOSER THAN TEN (10) FEET FROM THE CENTER OF ANY CITY TREE WITHOUT A WRITTEN APPROVAL OF THE CITY ARBORIST.
4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. ("GREENBOOK")
5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C6" CALIFORNIA CONTRACTOR'S LICENSE.

NOTES:

REFER TO CITY OF BEVERLY HILLS STD. DRAWING BH 114 NOTES 1 AND 2 FOR ASPHALT TYPES AND THICKNESS; REPLACE 12" WIDTH OF ASPHALT ONLY.

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

NON-RESIDENTIAL DRIVEWAY APPROACH

REVISIONS

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STANDARD DRAWING BH 102

RECOMMENDED DATE: 11-7-10

APPROVED DATE: 11-18-10
CITY OF BEVERLY HILLS
NON-RESIDENTIAL DRIVEWAY APPROACH SPECIFICATIONS AND GENERAL REQUIREMENTS
IN REFERENCE TO BEVERLY HILLS MUNICIPAL CODE SEC. 8-4-4

Definition: An approach is located between the edge of the gutter and property line. It is composed of an apron and flairs (see sheet 1 of 2).

1. Any variation from this Driveway Approach Standard must be approved in writing by the City Director of Public Works or his designee. Permits are required for all activities on public right-of-way.

2. Proposal Plan: A drawing shall be provided by the applicant to include: Width of proposed apron(s), width of proposed transitional flair areas at side of apron(s), measurement to nearest trees, street lights, other curb cuts, location of property line extension at each side of the site, location of any adjacent neighboring approach, height of the street curb in front of the property, width of the sidewalk, width of the driveway (landscaped area) and any other useful information.
   Note: If the project is part of a work to be performed on a private property, the drawing submitted must be stamped with the approval of the Building and Safety Department prior to issuance of a Driveway Approach permit.

3. Location: No portion of a driveway approach shall be closer than three feet (3') from any lighting standard, public utility, another driveway, or other device erected in the parkway. Except in single family residential zones, driveway approaches are restricted to access which lead directly to a carport, garage, or parking area located beyond the setback area. Two (2) driveway approaches authorized for any lot or parcel shall not be less than twenty eight feet (28') apart, and each such driveway approach shall be a minimum of two feet (2') from the side property line as measured at the beginning of the full height curb. Any circular driveway shall have a minimum outer radius of twenty six (26') feet. The transportation/engineering official may approve a driveway approach closer to the side property line, or closer to any tree, lighting standard, public utility, another driveway or a device erected in the parkway where necessary to accommodate existing topography or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. No portion of a proposed driveway approach shall be constructed closer than ten (10) feet from the center of any city tree without written approval of the City Arborist.

4. Concrete Finish: Approaches shall have a wood float, rotor finish. Sidewalk and curb face shall be troweled and light broom finished. Broken or defective public sidewalk, curb, and gutter adjacent to approaches shall be replaced if found necessary during the inspection of the work by Public Works Inspectors.

5. Adjacent Approach: No raised curb will be permitted between two approaches which are adjacent to a common property line and less than 4 feet apart. The approaches shall be continuous. A written consent of adjacent property owner is required to construct a joint approach. Construction of a joint approach includes the removal of the existing adjacent approach and reconstruction of the entire shared approach.

6. Width: The maximum overall width of any non-residential driveway approach shall not exceed forty feet (40'). The minimum overall width of any driveway approach shall be sixteen feet (16'). The transportation/engineering official may approve driveway approaches which vary from the widths designated herein to accommodate existing topography, or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. Driveway approach widths shall be the transition distance, measured along the curb, from the full height curb on one side to the opposite side.


NON-RESIDENTIAL DRIVEWAY APPROACH

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED ___________________________ DATE 11-18-10
CITY ENGINEER

APPROVED ___________________________ DATE 11-18-10
PUBLIC WORKS DIRECTOR

STANDARD DRAWING BH 102
SHEET 2 OF 2
1. CONCRETE SHALL BE CLASS 520-C-2500 AND SHALL BE 4" THICK OVER 4" CRUSHED MISCELLANEOUS BASE AT 90% RELATIVE COMPACTION.

2. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN WITH A 12" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER. SEE GROOVING DETAIL.

3. CURB RAMPS SHALL HAVE A RECESSD YELLOW DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3' DEPTH OF THE RAMP. EDGES SHALL BE FLUSH WITH THE SURFACE OF THE RAMP. SEE DETECTABLE WARNING DETAIL FOR SIZE AND PATTERN. THE EDGE OF THE DETECTABLE WARNING NEAREST TO THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FL.

4. UTILITY PULL BOXES, MANHOLES, VAULTS AND OTHER UTILITY FACILITIES WITHIN THE BOUNDARIES OF THE CURB RAMP WILL BE RELOCATED BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, THE CONSTRUCTION OF THE RAMP.

5. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.

6. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 48" OF THE TOP AND BOTTOM OF CURB RAMP.

7. THE BOTTOM OF THE RAMP SHALL HAVE A 0 INCH LIP AT CURB FACE.

8. IF DISTANCE FROM CURB TO BACK OF SIDEWALK IS TOO SHORT TO ACCOMMODATE RAMP AND 4'-0" LANDING AS SHOWN IN CASE 1 AND CASE 2, THE SIDEWALK MAY BE DEPRESSED LONGITUDINALLY AS IN CASE 5 OR 6, OR SIDEWALK MAY BE WIDENED AS SHOWN IN CASE 2.

9. AS SITE CONDITIONS DICTATE, THE RETAINING CURB SIDE AND THE FLARED SIDE OF CASE 4 RAMP SHALL BE CONSTRUCTED IN REVERSE POSITION.

10. IF LOCATED ON A CURVE, THE SIDES OF THE RAMP NEED NOT BE PARALLEL, BUT THE MINIMUM WIDTH OF THE RAMP SHALL BE 4'-0".

11. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

12. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
ABBREVIATIONS:

WPJ - WEAKENED PLANE JOINT
EXP JT - EXPANSION JOINT
BCR - BEGINNING OF CURB RETURN
ECR - END OF CURB RETURN

NOTES:
1. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE DETAIL AND/OR PLANS AND SHALL BE FORMED BY CUTTING A GROOVE IN THE PAVEMENT WITH A POWER DRIVEN SAW. THE GROOVE FOR A TRANSVERSE JOINT SHALL BE CUT TO A MINIMUM DEPTH OF 1-1/2" OR ONE-SIXTH OF THE PAVEMENT THICKNESS, WHICHEVER IS GREATER; THE GROOVE FOR A LONGITUDINAL JOINT SHALL BE CUT TO A MINIMUM DEPTH OF 1-1/2" OR ONE-FOURTH OF THE PAVEMENT THICKNESS, WHICHEVER IS GREATER; AND THE WIDTH SHALL BE THE MINIMUM WIDTH POSSIBLE WITH THE SAW BEING USED, BUT SHALL NOT EXCEED 1/4".

2. EXPANSION JOINTS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE DETAIL AND/OR PLANS. EXPANSION JOINT FILLER MATERIAL SHALL HAVE A MINIMUM THICKNESS OF 1/2", A MAXIMUM THICKNESS OF 3/4", A DEPTH EQUAL TO THE THICKNESS OF THE PAVEMENT, AND SHALL BE COMPOSED OF MATERIALS AS SPECIFIED OR APPROVED BY THE ENGINEER. AFTER THE CONCRETE HAS BEEN FINISHED, AN EDGER OF 1/4" RADIUS SHALL BE USED ON EACH SIDE OF THE EXPANSION JOINT FILLER. THE EXPANSION JOINT FILLER SHALL BE CLEANED OF ALL CONCRETE MORTAR.

3. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 2.5' IN WALKS AND 20' IN GUTTERS. JOINTS IN CURB, GUTTER, AND WALK SHALL BE ALIGNED.

4. CURB AND GUTTER SHALL BE CONSTRUCTED SEPARATELY FROM SIDEWALK.

5. SIDEWALK AND CURBFACE SHALL BE TROWELED AND LIGHT BROOM FINISHED.

6. SIDEWALK, CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.

7. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

8. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C3" CALIFORNIA CONTRACTOR'S LICENSE.

CURB AND SIDEWALK JOINTS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING BH 104

RECOMMENDED DATE 7-30-09
APPROVED DATE 7-31-09

CITY ENGINEER
PUBLIC WORKS DIRECTOR

SHEET 1 OF 1
1. SIDEWALK SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.
2. SEE BH 104 FOR JOINT LOCATION PLACEMENT.
3. CRUSHED MISCELLANEOUS BASE TO BE APPROVED BY THE CITY ENGINEER.
4. SIDEWALK SHALL BE TROWLED AND LIGHT BROOM FINISHED.
5. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
6. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
RESIDENTIAL
INTEGRAL CURB AND GUTTER SECTION
NOT TO SCALE

NOTES:
1. CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.

2. GUTTER WIDTH, W, SHALL MATCH EXISTING OR 24" MINIMUM, UNLESS OTHERWISE SPECIFIED.

3. AFTER THE CONCRETE HAS BEEN THOROUGHLY TAMPELED TO FORCE THE LARGER AGGREGATE INTO THE CONCRETE AND BRING TO THE TOP SUFFICIENT FREE MORTAR FOR FINISHING, THE SURFACE SHALL BE WORKED TO A TRUE AND EVEN GRADE BY MEANS OF A FLOAT, TROWELED WITH A LONG HANDLED TROWEL OR "FRESNO", AND WOOD-FLOAT FINISHED. THE FLOWLINE OF THE GUTTER SHALL BE TROWELED SMOOTH FOR A WIDTH OF 4 INCHES FOR INTEGRAL CURB AND GUTTER. SIDE FORMS SHALL REMAIN IN PLACE FOR AT LEAST 24 HOURS AFTER COMPLETION OF THE GUTTER, BUT MUST BE REMOVED BEFORE THE WORK WILL BE ACCEPTED.

4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
NON-RESIDENTIAL
INTEGRAL CURB AND GUTTER SECTION

NOT TO SCALE

NOTES:
1. CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.
2. GUTTER WIDTH, W, SHALL MATCH EXISTING OR 24" MINIMUM, UNLESS OTHERWISE SPECIFIED.
3. AFTER THE CONCRETE HAS BEEN THOROUGHLY TAMPERED TO FORCE THE LARGER AGGREGATE INTO THE CONCRETE AND BRING TO THE TOP SUFFICIENT FREE MORTAR FOR FINISHING, THE SURFACE SHALL BE WORKED TO A TRUE AND EVEN GRADE BY MEANS OF A FLOAT, TROWELED WITH A LONG HANDLED TROWEL OR "FRESNO", AND WOOD-FLOAT FINISHED. THE FLOWLINE OF THE GUTTER SHALL BE TROWELED SMOOTH FOR A WIDTH OF 4 INCHES FOR INTEGRAL CURB AND GUTTER. SIDE FORMS SHALL REMAIN IN PLACE FOR AT LEAST 24 HOURS AFTER COMPLETION OF THE GUTTER, BUT MUST BE REMOVED BEFORE THE WORK WILL BE ACCEPTED.
4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

NON-RESIDENTIAL INTEGRAL CURB AND GUTTER DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE: 7-30-09
APPROVED DATE: 9-3-09

STANDARD DRAWING
BH 107

SHEET 1 OF 1
NOTES:
1. CURB RETURN RADIUS, R, SHALL BE 5' TYPICAL, UNLESS OTHERWISE SPECIFIED.
2. TOP OF CURB ELEVATIONS SHALL MATCH EXISTING SIDEWALK ELEVATIONS.
3. ALLEY APPROACH WITH A SLOPE EXCEEDING 16.68% SLOPE SHALL REQUIRE A SPECIAL PERMIT FROM THE TRANSPORTATION/ENGINEERING OFFICIAL.
4. ACTUAL SHAPE AND LOCATION OF ALLEY APPROACH SHALL BE DETERMINED IN THE FIELD BY THE CITY ENGINEER.
5. ALLEY APPROACH AND NEW SIDEWALK WITHIN ALLEY APPROACH SHALL BE A CLASS 520-C-2500 8" THICK MONOLITHIC POUR OVER 6" CRUSHED MISCELLANEOUS BASE AT 95% RELATIVE COMPACTION.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
7. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

---

**ALLEY APPROACH DETAIL**

**CITY OF BEVERLY HILLS, CALIFORNIA**

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY ENGINEER: [Signature] DATE: 7-30-09

APPROVED BY PUBLIC WORKS DIRECTOR: [Signature] DATE: 7-31-09

STANDARD DRAWING
BH 108

SHEET 1 OF 2
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### Diagrams

**SECTION A-A**

- 8" THICK THROUGHOUT
- 6" CRUSHED MISCELLANEOUS BASE, 95% RELATIVE COMPACTION (THROUGHOUT)

**SECTION B-B**

- FLOW LINE

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**ALLEY APPROACH DETAIL**

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**REVISIONS**

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**CITY OF BEVERLY HILLS, CALIFORNIA**

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

CIVIL ENGINEERING DIVISION

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**RECOMMENDED**

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**STANDARD DRAWING**

BH 108

**SHEET 2 OF 2**
Curb & Gutter Section

NOT TO SCALE

Cut existing curb on vertical line to entire depth, reconstruct to score line if nearest score line is less than 4' (typ.)

Elevation "A-A"

NOT TO SCALE

1. Minimum curb break and reconstruction is 3'-0" in length.
2. Curb & gutter shall be Class 520-C-2500 PCC monolithic pour.
3. For multiple curb drains, spacing between C.I. pipes shall be a minimum of 6" O.C.
4. 3" pipe in 6" curb is allowed by coring.
5. For other conditions see APWA standard plan 150-2.
6. All work shall be constructed in accordance with the current standard specifications for public works construction ("Greenbook").
7. Contractor shall have a valid Class "A" or "C8" California contractor's license.

4" Curb Drain in 6" Curb

Revisions

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City of Beverly Hills, California
Department of Public Works & Transportation
Civil Engineering Division

Recommended by Date 7-30-09
Approved by Date 7-31-09

Standard Drawing BH 109
Sheet 1 of 1
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For S = 30" and less, use 2 anchors. Otherwise, use 3 anchors.

For S = 48" and less, B = 3". Use 2-1/2"x2"x1/2" galvanized steel angle. Otherwise, B = 4".

Use 3-1/2"x3"x1/2" galvanized steel angle.

**NOTES:**

1. Floor of box shall be troweled smooth.
2. If toe of slope is allowed within the R/W, inlet type 1 begins at the toe rather than at the R/W line.
3. For open ditch (type 2), the 24" extension beyond the R/W line is not required when back of walk is 24" or more from the R/W line; however, the pipe shall extend to the R/W line in any event.
4. Top of inlet structure (type 1 & 2) shall be flush with adjacent surface where practical.
5. A headed steel stud, 5/8" x 6-3/8" with a 1" head attached by a full penetration butt weld may be used as an alternate anchor.
6. Normal curb face at point M and Q. Curb face is B + 5" at point N and P.
7. The 3" leg of the 5/8" dia. anchors shall be parallel to the top of sidewalk.
8. Slope = 2.0%
9. Angle 'A' shall be 30° minimum when roadway slope is greater than 5.0%.
10. All work shall be constructed in accordance with the current standard specifications for public works construction ("Greenbook").
11. Contractor shall have a valid Class "A" or "C8" California contractor's license.
CRUSHED MISCELLANEOUS BASE. MINIMUM 95% RELATIVE COMPACTION.

LONGITUDINAL ALLEY GUTTER
NOT TO SCALE

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5.00' TRANSITION TO MATCH ALLEY APPROACH/SIDWALK

TRANSITION DETAIL A
BEGINNING OF LONGITUDINAL GUTTER

TRANSITION DETAIL B
END OF LONGITUDINAL GUTTER

NOTES:
1. LONGITUDINAL ALLEY GUTTER SHALL BE CLASS 520-C-2500 PCC.
2. CONTROL JOINTS SHALL BE PLACED AT 10' INTERVALS FOR FULL LENGTH OF LONGITUDINAL GUTTER.
3. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
4. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

LONGITUDINAL ALLEY GUTTER DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING
BH 111

REVISIONS

MARK DATE DESCRIPTION
LONGITUDINAL ALLEY GUTTER AT MANHOLE

CASE 1 (2'-0" LONGITUDINAL GUTTER)

CASE 2 (4'-0" LONGITUDINAL GUTTER)

NOTES:
1. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
2. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

LONGITUDINAL GUTTER PER CITY OF BEVERLY HILLS STD. DRAWING NO. BH 111

CRUSHED MISCELLANEOUS BASE. MINIMUM 95% RELATIVE COMPACTION

SECTION A-A

SECTION B-B

DIRECTION OF FLOW

FLOW LINE

ALLEY C/L

ALLEY SURFACE

MANHOLE

LONGITUDINAL GUTTER PER CITY OF BEVERLY HILLS STD. DRAWING NO. BH 111

NOTE: RECOMMENDED DATE: 7-30-09

APPROVED DATE: 9-31-09
CASE 3 (2'-0" LONGITUDINAL GUTTER)

LONGITUDINAL GUTTER PER CITY OF BEVERLY HILLS STD. DRAWING NO. BH 111

CASE 4 (4'-0" LONGITUDINAL GUTTER)

LONGITUDINAL GUTTER PER CITY OF BEVERLY HILLS STD. DRAWING NO. BH 111

NOTES:
1. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
2. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

LONGITUDINAL ALLEY GUTTER AT VAULT

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY CITY ENGINEER
APPROVED BY PUBLIC WORKS DIRECTOR

STANDARD DRAWING BH 112
SHEET 2 OF 2
SURFACE
12" MIN. (TYP.)

W

STEEL PLATE WITH NON-SKID SURFACE TREATMENT

T

MILL ALL AROUND TRENCH, 12" x "T"

TEMPORARY EXCAVATION

#4 x 12" PIN

---

"W" | "T"
---|---
TRENCH WIDTH | MINIMUM STEEL PLATE THICKNESS
≤3'-0" | 1 INCH
>3'-0", UP TO 4'-0" | 1-1/4 INCH

NOTES:
1. ALL STEEL TRENCH PLATES SHALL BE FULLY SUPPORTED AROUND THE PERIMETER TO PREVENT TIPPING.
2. TRENCHES AND EXCAVATIONS SHALL BE ADEQUATELY SHORED OR BRACED TO WITHSTAND HIGHWAY TRAFFIC LOADS.
3. WHEN TWO OR MORE PLATES ARE USED, THE PLATES SHALL BE TACK WELDED AT EACH CORNER OR AS REQUIRED BY THE CITY ENGINEER.
4. ALL TRENCH PLATES SHALL BE PINNED IN EACH CORNER WITH PINS MADE OF #4 REBAR, OR EQUIVALENT DIAMETER STEEL ROD, WITH A MINIMUM LENGTH OF 12".
5. ALL TRENCH PLATING SHALL BE DESIGNED FOR HS20-44 TRUCK LOADING.
6. FOR TRENCHES AND EXCAVATIONS WITH SPANS GREATER THAN FOUR FEET (4'), A STRUCTURAL DESIGN SHALL BE PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER AND REVIEWED BY THE CITY.
7. TRENCH PLATES SHALL BE USED WHEN TRENCH WORK CAN NOT BE COMPLETED WITHIN THE SAME WORKING DAY TO MAINTAIN ALL VEHICULAR, BICYCLE AND PEDESTRIAN TRAFFIC FLOW.
8. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

STEEL PLATE FOR OPEN TRENCH DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE: 7-30-09
APPROVED DATE: 7-31-09

STANDARD DRAWING
BH 113
SHEET 1 OF 1
CASE I - PLAN

CASE I - EXISTING SECTION: ASPHALT CONCRETE

1. Construct new asphalt concrete base course, Type B, PG 64-10, 1" thicker than the existing section.

2. Construct new asphalt concrete wearing course:

<table>
<thead>
<tr>
<th>TYPES OF STREETS</th>
<th>DEPTH</th>
<th>ASPHALT CONCRETE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCAL RESIDENTIAL STREETS</td>
<td>1&quot;</td>
<td>TYPE D2, PG-64-10</td>
</tr>
<tr>
<td>STREETS WITH RUBBERIZED ASPHALT</td>
<td>2&quot; MIN</td>
<td>ARHM-GG PG-64-16</td>
</tr>
<tr>
<td>COLLECTOR/MAJOR STREETS</td>
<td>1-1/2&quot;</td>
<td>TYPE C2, PG-64-10</td>
</tr>
</tbody>
</table>

1 AND 2: The total thickness of 1 + 2 shall be 4" minimum for local or collector streets and 6" minimum for major streets. Asphalt concrete layers shall be compacted to 95% of maximum theoretical specific gravity.

PAVEMENT REPLACEMENT SECTION - CASE I
The limits of the restoration shall be a rectangular area extending a minimum of 12" beyond the outer edge of the widest portion of the T-section. The limits shall be sawcut after backfill of trench is completed. The existing A.C. shall be removed to a depth equal to the thickness of the wearing course. Removal by cold milling or pneumatic hammer is acceptable. If the removals are less than 5' apart or less than 2' from a concrete curb, gutter or cross gutter, the restoration shall be continuous between excavations and/or the edge of the concrete.

Construct new crushed aggregate base to match existing thickness or 4" thickness, whichever is greater. Compact to 95% of relative density.

Trench backfill shall be either:

A. Native material or imported soil (if native is unsuitable)
B. Crushed aggregate base
C. Two sack cement sand slurry

Compaction test (using city approved method) are required unless slurry is used.

Sawcutting will be required around the perimeter of the final edge of all excavations to provide clean, straight, vertical sides.

7. T-sections are 12" wide as measured from the final edge of trench (after sluffing).

8. All traffic striping and/or markings removed by restoration work shall be replaced.

9. All work shall be constructed in accordance with the current edition of standard specifications for public works ("Greenbook").

10. Contractor shall have a valid class "A" or "C8" California contractor's license.
CASE II - EXISTING SECTION: PORTLAND CONCRETE CEMENT

1. CONSTRUCT NEW PCC PAVEMENT 1" THICKER THAN THE EXISTING CONCRETE, 6" MINIMUM.

2. THE EXACT LIMITS FOR REMOVAL SHALL BE DETERMINED BY THE CITY ENGINEER SUCH THAT JOIN LINES ARE NOT WITHIN 2'-6" OF EXISTING PAVEMENT JOINTS OR SIGNIFICANT CRACKS. IF THE EXCAVATIONS ARE LESS THAN 5' APART OR LESS THAN 2'-6" FROM A CONCRETE CURB, GUTTER OR EXPANSION JOINT, THE RESTORATION SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF CONCRETE.

3. FOR PCC STREETS OR INTERSECTIONS THE LIMITS OF THE RESTORATION SHALL BE A RECTANGULAR AREA EXTENDING TO THE NEAREST CONSTRUCTION JOINT. THE STRUCTURAL SECTION OUTSIDE THE UTILITY TRENCH AREA SHALL BE EQUAL TO 1 + 4.

4. CONSTRUCT NEW CRUSHED AGGREGATE BASE TO MATCH EXISTING THICKNESS OR 4" THICKNESS, WHICHEVER IS GREATER. COMPACT TO 95% OF RELATIVE DENSITY.

5. TRENCH BACKFILL SHALL BE EITHER:
   A. NATIVE MATERIAL OR IMPORTED SOIL (IF NATIVE IS UNSUITABLE)
   B. CRUSHED AGGREGATE BASE
   C. TWO SACK CEMENT SAND SLURRY

   COMPACTION TEST (USING CITY APPROVED METHOD) ARE REQUIRED UNLESS SLURRY IS USED.

6. SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF THE FINAL EDGE OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.

7. DOWEL SIZE, SPACING, AND EMBEDMENT SHOULD BE AS FOLLOWS:

<table>
<thead>
<tr>
<th>CONCRETE THICKNESS</th>
<th>SIZE &amp; SPACING</th>
<th>EMBEDMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot;</td>
<td>#6 @ 18&quot; O.C.</td>
<td>4&quot;</td>
</tr>
<tr>
<td>8&quot;</td>
<td>#5 @ 18&quot; O.C.</td>
<td>6&quot;</td>
</tr>
<tr>
<td>10&quot;</td>
<td>#6 @ 18&quot; O.C.</td>
<td>8&quot;</td>
</tr>
</tbody>
</table>

8. ALL TRAFFIC STRIPING AND/OR MARKINGS REMOVED BY RESTORATION WORK SHALL BE REPLACED.

9. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").

10. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

PAVEMENT REPLACEMENT SECTION - CASE II
CASE III - EXISTING SECTION: ASPHALT OVER CONCRETE

1. CONSTRUCT 1" NEW ASPHALT CONCRETE WEARING COURSE TYPE D2, PG 64-10. FOR STREETS WITH RUBBERIZED ASPHALT USE ARHM-GG PG-64-16, 2" MIN.

2. CONSTRUCT NEW ASPHALT CONCRETE BASE COURSE, TYPE B, PG 64-10.

3. CONSTRUCT NEW PCC PAVEMENT BASE, 560-C-3250, 1" THICKER THAN THE EXISTING CONCRETE, 6" MINIMUM. ASPHALT CONCRETE LAYERS SHALL BE COMPACTED TO 95% OF MAXIMUM THEORETICAL SPECIFIC GRAVITY.

4. THE EXACT LIMITS FOR REMOVAL SHALL BE DETERMINED BY THE CITY ENGINEER SUCH THAT JOIN LINES ARE NOT WITHIN 2'-6" OF EXISTING PAVEMENT JOINTS OR SIGNIFICANT CRACKS. IF THE EXCAVATIONS ARE LESS THAN 5' APART OR LESS THAN 2'-6" FROM A CONCRETE CURB, GUTTER OR EXPANSION JOINT, THE RESTORATION SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF CONCRETE.

5. TRENCH BACKFILL SHALL BE EITHER:
   A. NATIVE MATERIAL OR IMPORTED SOIL (IF NATIVE IS UNSUITABLE)
   B. CRUSHED AGGREGATE BASE
   C. TWO SACK CEMENT SAND SLURRY

   COMPACTION TEST (USING CITY APPROVED METHOD) ARE REQUIRED UNLESS SLURRY IS USED.

6. SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF THE FINAL EDGE OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.

7. DOWEL SIZE, SPACING, AND EMBEDMENT SHOULD BE AS FOLLOWS:

<table>
<thead>
<tr>
<th>CONCRETE THICKNESS</th>
<th>SIZE AND SPACING</th>
<th>EMBEDMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot;</td>
<td>#4 @ 16&quot; O.C.</td>
<td>4&quot;</td>
</tr>
<tr>
<td>8&quot;</td>
<td>#5 @ 16&quot; O.C.</td>
<td>6&quot;</td>
</tr>
<tr>
<td>10&quot;</td>
<td>#6 @ 16&quot; O.C.</td>
<td>8&quot;</td>
</tr>
</tbody>
</table>

8. ALL TRAFFIC STRIPING AND/OR MARKINGS REMOVED BY RESTORATION WORK SHALL BE REPLACED.

9. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").

10. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

PAVEMENT REPLACEMENT SECTION - CASE III

REVISIONS

<table>
<thead>
<tr>
<th>MARK</th>
<th>DATE</th>
<th>DESCRIPTION</th>
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</thead>
</table>

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY: ___________________________ DATE: 11/10/2011
APPROVED BY: _____________________________ DATE: 11/18/11

STANDARD DRAWING
BH 114

SHEET 4 OF 4
Section II

Sewer and Sanitation
MANHOLE FRAME AND COVER PER B.H. STANDARD DRAWING BH 208

SURFACE OF GROUND OR PAVEMENT

PIPE DIA. VARIABLE (TYP.)
REVERSE WYE

2'-0' D.

1/8 BEND

SLOPE SHELF
1" PER 1'

1/4 BEND

PORTLAND CEMENT CONCRETE

SECTION A-A

CASE I

SECTION B-B

NOTES:
1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADING RINGS.
2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.
3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.

SECTION L-M

DROP MANHOLE "S"

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED

STANDARD DRAWING
BH 201

SHEET 1 OF 2
LARGE MANHOLE "B"

NOTES:

1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.

2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.

3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.

4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.
NOTES:

1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.

2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.

3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.

4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.

JUNCTION CHAMBER "F"

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE 7-30-09
APPROVED DATE 7-31-09

STANDARD DRAWING
BH 203
NOTES:
1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.
2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.
3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.
4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.

JUNCTION CHAMBER "G"
**JUNCTION CHAMBER "H"**

<table>
<thead>
<tr>
<th>REVISIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MARK</td>
<td>DATE</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CITY OF BEVERLY HILLS, CALIFORNIA**
**DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION**
**CIVIL ENGINEERING DIVISION**

- **RECOMMENDED**
  
  CITY ENGINEER
  
  DATE: 7-30-09

- **APPROVED**
  
  PUBLIC WORKS DIRECTOR
  
  DATE: 7-31-09

**STANDARD DRAWING**

**BH 205**

**Sheet 1 of 1**

**NOTES:**
1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.
2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.
3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.
4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.
MANHOLE FRAME PER BH STD. DRAWING 208

SURFACE OF GROUND OR PAVEMENT

2'-0" D.

2'-0" D.

6'

VARIABLE

SECTION A-A

SECTION B-B

PIPE DIA. VARIABLE
(TYP.)

4'-0" D.

3'-0"

3'-9"

5'-6" D.

SLOPE SHELF
1" PER 1'

NOTES:

1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.

2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.

3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.

4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.

TERMINAL MANHOLE "Q"

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED CITY ENGINEER DATE 7-30-09
APPROVED PUBLIC WORKS DIRECTOR DATE 7-31-09

STANDARD DRAWING
BH 206

REVISIONS
MARK DATE DESCRIPTION

SHEET 1 OF 1
NOTES:

1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.

2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.

3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.

4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.
SANITARY SEWER
STORM DRAIN

DETAIL OF LETTERS

CITY OF
BEVERLY HILLS

PLAN COVER TOP

MANHOLE COVER AND FRAME PER ALHAMBRA FOUNDRY CO. LTD.
PART NO. A-1495

1" VENT HOLE
NOTCH

1-1/2"

27-1/8" DIA.

8"

24" DIA. CLEAR OPENING

32" DIA.

INSTALLATION NOTES:

2. ALL PARTS OF THE MANHOLE FRAME AND COVER EXCEPT MACHINED SURFACES SHALL BE COATED WITH ASPHALTUM PAINT.
3. THE MANHOLE FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY. THE COVER SHALL FIT THE FRAME SNUGLY BUT NOT TIGHTLY.
4. RAISED SURFACES OF LETTERS SHALL BE FLUSH WITH SURFACES OF THE RAISED BLOCK TREAD.
5. ALL RADIUS 1/8" UNLESS OTHERWISE SPECIFIED.
6. DRAFT TO BE 1-1/2" UNLESS OTHERWISE SPECIFIED.

NON-ROCKING MANHOLE FRAME AND COVER
INSTALLATION NOTES:
2. ALL PARTS OF THE MANHOLE FRAME AND COVER EXCEPT MACHINED SURFACES SHALL BE COATED WITH ASPHALTUM PAINT.
3. THE MANHOLE FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY. THE COVER SHALL FIT THE FRAME SNUGLY BUT NOT TIGHTLY.
4. RAISED SURFACES OF LETTERS SHALL BE FLUSH WITH SURFACES OF THE RAISED BLOCK TREAD.
5. ALL RADI 1/8" UNLESS OTHERWISE SPECIFIED.
6. DRAFT TO BE 1-1/2" UNLESS OTHERWISE SPECIFIED.
CASE I
REINFORCED CONCRETE BEAM

CLASS 6.0-C-3000 REINFORCED CONCRETE BEAM DIMENSIONS

<table>
<thead>
<tr>
<th>TRENCH WIDTH</th>
<th>DEPTH OF BEAM</th>
<th>BAR SIZE</th>
<th>BEAM LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'-0&quot; or LESS</td>
<td>6&quot;</td>
<td>5/8&quot;</td>
<td>7'-0&quot;</td>
</tr>
<tr>
<td>4'-8&quot;</td>
<td>9&quot;</td>
<td>5/8&quot;</td>
<td>7'-6&quot;</td>
</tr>
<tr>
<td>6'-0&quot;</td>
<td>9-1/2&quot;</td>
<td>3/4&quot;</td>
<td>9'-0&quot;</td>
</tr>
<tr>
<td>8'-0&quot;</td>
<td>10-1/2&quot;</td>
<td>3/4&quot;</td>
<td>9'-6&quot;</td>
</tr>
<tr>
<td>8'-6&quot;</td>
<td>12&quot;</td>
<td>7/8&quot;</td>
<td>10'-0&quot;</td>
</tr>
</tbody>
</table>

1. WIDTH OF BEAMS SHALL BE NOMINAL DIAMETER OF PIPE PLUS 2".
2. REINFORCING STEEL SHALL BE PLACED 1-1/2" CLEAR FROM THE SIDE AND BOTTOM OF BEAMS.
3. IF BEAMS ARE PRECAST, 18" AT ENDS OF BEAMS SHALL BE BEDIRED IN CLASS 4.5-C-2000 CONCRETE. CLASS "C" MORTAR SHALL BE PLACED BETWEEN TOP OF BEAMS AND BOTTOM OF PIPE TO GIVE BEARING.

CASE II
CONCRETE SUPPORT WALL

1. SUPPORTING WALL SHALL HAVE A FIRM BEARING ON THE SUBGRADE AND AGAINST THE SIDES OF THE EXCAVATION.
2. WALL SHALL BE AT LEAST 2" FREE AND CLEAR OF ANY GAS OR WATER MAIN OR OTHER CONDUIT OR DUCT.
3. EITHER TYPE "A" OR "B" CROSS SECTION MAY BE USED AT THE CONTRACTORS OPTION.

CASE III
CAST IRON PIPE

CLASS OF CAST IRON PIPE

<table>
<thead>
<tr>
<th>CLASS 150 PIPE</th>
<th>CLASS 250 PIPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSIDE DIAMETER</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MAXIMUM TRENCH WIDTH</td>
<td>4'-0&quot;</td>
</tr>
</tbody>
</table>

CASE IV
SPUN REINFORCED CONCRETE PIPE (STORM DRAINS ONLY)

1. CLASS 2000-D SPUN REINFORCED CONCRETE PIPE OF THE SAME DIAMETER AS STORM DRAIN MAY BE USED FOR STORM DRAINS ONLY WHERE WIDTH OF TRENCH IS 5'-0" OR LESS.
2. BEARING OF THE PIPE ENDS AND JOINT CLOSURE SHALL BE THE SAME AS FOR CASE III.

PIPE SUPPORTS ACROSS TRENCHES

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED

STANDARD DRAWING
BH 210
SHEET 1 OF 1
CASE I

CASE III

CASE V

REINFORCED CONCRETE PIPE

EXCAVATION TO THIS LINE PERMITTED

EXCAVATION TO THIS LINE PERMITTED

CASE II

CLAY AND CONCRETE PIPE

COVER

COVER

1. CASE I BEDDING (LOAD FACTOR 2.1) SHALL BE USED WHERE SPECIFIED ON THE PLANS OR WHERE REQUIRED AS AN ALTERNATIVE TO CASE II OR CASE III BEDDING AS PROVIDED HEREIN. CASE IV BEDDING SHALL BE USED INSTEAD OF CASE I AGAINST SHEETING OR UNSTABLE TRENCH SIDES IF SO REQUIRED BY THE ENGINEER.

1. CASE III BEDDING (LOAD FACTOR 1.8)
   a. "W" AT THE SPRING LINE SHALL NOT BE LESS THAN 3 INCHES FOR ANY DEPTH OF TRENCH.
   b. WHERE THE COVER IS LESS THAN 8 FEET, "W" MEASURED AT THE TOP OF THE PIPE MAY BE ANY DIMENSION GREATER THAN 3 INCHES.
   c. WHERE THE COVER IS GREATER THAN 8 FEET, "W" MEASURED AT THE TOP OF PIPE SHALL NOT BE GREATER THAN 10 INCHES UNLESS THE CONTRACTOR AT HIS OWN EXPENSE PROVIDES CASE I BEDDING. THE STATED 10 INCHES INCLUDES THE THICKNESS OF ANY SHEETING.

1. CASE V BEDDING (LOAD FACTOR 2.7) SHALL BE USED WHERE SPECIFIED ON THE PLANS. CASE IV BEDDING SHALL BE USED INSTEAD OF CASE V AGAINST SHEETING OR UNSTABLE TRENCH WALLS IF SO REQUIRED BY THE ENGINEER.

GENERAL NOTES

1. USE CASE III FOR RCP AND CASE II FOR VITRIFIED CLAY AND PLAIN CONCRETE PIPE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE PROJECT DRAWINGS.

2. BEDDING "A" SHALL BE COMPOSED OF SAND, NO. 3 OR NO. 4 CRUSHED ROCK OR GRAVEL, OR OTHER GRANULAR MATERIAL AS MAY BE SPECIFIED OR OTHERWISE APPROVED BY THE ENGINEER. THE MAXIMUM SIZE ROCK OR GRAVEL SHALL BE NO. 3 FOR PIPES 27 INCHES IN DIAMETER AND LARGER, AND NO. 4 FOR PIPES SMALLER THAN 27 INCHES IN DIAMETER. BEDDING "B" SHALL BE COMPOSED OF SAND OR OTHER GRANULAR MATERIAL AS MAY BE SPECIFIED OR OTHERWISE APPROVED BY THE ENGINEER AND SHALL BE COMPLETED PRIOR TO PLACING BALANCE OF BACKFILL.

3. CONCRETE ENCAUSING, WHERE CALLED FOR ON THE PROJECT DRAWINGS, SHALL BE CLASS 5-C-2800 CONCRETE POURED FROM A MINIMUM OF 6" BELOW BOTTOM OF PIPE TO A MINIMUM OF 6" ABOVE TOP OF PIPE.

PIECE BEDDING IN TRENCHES

REVISIONS

MARK | DATE | DESCRIPTION
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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE 7-30-09
APPROVED DATE 7-31-09

STANDARD DRAWING BH 211

SHEET 1 OF 1
**CASE 1**
NEW SEWER

**ZONE**
SPECIAL CONSTRUCTION REQUIRED FOR SEWER

A. SEWER LINES PARALLEL TO WATER MAINS SHALL NOT BE PERMITTED IN THIS ZONE WITHOUT APPROVAL FROM THE CITY OF BEVERLY HILLS.

B. A SEWER LINE PLACED PARALLEL TO A WATER LINE SHALL BE CONSTRUCTED OF:
   1. EXTRA STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS.
   2. PLASTIC SEWER PIPE WITH RUBBER RING JOINTS (PER ASTM D 3034) OR EQUIVALENT.
   3. CAST OR DUCTILE IRON PIPE WITH COMPRESSION JOINTS.
   4. REINFORCED CONCRETE PRESSURE PIPE WITH COMPRESSION JOINTS (PER AWWA C302-74).

P. PROHIBITED ZONE - NO SEWER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

**CASE 2**
NEW WATER MAIN

**ZONE**
SPECIAL CONSTRUCTION REQUIRED FOR SEWER

A. NO WATER MAINS PARALLEL TO SEWERS SHALL BE CONSTRUCTED WITHOUT APPROVAL FROM THE CITY OF BEVERLY HILLS.

B. A WATER LINE PLACED PARALLEL TO A SEWER LINE SHALL BE CONSTRUCTED OF STEEL PIPE, CML, AND CMC WITH WELDED JOINTS.

P. PROHIBITED ZONE - NO WATER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

**ADDITIONAL NOTES:**
1. ZONES IDENTICAL ON EITHER SIDE OF CENTER LINES,
2. WATER MAINS AND SEWER MAINS MUST NOT BE INSTALLED IN THE SAME TRENCH.
3. SEPARATION DISTANCES SPECIFIED SHALL BE MEASURED FROM THE NEAREST EDGE OF FACILITIES.
4. STEEL PIPE SHALL BE A MINIMUM OF 10 GAGE THICKNESS.

---

**SEWER AND WATER MAIN PARALLEL SEPARATION < 10'**

**REVISIONS**

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<th>MARK</th>
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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY: [Signature]
DATE: 11/18/10

APPROVED BY: [Signature]
DATE: 11/18/10

STANDARD DRAWING
BH 212

SHEET 1 OF 2
CASE 1
NEW SEWER

ZONE SPECIAL CONSTRUCTION REQUIRED FOR SEWER
C. A SEWER LINE CROSSING A WATER MAIN SHALL BE CONSTRUCTED OF:
   1. DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING AND MECHANICAL JOINTS.
   2. A CONTINUOUS SECTION OF CLASS 200 (DR 14 PER AWWA C900) PLASTIC PIPE OR EQUIVALENT. CENTERED OVER THE PIPE BEING CROSSED.
   3. A CONTINUOUS SECTION OF REINFORCED CONCRETE PRESSURE PIPE (PER AWWA C302-74) CENTERED OVER THE PIPE BEING CROSSED.
   4. ANY SEWER PIPE WITHIN A CONTINUOUS SLEEVE.

D. A SEWER LINE CROSSING A WATER MAIN SHALL BE CONSTRUCTED OF:
   1. A CONTINUOUS SECTION OF DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING.
   2. A CONTINUOUS SECTION OF CLASS 200 (DR 14 PER AWWA C900) PLASTIC PIPE OR EQUIVALENT. CENTERED OVER THE PIPE BEING CROSSED.
   3. A CONTINUOUS SECTION OF REINFORCED CONCRETE PRESSURE PIPE (PER AWWA C302-74) CENTERED OVER THE PIPE BEING CROSSED.
   4. ANY SEWER PIPE WITHIN A CONTINUOUS SLEEVE
   5. ANY SEWER PIPE SEPARATED BY A 10'x10'x4' THICK REINFORCED CONCRETE SLAB.

P. PROHIBITED ZONE - NO SEWER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

CASE 2
NEW WATER MAIN

ZONE SPECIAL CONSTRUCTION REQUIRED FOR SEWER
C. NO JOINTS WITHIN 10 FEET OF EITHER SIDE OF SEWER LINE. USE DUCTILE IRON PIPE, CML, AND POLYETHYLENE WRAPPED, OR STEEL PIPE, CML, AND CMC.
D. NO JOINTS WITHIN 4 FEET OF EITHER SIDE OF SEWER LINE. USE DUCTILE IRON PIPE, CML, AND POLYETHYLENE WRAPPED, OR STEEL PIPE, CML, AND CMC.
P. PROHIBITED ZONE - NO WATER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

ADDITIONAL NOTES:
1. WATER MAINS AND SEWER MAINS MUST NOT BE INSTALLED IN THE SAME TRENCH.
2. SEPARATION DISTANCES SPECIFIED SHALL BE MEASURED FROM THE NEAREST EDGE OF FACILITIES.
3. STEEL PIPE SHALL BE A MINIMUM OF 10 GAGE THICKNESS.

SEWER AND WATER MAIN PERPENDICULAR SEPARATION < 10'

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED

STANDARD DRAWING

BH 212

SHEET 2 OF 2
NOTES:

1. EXTEND BOTH ENDS OF CRADLE OR ENCASEMENT TO A POINT 1" SHORT OF FIRST PIPE JOINT BEYOND LOCATIONS SPECIFIED ON PLANS.

2. APPLY FORM OIL. THIN PLASTIC SHEET, OR OTHER ACCEPTABLE MATERIAL TO PIPE, TO PREVENT BOND BETWEEN PIPE AND CONCRETE.

3. USE CLASS 420-C-2000 CONCRETE FOR ALL CASES.

4. CONDITIONS OF REQUIRED USE:
   a. CASE I - CONCRETE CRADLE
      1. WHEN OVERBURDEN DEPTH IS GREATER THAN 20'.
      2. AS A SUPPORT WHEN CROSSING OVER A STRUCTURE WITH A CLEARANCE LESS THAN 1.5' AND GREATER THAN 0.5'.
      3. WHEN WITHIN A 45° ANGLE DOWNWARD FROM THE BOTTOM OF A FOOTING.
   b. CASE II - CONCRETE ENCASEMENT
      1. WHEN CROSSING UNDER A STRUCTURE WITH A CLEARANCE LESS THAN 1.5' AND GREATER THAN 0.5'.
      2. WHEN COVER DIRT IS LESS THAN 4'.
      3. WHEN LESS THAN 3' FROM A POWER POLE.
   c. CASE III - SPECIAL CRADLE
      1. AS A SUPPORT WHEN CROSSING OVER A TRENCH GREATER THAN 4' IN WIDTH, SEE APWA STANDARD PLAN 224.
   d. CASE IV - SPECIAL ENCASEMENT
      1. WHEN CROSSING UNDER A STRUCTURE WITH A WIDTH GREATER THAN 5' AND A CLEARANCE LESS THAN 1.5' AND GREATER THAN 0.5'.
      2. WHEN WITHIN 10' OF A PRESSURIZED WATER MAIN, OR WITHIN 25' OF A GRAVITY FLOW WATER MAIN.

CRADLING AND ENCASEMENT

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING
BH 213

MARK DATE DESCRIPTION

RECOMMENDED

APPROVED

DATE

DATE

11/18/10

11/18/10

CITY OF BEVERLY HILLS
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED
ADDITIONAL NOTES:

1. MATERIALS SHALL BE SELECTED FROM THE CITY OF BEVERLY HILLS APPROVED MATERIALS LIST.
2. IN NO CASE SHALL CONNECTION BE MADE DIRECTLY ON TOP OF SEWER MAIN.
3. NO MORE THAN ONE CUT-IN LATERAL CONNECTION WILL BE ALLOWED FOR EACH LENGTH OF VCP SEWER MAIN.
4. LINING SHALL BE CORED THE EXACT DIAMETER OF THE LATERAL.
5. LATERAL SHALL BE FLUSH WITH THE LINING MATERIAL AND SHALL NOT PROTRUDE WITHIN THE LINING.

LATERAL CONNECT TO LINED SEWER MAIN
Section III

Flood Control and Storm Drain Facilities

(RESERVED)
Section IV

Street Lighting and
Traffic Signals
NOTES:
1. THREE TURNS OF DETECTA-DUCT OR TYPE 2 LOOP WIRE STACKED ONE WIRE ON TOP OF ANOTHER. A PRE-WOUND LOOP WIRE SHALL BE USED IN SLOTS GREATER THAN 1/4" IN WIDTH.
2. LOOP DETECTOR LEAD-IN CABLE EXTENDING FROM THE PULL BOX ADJACENT TO THE LOOP TO THE FIELD TERMINAL IN THE CONTROLLER CABINET SHALL BE TWO, THREE, OR FOUR PAIR #18 AWG INDIVIDUALLY TWISTED, INDIVIDUALLY SHIELDED, FILLED (WATER BLOCKED) CABLE. EACH CABLE SHALL BE IDENTIFIED BY THE INSTALLATION OF A RIGID PLASTIC TAG HELD IN PLACE WITH TWO NYLON TIES.
3. STUB OUT SHALL BE LOCATED AT THE EDGE OF GUTTER IN PAVEMENT, 4" BELOW FINISHED SURFACE OR INSTALL DETECTOR HANDHOLE (CITY OF BH, STANDARD DRAWING BH 402) AS DIRECTED BY CITY ENGINEER.
4. IF THE "STUB OUT" EXCAVATION AREA FOR LOOP HOMERUNS IS GREATER THAN 8" IN DIAMETER, BACKFILL WITH ASPHALT CONCRETE. IF EXCAVATION AREA IS LESS THAN OR EQUAL TO 6" IN DIAMETER, SEAL AREA WITH HOT RUBBERIZED ASPHALT SEALANT.
5. FILL SLOT WITH HOT MELT RUBBERIZED ASPHALT SEALANT IN ACCORDANCE WITH SECTION 85-5.01A OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS. POUR POTS ARE NOT ACCEPTABLE TO APPLY SEALANT.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

ROUND INDUCTIVE LOOP DETECTOR INSTALLATION

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STANDARD DRAWING
BH 401

RECOMMENDED: [Signature] date: 11/16/11

APPROVED: [Signature] date: 11/18/11

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

PUBLICATIONS DIRECTOR
NOTES:
1. THREE TURNS OF DETECTA-DUCT OR TYPE 2 LOOP WIRE STACKED ONE WIRE ON TOP OF ANOTHER. A PRE-WOUND LOOP WIRE SHALL BE USED IN SLOTS GREATER THAN 1/4" IN WIDTH.
2. LOOP DETECTOR LEAD-IN CABLE EXTENDING FROM THE PULL BOX ADJACENT TO THE LOOP TO THE FIELD TERMINAL IN THE CONTROLLER CABINET SHALL BE TWO, THREE, OR FOUR PAIR #18 AWG INDIVIDUALLY TWISTED, INDIVIDUALLY SHIELDED, FILLED (WATER BLOCKED) CABLE. EACH CABLE SHALL BE IDENTIFIED BY THE INSTALLATION OF A RIGID PLASTIC TAG HELD IN PLACE WITH TWO NYLON TIES.
3. STUB OUT SHALL BE LOCATED AT THE EDGE OF GUTTER IN PAVEMENT, 4" BELOW FINISHED SURFACE OR INSTALL DETECTOR HANDHOLE (CITY OF BH, STANDARD DRAWING BH 402) AS DIRECTED BY CITY ENGINEER.
4. IF THE "STUB OUT" EXCAVATION AREA FOR LOOP HOMERUNS IS GREATER THAN 6" IN DIAMETER, BACKFILL WITH ASPHALT CONCRETE. IF EXCAVATION AREA IS LESS THAN OR EQUAL TO 6" IN DIAMETER, SEAL AREA WITH HOT RUBBERIZED ASPHALT SEALANT.
5. FILL SLOT WITH HOT MELT RUBBERIZED ASPHALT SEALANT IN ACCORDANCE WITH SECTION 86-5.01A OF THE STATE OF CALIFORNIA STANDARDS SPECIFICATIONS. POUR POTS ARE NOT ACCEPTABLE TO APPLY SEALANT.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
7. FRONT LOOP (LOOP 1) SHALL EXTEND INTO CROSSWALK 12" WHERE APPLICABLE.
8. ROUND CORNERS OF ACUTE ANGLE SAWCUTS TO PREVENT DAMAGE TO CONDUCTORS.

BIKE LOOP DETECTOR INSTALLATION

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED: Signature DATE: 11/15/11
APPROVED: Signature DATE: 11/18/11

STANDARD DRAWING
BH 402

SHEET 1 OF 1
NOTES:
1. NON-METALLIC BUSHING SHALL BE USED AT ROADWAY END OF CONDUIT.
2. TAPE WIRE 5" EACH SIDE OF ROADWAY BUSHING.
3. INSTALL DUCT SEAL COMPOUND TO EACH END OF ROADWAY CONDUIT BEFORE INSTALLING EPOXY OR OTHER APPROVED MATERIALS.
4. ROUND ALL SHARP EDGES WHERE WIRE HAS TO PASS.
5. SPLICING DETECTOR CONDUCTORS OR CABLE TO LEAD-IN CABLE FOR RUN TO CONTROLLER CABINET.
6. 2" PVC CONDUIT ENDS SEALED WITH APPROVED COMPOUND AFTER CONDUCTOR INSTALLATION.
7. EXACT LOCATION OF THE DETECTOR HANDHOLE WILL BE DETERMINED BY THE CITY ENGINEER IN THE FIELD.
8. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
LID
- FIBRELYTE LID, NON-CONCRETE
- ETCHED POLYETHYLENE FACE
- FACE ANCHORED IN CONCRETE
- ULTRA-VIOLET INHIBITOR

BOX
- CHRISTY OR EQUAL

TRAFFIC SIGNAL PULL BOX & LID

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED

STANDARD DRAWING
BH 404
SHEET 1 OF 1

MARK DATE DESCRIPTION
Section V

Landscaping and Irrigation

(RESERVED)
Section VI

General Facilities
CROSSWALKS

LEGEND SHALL BE YELLOW (TYP.)

W63 (S1-1) AND W65 (S4-3) ± 300 FEET IN ADVANCE OF SCHOOL ZONE ONLY.

W63 W16-7

12" WHITE LIMIT BAR (TYP.)

SCHOOL CROSSWALKS

NOTES:
1. ALL CROSSWALK LINES SHALL BE 12" STROKE.
2. CROSSWALK WIDTH SHALL BE EQUAL TO ADJACENT MAXIMUM SIDEWALK WIDTH, BUT NO LESS THAN 12 FEET.
3. OMIT LEGEND ON INTERSECTION APPROACHES WHEN SIGNALS, STOP OR YIELD SIGNS ARE IN PLACE.
4. REFER TO M.U.T.C.D. CA SUPPLEMENT (LATEST EDITION).

CROSSWALKS STRIPING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING

BH 602

MARK DATE DESCRIPTION

REVISIONS

CITY ENGINEER

PUBLIC WORKS DIRECTOR

DATE 7-20-09

DATE 7-31-09

SHEET 1 OF 1
SECTION A-A

INSTALLATION NOTES:
1. SPEED HUMPS SHALL NOT BE PLACED OVER MANHOLES, WATERGATES, JUNCTION CHAMBERS, ETC.
2. EDGE OF SPEED HUMP SHALL BE 5 FEET MINIMUM FROM EDGE OF DRIVEWAY.
3. WHenever possible speed humps shall be placed at property lines instead of mid-lot.
4. WHenever possible speed humps shall be placed adjacent to street lights.

SECTION B-B

EXISTING CURB
TACK COAT
A.C. E-AR4000
18" TAPER

SPEED HUMP DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY: CITY ENGINEER DATE: 7-30-09
APPROVED BY: PUBLIC WORKS DIRECTOR DATE: 7-31-09

STANDARD DRAWING
BH 603

REVISIONS

MARK DATE DESCRIPTION

Sheet 1 of 1
TEMPORARY CURB RAMP DETAIL

TEMPORARY CURB RAMP DETAIL

TEMPORARY CURB RAMP PLAN
NOT TO SCALE

TEMPORARY CURB RAMP

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

STANDARD DRAWING
BH 604

RECOMMENDED DATE 7-30-09
APPROVED DATE 9-31-09
SPECIFICATIONS:

ALL MONUMENT COVERS SHALL BE MADE OF CAST IRON IN ACCORDANCE WITH A.S.T.M STANDARD SPECIFICATIONS A48M-03, CLASS 30, EXCEPT THAT NO TRANSVERSE TEST WILL BE REQUIRED.

ALL MONUMENT COVERS SHALL BE MADE TO THE DIMENSIONS AS SHOWN HEREON, SHALL BE OF UNIFORM THICKNESS AND FREE FROM FLAWS OR DEFECTS. ALL LETTERING SHALL BE RADially PLACED, UNIFORM IN SIZE AND SHALL CONFORM TO THE DIMENSIONS AS SHOWN HEREON WITHOUT FLAWS OR IRREGULAR LETTERING.

NOTES:

1. ALL RADII TO BE 1/16" UNLESS OTHERWISE SPECIFIED.

2. ALL DRAFT TO BE 1-1/2° UNLESS OTHERWISE SPECIFIED.
REAMED INSIDE OF TOP

DRILL Ø 1/4" HOLE
(ONE SIDE ONLY)

WOODEN WEDGES
1"x3/4"x2" ± LONG TO
HOLD POST UPRIGHT

POST FLANGE SET
IN CEMENT GROUT

FINISHED SURFACE

CURB AND GUTTER

CONCRETE
SIDIWALK

CEMENT
GROUT

CLEAN OUT DIRT UNDER
SIDIWALK APPROX. AS
SHOWN

3-1/4"

12"

36"

48"

32"

20"

SPECIFICATIONS FOR POST:

STEEL PIPE, STANDARD WEIGHT, 2" X 48" LONG,
ASTM-A120-63T, NEW AND UNUSED, HOT DIPPED
GALVANIZED, TOP REAMED

ADDITIONAL NOTES:

1. POST TO BE LEVEL AND STRAIGHT
2. AREA TO BE LEFT CLEAN
3. CEMENT GROUT - 1 CEMENT : 2-1/2 SAND
4. TOP OF INSTALLED METER COIN/CARD SLOT SHALL
   NOT EXCEED 48" ABOVE FINISHED GRADE.

PARKING METER POST INSTALLATION - CONCRETE SETTING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

PUBLIC WORKS DIRECTOR

STANDARD DRAWING
BH 606

MARK DATE DESCRIPTION

REVISIONS

DATE 11-18-10

DATE 11-18-10

DATE 11-18-10

DATE 11-18-10

DATE 11-18-10
Section VII

Water Pipe Line Installations
ABBREVIATIONS

B.H.W. BEVERLY HILLS WATER
D.W. & P.-W.S. DEPARTMENT OF WATER & POWER, WATER SERVICE
P.T. & T PACIFIC TELEPHONE & TELEGRAPH COMPANY
S.C.E. SOUTHERN CALIFORNIA EDISON
S.C.G. SOUTHERN CALIFORNIA GAS
S.D.M.H. STORM DRAIN MAINTENANCE HOLE
S.S.M.H. SANITARY SEWER MAINTENANCE HOLE
M.W.D. METROPOLITAN WATER DISTRICT
O.L.C. ORNAMENTAL LIGHTING CONDUIT
F.A.C. FIRE ALARM CONDUIT
C.I. CAST IRON
F.H. FIRE HYDRANT
P/L PROPERTY LINE

ABBREVIATIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED CITY ENGINEER DATE 7-30-09
APPROVED PUBLIC WORKS DIRECTOR DATE 7-31-09

STANDARD DRAWING

BH 702

SHEET 1 OF 1
NOTES:
1. HYDRANT OUTLETS SHALL FACE THE STREET AT 45° OR AS DIRECTED BY THE CITY ENGINEER.
2. FINAL HYDRANT LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
3. CONNECTION OF THE FIRE HYDRANT TO THE WATER MAIN MAY REQUIRE FITTING AND COUPLINGS NOT SHOWN HEREON. THE CONTRACTOR SHALL PROVIDE AND INSTALL AT NO EXTRA COST.
4. BREAKAWAY BOLTS SHALL BE USED TO INSTALL THE HYDRANT HEAD ON THE BURY.
5. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH 706 OR AS DIRECTED BY THE CITY ENGINEER.
6. FIRE HYDRANTS SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS.
7. ALL HYDRANTS WATER OUTLET CAP MATERIAL SHALL BE BRONZE.
8. ALL FITTINGS USED TO CONNECT THE FIRE HYDRANT TO THE WATER MAIN SHALL BE PROPERLY RESTRAINED WITH APPROVED STANDARD METHODS OR AS DIRECTED BY THE CITY ENGINEER.
9. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED WITH A SAND SLURRY MIX AS DIRECTED BY THE CITY ENGINEER.
10. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.
11. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
LATERAL INSTALLATION PER STANDARD DRAWING BH 705

EXISTING WATER MAIN

UNDISTURBED SOIL

THRUST BLOCK

Curb AND GUTTER

UNDISTURBED SOIL

VALVE BOX PER STANDARD DRAWING BH 707

WATER MAIN

UNDISTURBED SOIL

THRUST BLOCK

6" BUTTERFLY VALVE MJ x FLG PER STANDARD DRAWING BH 707

6" DUCTILE IRON PIPE CLASS 52 (CEMENT MORTAR LINED)

6" 90° BEND MJ x FLG

THRUST BLOCK

RESTRAINT JOINT MEGALUG TYPE (TYP.)

FACE OF CURB

UNDISTURBED SOIL

FIRE HYDRANT ASSEMBLY PER STANDARD DRAWING NO. BH 703

NOTES:
1. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH 709 OR AS DIRECTED BY THE CITY ENGINEER.
2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TARBITUMASTIC ENAMEL PRIOR TO BACKFILL.
3. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.

FIRE HYDRANT INSTALLATION
WITH WATER MAIN BEHIND THE CURB

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY:
DATE: 7-30-09

APPROVED BY:
DATE: 7-3-09

STANDARD DRAWING
BH 704

SHEET 1 OF 1
NOTES:

1. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH 709 OR AS DIRECTED BY THE CITY ENGINEER.

2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.

3. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED WITH A SAND SLURRY MIX AS DIRECTED BY THE CITY ENGINEER.

4. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
NOTES:
1. THRUST BLOCKS PER STANDARD DRAWING NUMBER BH 709, ARE REQUIRED AT ALL PLUGS, TEES AND ENDS, OR AS DIRECTED BY THE CITY ENGINEER.
2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.
3. ALL PERMANENT PLUGS OR CAPS, PER STANDARD DRAWING NO. BH 708, SHALL BE CAPABLE OF WITHSTANDING A 200 PSI TEST PRESSURE.
4. FINAL FIRE HYDRANT LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
5. REMOVE EXISTING TEE, VALVE, LATERAL AND FIRE HYDRANT ASSEMBLY IF LOCATION REMAINS THE SAME.
6. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED WITH A SAND SLURRY MIX AS DIRECTED BY THE CITY ENGINEER.
7. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
PROVIDE HEAVY DUTY CAST IRON VALVE BOX CAP, WESTERN WATER WORKS SUPPLY COMPANY, 8" I.D. NO. 84 OR APPROVED EQUAL, MARKED AS INDICATED, PAINT AS INDICATED.

<table>
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<th>VALVE TYPE</th>
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<td>WATER MAIN ISOLATION VALVE</td>
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<tr>
<td>FIRE HYDRANT BRANCH VALVE</td>
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<tr>
<td>ZONE VALVE</td>
<td>RED</td>
<td>YELLOW</td>
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NOTES:

1. VALVE OPERATORS SHALL BE A TRAVELING NUT TYPE AND HAVE 2-INCH OPERATING NUTS.

2. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.

VALVE BOX DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED  (signature)  DATE 7-30-09
APPROVED (signature)  DATE 7-31-09

STANDARD DRAWING
BH 707
SHEET 1 OF 1
### NOTES:
1. CONCRETE SHALL BE 2000 P.S.I.
2. POUR CONCRETE THRUST BLOCKS AGAINST UNDISTURBED SOIL.
3. REMOVE INTERFERING PORTIONS OF MAIN TO BE ABANDONED.
4. USE STEEL ANCHOR RODS OR STRAPS ONLY WHERE PERMITTED BY THE ENGINEER.

### TYPICAL CAPS AND PLUGS

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED [Signature] DATE 7-30-09
APPROVED [Signature] DATE 7-31-09

STANDARD DRAWING BH 708

SHEET 1 OF 1
### HORIZONTAL BENDS

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<th>DEAD ENDS AND TEES</th>
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### VERTICAL BENDS

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### CONCRETE THRUST BLOCK SCHEDULE

**NOTE:**

1. THRUST BLOCK SIZES ARE BASED ON A BEARING CAPACITY OF 1500 P.S.F., WITH A MINIMUM SOIL COVER OF 3'-0". IF SOIL COVER IS LESS THAN 3'-0", MULTIPLY BEARING AREA BY A FACTOR OF 1.5 FOR SOIL COVER OF 2'-0" TO 3'-0", OR BY A FACTOR OF THREE (3) FOR SOIL COVER OF 1'-0" TO 2'-0".

2. DIMENSIONS SHOWN REFER TO THRUST BLOCK TYPES SHOWN IN DETAIL, AND ARE MINIMUM VALUES ONLY.

3. CONCRETE MIX SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR 3000 LBS. STRENGTH AT 28 DAYS WHEN TESTED IS ACCORDANCE WITH ASTM 039.

4. ALL THRUST BLOCKS SHALL BE Poured SOLIDLY AGAINST FIRM, UNDISTURBED SOIL.

5. IF SOILS HAVE BEEN PREVIOUSLY EXCAVATED AND BACKFILLED, CONTRACTOR SHALL NOTIFY CITY ENGINEER, WHO MAY DIRECT THAT THE DIMENSIONS SHOWN SHALL BE INCREASED BY A FACTOR OF 1.5.

6. CONCRETE POURED AGAINST PIPE FITTINGS SHALL NOT EXTEND BEYOND THE FITTING JOINTS WITHOUT THE APPROVAL OF THE CITY ENGINEER.

7. THRUST REACTION BACKING TYPE (SEE DRAWING) SHALL BE AS DIRECTED BY THE CITY ENGINEER.

8. THE ANGLE (θ) SHOWN IN THE DETAILS SHALL BE GREATER THAN 45° IN ALL CASES.
NOTE:

1. CONCRETE FOR THRUST BLOCK TO BE 2000 P.S.I.
NOTE:
1. SEE STANDARD DRAWING NO. BH 711, SHT. 1 FOR THRUST BLOCK SCHEDULE AND NOTES.
CONCRETE THRUST BLOCKS

MAKE BLOCK FULL WIDTH OF TRENCH

TYPE V

SECTION P

#5 @ 12" O.C. MAX. MIN. 2 REQUIRED, TOP AND BOTTOM EACH SIDE
WRAP WITH PLASTIC LINER TO PREVENT CORROSION

NOTE:
1. SEE STANDARD DRAWING NO.BH 711, SHT. 1 FOR THRUST BLOCK SCHEDULE AND NOTES.

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED CITY ENGINEER
APPROVED PUBLIC WORKS DIRECTOR

REVISIONS
MARK DATE DESCRIPTION

STANDARD DRAWING
BH 709

SHEET 4 OF 4
NOTES:

1. WHEN TRENCH WORK CAN NOT BE COMPLETED WITHIN THE SAME WORKING DAY SEE BEVERLY HILLS STANDARD DRAWING BH 113 FOR STEEL PLATE PLACEMENT.

2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

TRENCH FOR WATER LINE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING
BH 710

DATE 7-20-09
DATE 1-21-09

SHEET 1 OF 1
15" I.D. FABRICATED STEEL CASING, 1/8" THICK

FILL TOP 270° AREA WITH GROUT OR PIT SAND AFTER PIPE HAS BEEN PLACED

WATER MAIN

STRAP

CONTINUOUS GREASED SKIDS, NOTCH AND STRAP TO WATER MAIN

FILL TOP 90° AREA WITH GROUT AFTER PIPE HAS BEEN PLACED

NOTE:
GROUT HOLES SHALL BE PROVIDED AT LOCATIONS ACCEPTABLE TO THE ENGINEER. FILL VOIDS OUTSIDE CASING PIPE WITH GROUT.

JACKED CASING WITH WATER MAIN
NOT TO SCALE
WATER METER BOX & LID - 13" x 24"

SECTION A-A

SECTION B-B

3/8-16 SST THREADED INSERT, 2 PLCS (4 PLCS OR FLOATING NUT ALSO AVAILABLE)

NON-TRAFFIC RATED

DESCRIPTION OF MATERIAL: POLYMER CONCRETE (GRAY)

TOLERANCE: ±1/8"

ESTIMATED PART WEIGHT: 65.0 LBS.
WATER METER BOX & LID - 13" x 24"

SECTION A-A

SEE DETAIL A

REVISIONS

RECOMMENDED DATE 11/8/10
APPROVED DATE 11/18/10

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

STANDARD DRAWING
BH 712
SHEET 2 OF 2
WATER METER BOX & LID - 17" x 30"

NON-TRAFFIC RATED
DESCRIPTION OF MATERIAL: POLYMER CONCRETE (GRAY)
TOLERANCE: ±1/8"
ESTIMATED PART WEIGHT: 99.0 LBS.
WATER METER BOX & LID - 17" x 30"

PLAN VIEW

SECTION A-A

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING
BH 713

REMARKS

MARK DATE DESCRIPTION

RECOMMENDED CITY ENGINEER DATE 11-18-10
APPROVED PUBLIC WORKS DIRECTOR DATE 11-18-10

SHEET 2 OF 2
10" x 17" WATER METER BOX & LID - H/20 LOADING

TRAFFIC BOX
REINFORCED CONCRETE
H-20 LOADING
130 lbs.

EXTENSION
REINFORCED CONCRETE
H-20 LOADING
129 lbs.

SLAB
REINFORCED CONCRETE
32 lbs.

NOTES:
1. CALTRANS No. 3-1/2T STATE SPECIFICATIONS.
10" x 17" WATER METER BOX & LID - H/20 LOADING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

STANDARD DRAWING
BH 714

RECOMMENDED
CITY ENGINEER DATE 11-19-10
APPROVED
PUBLIC WORKS DIRECTOR DATE 11-18-10

MATERIALS:
1 - 1/2" DIAMOND CHECKER PLATE
2 - 1/4" X 1-1/2" STEEL FLAT STOCK
3 - 3/4" X 1/2" STEEL FLAT STOCK
4 - 3/8" - 16 STEEL NUT
5 - 3/16" THICK WASHER TO BE WELDED PER ASTM A-706
6 - SURFACE AROUND WELD TO BE FLAT
### TRAFFIC BOX
- Reinforced Concrete
- H-20 Loading
- 166 lbs.

### EXTENSION
- Reinforced Concrete
- H-20 Loading
- 163 lbs.

### SLAB
- Reinforced Concrete
- 52 lbs.

### NOTES:
1. CALTRANS No. 5T STATE SPECIFICATIONS.

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### 13" x 24" WATER METER BOX & LID - H/20 LOADING

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**REVISIONS**

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**CITY OF BEVERLY HILLS, CALIFORNIA**

**DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION**

**CIVIL ENGINEERING DIVISION**

**RECOMMENDED**

**APPROVED**

**STANDARD DRAWING**

**BH 715**

**SHEET 1 OF 2**
BOX
REINFORCED CONCRETE
H-20 LOADING
268 lbs.

EXTENSION
REINFORCED CONCRETE
H-20 LOADING
250 lbs.

SLAB
REINFORCED CONCRETE
106 lbs.

NOTES:
1. CALTRANS No. 6T STATE SPECIFICATIONS.
17" x 30" WATER METER BOX & LID - H/20 LOADING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE 11-18-09
APPROVED DATE 11-18-10

MATERIALS
1 - 1/2" DIAMOND CHECKER PLATE
2 - 1/4" x 1-1/2" STEEL FLAT STOCK
3 - 3/4" x 1/2" STEEL FLAT STOCK
4 - 3/8" - 16 STEEL NUT
5 - 3/16" THICK WASHER TO BE WELDED PER ASTM A-708
6 - SURFACE AROUND WELD TO BE FLAT
FOR LID SEE SHEET 3

MATERIALS:

1. 27" HIGH LOWER SECTION.
2. 6" TOP SECTION WITH GALVANIZED CAST-IN FRAME.
3. 12" x 12" KNOCK OUT 3-1/2" DEEP ON EACH END WALL
4. 6" OR 12" EXTENSION SECTIONS AVAILABLE.

NOTES:

1. DESIGNED FOR PEDESTRIAN/PARKWAY LOADS OR TRAFFIC AASHTO H20 FOR USE IN OFF-STREET LOCATIONS ONLY.
   STRUCTURE DESIGNED IN ACCORDANCE WITH:
   - AASHTO H-20 TRAFFIC BRIDGE LOADING
   - ASTM C-857 STANDARD PRACTICE FOR MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES
   - AMERICAN CONCRETE INSTITUTE ACI 318-05

2. CONCRETE COMPRESSIVE STRENGTH Fc = 5500 PSI.

3. REINFORCEMENT IN ACCORDANCE WITH ASTM A-706 WITH A YIELD STRENGTH OF FY = 60,000 PSI.

4. 6" MINIMUM COMPACTED GRANULAR MATERIAL RECOMMENDED FOR SUB-BASE FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.

5. MINIMUM EXCAVATION SIZE: 3'-2" x 4'-2" x REQUIRED DEPTH.

2' x 3' WATER VAULT BOX & LID

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED CITY ENGINEER 11-19-10
APPROVED PUBLIC WORKS DIRECTOR 11-18-10

STANDARD DRAWING
BH 717

SHEET 1 OF 3
2' x 3' WATER VAULT BOX & LID
2' x 3' WATER VAULT BOX & LID

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED

1 5/16" DIAMOND PLATE
27-1/2" x 39-1/2"

1 10-1/8" ID x 12-1/4" OD
1/4" PLATE

1 11-1/2" ID x 13-1/2" OD
1/4" PLATE

APPROX. 104 lbs.
**FOR LID SEE SHEET 3**

**NOTES:**

1. **DESIGNED FOR PEDESTRIAN/PARKWAY LOADS OR TRAFFIC AASHTO H20 FOR USE IN OFF-STREET LOCATIONS ONLY.**

2. **STRUCTURE DESIGNED IN ACCORDANCE WITH:**
   - AASHTO H-20 TRAFFIC BRIDGE LOADING
   - ASTM C-657 STANDARD PRACTICE FOR MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES
   - AMERICAN CONCRETE INSTITUTE ACI 318-05

3. **CONCRETE COMPRESSIVE STRENGTH \( f'_c \) = 5500 PSI.

4. **REINFORCEMENT IN ACCORDANCE WITH ASTM A-706 WITH A YIELD STRENGTH \( f_y \) = 60,000 PSI.**

5. **6" MINIMUM COMPACTED GRANULAR MATERIAL RECOMMENDED FOR SUB-BASE FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.**

6. **MINIMUM EXCAVATION SIZE: 3'-6" x 5'-2" x REQUIRED DEPTH.**

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**2'-6" x 4' WATER VAULT BOX & LID**

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**CITY OF BEVERLY HILLS, CALIFORNIA**

**DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION**

**CIVIL ENGINEERING DIVISION**

**RECOMMENDED**

**APPROVED**

**STANDARD DRAWING**

**BH 718**

**SHEET 1 OF 3**
2'-6" x 4' WATER VAULT BOX & LID

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE 11-19-09
APPROVED DATE 11-18-10

STANDARD DRAWING BH 718

SHEET 2 OF 3
2'-6" x 4' WATER VAULT BOX & LID

PLAN VIEW

SLOT DETAIL
6 PLACES

QTY. MATERIALS
1 5/16" DIAMOND PLATE
33-1/2" x 51-1/2"
1 10-1/8" ID x 12-1/4" OD
1/4" PLATE
1 11-1/2" ID x 13-1/2" OD
1/4" PLATE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
CITY ENGINEER
DATE 11-18-10

APPROVED
PUBLIC WORKS DIRECTOR
DATE 11-18-10

STANDARD DRAWING
BH 718

SHEET 3 OF 3
CASE 1
NEW SEWER

ZONE
A. SEWER LINES PARALLEL TO WATER MAINS SHALL NOT BE PERMITTED IN THIS ZONE WITHOUT APPROVAL FROM THE CITY OF BEVERLY HILLS.

B. A SEWER LINE PLACED PARALLEL TO A WATER LINE SHALL BE CONSTRUCTED OF:
   1. EXTRA STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS.
   2. PLASTIC SEWER PIPE WITH RUBBER RING JOINTS (PER ASTM D 3034) OR EQUIVALENT.
   3. CAST OR DUCTILE IRON PIPE WITH COMPRESSION JOINTS.
   4. REINFORCED CONCRETE PRESSURE PIPE WITH COMPRESSION JOINTS (PER AWWA C302-74).

P. PROHIBITED ZONE - NO SEWER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

CASE 2
NEW WATER MAIN

ZONE
A. NO WATER MAINS PARALLEL TO SEWERS SHALL BE CONSTRUCTED WITHOUT APPROVAL FROM THE CITY OF BEVERLY HILLS.

B. A WATER LINE PLACED PARALLEL TO A SEWER LINE SHALL BE CONSTRUCTED OF STEEL PIPE, CML, AND CMC WITH WELDED JOINTS.

P. PROHIBITED ZONE - NO WATER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

ADDITIONAL NOTES:
1. ZONES IDENTICAL ON EITHER SIDE OF CENTER LINES,
2. WATER MAINS AND SEWER MAINS MUST NOT BE INSTALLED IN THE SAME TRENCH.
3. SEPARATION DISTANCES SPECIFIED SHALL BE MEASURED FROM THE NEAREST EDGE OF FACILITIES.
4. STEEL PIPE SHALL BE A MINIMUM OF 10 GAGE THICKNESS.

SEWER AND WATER MAIN PARALLEL SEPARATION < 10'

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED

STANDARD DRAWING
BH 719
SHEET 1 OF 2
CASE 1
NEW SEWER

ZONE "C"
ZONE "P"

ZONE "D"
ZONE "P"

ZONE "C"

CASE 2
NEW WATER MAIN

ZONE "D"
ZONE "P"

ZONE "C"

CASE 1
NEW SEWER

ZONE SPECIAL CONSTRUCTION REQUIRED FOR SEWER

C. A SEWER LINE CROSSING A WATER MAIN SHALL BE CONSTRUCTED OF:
   1. DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING AND MECHANICAL JOINTS.
   2. A CONTINUOUS SECTION OF CLASS 200 (OR 14 PER AWWA C302-74) PLASTIC PIPE OR EQUIVALENT, CENTERED OVER THE PIPE BEING CROSSED.
   3. A CONTINUOUS SECTION OF REINFORCED CONCRETE PRESSURE PIPE (PER AWWA C302-74) CENTERED OVER THE PIPE BEING CROSSED.
   4. ANY SEWER PIPE WITHIN A CONTINUOUS SLEEVE.

D. A SEWER LINE CROSSING A WATER MAIN SHALL BE CONSTRUCTED OF:
   1. A CONTINUOUS SECTION OF DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING.
   2. A CONTINUOUS SECTION OF CLASS 200 (OR 14 PER AWWA C302-74) PLASTIC PIPE OR EQUIVALENT, CENTERED OVER THE PIPE BEING CROSSED.
   3. A CONTINUOUS SECTION OF REINFORCED CONCRETE PRESSURE PIPE (PER AWWA C302-74) CENTERED OVER THE PIPE BEING CROSSED.
   4. ANY SEWER PIPE WITHIN A CONTINUOUS SLEEVE
   5. ANY SEWER PIPE SEPARATED BY A 10'x10'x4" THICK REINFORCED CONCRETE SLAB.

P. PROHIBITED ZONE - NO SEWER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

CASE 2
NEW WATER MAIN

ZONE SPECIAL CONSTRUCTION REQUIRED FOR SEWER

C. NO JOINTS WITHIN 10 FEET OF EITHER SIDE OF SEWER LINE.
   USE DUCTILE IRON PIPE, CML, AND POLYETHYLENE WRAPPED, OR STEEL PIPE, CML, AND CMC.

D. NO JOINTS WITHIN 4 FEET OF EITHER SIDE OF SEWER LINE.
   USE DUCTILE IRON PIPE, CML, AND POLYETHYLENE WRAPPED, OR STEEL PIPE, CML, AND CMC.

P. PROHIBITED ZONE - NO WATER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

ADDITIONAL NOTES:

1. WATER MAINS AND SEWER MAINS MUST NOT BE INSTALLED IN THE SAME TRENCH.
2. SEPARATION DISTANCES SPECIFIED SHALL BE MEASURED FROM THE NEAREST EDGE OF FACILITIES.
3. STEEL PIPE SHALL BE A MINIMUM OF 10 GAGE THICKNESS.

SEWER AND WATER MAIN PERPENDICULAR SEPARATION < 10'

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE 11-18-10
APPROVED DATE 11-18-10

STANDARD DRAWING
BH 719
SHEET 2 OF 2
SECTION 6. OVERFLOW EMERGENCY RESPONSE PLAN

6.1 Introduction

This section of the SSMP is intended to provide an overview of the City’s sanitary sewer system Overflow Emergency Response Plan. This Overflow Emergency Response Plan has been developed pursuant to State Water Resources Control Board guidelines requiring all public wastewater collection system agencies in California be regulated under General Waste Discharge Requirements. The City’s sanitary sewer overflow response procedures provide a standardized course of action for Wastewater Collection and Environmental Programs staff to follow in the event of an SSO.

The City SSO response and reporting requirements have been revised to adhere to the July 30, 2013 Statewide General Waste Discharge Requirements for Sanitary Sewer System (SSS WDRs).

6.2 Regulatory Requirements for the Overflow Emergency Response Plan Section

The requirements for the Overflow Emergency Response Plan section of the SSMP are:

GWDR (Element 6 - Overflow Emergency Response Plan) Requirement:
The GWDR requirements for the Overflow Emergency Response Plan are: Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSO’s in a timely manner;
- A program to ensure an appropriate response to all overflows;
- Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities;
- A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States, and to minimize or correct any adverse impact on the environment resulting from the SSO’s, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge;
- Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSO’s that potentially affect public health or reach water of the State in accordance with the MRP. All SSO’s shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDR’s or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification; and
- Procedures to ensure that appropriate staff and contractor personnel are aware and follow the Overflow Emergency Response Plan and are appropriately trained.
6.3 SSO Notification Procedure

The Requirement: Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSO’s in a timely manner.

Section 2.3.2 of this SSMP introduces the process and individuals responsible for reporting and notification of a sanitary sewer overflow. Table 2-1 provides contacts and phone numbers for City staff who need to be notified of SSO’s. Figure 2-2 depicts the chain of communication for responding to SSO’s. Beverly Hills keeps a large “Call” poster at the City’s Corporation Yard for clear reminders.

Any type of wastewater infrastructure failure or overflow triggers an immediate response by the Wastewater Division to isolate and correct the problem. Once a call is received the appropriate Wastewater Collection staff member(s) are notified.

For Category 1 and Category 2 spills, staff is directed to immediately notify the Environmental Compliance and Sustainability Programs Manager and the Environmental Services Manager (Managers). The Managers will be responsible for reporting the SSO event to various regulatory agencies and also provide field staff assistance in remediation coordination if necessary. For after-hours response, the Stand-By staff (2 System Drainage Workers) will be deployed to mitigate the SSO and if needed, additional System Drainage Workers members will be asked to respond to the SSO. If needed, the Managers will activate mutual aid assistance from neighboring cities to assist in managing sewer overflows.

If the Managers are not available to respond to the SSO, the Wastewater Division staff members are instructed to contact the Assistant Director of Public Works to fulfill the roles of the Managers. If the Assistant Director of Public Works is not available, the Wastewater Collection staff are instructed to call the Director of Public Works to fulfill the roles filled by his/her subordinates. Figure 2-2 is the SSO Response Chain of Communications summarizing the organizational structure to respond and report SSOs.

Figure 6-1 contains a flowchart depicting the chain of communication for notification of and reporting SSO’s.
Figure 6-1. SSO Response Flow Chart

SSO Notification

- Public Calls
- Customer Service receive calls during Business Hours
- Emergency Response Dispatch receive calls for After-Hours

Wastewater Division Response

- Staff receives calls and dispatches to mitigate the SSO.
- During business hours, all available staff will respond to the SSO. Managers will be responsible for communicating the SSO to the various regulatory agencies.
- After business hours, Stand-By Operators will respond to SSOs and Managers will be contacting the various regulators as needed.
- Staff responds to SSO’s from restoring flow, SSO recovery and cleanup.

Notify Regulatory Agencies

- Managers notify the SWRCB, OES, County Health Department for SSO’s as required.
- Managers enter SSO events into CIWQs and review SSO field worksheets.
- Environmental Compliance & Sustainability or Assistant Director of Public Works certifies CIWQs reports.
6.4 SSO Emergency Response Procedure

The Requirement: A program to ensure appropriate response to all overflows.

The City responds to all spills within City limits. During business hours, all available wastewater division staff members respond to the SSO. For after-hours, the City assigns a Stand-By which consists of two Drainage Workers crew to respond to the SSO. Staff assigned a Stand-By assignment is well versed with the sewer overflow emergency response procedures. If the emergency event needs additional support, additional operators will be asked to respond to mitigate and cleanup during an emergency event.

Section 2 of this SSMP addresses the responsibilities and authority of City staff during an emergency.

Additional operators will be asked to respond, if needed, to support assigned Stand-By operators in mitigation and cleanup.

6.4.1 Secure the Area

The Requirement: Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities.

Wastewater Division staff respond to all sewer emergencies within City limits. Other departments within the City may provide assistance for traffic and crowd control depending on the severity of the situation, including the Public Works Department that has the Streets, Water, and Solid Waste Divisions. The City's Police Department is also available to assist in traffic and crowd control by deploying their Traffic Control Officers (TCO's). The Fire Department can be used in this situation if they become the first responders to the SSO. Each Department described above is versed on the following methods to control traffic and crowd issues during the emergency. They know how to do the following:

- Place warning signs
- Barricades and cones (lighted barricades if needed)
- Safety tape

6.4.2 Control the Cause of the Wastewater Spill

The Requirement: A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSO's, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.
City Wastewater Division staff are trained to use procedures identified in the City of Beverly Hills' Wastewater Division Standard Operating Procedure “Wastewater Spill Control Procedures” as provided in Appendix 6-B. Staff are trained to use best management practices to manage and recover sewer overflows.

City staff will do what is necessary to stop the cause of the spill. If the overflow is caused by a stoppage in the main line, City staff will use the hydro jet or mechanical rodder truck to relieve the stoppage immediately.

One method to contain spills includes plugging of storm drain water lines and directing sewer spill flow to storm drain for use as a temporary catch basin. If this procedure is used, the storm drain will be cleaned and disinfected after the spill is relieved. The Combination Truck which is equipped with a hydrojet and 4,000 gallon vacuum will be used to clean catch basins that were holding sewer overflows. In addition, the Wastewater Division will clean the affected storm drain line by recovering sewage overflow and wash water. If necessary, the City will report spills immediately to the Los Angeles County Department of Public Health (LACDPH) for monitoring water quality and posting hazard notices.

If there is a significant sewer overflow emergency event, the City of Beverly Hills has the major equipment (cranes, fencing, pumping) to respond to these issues locally. For those emergencies requiring additional support and mitigation, the City Manager has the authority to execute an emergency contract work from the contractors listed in Table 6-1:

<table>
<thead>
<tr>
<th>SERVICE/PHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractors</td>
</tr>
<tr>
<td>a. Insituform Technologies, LLC............................................ (714) 278-1900</td>
</tr>
<tr>
<td>b. Williams Pipeline Contractors, Inc................................. (805) 644-1277</td>
</tr>
</tbody>
</table>

If the sewer overflow event requires the general public to be notified, the City has an internal Public Information Office (PIO) that is responsible for informing all necessary media outlets during Emergency responses. Therese Kosterman is the current PIO for Beverly Hills. She can be contacted at (310) 285-2456.

6.4.3 Clean Up the Wastewater Spill
To minimize health impacts to the public and to protect the environment, the City will begin cleaning the wastewater spill site as soon as possible or immediately after the overflow stops.

The City will remove debris found on the surface streets, catch basin, or storm drain lines. Liquid and debris collected during clean-up will be properly disposed in either the sewer collection system or in a refuse solid waste system.
Surface areas exposed to sewer overflows will be disinfected by applying a mild industrial grade disinfectant over the area. In addition, the streets are always exposed to sunlight where the ultraviolet rays from the sun kills harmful organisms as a result of the sewer overflows.

The wash water from the cleanup process will be either vacuumed or diverted to a downstream sewer manhole. If necessary, a deodorizer will be used to eliminate odor issues in the area. During cleanup, Drainage Maintenance Workers wear personal protective equipment (PPE) while performing cleanup. PPEs will protect the operators from being exposed to health hazard conditions caused by sewer discharge and cleaning agents.

Before leaving the affected area, the Wastewater Division will conduct a final inspection of the spill area and the system to make sure that it has been restored to normal conditions.

6.4.4 Spill Documentation
The City has implemented additional documentation procedures for SSOs.

The City is using an SSO field worksheet that provides pertinent information for SSO events. The field worksheet was based off the CIWQS forms.

As of January 2016, the City uses the City of San Diego Metropolitan Wastewater Department Reference Sheet to estimate SSO’s. The City utilizes efforts to contact members of the public who are in close proximity to a sewer overflow on a “maximum extent possible” for Category 1 and 2 spills.

The City has implemented procedures to take photographs of manhole flows at the SSO site to have a better determination of SSO flowrates. Photographs are also taken during cleanup and recovery to demonstrate the City’s commitment to recovering overflows and safely restoring the affected areas. Photographs will only be taken if they can be obtained without substantially impeding response measures.

For Category 1 SSO’s that are greater than 1,000 gallons and non-recoverable, the City coordinates with the Los Angeles County Flood Control District to assess if the overflow has in fact reached the surface waters. If it has, the City is prepared to take photographs and collect water quality samples at Ballona Creek to determine the impact of the SSO in the watershed.

The City also reviews water quality results from the Ballona Creek Watershed Management Group (“BC-WMG”). The Ballona Creek Watershed is subject to Bacteria Total Maximum Daily Limits (TMDLs) water quality regulations. With a TMDL, the watershed is subject to bacterial limits for non-rainy season (dry-weather) and rainy seasons (wet-weather). If any levels of bacterial constituents are determined to be higher than background levels and determined to be caused by an SSO, the City will perform any necessary maintenance undertaken at the time of the spill (i.e. line condition assessment, line maintenance activities, spot repair or replacement). Thus far, the results do not correlate to any SSO events that have occurred.
6.4.5 Post Spill Investigation

Following a SSO event, an investigation will be conducted to determine the cause and identify actions needed to reduce or eliminate the potential for the SSO to repeat. The investigation will include the following:

- Review of past maintenance records;
- Review of available photographs taken during the spill;
- Conducting a CCTV inspection to determine the condition of the line segment immediately following SSO and reviewing the video and logs; and;
- Conduct an investigation with staff involved with the spill, customers and nearby residents.

The post spill investigation should lead to the cause of the SSO, lead to corrective actions that need to be made, and accurate reporting.

6.5 Sanitary Sewer Overflow Reporting

The Requirement: Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected agencies (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSO’s that potentially affect public health or reach water of the State in accordance with the MRP. All SSO’s shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDR’s or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification.

City policy is to report spills, depending upon size, significance, and/or containment, to the Los Angeles Regional Water Quality Control Board, Los Angeles County Public Health, and the California Emergency Management Agency. The City has a responsibility to provide full disclosure of its operations and performance, and has adopted the spill reporting format referenced in the reporting requirements of the State General Permit. A sample of the SSO field worksheet is included in Appendix 6-C.

Reporting time frames vary by agency. Spills are categorized and reported as identified in Table 6-2. The City utilizes the City of San Diego Metropolitan Wastewater Reference Sheet for Estimating Sewer Spills Overflowing Sewer Manholes which is included in Appendix 6-D.
### Table 6-2. Regulatory Agencies Notification and Time Frame

<table>
<thead>
<tr>
<th>SSO Category</th>
<th>Type or Description</th>
<th>Agencies to be Notified</th>
<th>Timeframe</th>
<th>Type of Notification and Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Any volume of untreated or partially treated SSO:</td>
<td>OES (&gt; 1,000 gallons)</td>
<td>As soon as possible, but no later than 2 hours after becoming aware of the spill.</td>
<td>Call and obtain control number.</td>
</tr>
<tr>
<td></td>
<td>• Reach surface water and/or drainage channel tributary to surface water</td>
<td>Los Angeles County Department of Public Health (LACDPH)</td>
<td>Within 15 minutes after becoming aware of the spill.</td>
<td>Call and obtain operator number.</td>
</tr>
<tr>
<td></td>
<td>• Discharge to a storm drain and not fully captured and returned to the sanitary sewer system or not captured and disposed of properly. Any volume not recovered from storm drain is considered to have reached surface water.</td>
<td>Los Angeles County Flood Control District (only if entered into storm drain)</td>
<td>As soon as possible, but no later than 1 hour after becoming aware of the spill.</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LACDPH (&gt; 50,000)</td>
<td>As soon as possible, but no later than 2 hours after becoming aware of the spill.</td>
<td>Conduct Water Quality Sampling within 48 hours of initial spill.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWQCB (Region 4)</td>
<td>As soon as possible, but no later than 2 hours after becoming aware of the spill.</td>
<td>CIWQS Online Database – Upload water quality results.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWRCB</td>
<td>As soon as we become aware of the SSO, reporting is possible and can be provided without substantially impeding cleanup or other measures.</td>
<td>SSO Technical Report – Submit report within 45 calendar days on conclusion of SSO in which 50,000 gallons or greater are spilled to surface water.</td>
</tr>
<tr>
<td>2</td>
<td>&gt; 1,000 gallons of Untreated or partially treated SSO:</td>
<td>Los Angeles County Flood Control District (only if entered into storm drain)</td>
<td>Same as above</td>
<td>Additional Information – Anytime in form of an attachment.</td>
</tr>
<tr>
<td></td>
<td>• Does not reach surface water, drainage channel or storm drain unless discharge to storm drain system is fully recovered and disposed of properly.</td>
<td>LACDPH</td>
<td>Same as above</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWQCB (Region 4)</td>
<td>Same as above</td>
<td>Final Certified Report – Within 15 calendar days on conclusion of the SSO response and remediation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWRCB</td>
<td>Same as above</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>All other discharge of untreated or partially treated resulting from sewer system failure or flow condition.</td>
<td>LACDPH</td>
<td>Same as above</td>
<td>CIWQS Online Database – Within 30 days after the end of the calendar month in which the SSO occurred.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWQCB (Region 4)</td>
<td>Same as above</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWRCB</td>
<td>Same as above</td>
<td></td>
</tr>
<tr>
<td>PLSD</td>
<td>Private lateral sewage discharge (PLSD) caused by blockages or other problems within a privately-owned lateral</td>
<td>LACDPH</td>
<td>Same as above</td>
<td>CIWQS Online Database – Certified within 30 days after the end of the calendar month, certified statement that no SSO occurred.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWQCB (Region 4)</td>
<td>Same as above</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SWRCB (optional)</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>NA</td>
<td>No SSO in a calendar month</td>
<td>SWRCB</td>
<td>NA</td>
<td>CIWQS Online Database - Update and certify every 12 months.</td>
</tr>
<tr>
<td>NA</td>
<td>Collection System Questionnaire</td>
<td>SWRCB</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>
### Table 6-3. Regulatory Agency Contacts

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>CONTACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Emergency Management Agency (Cal-EMA)</td>
<td>(800) 852-7550</td>
</tr>
<tr>
<td>Los Angeles Regional Water Quality Control Board (Region 4) (LA RWQCB)</td>
<td>(213) 576-6600 or (213) 576-6650</td>
</tr>
<tr>
<td>Los Angeles County Department of Public Health (LACDPH)</td>
<td>(213) 974-1234</td>
</tr>
<tr>
<td>Los Angeles County Flood Control District</td>
<td>(626) 458-4357</td>
</tr>
<tr>
<td>State Water Resource Control Board (SWRCB)</td>
<td>Online database website address</td>
</tr>
</tbody>
</table>

#### 6.6 Emergency Response Plan Distribution and Training

**The Requirement:** Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Overflow Emergency Response Plan and are appropriately trained.

The role of the Wastewater Division staff is clearly established and described in Section 2 of this SSMP. All City personnel who may have a role in responding to, reporting, and/or mitigating a SSO will receive training on the contents of the City’s Overflow Emergency Response Plan. New employees will receive training and current employees will receive annual refresher training on this plan and the overflow emergency response procedures. All Wastewater Division staff are required to be familiar with this SSMP prior to fulfilling Stand-by assignments.

The City’s Sewer Spill Prevention Contingency Plan and SSMP are available digitally and in printed form for the Wastewater Division staff.
APPENDIX 6-A. MONITORING AND REPORTING PROGRAM

State Water Resources Control Board
Order No. WQ 2013-0058-EXEC
Amending Monitoring and Reporting Program For
Statewide General Waste Discharge Requirements
Sanitary Sewer Systems

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order No. 2006-0003-DWQ, “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems” (SSS WDRs). This MRP shall be effective from September 9, 2013 until it is rescinded. Revisions to this MRP may be made at any time by the Executive Director, and may include a reduction or increase in the monitoring and reporting requirements. All site specific records and data developed pursuant to the SSS WDRs and the MRP shall be complete, accurate, and justified by evidence maintained by the enrollee. Failure to comply with the MRP may subject an enrollee to civil liabilities pursuant to Water code section 13350; Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. The State Water Resources Control Board reserves the right to take any further enforcement action authorized by law.

A. SUMMARY OF MRP REQUIREMENTS

Table 1 – Spill Categories and Definitions

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>DEFINITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATEGORY 1</td>
<td>Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee’s sanitary sewer system failure or flow condition that:</td>
</tr>
<tr>
<td></td>
<td>• Reach surface water and/or reach a drainage channel tributary to a surface water; or</td>
</tr>
<tr>
<td></td>
<td>• Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. 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.</td>
</tr>
<tr>
<td>CATEGORY 2</td>
<td>Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee’s sanitary sewer system failure or flow condition that do not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.</td>
</tr>
<tr>
<td>CATEGORY 3</td>
<td>All other discharges of untreated or partially related wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition.</td>
</tr>
<tr>
<td>PRIVATE LATERAL SEWAGE</td>
<td>Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral</td>
</tr>
</tbody>
</table>
## Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>REQUIREMENT</th>
<th>METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTIFICATION</strong> (see section B of MRP)</td>
<td>• Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, notify the California Office of Emergency Services (Cal OES) and obtain a notification number.</td>
<td>Call Cal OES at: (800) 852-7550</td>
</tr>
</tbody>
</table>
| **REPORTING** (see section C of MRP)  | • Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.  
• Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.  
• Category 3 SSO: Submit certified report within 30 calendar days of the ended of month in which SSO occurred.  
• SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.  
• “No Spill” Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.  
• Collection System Questionnaire: Update and certify every 12 months. | Enter data into the CIWQS Online SSO Database [http://ciwqs.waterboards.ca.gov](http://ciwqs.waterboards.ca.gov), Certified by enrollee’s Legally Responsible Official(s). |
| **WATER QUALITY MONITORING** (see section D of MRP) | • Conduct water quality sampling within 48 hours after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface water. | Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters. |
| **RECORD KEEPING**                   | • SSO event records.  
• Records documenting SSMP | Self-maintained records shall be available during inspections or upon request.               |
B. NOTIFICATION REQUIREMENTS

Although Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) staff do not have duties as first responders, this MRP is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the Wastewater Supervisor shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the California Office of Emergency Services (Cal EOS), and obtain a notification control number.

2. To satisfy notification requirements for each applicable SSO, the Wastewater Supervisor, or Lead Operator, shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include;
   i. Name of person notifying Cal OES and direct return phone number
   ii. Estimated SSO volume discharged (gallons)
   iii. If ongoing, estimated SSO discharge rate (gallons per minute)
   iv. SSO Incident Description:
      a. Brief narrative
      b. On-scene point of contact for additional information (name and cell phone number)
      c. Date and time enrollee became aware of the SSO
      d. Name of sanitary sewer system agency causing the SSO
      e. SSO cause (if known)
   v. Indication of whether the SSO has been contained
   vi. Indication of whether surface water is impacted
   vii. Name of surface water impacted by SSO, if applicable
   viii. Indication of whether a drinking water supply is or may be impacted by the SSO
   ix. Any other known SSO impacts
x. SSO incident location (address, city, state, and zip code)

3. Following the initial notification to Cal OES and until such time that the SSO report is certified in the CIWQS Online SSO Database, the Wastewater Supervisor shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to know impact(s).

4. PLSDs: The Wastewater Supervisor is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially related wastewater that results or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.

C. REPORTING REQUIREMENTS

1. CIWQS Online SSO Database Account: All enrollees shall obtain a CIWS Online SSO Database account and receive a “Username” and “Password” by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.

2. SSO Mandatory Reporting Information: For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

3. SSO Categories
   i. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee’s sanitary sewer system failure or flow condition that:
      a. Reach surface water and/or reach a drainage channel tributary to a surface water; or
      b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. 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.
   ii. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee’s sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.
   iii. **Category 3** – All other discharges of untreated or partially related wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition.
4. Sanitary Sewer Overflow Reporting to CIWQS – Timeframes

i. Category 1 and Category 2 SSOs – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:
   a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified below under ‘Mandatory Information to be Included in SSO Online Reporting.’
   b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified below under ‘Mandatory Information to be Included in SSO Online Reporting.’

ii. Category 3 SSOs – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified below under ‘Mandatory Information to be Included in SSO Online Reporting.’

iii. "No Spill" Certification – if there are no SSSOs during that calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a "No Spill" certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, "No Spill" certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 – January-March, Q2 – April – June, Q3 – July-September, Q4 – October – December.

iv. Amended SSO Reports – the enrollee may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. After the 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5. SSO Technical Report

The enrollee shall submit an SSO technical report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for an SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the Water Boards form requiring more detailed analyses if requested, shall include at a minimum, the following:
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i. **Causes and Circumstances of the SSO:**
   a. Complete and detailed explanation of how and when the SSO was discovered.
   b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).
   c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
   d. Detailed description of the causes(s) of the SSO.
   e. Copies of original field crew records used to document the SSO.
   f. Historical maintenance records for the failure location.

ii. **Enrollee’s Response to SSO:**
   a. Chronological narrative description of all actions taken by enrollee to terminate the spill.
   b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.
   c. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. **Water Quality Monitoring:**
   a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
   b. Detailed location map illustrating all water quality sampling points.

6. **PLSDs**
   Dischargers of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee’s sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database.
   a. The enrollee is also encouraged to provide notification to Cal OES when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the enrollee is also encouraged to file a spill report as required by Health and Safety Code section 5410 et. Seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.
   b. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

7. **CIWQS Online SSO Database Unavailability**
   In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or email all required information to the appropriate Regional Water Board office in
accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in SSO Online Reporting**

All enrollees must obtain a California Integrated Water Quality System (CIWQS) Online SSO Database account and receive a “Username” and “Password” by registering through the CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS SSO Database. Additionally, within 30 days of receiving an account and prior to recording SSO’s into the SSO Database, all Enrollees must complete the “Collection System Questionnaire,” which collects pertinent information regarding the Enrollee’s collection system. The “Collection System Questionnaire” must be updated at least every 12 months.

i. **SSO Reports**

At a minimum, the following mandatory information must be included prior to finalizing and certifying an SSO report for each category of SSO:

a. **Draft Category 1 SSOs:** At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. IF a single overflow 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 SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.

b. **Certified Category 1 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in the Draft Category 1 SSO.
   1. Description of SSO destination(s).
   2. SSO end date and time.
   3. SSO causes (mainline blockage, roots, etc.).
   4. SSO failure point (main, lateral, etc.).
   5. Whether or not the spill was associated with a storm event.
   6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
   7. Description of spill response activities.
   8. Spill response completion date.
   9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.
10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

c. **Draft Category 2 SSOs:** At a minimum, the following mandatory information shall be reported for a drafty Category 2 SSO report:
   1. Items 1-14 under Draft Category 1 SSO.
d. **Certified Category 2 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:
   1. Items 1-14 under Draft Category 1 SSO and Items 1-9, and 17 under Certified Category 1 SSO.

e. **Certified Category 3 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:
   1. Items 1-14 under Draft Category 1 SSO and Items 1-5, and 17 under Certified Category 1 SSO.

ii. **Reporting SSOs to Other Regulatory Agencies**
These reporting requirements do not preclude an Enrollee from reporting SSO’s to other regulatory agencies pursuant to California state law. These reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

The Enrollee shall report SSO’s to OES, in accordance with California Water Code Section 13271.

   Office of Emergency Services
   Phone (800) 852-7550

The Enrollee shall report SSO’s to County Health officials in accordance with California Health and Safety Code Section 5410 et seq. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSO’s. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department if the county desires this information, and the appropriate Regional Water Board.

iii. **Collection System Questionnaire**
The required Questionnaire provides the Water Board with site-specific information related to the enrollee’s sanitary sewer system. The enrollee shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.

iv. **SSMP Availability**
The enrollee shall provide the publicly available internet web site address to the CIWQS Online SSO Database where a downloadable copy of the enrollee’s approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the enrollee shall comply with the following procedure:
Appendix 6-A
Rev. 1

City of Beverly Hills
Sewer System Management Plan

6A-10

a. Submit an electronic copy of the enrollee’s approved SSMP, critical supporting
documents referenced in the SSMP, and proof of local governing board approval and
within 30 days of any subsequent SSMP re-certifications, to the following mailing
address:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
1001 I Street, 15th Floor, Sacramento, CA 95814

D. WATER QUALITY MONITORING REQUIREMENTS

The enrollee shall develop and implement an SSO Water Quality Monitoring Program to
assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled
to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may
   not be possible.
3. Require water quality analyses for ammonia and bacterial indicators to be performed
   by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water
   Quality Monitoring Program to be properly maintained and calibrated, including any
   records to document maintenance and calibration, as necessary, to ensure their
   continued accuracy.
5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality
   sampling for, at a minimum, the following constituents:
   i. Ammonia
   ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality
       objective or Regional Board direction which may include total and fecal
       coliform, enterococcus, and e-coli.

E. RECORD KEEPING REQUIREMENTS

The following records shall be maintained by the enrollee for a minimum of five years and
shall be made available for review by the Water Boards during an onsite inspection or
through an information request:

1. General Records: The enrollee shall maintain records to document compliance with all
   provisions of the SSS WDRs and this MRP for each sanitary sewer system owned
   including any required records generated by an enrollee’s sanitary sewer system
   contractor(s).
2. SSO Records: The enrollee shall maintain records for each SSO event, including but not
   limited to:
   i. Complaint records documenting how the enrollee responded to all notifications of
      possible or actual SSOs, both during and after business hours, including
complaints that do not result in SSOs. Each complaint record shall, at a minimum, include the following information:

a. Date, time, and method of notification.

b. Date and time the complainant or informant first noticed the SSO.

c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has received surface waters, drainage channels or storm drains.

d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.

e. Final resolution of the complaint.

ii. Records documenting the steps and/or remedial actions undertaken by enrollee, using all available information.

iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.

4. Electronic monitoring records relied upon for documenting SSO event and/or estimating the SSO volume discharged, including, but not limited to records from:

i. Supervisory Control and Data Acquisition (SCADA) systems

ii. Alarm Systems(s)

iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

F. CERTIFICATION

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the SSS WDRs. This designated person is also known as a Legally Responsible Official (LRO). An enrollee may have more than one LRO.

2. Any designated person (i.e. an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.

3. Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.

4. The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.
5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the states as stated in the CIWQS Online SSO Database at the time of certification.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Board.

7/30/13

Jeannine Townsend
Clerk to the Board
APPENDIX 6-B. WASTEWATER SPILL PROCEDURE (SOP)
PURPOSE: Procedures for response teams to meet the requirements of the Sewer System Master Plan (SSMP)

REFERENCES: City of Beverly Hills Sewer System Master Plan (SSMP).

1. DEFINITIONS

Best Management Practices (BMPs): Procedures and equipment used to minimize and prevent sanitary sewer overflows (SSO) from reaching the catch basin, storm drain system and the waters of the US. Procedures and equipment used to clean debris caused by an SSO. For the purposes of this document, BMPs is referring to the following:

1. The use of berms to divert SSOs to downstream catch basin.
2. The use of berms to prevent SSOs flowing into a catch basin.
3. The use of drain plug(s) to hold SSO in a catch basin.
4. The use of vacuum truck to recover SSO flow during an SSO event.

CCTV: Closed Circuit TV. Equipment used to video log the condition of the sanitary sewer segment.

CIWQS: California Integrated Water Quality System

Catch Basin: The catch basin where the sewer overflow enters the storm drain system and discharges to the waters of the US.

Response Team 1 (RT1): First team to arrive at the SSO site.

Response Team 2 (RT2): Second team to arrive at the SSO site.

Response Team 3 (RT3): Third team to arrive at the SSO site.

SSO: Sanitary Sewer Overflow

Waters of the United States (US): For the purpose of this SOP, waters of the United States is defined as the storm drain system (catch basins, storm drain lines, storm drain channels that discharges to Ballona Creek.)
2. **PROCEDURES**

When a sanitary sewer overflow (SSO) is reported to the City, the Wastewater Division responds and uses Best Management Practices (BMPs) to mitigate the SSO and prevent discharge from entering the catch basins and entering waters of the United States (US). On a typical business week, two (2) to three (3) response teams (RT) responds to an SSO. During after hours, one (1) or two (2) Response Teams will be performing the following procedures.

Below are procedures for each Response Team (RT). These are standard guidelines that comply with regulations.

2.1. **Response Team 1 (RT1): 1st Team to arrive at the SSO site.**

2.1.1. Confirm the SSO event. When the SSO is confirmed, report the event to the Wastewater Supervisor and/or Environmental Compliance and Sustainability Programs Manager and/or Solid Waste Manager.

2.1.2. Take a photo of the discharge. The photo will be used to confirm the discharge flowrate.

2.1.3. Place BMP equipment(s) to prevent SSO from reaching the catch basin or the waters of the US.

   2.1.3.1. Equipment can be used to divert the discharge to the downstream manhole; or

   2.1.3.2. Equipment can be used to divert the discharge to the street; or

   2.1.3.3. Equipment can be used to block the discharge from entering the storm drain; or

   2.1.3.4. Equipment can be used to plug the catch basin to prevent flow from entering the storm drain system

Note: RT1 will decide the best BMP option to use to prevent additional flow from entering the catch basin or waters of the US.

2.1.4. If, there is no Response Team 2 (RT2) and/or Response Team 3, then Response Team 1 breaks the sewer blockage after setting up the BMPs.

2.2. **Response Team 2 (RT2) and/or RT3: 2nd and 3rd Teams to arrive at the SSO site.**

2.2.1. Assess the BMP conditions.

2.2.2. If necessary, place or secure additional BMPs (See 2.1.2, above for options) to prevent SSO flow from entering the catch basin and flowing into the storm drain system.
2.2.3. If the RT is not using the Combination Truck, break the sewer blockage.

2.2.4. If the RT is using the Combination Truck, setup to recover discharge from the curb and gutter, catch basin or storm drain line. Return the discharge to the sanitary sewer.

2.2.5. Take photo evidence of SSO contained in the catch basin, curb and gutter or storm drain line. This photo will be used as an attachment to the CIWQS report.

2.3. **When an SSO discharge is not fully contained or recovered, RT2 and/or RT3 will need to do the following:**

2.3.1. Look at the storm drain system map.

2.3.2. Open downstream storm drain manhole(s) to determine the distance traveled by the SSO.

2.3.3. Recover any remaining flow and/or debris in the storm drain system.

2.3.4. Take photo evidence of that discharge was recovered.

2.4. **When the sewer blockage has been broken, prepare for cleanup.**

2.4.1. Wash and clean the affected areas. Estimate how much cleanup water was used and record it.

2.4.2. Return cleanup water to the sanitary sewer system.

2.5. **Perform public SSO inquiry.**

2.5.1. Talk to witnesses (i.e. neighbors, homeowner, contractors, etc.) to confirm the Estimated Spill Start Date/Time.

2.5.2. If this was not successful, record the attempt in the SSO Field Worksheet.

2.5.3. Record this information when completing the SSO Field Worksheet.

2.6. **Complete the SSO Field Worksheet.**

2.6.1. Location of SSO

2.6.2. Date and time when the SSO was discovered or reported to the City.

2.6.3. Estimated spill start date & time.

2.6.4. Estimated operator arrival date/time.

2.6.5. Spill appearance point
2.7. Notify necessary regulatory agencies (varies depending on SSO Category)

2.7.1. Call all State and Local regulators.

2.7.2. Record the case number, time called, and contact person. Include this information in the SSO Field Worksheet.

2.8. CCTV the sewer line segment and laterals where the SSO occurred.

2.8.1. CCTV from manhole to manhole (upstream to downstream)

2.8.2. CCTV lateral connections within the line segment.

2.8.3. Take observational notes (i.e. line conditions, lateral connection condition, root intrusion, etc.)

2.8.4. Identify the cause of the SSO (i.e. lateral condition, line condition, root intrusion, etc.)

2.8.5. Print photo evidence of key observations during CCTV.

2.8.6. Note for Private Laterals: An enforcement letter will be sent to property owners whose laterals are not in good condition (i.e. collapsed, root intrusion, etc.) and provide a compliance period action plan.

2.8.7. Note for Sewer Main Conditions: Report the findings to supervisors and managers. Cases will be evaluated for immediate repair, action or included in the CIP program.

2.9. Post SSO Damages

2.9.1. Staff should also advise the property owner to contact their insurance company to file a claim.

2.9.2. Staff should advise the property owner to call a restoration company to clean and restore the damaged areas.

2.9.3. Staff shall advise the property owner to contact the City’s Risk Management at (310)285-1073 to file a claim against the City.

2.9.4. Staff shall take photo evidence of private property damages. This will be useful for Risk Management assessing the case.
2.10. **Report the SSO Event in CIWQS**

2.10.1. Wastewater Supervisor, and/or Environmental Compliance and Sustainability Programs Manager and/or Solid Waste Manager will need to report the SSO event in the CIWQS database.

2.10.2. The report must be certified in CIWQS after all the SSO information is confirmed to be accurate.

2.11. **Post SSO Enforcement**

When CCTV investigation determines that a property owner is responsible for the SSO, staff shall do the following:

2.11.1. Issue a corrective action notice to property owner.

2.11.2. If no action is taken, staff shall issue a Notice of Violation and/or pursue higher enforcement actions pursuant to the Municipal Code.
3. **SAFETY**

3.1. All waste water staff responding to sanitary sewer surveys will use all precautions and safety practices in operating equipment, implementing BMP equipment and entering into sanitary sewer system and storm drain systems.

3.2. All waste water staff operating equipment shall be using safety equipment prescribed in the operations manual of all equipment.

4. **PERSONNEL/ EQUIPMENT/ MATERIALS**

**Personnel:**

2 to 7 Wastewater Collection System Operators

1 Wastewater Collection System Supervisor

1 Environmental Compliance and Sustainability Programs Manager

1 Solid Waste Manager

**List of Vehicle and Equipment:**

1. Mechanical Rodder (Truck No. 746)
2. Jet Rodder (Truck No. 797)
3. Combination Truck (Truck No. 799)
4. Vacuum Trailer (Truck No. 793)
5. CCTV Truck (Truck No. 798)
### Waste Water Operating Procedure: SSO Field Response

<table>
<thead>
<tr>
<th>Reason For Change</th>
<th>Date</th>
<th>Version</th>
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</table>
| 1. Include Follow-Up investigation and inquiry around the neighborhood to determine the accurate time when the SSO started. California River Watch (CRW) Settlement  
2. Added Section 2.4.4 and Section 2.4.5  
3. Assigned “Report the SSO Event in CIWQS” to Section 2.4.6.                      | August 15, 2016 | Version A|
| 1. Update to include changes in SSO Response Procedures for each response team.  
2. Update to include changes in post SSO investigation, damage and enforcement actions. | October 26, 2016| Version B|

List other Operating Procedures impacted by this revision.
Appendix 6-C
Rev. 1

APPENDIX 6-C. SEWAGE SPILL REPORT FORM (SAMPLE)
City of Beverly Hills
Wastewater Disposal Services

SSO Field Worksheet

Location of SSO: __________________________________________
(closest street address to overflow/cross street)

Operators On Duty: __________________________________________

Date and time sanitary sewer system agency (Time drainage staff was informed) was notified or discovered spill:

Estimated spill start date/time:
(Same as time immediately above unless you have reliable info of earlier start)

Estimated operator arrival date/time:

Spill appearance point (Check one):
- Building or structure
- Force main or pressure sewer
- Gravity sewer
- Manhole
- Other sewer system structure
- Pump station
- Other (Specify) ____________________________

Private lateral spill? Yes/No

If no – move on to Estimated spill end date/time:

If yes - move on to County Health Department notification if private lateral spill reached public right of way. No further notification is required. Clean-up sewage on public right of way. Notify property owner/resident of requirement to correct or risk water shutoff. Private lateral spills are NOT SSO’s as of this revision.

Estimated spill end date/time:

Supervisor Notified: ______________________

Index
Health Department notified within 15 mins of arrival on scene?  

Yes/No

24 Hour Number (213) 974-1234

Note: Health Dept. Notification required for all SSO’s even if they never make it to a public right of way.

Time County Health Department Notified ____________ ____________
Operator #: __________________________ Date ____________ Time 24 hr.
Ticket #: _____________________________

Spill response activities (Check all that apply):
- Cleaned-up (mitigated effects of spill)
- Contained all or a portion of spill
- Inspected sewer using CCTV to determine cause
- Restored flow
- Returned all or a portion of the spill to the sanitary sewer system
- Other (Specify)______________________________.

Answer the following three questions about this event:

#1. Did the spill discharge to a drainage channel or surface water?  Yes/No

#2. Did the spill discharge to a storm drain pipe that was not fully captured and returned to the sanitary sewer system?  Yes/No

#3. Is the spill volume greater than or equal to 1,000 gals?  Yes/No

Did you answer “yes” to any of the above questions?  Yes/no

If Yes to #1 or #2, SSO is-------------------------------  Category 1
If Yes to #3, SSO is-------------------------------  Category 2
If No to all, SSO is-------------------------------  Category 3

Final spill destination (Check all that apply):
- Building or structure
- Other paved surface
- Storm drain
- Street/curb and gutter
- Surface water
- Unpaved surface
- Other (Specify)______________________________.
Estimated total spill volume: (Attach Calculations)  
A. _________ gallons

Estimated volume of spill recovered:  
B. _________ gallons

Estimated volume of spill that reached surface water, 
drainage channel, or not recovered from storm drain:  
C. _________ gallons

Did you answer yes to questions #1 and #3 or #2 and #3 above? ....... Yes/No

If Yes call OES within 2 hrs. of time agency notified or discovered spill.  
OES Phone # 1-800-852-7550

OES Control # ___________________  
Time OES notified _________      _________  
MM/DD/YY  Time 24 hrs.

OES Operator: __________________

If the spill is greater than or equal to 1,000 gallons:

Call LA County Flood Control District within 1 hr. of time agency was notified or discovered spill:  
LACFCD Phone # (626) 458-4357

If the sewer overflow requires assistance from the City of Los Angeles, call the City of Los Angeles within 1 hr. of time agency was notified or discovered spilled:  
City of Los Angeles Phone # (213) 485-7575
Additional Notes (attach additional sheets if needed):
City of Beverly Hills

Wastewater Disposal Services

SSO Volume Estimating Worksheet

Did an overflowing manhole reach a storm drain or surface water?  
Yes/No  
(circle one)

If yes – Go to Step 1.

If no – perform wetted street volume calculations on reverse.

Step 1. Determine Estimated Spill Volume to Street from overflowing Manhole.

A. Estimated spill start date/time:  
MM/DD/YY  Time 24 hr

B. Estimated spill end date/time:  
MM/DD/YY  Time 24 hr

C. Total spill time in minutes = B. – A.  
Minutes

D. Estimated Overflow Rate  
Reference  
GPM

References  
(P, A, B, C)

1. Pictures (P), 2. Table A, 3. Table B, 4. Table C

E. Estimated Spill Volume to Street = C. X D. gals.

Did sewer overflow inside a building or residence?  
Yes/No  
(circle one)

If yes – Go to Step 2.

If no – Go to Step 3.

Step 2. Estimate Spill Volume to Building or Residence.

F. Determine total wetted floor area in sq. feet.  

1. Room Inventory  
Length (ft.) X Width (ft.) = Area (ft.²)

a.  

b.  

c.  

d.  

e.  

G. Total wetted floor area (add 1. a thru 1. e.)  
= _______
City of Beverly Hills

H. Estimated average depth of wetted floor in inches = _____ (in.)

Note: If can’t actually measure, make a reasonable assumption ¼” -1/2”.

I. Convert depth in inches to ft. H. / 12 = _____ (ft.)

J. Estimated Spill Volume (Building or Residence) = G. x I. = _____ (ft³)

K. Convert Estimated Spill Volume (Building or Residence) to gals.
   J. x 7.48 = _____ (gals.)

Step 3. Determine Total Estimated Spill Volume

L. Total Estimated Spill Volume = E. + K. = _____ (gals.)

Step 4. Determine Estimated Volume of Spill Vacuum Recovered

M. Estimated Vacuum Recovery Start date/time: ____________
   MM/DD/YY Time 24 hr

N. Total Vacuum Recovery Time in minutes B. - M. = _____ (mins.)

O. Est. Volume of Spill Vacuum Recovered = ______ x ______ = ______
   N. D. (gals.)

Step 5. Estimated volume of spill that reached surface water, drainage channel, or not recovered from storm drain:

   E. – O. – Volume Captured (below) = _____ (gals.)

Determine Wetted Street Volume or Volume Captured

1. Attach copy of sketch from stoppage report.

   Length (L) = ______ ft.

   Width (W) = ______ ft.

   Depth (D) = Average Observed (in.) = _____ / 12 = _____ ft.

   Wetted street volume = _____ X _____ X _____ = _____ ft³ X 7.48 = _____ gals.

   Depth Information in Ft.
   1/8” = 0.01 FT
   1/4” = 0.021 FT
   3/8” = 0.031 FT
APPENDIX 6-D. REFERENCE SHEET FOR ESTIMATING SEWER SPILLS
OVERFLOWING SEWER MANHOLES
Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

5 gpm
25 gpm
50 gpm
100 gpm
150 gpm
200 gpm
225 gpm
250 gpm
275 gpm

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4/99
SECTION 7. FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

7.1 Introduction
This section of the SSMP describes the development and implementation of FOG source control measures for all known sources of FOG discharged to the City’s sanitary sewer system. The City currently contracts with the County of Los Angeles to implement the FOG Control Program under their agreement with the County as outlined in Section 3 of this SSMP.

7.2 Regulatory Requirements for the Fats, Oils, & Grease Control Program
Summarized requirements for the FOG Control Program section of the SSMP are:

GWDR (Element 7 – Fats, Oils, and Grease (FOG) Control Program) Requirements:
The GWDR requirements for the FOG Control Program are: Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification as to why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:

- An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- A plan and schedule for the disposal of FOG 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 FOG generated within a sanitary sewer system area;
- The legal authority to prohibit discharges to the system and identify measures to prevent SSO's and blockages caused by FOG;
- Requirements to install grease removal devices (such as traps or interceptors) design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- Authority to inspect grease producing facilities, enforcement authorities, and whether the District has sufficient staff to inspect and enforce the FOG ordinance;
- An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and
- Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system subject to FOG blockages.

7.3 Nature and Extent of FOG Problem
The City’s sanitary sewer collection system serves approximately 35,000 residents and can reach up to 200,000 people due to business, shopping and tourism. Several restaurants are located within the City as well. Food service establishments (FSE’s) are the largest population of FOG producers within the City. Most FSE’s are located near or in the heart of town near the
Golden Triangle shopping district bound by Wilshire Blvd., Santa Monica Blvd., and Rexford Avenue. Figures 7-1 through 7-3 identify general locations of FSE’s in Beverly Hills.

Figure 7-1. General Locations of FSE’s in Beverly Hills – Golden Triangle. *(Image source: Beverly Hills GIS)*

Figure 7-2. General Locations of FSE’s in Beverly Hills – Robertson and La Cienega. *(Image source: Beverly Hills GIS)*
Existing FOG-control measures have prevented FOG-related SSO’s. Grease traps or interceptors are required for grease producing FSE’s. The City provides a two-system inspection/enforcement mechanism for FSE’s. FSE’s are inspected to comply with Industrial Waste Discharge regulations and also the Municipal Separate Storm Sewer System (MS4) NPDES Permit.

7.4 Public Outreach

The Requirement: An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG.

The City of Beverly Hills has an aggressive educational outreach FOG program for FSEs and its residents. The FSEs are inspected at least two times a year by either the Los Angeles County Department of Public Works Environmental Programs and the City’s Environmental Compliance and Sustainability Programs. Both programs ensure that FSEs practice FOG BMPs in grease disposal and proper maintenance of grease interceptors or traps. In addition, both programs provide the most up to date educational materials to FSEs. FSEs are informed that their failure to practice BMPs will result in violation notices and monetary fines.

In addition, the City provides collateral outreach materials to at least four public outreach events such as National Night Out, Public Works Day, Earth Day, and Team Beverly Hills.
7.4.1 Residential Service Areas

As for the residential program, the City’s website provides general guidelines on managing FOG on-site. The City funds the purchase of promotional materials about the FOG Control Program, proper disposal methods, and Best Management Practices (BMP’s) for residents. Promotional items include flyers and brochures. These items are periodically distributed as needed by City staff through mailers or community events such as National Night Out, Public Works Day, Earth Day, and Team Beverly Hills. These outreach events has been effective knowing that grease is not a major issue in the City’s residential areas. To further improve the residential program, the City will be inserting FOG BMP guidelines inside the utility bill invoices. The City is confident this strategy is effective and will further reduce FOG issues in the system.

7.4.2 Commercial Service Areas

The City funds the purchase and distribution of FOG control material for commercial service areas. FOG-control materials include:

- Brochure “Good Cleaning Practices” (See Appendix 7-A)
- Trap the Grease (See Appendix 7-B)

The City provides FOG-control material to all FSE’s. The Environmental Compliance Inspector visits all restaurants annually (between 120-160 restaurants) to perform visual inspections of operations, grease control, and required grease traps/interceptors and BMPs. Currently the enforcement and inspection is a combined program. In addition, the Los Angeles County Department of Public Works Environmental Programs also inspects FSE’s that have grease interceptors to make sure they are properly functioning. As a result of an aggressive program, there is a low incidence of FOG-related SSO’s in commercial service areas. The Environmental Compliance Inspector may periodically organize and facilitate workshops for restaurant owners and managers depending on need. A review and fresh look at improving the FOG control program is slated for the next 2017-2018 fiscal year.

The public outreach program focused on Commercial Service Areas and FSE’s will be evaluated yearly for effectiveness. If needed, adjustments will be made regarding program implementation and cost of FOG-control materials and methods.

7.5 Plan and Schedule for Disposal of FOG

The Requirement: A plan and schedule for the disposal of FOG 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 FOG generated within a sanitary sewer system service area.

Solidified fats found in the collection system during cleaning operations are trapped, collected, and taken to the maintenance yard refuse bins. These and other debris collected from the system are taken to the City’s Material Recovery Facility (MRF).
7.6 Legal Authority

The Requirement: The legal authority to prohibit discharges to the system and identify measures to prevent SSO’s and blockages caused by FOG.

The City’s legal authority to prohibit discharges to the system and identify measures to prevent SSO’s and blockages caused by FOG are handled by their agreement with Los Angeles County as outlined in Section 3. The County’s authority is as follows:

The Director of Public Works and Transportation under the LACO Plumbing Code, Title 28, has the legal authority to require the installation of grease interceptors at restaurants and other food establishments that generate grease. Section 20.36.560 of LACO Code also gives the Director of Public Works and Transportation the authority to require the installation of treatment facilities, including grease interceptors, at any facility that generates FOG in the amount that will damage or increase the maintenance costs of the sewer collection system. The LACO Code Section 20.24.090 gives the Director of Public Works and Transportation the legal authority to inspect mainline sewers, sewage pumping plants, interceptors, etc., as often as he deems necessary, to ascertain whether such facilities are maintained and operated in accordance with the provisions of Division 2 of the LACO Code. Section 20.36.400 of the LACO Code prohibits the discharge of Fats, Oils, and Grease (FOG) and other substances that may, among other things, clog, obstruct, fill, or necessitate frequent repairs, cleaning out, or flushing of sewer facilities in the sewer system.

7.7 Grease Removal Device Requirements

The Requirement: Requirements to install grease removal devices (such as traps or interceptors), design standards for removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements.

The County of Los Angeles Department of Public Works supplies Standard Plans for Grease Interceptors, Standard Plan 2046-0 and 2041-0 (See Appendix 7-C).

7.7.1 Maintenance Requirements

The Requirement: Requirements to install grease removal devices (such as traps or interceptors), design standards for removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements.

Each restaurant is responsible for scheduling maintenance of their grease interceptors and traps.

7.8 Inspection Authority

The Requirement: Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance.
Section 3 of the SSMP addresses legal authority to conduct inspections and enforce sewer ordinances.

The County Environmental Compliance Inspector performs inspections yearly. In addition, the City’s Environmental Programs Inspector also performs yearly inspections.

When sizable grease deposits are discovered during cleaning or inspection of the sanitary sewer system, the City’s Inspector notifies the FOG-producer and documents the incident in writing.

### 7.9 FOG Hot Spots and Preventive Maintenance

**The Requirement:** An identification of sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section.

#### 7.9.1 FOG Hot Spots

FOG Hot Spots are sections of the City’s sanitary sewer system that are prone to FOG blockages and FOG-related SSO’s. The City’s FOG Hot Spots are routinely maintained based on the 30-60-90 Day Maintenance Schedule. These locations are identified in Figure 7-4.

#### 7.9.2 Preventive Maintenance of Sanitary Sewer System

The City’s Wastewater Division of the Public Works Department is responsible for maintenance of the sanitary sewer collection system. The Wastewater Division provides routine maintenance for FOG Hot Spots sections. Given the low incidence of FOG-related SSO’s, the FOG maintenance schedule is effective and requires re-evaluation to make the operation more efficient and address other problematic areas.

### 7.10 Implementation of Source Control Measures

The City’s program for developing and implementing FOG control measures is described above. Elements of the program include the following:

- Public Outreach,
- Plan and Schedule for Disposal of FOG,
- Legal Authority,
- Grease Removal Device Requirements,
- Inspection Authority, and
- FOG Hot Spots and Preventive Maintenance.

The program will be evaluated periodically by the City and adjusted as needed.
Figure 7-4. 30-60-90 Day Maintenance Line Map. (Image source: Beverly Hills GIS)
APPENDIX 7-A. BROCHURE
Wipe pots, pans, and work areas prior to washing.

Do not pour cooking residue directly into the drain.

Do not wash floor mats outside where water will run off directly into the storm drain.

Do not rinse spills into the street.

Dispose of food waste directly into the trash.

Avoid using the garbage disposal. Place greasy food in the trash.

Do not pour waste oil directly into the drain, parking lot or street.

Clean mats inside over a utility sink. Use dry clean up for spills.

Collect waste oil and store for recycling.

For more information call (888) CLEAN LA or visit www.888CleanLA.com
APPENDIX 7-B. TRAP THE GREASE
## Check out the Do's and Don'ts of FOG.

<table>
<thead>
<tr>
<th>DON'T</th>
<th>DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash food scraps (solid or liquid) down the drain, dump them in the toilet, or grind them up in the garbage disposal.</td>
<td>Use mesh drain strainers to catch solid food scraps for disposal in a trash can. Pour liquid food scraps, e.g., sauces, milkshakes, into a container and place in the trash can.</td>
</tr>
<tr>
<td>Wash contents of soaking pots and pans down the drain.</td>
<td>Scrape plates over the trash can or dry wipe with a paper towel.</td>
</tr>
<tr>
<td>Pour used oil down the drain.</td>
<td>Pour used oil into a container with a top (the original if available) so it can be reused, recycled, or placed in the trash can for disposal.</td>
</tr>
<tr>
<td>Pour hot grease (including poultry skimming) down the drain.</td>
<td>Pour cooled grease into a grease can or other container for disposal and/or absorb with paper towels or newspaper.</td>
</tr>
<tr>
<td>Pour grease down the storm drain.</td>
<td>Pour cooled grease into a container, seal it and place it in the trash.</td>
</tr>
</tbody>
</table>

Mesh drain screens, paper towels and original oil containers are good tools for fighting FOG.

Other ways to be a part of the FOG solution include reporting any illegal dumping or spills immediately. You can also help by educating your neighbors and others in your community by sharing this website.
APPENDIX 7-C. GREASE TRAP STANDARD DETAILS
NOTES

1. THE APPROVAL OF THE COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS MUST BE OBTAINED BEFORE INSTALLATION.

2. THE INTERCEPTOR IS TO BE CONSTRUCTED OF TYPE II PORTLAND CEMENT CONCRETE.

3. INTERCEPTOR EXCEEDING 6'-6" IN DEPTH MUST BE CONSTRUCTED OF REINFORCED CONCRETE.

4. IF INSTALLED INSIDE OF BUILDING THE TOP OF INTERCEPTOR MAY BE LEVEL WITH FLOOR PROVIDED THAT WASTES ENTER THROUGH INLET PIPE ONLY.

5. ALL SURFACE WATER MUST DRAIN AWAY FROM INTERCEPTOR TO EXCLUDE RAIN WATER TO PUBLIC SEWERS.

6. ALL PIPING SHALL BE CAST IRON.

7. MANHOLE COVERS SHALL BE OF METAL.

8. STRUCTURE NOT FOR TRAFFIC LOADING.
CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER

SAND & GREASE INTERCEPTOR

CAPACITY
510 GALLONS
866 GALLONS
1250 GALLONS

DIMENSIONS
A  3'-0"  9'-6"
B  3'-0"
C  2'-6"
D  3'-0"
E  19"
F  16"
G  18"

COVER SIZE
2'-10"x3'-4"
3'-1"x3'-10"
3'-10"x4'-4"

METAL COVERS
1/4" STEEL PLATE
3/8" ALUMINUM PLATE
3/8" ALUMINUM PLATE

PIPE SIZE
4" MIN.
4" MIN.
4" MIN.

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

SAND & GREASE INTERCEPTOR

STANDARD PLAN
2041-0

5/31/1992

SUPERSDES COUNTY ENGINEER STD. 1-2
NOTES

1. THE APPROVAL OF THE COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS MUST BE OBTAINED BEFORE INSTALLATION.

2. THE INTERCEPTOR TO BE CONSTRUCTED OF TYPE II PORTLAND CEMENT CONCRETE.

3. INTERCEPTOR EXCEEDING 6'-6" IN DEPTH MUST BE CONSTRUCTED OF REINFORCED CONCRETE.

4. IF INSTALLED INSIDE OF BUILDING, THE TOP OF INTERCEPTOR MAY BE LEVEL WITH FLOOR PROVIDED THAT WASTES ENTER THROUGH INLET PIPE ONLY.

5. ALL SURFACE WATER MUST DRAIN AWAY FROM INTERCEPTOR TO EXCLUDE RAIN WATER FROM PUBLIC SEWERS.

6. STRUCTURE NOT FOR TRAFFIC LOADING.
SECTION 8. SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

8.1 Introduction
This section of the SSMP outlines the City’s programs and activities to provide adequate hydraulic capacity in its collection system.

8.2 Regulatory Requirements for the System Evaluation and Capacity Assurance Plan Section
The requirements for the System Evaluation and Capacity Assurance Plan section of the SSMP are:

GWDR (Element 8 – System Evaluation and Capacity Assurance Plan) Requirement:
The GWDR requirements for the System Evaluation and Capacity Assurance Plan are: Enrollee shall prepare and implement a capital improvement plan that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

- **Evaluation**: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSO’s that escape the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events.

- **Design Criteria**: Where design criteria do not exist or are deficient, undertake the evaluation identified in the Evaluation requirement above to establish appropriate design criteria.

- **Capacity Enhancement Measures**: The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

- **Schedule**: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed above in Evaluation, Design Criteria, and Capacity Enhancement Measures requirements. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D.14 (of the GWDR).

8.3 Condition Assessment
The City of Beverly Hills has completed a condition assessment of approximately 84% (84 miles) of the collection system by closed circuit television (CCTV) as was recommended in the 2010 Sewer Master Plan. All sewer gravity main in the collection system will be CCTV’d by 2021. Inspections of manholes and pipe connections are based on visual inspection at the...
manhole for structural defects. After inspection occurs, gravity main pipe segments are assigned a grade based on the Pipeline Assessment and Certification Program (PACP) rating system, developed by the National Association of Sewer Service Companies, as follows:

5 – Failed or will fail within 5 years  
4 – Failure likely in 5-10 years  
3 – May fail in 10-20 years  
2 – Unlikely to fail for at least 20 years  
1 – Unlikely to fail in foreseeable future

Insituform Technologies, LLC was contracted to conduct the CCTV investigation. The CCTV investigation has not determined any sewer mains to be a rating of 5, which would require repair, rehabilitation or replacement within a two year time period. The City’s CCTV investigation has not determined any sewer mains to be rated 3 or 4, which would warrant placement on a watch list to be further investigated in five years. The City will either contract or do in-house CCTV investigation on the remaining 16% (16 miles) of sewer gravity main.

The City’s Wastewater Division conducts CCTV investigation on the collection system typically upon service requests from a developer, after an SSO and when they encounter issues during maintenance.

The City is in the process of revising the program to use the CCTV to QC/QA (Quality Control/Quality Assurance) the maintenance work completed in the system. The City currently has two certified PACP operators for system evaluation and will be including PACP ratings (Industry grading system) on inspected sewer main line.

The City commits funds in its budget for operations to provide for a condition assessment of all manholes, gravity sewer main and pipe connections in its collection system on an ongoing ten year cycle. The City currently places defective sewer main segments, manholes and other parts of the system on a CIP project that will address the defective parts of the system until a new CIP is established.

8.4 System Evaluation

In order to analyze the City’s sewer collection system and plan for upgrades, the City completed a Sanitary Sewer Collection System Master Plan Document. This document was completed in September 2010 and recommendations for the collection system improvements were made. A copy of this Master Plan is kept with this SSMP document. The City is planning to update its Sewer System Master Plan within five years to evaluate the needs for system improvements.

The major elements completed as a part of the 2010 master plan project include:

- An update of City’s GIS of the sewer system
- The scanning of all sewer system record drawings and linking to the GIS
- GPS survey of every manhole in the system for location and rim elevations
- Flow monitoring to analyze inflow and infiltration within the City
- Recommendations for City design criteria
System Evaluation and Capacity Assurance Plan
Rev. 1

- Evaluating the condition of representative portions of the City of Beverly Hills sewer system through closed circuit television (CCTV) pipeline inspections and manhole inspections
- Extended period modeling analysis to evaluate hydraulic capacity in various design conditions
- Determining necessary capital improvement projects
- Providing a financial plan for proposed improvements and maintenance

The City of Beverly Hills sewer system is a gravity flow system consisting primarily of vitrified clay pipe constructed from the 1920s to the present. The local sewer collection pipelines are predominantly 8-inch in diameter, but diameters range from 6-inch to 36-inch and total over 100 miles. Approximately 35,000 residents are served by the City’s sewer system. The City’s sewer system has enough capacity to accommodate all wastewater flows. Wastewater generated in the City of Beverly Hills is conveyed by the City-owned gravity sewer (mains) pipelines into the sewer system owned by the City of Los Angeles and finally into the Hyperion Treatment Plant in Playa del Rey.

Flow monitoring was conducted for a period of 28-days to evaluate the normal flow conditions within the system and an extended flow data analysis was performed to assess the amount of rainfall entering the sanitary sewer collection system through defects. The analysis found the majority of the water entering the sewer system is through inflow directly into the sewer system. Included in the Capital Improvement Program (CIP), is an Inflow and Infiltration Study to develop a plan to reduce defect flows into the sewer system.

A system capacity analysis was conducted with the use of the updated and calibrated hydraulic model. The software used for the hydraulic model is Hydra by Pizer Incorporated. The purpose of the analysis was to simulate varying scenarios of different flow conditions to identify system deficiencies. As a result of the hydraulic model analysis, three projects were identified to alleviate the hydraulic capacity problems.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Street</th>
<th>Diameter</th>
<th>Proposed Diameter</th>
<th>Total Length (LF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Peck Drive</td>
<td>8&quot;- 21&quot;</td>
<td>12&quot;- 27&quot;</td>
<td>5,891</td>
</tr>
<tr>
<td>2</td>
<td>Gregory Way</td>
<td>24&quot;- 30&quot;</td>
<td>30&quot;- 39&quot;</td>
<td>4,286</td>
</tr>
<tr>
<td>3</td>
<td>Oakhurst Drive</td>
<td>10&quot;-15&quot;</td>
<td>15&quot;- 21&quot;</td>
<td>2,915</td>
</tr>
</tbody>
</table>

Thus far, the existing lines have not shown capacity issues. The City will re-assess these recommendations as part of the update for the Sewer System Master Plan.

8.5 Planning and Design Criteria

The 2010 Sanitary Sewer Master Plan established several criteria to model and evaluate the City’s sewer system, as described in this section. For a more detailed account of the planning and design criteria refer to Chapter 3 (Inflow and Infiltration Analysis and Chapter 6 System Analysis) of the 2010 Master Plan.
8.5.1 Flow Monitoring
As part of the Sanitary Sewer Master Plan, five temporary flow monitoring locations were installed and monitored for 28 days. Additionally, the City has eight permanent flow monitors in the collection system (owned by the City of Los Angeles) that monitor at four locations throughout the collection system and four locations where the flow leaves the City limits. These flows were utilized to determine Dry Weather, Wet Weather (with further analysis), and Storm Events. Rainfall during the 28 day monitoring totaled 2.7 inches.

8.5.2 Dry Weather flow
The average dry weather flow is defined as wastewater production (WWP) and base infiltration and inflow (BI/I). The wastewater production is the actual wastewater flow that is generated as a result of water use. The BWW factor varies from 1.0 to 0.75 and averages to 0.80 for predominately residential basins like Beverly Hills. BI/I occurs from naturally high ground water tables, irrigation drainage or faulty plumbing. BI/Is are considered to be constant.

8.5.3 Wet Weather Flow
Wet weather is the total flow as a result of how the collection system responds to rainfall events. Therefore, this is considered Rainfall Infiltration and Inflow (RFI/I) and it can be dominated by quick inflow (defects in system) or by slow infiltration (rainfall induced).

8.5.4 Flow Allocation
In the hydraulic model, the flow allocation is completed with two techniques based on dry weather and wet weather flow conditions. The dry weather flow used the sub-basin manhole flow allocation. The wet weather flow used the parameter Inch Diameter Mile (IDM) method for allocating flow.

8.5.5 Future Population and Projected Flows
The projected population and corresponding flow projections were used for the future flow conditions. The California Department of Finance and the Southern California Council of Governments were consulted for existing and future projections. The ultimate future flow scenario represents the sanitary flow increase of only 7.2 percent from existing flows to year 2030. Redevelopment Project Flow Projections for various identified projects were also considered with the flow projections. The Redevelopment flow projections are located in Table 6-7 of the Sanitary Master Plan.

8.5.6 Flow Depth Criteria
Flow depth criteria were established as part of the master planning effort. These criteria are typically expressed in terms of maximum flow depth to pipe diameter (d/D) ratio. The following table indicates the classifications considered in the analysis of pipe capacity.
### Table 8-2. d/D Criteria

<table>
<thead>
<tr>
<th>Pipe Diameter</th>
<th>d/D Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>(in)</td>
<td>0.50 to 0.75</td>
</tr>
<tr>
<td>&lt;18”</td>
<td>Watch</td>
</tr>
<tr>
<td>≥18”</td>
<td>OK</td>
</tr>
</tbody>
</table>

### 8.6 Service Lateral Inspections

The City notifies a private property owner of record when there is a probable blockage in a lateral line based upon CCTV or other inspections of the main sewer lines. Up to date, the City has notified 18 private residents of their issues, all of which have been resolved with the individual property owners.

The City has a standard plan review process to assess new sewer lateral connections to the system. Plan reviewers ensure that new connections do not exceed the sewer system capacity. Plan reviewers also ensure that the integrity of the sewer lateral and connection are in good condition. If they are not, plan reviewers and building inspectors require it to be replaced.

### 8.7 Smart Cover Monitoring Systems

SmartCover monitors provide both a way to immediately alert staff when an SSO occurs and, even more importantly, provides a predicative function using data collection and analysis in order to identify emerging problems that could lead to SSOs and address them before a spill can occur.

This is achieved by continual monitoring of the water level within designated manholes in a collection system. When the water level rises above the customer predetermined acceptance level due to a constriction downstream or capacity issue, an alarm is sent directly to the wastewater staff. This enables the City to receive advance notice of an issue arising in the collection system so that corrective action can be taken before an overflow occurs.

The City purchased and installed SmartCover units under ten (10) manholes covers. A contract that commenced on July 1, 2016 authorized Hadronex Inc. to install the ten (10) SmartCover units. Thus far, the staff has been notified of potential SSO occurrences and mitigated the issue before an overflow occurred. All ten (10) SmartCover units are placed strategically throughout the City and has not indicated that there are capacity issues in these areas. Depending on realized benefit and need of the SmartCover technology, additional SmartCover monitoring systems may be purchased and installed.

Like most agencies, the City has hot spots that are maintained on a routine 30-60-90 schedule as part of a preventive maintenance program. Integral placement of the SmartCover systems will reduce the routine hot spot cleanings and effectively manage portions of the collection system remotely.
Additional SmartCover system placement and operation is detailed in Section 4.3.2 of this SSMP.

### 8.8 Completed and Future Projects

As a result of the Sanitary Sewer Master Plan and any concurrent CCTV of the collection system, the City has completed the following projects. Below is a summary of those projects:

#### Table 8-3. Completed City Sewer Project

<table>
<thead>
<tr>
<th>Date</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Description</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2010 to May 2012</td>
<td>36,960</td>
<td>Linear Ft</td>
<td>Plastic lining of sewer main line.</td>
<td>$1,318,434.86</td>
</tr>
<tr>
<td></td>
<td>105,600</td>
<td>Linear Ft</td>
<td>CCTV inspection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>284</td>
<td>Linear Ft</td>
<td>Sewer line point repairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>Manhole</td>
<td>Rehabilitation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Manhole</td>
<td>Removal and replacement of manholes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Manhole</td>
<td>Removal and replacement of manhole frames and covers</td>
<td></td>
</tr>
<tr>
<td>June 2012 to August 2015</td>
<td>127,776</td>
<td>Linear Ft</td>
<td>Plastic lining of sewer main line.</td>
<td>$4,908,852.35</td>
</tr>
<tr>
<td></td>
<td>563</td>
<td>Manhole</td>
<td>Rehabilitation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>480</td>
<td>Linear Ft</td>
<td>Sewer line point repairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10,560</td>
<td>Linear Ft</td>
<td>Sewer cleaning and CCTV inspection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Manhole</td>
<td>Adjusting manholes to grade with new rings and covers.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Manhole</td>
<td>New manhole installation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Clean-Out</td>
<td>Installation of new clean out structure.</td>
<td></td>
</tr>
</tbody>
</table>

Currently, the Wastewater Division is gathering a list of needed system improvements based on issues encountered during maintenance and results from CCTV. The list is currently minimal and therefore, there’s no immediate need to plan a significant CIP project to address these issues. These current minimal issues are resolved on existing CIPs.

The City expects that the next major CIP will be based on results of the updated Sewer System Master Plan.
SECTION 9. MONITORING MEASUREMENT AND PLAN MODIFICATION

9.1 Introduction
This section of the SSMP outlines the process that the City will follow to evaluate the effectiveness of the SSMP and to identify updates that may be needed for a more effective program. The City will be using the following methods to verify that the SSMP goals are being met and these goals are adequate for meeting the intent of the program, which is to minimize sanitary sewer overflows.

9.2 Regulatory Requirements for Monitoring Measurement and Plan Modification

The requirements for the Monitoring Measurement and Plan Modification section of the SSMP are:

GWDR (Element 9 – Monitoring Measurement and Plan Modification) Requirement: The GWDR requirements for the Monitoring Measurement and Plan Modification are: Enrollee shall:

- Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- Assess the success of the preventive maintenance program;
- Update program elements, as appropriate, based on monitoring or performance evaluations; and
- Identify and illustrate SSO trends, including: frequency, location, and volume.

9.3 Operations and Maintenance Monitoring

The City uses an Access Database to monitor, record, and track maintenance activities in the sewer collection system. The City also tracks sanitary sewer overflows, blockages and their causes, sewer line cleaning and videoing, and FOG control activities. The data captured during these activities is used to evaluate the effectiveness of this program.

Starting in FY17-19, the Wastewater Division will be embarking on creating and using the Infor For Public Sector (IPS) CMMS system to collect all data related to the operations of the division. The IPS CMMS system will enhance the division’s ability to analyze the system, improve on its reporting capability to City officials and regulators and accurately address problematic areas by planning for additional resources. The IPS CMMS system will also allow the Division to adjust maintenance schedule based on the reports produced by the CMMS.
9.4 Performance Measurement

The City adopted the following performance measures for its wastewater collection system and for the effectiveness of its SSMP:

- Total number of SSO’s on an annual basis.
  - Goal: Less than industry standard of six (6) overflows per 100 miles of pipe.
- Number of SSO’s by each cause (roots, grease, debris, structural failure, inadequate hydraulic capacity, other)
- Portion of Volume Contained compared to Total Volume Spilled
- Volume of Spilled Sewage Discharged to Surface Water (direct vs indirect)
- Planned # of Preventative Maintenance Activities, Planned Total Pipe Cleaned, and Actual Total pipe Cleaned

9.5 Performance Evaluation

The City’s performance data is based on the performance measurement listed in Section 9.4. Table 9-1 and Figures 9-1 through 9-2 provide an in depth analysis of SSOs and SSO spill recovery. Table 9-2 and Figure 9-3 provide SSOs by categories; and Table 9-3 provides maintenance goals and performance measures for the sewer system.

As identified in this plan, roots, grease and debris are the three main causes of sanitary sewer overflows. Each type of blockage can be attributed to either maintenance quality, completing scheduled maintenance and episodic.

Generally, roots and grease blockages are indicators for maintenance failure because these build-up over time. However, root blockages are more complex because roots can be introduced to the system in the following manner:

1. Growth in unlined pipes (typically coming from the pipe joints).
2. Growth from private laterals and protruding to the sewer main.
3. Root masses from private laterals are pushed to the sewer main (typically during lateral maintenance).

Root analysis requires additional review of maintenance records, pipe type and CCTV inspection.

On the other hand, debris blockages are considered episodic and relatively not indicative of maintenance performance issues. Typically, debris blockages are caused by non-dissolvable materials like paper, rag, feminine hygiene products, and cement in the system.
Table 9-1. Sanitary Sewer Overflows

<table>
<thead>
<tr>
<th>YEAR</th>
<th># OF SSO’S</th>
<th>SSO CAUSE</th>
<th>AVERAGE VOLUME CONTAINED</th>
<th>VOLUME SPILLED DISCHARGED TO SURFACE WATER</th>
<th>AVERAGE VOLUME SPILLED</th>
<th>FUTURE PREVENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DIRECTLY</td>
<td>INDIRECTLY</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>8</td>
<td>3 – Roots</td>
<td>106</td>
<td>0</td>
<td>8</td>
<td>1,221</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 – Roots from lateral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 - Grease</td>
<td></td>
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<td></td>
<td>3 - Debris</td>
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<td></td>
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</tr>
<tr>
<td>2014</td>
<td>4</td>
<td>3 - Roots</td>
<td>817</td>
<td>0</td>
<td>3</td>
<td>2,050</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 - Grease</td>
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<td></td>
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<td></td>
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<tr>
<td>2015</td>
<td>7</td>
<td>3 - Roots</td>
<td>46</td>
<td>0</td>
<td>7</td>
<td>531</td>
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<tr>
<td></td>
<td></td>
<td>2 – Roots from lateral</td>
<td></td>
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<td></td>
<td></td>
<td>2 - Debris</td>
<td></td>
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<tr>
<td>2016</td>
<td>14</td>
<td>10 - Roots</td>
<td>1,051</td>
<td>0</td>
<td>14</td>
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<td>1 – Roots from lateral</td>
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<td>3 - Debris</td>
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<tr>
<td>2017’</td>
<td>8</td>
<td>3 - Roots</td>
<td>1,109</td>
<td>0</td>
<td>8</td>
<td>2,206</td>
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<td>4 – Roots from lateral</td>
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<td>1 - Debris</td>
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1. SSO data from January to May 2017.
Figure 9-1. SSOs and Causes

SSOs and Causes

<table>
<thead>
<tr>
<th>Year</th>
<th>Roots</th>
<th>Roots from Lateral</th>
<th>Grease</th>
<th>Debris</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2014</td>
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<td>2015</td>
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<td>2016</td>
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<td>1</td>
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<td>0</td>
</tr>
<tr>
<td>2017</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
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</table>

Figure 9-2. Volume Spilled & Contained

SSO Volume Spilled & Contained

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Volume Spilled</th>
<th>Average Volume Contained</th>
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</thead>
<tbody>
<tr>
<td>2013</td>
<td>1200</td>
<td>1000</td>
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<tr>
<td>2014</td>
<td>2400</td>
<td>2000</td>
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<tr>
<td>2015</td>
<td>500</td>
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<td>2016</td>
<td>1500</td>
<td>1500</td>
</tr>
<tr>
<td>2017</td>
<td>2000</td>
<td>2000</td>
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</table>
Table 9-2. Sanitary Sewer Overflows by Category

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Total #SSO</th>
<th># CAT 1 SSO</th>
<th># CAT 2 SSO</th>
<th># CAT 3 SSO</th>
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</thead>
<tbody>
<tr>
<td>2013</td>
<td>8</td>
<td>6</td>
<td>0</td>
<td>2</td>
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<tr>
<td>2014</td>
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<td>2015</td>
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</tr>
<tr>
<td>2016</td>
<td>14</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>2017</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>4</td>
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</table>

1. **CAT 1: SSO of any volume** resulting from a sanitary sewer failure or flow condition that:
   a. Reach surface water and/or reach a drainage channel tributary to a surface water; or
   b. Reach a MS4 and not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached the surface water unless the storm drain system discharges to a dedicated storm or groundwater infiltration basin.

2. **CAT 2: Discharges of untreated or partially treated wastewater greater than or equal to 1000 gallons** resulting from a sanitary sewer failure or flow condition that do not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

3. **CAT 3: All other discharges of untreated or partially related wastewater resulting from a sanitary sewer system failure or flow condition.**

4. SSO Data from January to May 2017.

**Figure 9-3. SSO by Spill Category**

![SSO by Spill Category Graph](image-url)
Table 9-3. Maintenance Activity

<table>
<thead>
<tr>
<th>CALENDAR YEAR</th>
<th>ANNUAL PRIORITY SCHEDULED LINE CLEANING GOAL (FT)</th>
<th>ANNUAL NON-PRIORITY LINE CLEANING GOAL (FT)</th>
<th>TOTAL CLEANING GOAL (FT)</th>
<th>TOTAL PIPE CLEANED (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>476,514.8</td>
<td>464,794.8</td>
<td>941,309.6</td>
<td>1,025,688</td>
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<tr>
<td>2014</td>
<td>476,514.8</td>
<td>464,794.8</td>
<td>941,309.6</td>
<td>1,068,264</td>
</tr>
<tr>
<td>2015</td>
<td>476,514.8</td>
<td>464,794.8</td>
<td>941,309.6</td>
<td>1,221,999</td>
</tr>
<tr>
<td>2016</td>
<td>476,514.8</td>
<td>464,794.8</td>
<td>941,309.6</td>
<td>711,270</td>
</tr>
<tr>
<td>2017</td>
<td>476,514.8</td>
<td>464,794.8</td>
<td>941,309.6</td>
<td>712,874</td>
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</tbody>
</table>

1. Yearly line footage total for the 30/60/90 Day Priority Maintenance Schedule
2. Yearly line footage total not in the 30/60/90 Priority Maintenance Schedule
3. Line Total Maintenance up to July 31, 2017

From 2013 to 2017, with the exception of 2014, the City exceeded the industry standards for the number of SSOs occurring in the system. Data shows that root blockages and root lateral blockages are the main causes of SSOs. Data also shows that during the height of the California Drought (2015-summer 2017) the number of root blockages and root lateral blockages increased due to the roots intruding in to the sewer system to get water. During this time frame, the City restricted watering to two days a week.

Even though the number of SSO’s increased during this time span, the number of Category 1 SSOs decreased and the numbers of Category 2 and Category 3 increased. By 2016, operations placed a bigger emphasis on recovering sewer overflows from the MS4 system. This was formalized when the Standard Operation Procedures for SSO Field Response was revised that directs first responders to setup Best Management Practices (BMPs) first to contain the sewer overflow and direct additional responders to relieve the blockage and begin recovering discharges.

Likewise, the City benefited from the installation of full captured screens in 697 catch basins. These full capture screens are able to contain sewer discharges in the catch basin from entering the MS4. This BMP allowed staff to recover most of the sewer discharges and clean them afterwards.

As a result of these BMPs, the City improved on its sewer overflow recovery by recovering 23,589 gallons of sewer overflows out of the 38,711 gallons discharged from 2016 to July 31, 2017. This is a 61% recovery rate compared to the 20% recovery rate from 2013-2015. The recovery rate could have been better in 2017 if the City was notified correctly in one of the sewer overflows that occurred that year.

Table 9-3 provides the maintenance activity from 2013-July 31, 2017. On average, approximately 1 million linear feet of sewer main are cleaned annually with the exception of 2016. This 1 million linear feet cleaning includes the priority maintenance schedule.
In 2016, the cleaning production went down by approximately 300,000 linear feet due to two vacancies (1 drainage worker and 1 drainage worker supervisor) due to retirement. By losing one (1) drainage worker, the City lost one (1) maintenance crew (team) from weekday production. Unfortunately, these positions were not filled in 2016 and affected production. Both open positions are scheduled to be filled in FY2017-18.

Based on the production results of 2016, the City temporarily filled the supervisor position to provide maintenance schedule and ensuring that maintenance schedules are completed by staff. In 2017, the City also expanded its overtime opportunities to complete maintenance schedule left by the vacancies.

9.6 Program Modifications

Based on the Performance Evaluation in Section 9.5, the City has been implementing changes to improve its performance and meeting the goals of the SSMP. First, the City is implementing a CMMS system that will help the City manage its maintenance schedule and will be able to provide a complete assessment of the systems “hot spots.” The CMMS system will also help the City properly plan to upgrade the system to prevent sewer blockages. The CMMS system is expected to be in service starting January 2018. Secondly, the City is addressing lateral root issues by performing lateral inspection and notification. The lateral noticing program enables the City to inform property owners to maintain their lateral connections. This program helps the residents reduce its risk of sewer backup and the risk of causing a blockage in the City main.

The City is also assessing the need to update the Municipal Code to address the roots from growing in abandoned lateral connections. City staff has observed that recent sewer overflows were caused by massive root growth from abandoned laterals. City staff is reviewing the Municipal Code and construction inspection practices to see if this problem can be eliminated by ensuring laterals are capped at the point of connection and/or requiring new construction to destroy the old connection and install a new lateral.

To address debris and FOG blockages, the City will be updating its Outreach Program. The Public Works Department will be sending out quarterly newsletter to promote sanitary sewer BMPs. The content will include properly disposing of cooking oil, grease, maintaining grease traps and interceptors and prohibiting the discharge of non-dissolvable materials in the sanitary sewer system.

For subsequent years, the City will annually review the performance measurements and make modifications to its program. Formalizing modifications will be part of updating the SSMP every five years. The City will determine the need to update its SSMP more frequently based on the results of the audits and performance of its collection system.

The City staff will seek approval from the City Council for any significant changes to the SSMP. Minor changes such as employee names, contact information, or minor procedural revisions can be handled by the Environmental Compliance and Sustainability Manager.
SECTION 10. SSMP PROGRAM AUDITS

10.1 Introduction
This section of the SSMP outlines the process that the City will follow to audit the completeness and effectiveness of the SSMP and to identify updates that may be needed for a more effective program.

10.2 Regulatory Requirements for SSMP Program Audits
The requirements for the SSMP Program Audits section of the SSMP are:

GWDR (Element 10 – SSMP Program Audits) Requirement:
The GWDR requirements for the SSMP Program Audits are:
- As part of the SSMP, Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSO’s.
- At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee’s compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

10.3 Audits
The City of Beverly Hills will conduct periodic internal audits at a minimum of at least once every two calendar years. The audit will be conducted by a team consisting of City staff selected from the Public Works Department and may include members from outside sister agencies and/or consultants.

The scope of the audit will cover each of the major sections of the SSMP and will be summarized through the completion of Table 10-1, Audit Checklist and an accompanying Audit Report. The Report will address the following topics and will be submitted to the RWQCB by March 15 following the calendar year that was the subject of the audit:
- A brief summary of the effectiveness of implementing SSMP elements;
- A description of the additions and improvements made to the sanitary sewer collection system during the reporting period; and,
- A description of the additions and improvements planned for the upcoming reporting year with an estimated schedule for implementation.

10.4 Updates
The City will determine the need to update its SSMP based on the results of the audit and the performance of its wastewater collection system determined from the Monitoring and Measurement Program Modification Section 9 of the SSMP. In the event the City decides that an update is warranted, the process to complete the update will be identified in the Audit Report. The City will then strive to complete the update within the same calendar year as the audit takes place.
## Table 10-1. Audit Checklist

<table>
<thead>
<tr>
<th>SECTION</th>
<th>TITLE</th>
<th>REQUIREMENT</th>
<th>IS SSMP CURRENT?</th>
<th>RECOMMENDED IMPROVEMENT</th>
<th>IMPLEMENTATION SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Goals</td>
<td>Reduce, prevent, and mitigate SSO’s</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Organization</td>
<td>Designate LRO</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Names and phone numbers for key management personnel</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Names and phone numbers for key administrative personnel</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Names and phone numbers for key maintenance personnel</td>
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<td></td>
<td></td>
<td>Chain of communication for reporting SSO’s</td>
<td></td>
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<td>3</td>
<td>Legal Authority</td>
<td>Prevent illicit discharges to sanitary sewer system</td>
<td></td>
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<td></td>
<td></td>
<td>Require sewers and connection be properly designed and constructed</td>
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<td>Ensure access for inspection, maintenance, and repairs (includes public</td>
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<td></td>
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<td>portion of lateral)</td>
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<td></td>
<td></td>
<td>Limit discharge of FOG and debris that may cause blockages</td>
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<td></td>
<td></td>
<td>Require the installation of grease removal devices</td>
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<td></td>
<td>Ability to inspect FOG producing facilities</td>
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<td></td>
<td>Enforce violations of the City’s sewer ordinances</td>
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<tr>
<td>4</td>
<td>O&amp;M Program</td>
<td>Maintain up-to-date maps of sanitary sewer system</td>
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<td></td>
<td>Describe routine preventive maintenance program</td>
<td></td>
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<td>Document completed preventive maintenance using system such as work orders</td>
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<td>Rehabilitation and replacement plan that identifies and prioritizes</td>
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<td>sanitary sewer system defects</td>
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<tr>
<td>SECTION</td>
<td>TITLE</td>
<td>REQUIREMENT</td>
<td>IS SSMP CURRENT?</td>
<td>RECOMMENDED IMPROVEMENT</td>
<td>IMPLEMENTATION SCHEDULE</td>
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<td></td>
<td>Provide regular technical training for City sanitary sewer system staff</td>
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<td></td>
<td>Require contractors to provide training for their workers who work in the</td>
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<td>City's sanitary sewer system facilities</td>
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<td>Maintain equipment inventory</td>
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<td>Maintain critical spare part inventory</td>
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<td>Design and Performance Provisions</td>
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<td>Design and construction standards for repair and rehabilitation of existing</td>
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<td>sanitary sewer system facilities</td>
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<td>Procedures for the inspection and acceptance of new sanitary sewer system</td>
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<td>facilities</td>
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<td>Procedures for the inspection and acceptance of repaired and rehabilitated</td>
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<td>OERP (SSORP)</td>
<td>Procedures for the notification of primary responders</td>
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<td>Procedures for the notification of regulatory agencies</td>
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<td>Program to ensure appropriate response to all SSO’s</td>
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<td>Proper reporting of all SSO’s</td>
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<td>Procedure to ensure City staff are aware of and follow SSORP</td>
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<td>Procedure to ensure City staff are trained in the SSORP procedures</td>
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<td>Procedure to ensure contractor personnel are aware of and follow SSORP</td>
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<tr>
<td>SECTION</td>
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<td>REQUIREMENT</td>
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<td>Procedure to ensure contractor personnel are trained in the SSORP procedures</td>
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<td>Procedures to address emergency operations such as traffic and crowd control</td>
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<td>Program to prevent the discharge of sewage to surface waters</td>
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<td>Program to minimize or correct the impacts of any SSO’s that occur</td>
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<td>Program of accelerated monitoring to determine the impacts of any SSO’s that occur</td>
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<td>7</td>
<td>FOG Control Program</td>
<td>Public outreach program that promotes the proper disposal of FOG</td>
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<td>Plan for the disposal of FOG generated within the City’s service area</td>
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<td>Demonstrate that the City has allocated adequate resources for FOG control</td>
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<tr>
<td></td>
<td></td>
<td>Identification of sanitary sewer system facilities that have FOG-related problems</td>
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<td></td>
<td>Program of preventive maintenance for sanitary sewer system facilities that have FOG-related problems</td>
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<tr>
<td>8</td>
<td>SECAP</td>
<td>Identification of elements of the sanitary sewer system that experience or contribute to SSO’s caused by hydraulic deficiencies</td>
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<td></td>
<td></td>
<td>Established design criteria that provide adequate capacity</td>
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<td>Short-term CIP that address known hydraulic deficiencies</td>
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<td>Long-term CIP that address known hydraulic deficiencies</td>
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<tr>
<td>SECTION</td>
<td>TITLE</td>
<td>REQUIREMENT</td>
<td>IS SSMP CURRENT?</td>
<td>RECOMMENDED IMPROVEMENT</td>
<td>IMPLEMENTATION SCHEDULE</td>
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<td>Procedures that provide for the analysis, evaluation, and prioritization of hydraulic deficiencies</td>
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<td>The short- and long-term CIP’s include schedules for the correction of each identified hydraulic deficiency</td>
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<td>9</td>
<td>Monitoring, Measurement, and Program Modifications</td>
<td>Maintain relevant information to establish, evaluate, and prioritize SSMP activities</td>
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<td>Monitor implementation of the SSMP</td>
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<td>Measure, where appropriate, performance of the elements of the SSMP</td>
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<td>Assess success of the preventive maintenance program</td>
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<td>Update SSMP program elements based on monitoring or performance</td>
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<td>Identify and illustrate SSO trends</td>
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<td>10</td>
<td>SSMP Program Audits</td>
<td>Conduct periodic audits</td>
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<td>Record the results of the audit in a report</td>
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<td>Record the changes made and/or corrective actions taken</td>
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<td>11</td>
<td>Communications Program</td>
<td>Communicate with the public regarding the preparation of the SSMP</td>
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<td>Communicate with the public regarding the performance of the SSMP</td>
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<td></td>
<td>Communicate with tributary or satellite sewer systems</td>
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SECTION 11. COMMUNICATION PROGRAM

11.1 Introduction
This section of the SSMP outlines the process involved in communicating with interested members of the public regarding the development, implementation, and performance of this plan.

11.2 Regulatory Requirements for Communication Program
The requirements for the Communication Program section of the SSMP are:

GWDR (Element 11 – Communication Program) Requirement:
The GWDR requirements for the Communication Program are:
• The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.
• The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee’s sanitary sewer system.

11.3 Communication during SSMP Development (and Updates)
The City of Beverly Hills City staff announced that it was requesting proposals for the development of an SSMP Document. Proposals were received on June 7, 2012. Cannon Corporation was retained to develop a comprehensive document. On December 18, 2012, the City Council approved the submission of the SSMP to its regulatory agencies.

The City announced that it was requesting proposals for the SSMP Document update as required per the General Waste Discharge Requirements (GWDR). This update incorporated the amended MRP Order Number WQ 2013-0058-EXEC changes. Cannon Corporation was retained to develop an update to the City’s SSMP Document. Recertification by City Council is required.

Future updates will be announced in a similar manner or completed in-house.

11.4 Communication regarding Sewer System Performance
The City will make information on the performance of its sanitary sewer system performance available for review. The performance information will include the performance indicators listed in Section 9 of the SSMP and will be compiled annually. In addition, performance is also listed in the Monthly Public Works Department Report to the City Council. The report is available online at:
http://www.beverlyhills.org/citygovernment/departmentsanddivisions/publicworks/monthlyreports

Notice that the performance information is available for review will be posted on the City’s website. The notice shall read:
The most recent compilation of the City’s sanitary sewer system performance information is available for review during normal business hours. Interested parties can contact Josette Descalzo (jdescalzo@beverlyhills.org & 310-285-2554) or Colonel Burnley (jburnley@beverlyhills.org & 310-285-2475) for additional information.

The City reports SSOs electronically to the California Integrated Water Quality System (CIWQS). The electronic SSO data, as well as information regarding regulatory actions, is available at:

http://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml

The City will direct interested parties to the CIWQS public access website. In addition, the City will report the performance of its sanitary sewer system to its City Council annually at a regularly scheduled meeting and the performance information will be included in the minutes of that public meeting. The performance information will include the performance indicators listed in Section 9 of the SSMP and will be compiled annually as stated above.

11.5 Communication with Satellite Collection Systems

City of Los Angeles: The City of Beverly Hills entered into an agreement with the City of Los Angeles on March 9, 1999 for the conveyance, treatment and disposal of wastewater. This agreement is included as Appendix 3-B in this SSMP.

County of Los Angeles: The City of Beverly Hills entered into an agreement with the County of Los Angeles on August 14, 1990 for the enforcement of the industrial waste provisions of the City’s Municipal Code. These services include, but are not limited to providing inspections, filing of required reports, and issuing permits. The services shall also include the inspection of open sanitary spills only in the event that the City, by action of City Council, requests such services. This agreement is included as Appendix 3-C in this SSMP.