SEWER SYSTEM MANAGEMENT PLAN



Public Works

Prepared September 2024

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Introduction

This section provides background information on the purpose and organization of the Sewer System Management Plan (SSMP) and outlines the City of Montclair's (City) existing service area and collection system.

This SSMP has been prepared in compliance with the requirements of the State Water Resources Control Board (SWRCB). On December 6, 2022, the SWRCB adopted Order WQ 2022-0103-DWQ, further recognized as the "Order" in the SSMP. The current adopted Order supersedes Order No. 2006-0003 that established General Waste Discharge Requirements (WDR) for all publicly owned and operated sanitary sewer systems comprised of more than one mile of sewer line within the state of California. The Order requires every owner or operator to develop and implement a written SSMP. Essentially, the SSMP is a living document an Enrollee develops and implements to effectively manage its sanitary sewer system in accordance with the Order. This document must be implemented and routinely monitored for its effectiveness.

The City must also comply with SWRCB sanitary sewer spill (spill) electronic reporting requirements. The Order requires that all Spills should be monitored and reported online. Electronic reporting allows the state to accurately track Spills, thus being able to identify areas of concern and where improvement is needed.

The SSMP includes eleven elements, as listed below. Each of these elements forms an individual section of this document.

1. Sewer System Management Plan and Goal Introduction
2. Organization of personnel, including the chain of command and communications
3. Legal authority for permitting flows into the system, inflow/infiltration control as well as enforcement of 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 Grease (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

Each of the sections have been divided into three sub-sections, as follows:

- Description of the SWRCB requirement for the element.
- Identification of associated section and list of supporting documentation and information included in the section. This is because information included in appendices often requires relatively frequent updates of new information.
- Discussion of the element including the City of Montclair's plan of response. Each section may be divided into subsections depending on the complexity of the element.

1. Sewer System Management Plan and Goal

The goal of the SSMP is to provide a plan and schedule to:

- Properly manage, operate, and maintain all parts of the Enrollee's sanitary sewer system(s),
- Reduce and prevent spills, and
- Contain and mitigate spills that do occur.

1.1 Regulatory Context

The City of Montclair has adopted a SSMP in accordance with the SWRCB statewide waste discharge requirements. The first SSMP was adopted by the City Council in 2009. The City enrolled for regulatory coverage and was approved on November 15, 2023.

1.2 Sewer System Management Plan Update Schedule

Under the reissued General Order, 2022-0103-DWQ, the SSMP must be updated within every six (6) years after the required due date of its last plan update.

The SWRCB has created an online look-up tool to show each System's SSMP audit and update due dates https://www.waterboards.ca.gov/water_issues/programs/sso/lookup/

The City's SSMP update schedule is shown in Table 1 below and follows the required plan update [pattern of six (6) years.

Table 1. SSMP update schedule

September 2024	September 2042	September 2060
September 2030	September 2048	September 2066
September 2036	September 2054	September 2072

1.3 Sewer System Asset Overview

The City of Montclair's sanitary system serves a population 37,500 residents in a 5.5 square mile service area within San Bernardino County. The City owns and operates 87 miles of gravity wastewater collection system pipeline that ranges from 8 to 36 inches in diameter and one siphon. There are 9,182 service laterals. The upper and lower service laterals connected to the main pipeline are owned and maintained by individual private property owners. The City's sewer system also receives some flow from the City of Upland. The City is one of the seven contracting agencies in the Inland Empire Utilities Agency (IEUA) service area.

The seven contracting agencies are comprised of Chino, Chino Hills, Fontana, Cucamonga County Water District (Rancho Cucamonga), Fontana, Upland, Ontario, and Montclair. IEUA owns and operates the Regional Sewerage System's Wastewater treatment, disposal, and transmission facilities. The Regional Sewage Service Contract, as administered by IEUA, outlines the rights and obligations of the seven-member agencies for sewage transmission, treatment, and disposal. Collected sewage is conveyed to IEUA wastewater treatment facilities (RP-1 or Carbon Canyon

Water Reclamation Facility, CCWRF) through a collection system owned and operated by the City of Montclair via a Regional Interceptor. See City's Boundary Map (Exhibit A).

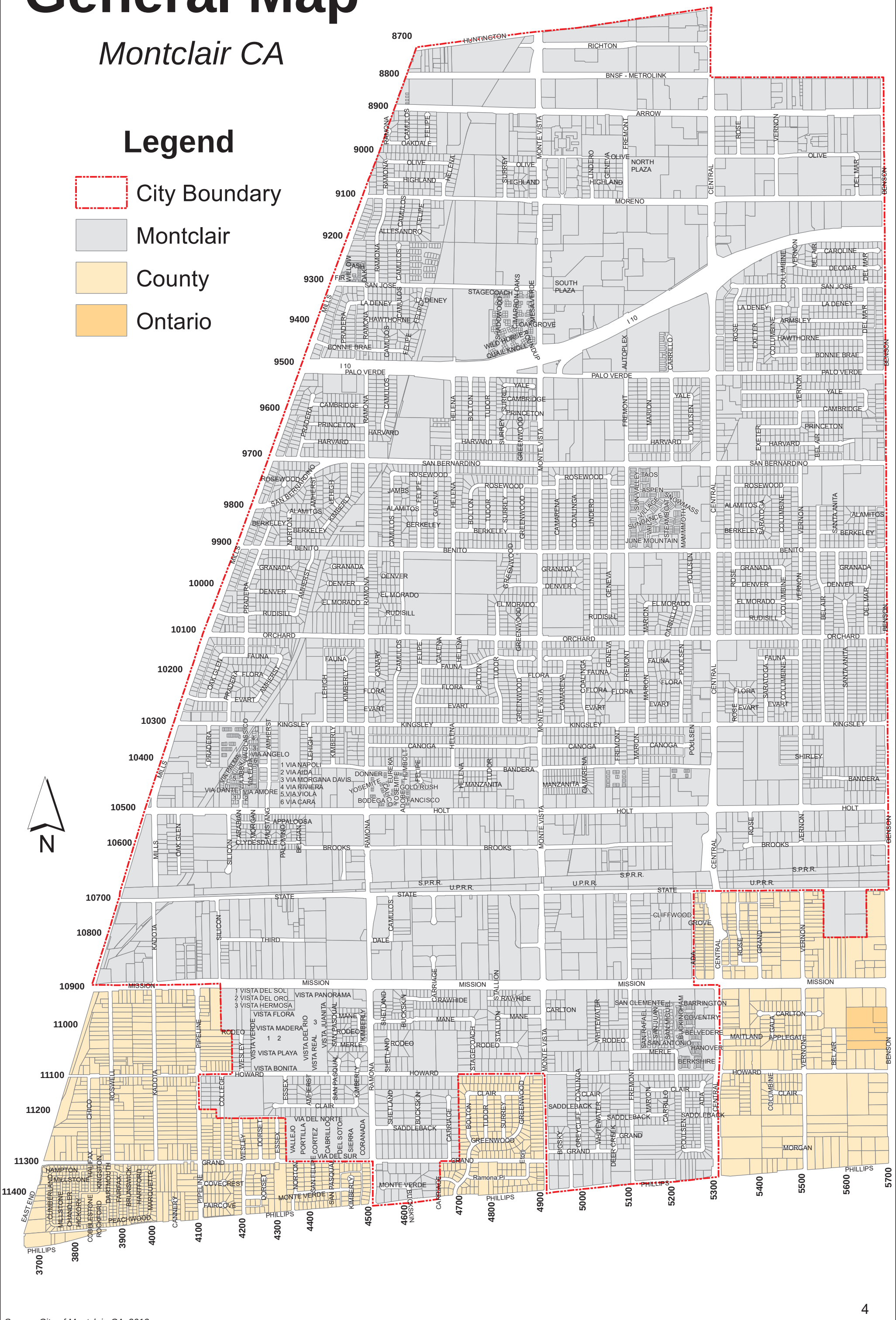
General Map

Montclair CA

Exhibit A

Legend

- City Boundary
- Montclair
- County
- Ontario



Source: City of Montclair, CA 2013

\Maps\Departments\General Map w 100 Tab.mxd

2. Organization

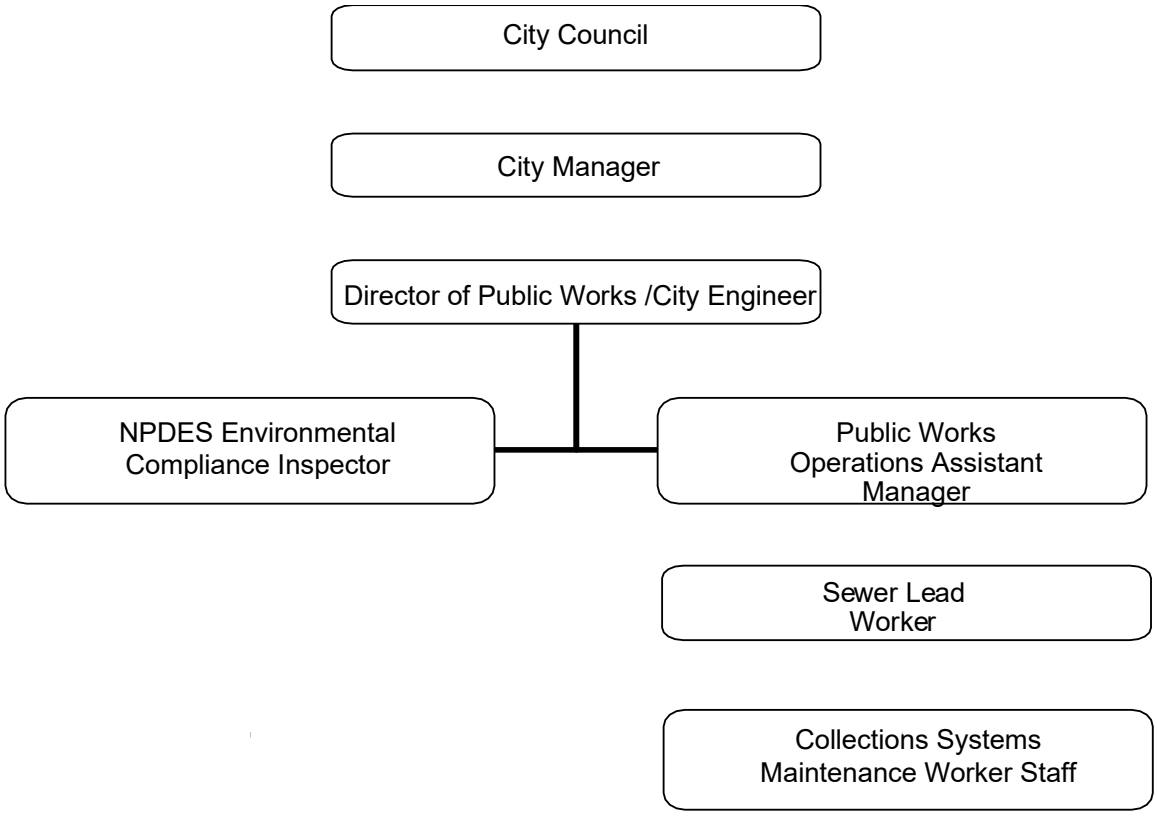
Element 2 outlines the City's organizational line or authority. The collection system agency's SSMP must identify:

- The name of the Legally Responsible Official as required per section 5.1 of the General Order;
- The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific SSMP elements;
- Organizational lines of authority; and
- The chain of communication for reporting Spills, from receipt of a complaint or other information, including the person responsible for reporting Spills to the State and Regional Water Quality Control Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and /or State Office of Emergency Services (OES).

2.1 Organizational Lines of Authority

An organizational chart for the City of Montclair is shown in Figure 1. This organization shows the line of authority for administrative and field staff who are involved with implementing the SSMP.

Figure 1. Organizational chart for administrative and field staff.



2.2 Description of Positions and Responsibilities

Director of Public Works/City Engineer. Plans, organizes, and directs public works activities in the City of Montclair. Advises City Council and the Planning Commission on public works/engineering issues, including matters pertaining to the sewer collections system. Prepares and controls department budget.

Reviews project specifications for public works projects. Confers with officials of other public works departments. Responsible for the development of department plans and programs including sewer operations from an engineering-based standpoint and the Capital Improvement Program. Coordinates and confers with the maintenance department on sanitary sewer collections system issues.

Confers with contractors, consultants, and the public on engineering and construction matters. Prepares reports on public works special projects.

Responsible for compliance with existing and new federal, state, and regional laws, directives, and policies related to sewage discharge, conveyance, treatment, and storm water discharges. Recommends changes in City policies and ordinances to comply with applicable laws, directives, and ordinances.

Acts as liaison to regional sewage treatment provider IEUA. Acts as the Legally Responsible Official responsible for compliance of the SSMP and the electronic reporting requirements by the SWRCB.

Public Works Operations Assistant Manager. Plans, organizes, and supervises the repair and maintenance of the public works infrastructure, including the sewer collections system.

Manages the City Yard. Makes recommendations regarding maintenance and construction from an operations-based standpoint. Controls budget expenditure within the Maintenance Division. Confers with contractors, the City Engineer, and members of the general public on construction/collections maintenance problems and procedures.

Supervises sewer maintenance workers. Schedules work assignments. Maintains records of projects assigned and completed, supplies and equipment used, and costs incurred. Procures needed equipment and develops an equipment maintenance program.

Sewer Lead Worker. Assists in the cleaning and repair of sewer mains and lines and the location and raising of manholes.

Performs CCTV inspections of the City's main sewer line and operates video equipment. Lays out and schedules work for the collections crew members. Trains crew members in required tasks, including collection system preventative maintenance and Spill response. Checks work of assigned crew members.

Maintenance Worker. Works as a member of the collections field maintenance crew. Cleans, unplugs, and repairs sewer lines when necessary. Locates and raises manholes. Operates power equipment and vehicles including hydraulic cleaning/Vactor truck and sewer rodder.

City Engineer. Responsible for the development of department plans and programs including sewer operations from an engineering-based standpoint and the Capital Improvement Program. Coordinates and confers with the maintenance department on sanitary sewer collections system issues. Confers with contractors, consultants, and the public on engineering and construction matters. Prepares reports on public works special projects.

NPDES Environmental Compliance Inspector. Performs field investigations and inspections on industrial, commercial, and residential discharges of wastewater, sewer-related issues, and stormwater. Enforces compliance with sewer and storm drain ordinances.

2.3 Authorized Representative

The Public Works Director/City Engineer is authorized to certify all electronic spill reports submitted to the SWRCB, and is authorized to submit Spill reports to the appropriate government agencies.

2.4 Responsibility for SSMP Implementation

The City's authorized representative for the development and implementation of the SSMP is the Public Works Director/City Engineer.

2.5 Spill Reporting Chain of Communication

Table 2 lists the telephone contact numbers for the parties included in the chain of communication. The spill reporting process is described further in Element 3: Overflow Emergency Response Plan. Figure 2 contains a flowchart depicting the chain of communication for responding to and reporting spills. The flowchart shows communication from the first observation of a spill to reporting the spill to the appropriate regulatory agencies.

Table 2. Contact Information for spill reporting chain of communication.

Contact	Phone Number
City Hall	(909) 625-9440
Police Department Dispatch	(909) 625-4711
Fire Department	(909) 447-3540
Director of Public Works/ City Engineer	(909) 625-9441
Public Works Operation Assistant Manager	(909) 625-9467
Sewer Lead Worker	(909) 625-9469

3. Legal Authority

Element 3 of the SSMP discusses the City's Legal Authority, including its Municipal Code and agreements with other agencies. This section fulfills the Legal Authority of the SSMP requirement.

3.1 Regulatory Requirements for the Legal Authority Element

The collection system agency's SSMP Legal Authority Element must identify, through its collection system use ordinance, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

- Prevent illicit discharges into its wastewater collection system (examples including chemical dumping, illegal connections, infiltration and inflow (I/I), unauthorized debris, storm water, etc.);
- Require proper design and construction of sewers and connections;
- Provide access for maintenance, inspection, and repairs to publicly owned portions of laterals;
- Limit the discharge of fats, oils, and grease (FOG), and other debris that may cause blockages; and
- Enforce violations of its sewer ordinances.

Supporting documentation for Element 3 is located in Section B. This section contains the following documents:

1. City of Montclair Municipal Code Title 9 Chapter 9.20 Sewer System https://library.municode.com/ca/montclair/codes/code_of_ordinances?nodeId=TIT9PUSEPUPL_CH9.20SESY
2. Inland Empire Utilities Agency Regional Sewage Service Contract and Regional Pretreatment Agreement
3. City of Upland Sewer Service Agreements

3.2 Municipal Code

The legal authority required for the SSMP by the SWRCB is contained within the City's Municipal Code. The chapter of the Municipal Code that is dedicated to the sewer system is Title 9, Public Services and Public Places, Chapter 20 Sewer System. This chapter is included in full in Section B. Portions of this chapter are discussed in the following sub-sections as it pertains to the prevention of illicit discharges, proper design, and construction of sewers and connections, maintenance access, and enforcement measures. All discussions in the following sub-sections on the City's legal authority as required by the SSMP are based on the City's existing Municipal Code as of fall 2008.

Prevention of Illicit Discharges

All measures prohibiting illicit discharges are included in Chapter 9.20 Sewer System. Some of the intended purposes of this chapter are to prevent the discharge of any pollutant into the sewers that would obstruct or cause damage to the collection system, interfere with treatment at the

wastewater treatment plant owned and operated by Inland Empire Utilities Agency, or threaten harm to the environment or human health. Examples of discharges covered in the Municipal Code are included below. For the complete text of the ordinance, refer to the Municipal Code located in Section B.

- Stormwater and Inflow/Infiltration. Section 9.20.640 Limitations on point of discharge prohibits any discharge into a manhole or other opening in a sewer unless the discharge has been approved by the City Engineer and appropriate discharge fees have been paid. Section 9.20.580 General discharge prohibitions (B 14) prohibit any unpolluted water, including cooling water, storm water, subsurface water, and single-pass cooling water, unless the discharge has been approved by the City Engineer and all applicable fees have been paid.
- Industrial Waste. Article XIII Administration, Sections 9.20.720-730 Industrial user discharge permits require that all industrial waste dischargers obtain a permit that prohibits all wastewater discharges in excess of the permit allowances stated within the permit. Section 9.20.800 Pretreatment required states that all industrial users shall provide necessary pretreatment equipment as required to comply with all wastewater discharge limitations stated within the permit. Article XIV Reporting Requirements provides reporting standards for determining compliance with permit conditions. Section 9.20.610 Local concentration limitations include a list of the pollutant limitations for all other wastewater dischargers that do not have an approved Industrial Wastewater Discharge Permit with the City.
- Other Discharges. Article X Sewer Discharge Regulations outlines standards for discharge to the City's wastewater collection system. Section 9.20.580 General discharge prohibitions prohibit any user to discharge any pollutant or wastewater which will pass through or interfere with the system or the regional treatment plant. This section further lists specific discharge prohibitions including gasoline, solvents, flammable or explosive materials, grease, garbage, bone, hair, blood, sand, stone or marble dust, rags, paper, wood, plastic, tar, asphalt, corrosive materials, toxic materials, dyes, radioactive wastes, etc. Additional sections in Chapter 9.20 specify requirements for other discharges, including hospital/medical wastes and water-softening appliances.

<u>Proper Design and Construction of Sewers and Connections</u>

Regulations pertaining to the design, construction, and inspection of connections, building sewers, and private sewer systems are included in Chapter 9.20 of the Municipal Code.

- Permit Required. Section 9.20.230 Construction permit required mandates that a permit must be obtained prior to any type of construction being performed or connection is made to the sewer system.
- Design and Construction Requirements. Section 9.20.020 Scope (B) requires that design and construction of the City sewer system shall be based on the "Specification for the Design and Construction of Public Works Facilities for the City of Montclair" document adopted by the Montclair City Council. Section 9.20.120 Dedication of sewers to public states that no sewer shall be accepted for dedication by the City unless the sewer has been constructed in conformity with the requirements in Chapter 9.20 of the municipal code and

the document known as “Specifications for the Design and Construction of Public Works Facilities for the City of Montclair.”

- Inspection and Testing. Article III. Inspection of System Construction and Maintenance of System requires that all building sewers be inspected by the City Engineer or the Director of Public Works.

Lateral Maintenance Access

Section 9.20.200 requires that building sewers, building laterals, wastewater pretreatment systems, gravity-separation interceptors, and related appurtenances shall be maintained by the owners of the property. Property owners are responsible for maintaining the street and house lateral up to the main sewer line.

Limit Discharge of FOG and Other Debris

As discussed under Element 7: Fats, Oils, and Grease (FOG) Control Program, Section 9.20. 580 General discharge prohibitions (B) (2) prohibits grease disposal to the City sewer system, and Section 9.20.690 Gravity separation interceptor mandates the installation of a minimum 750-gallon grease interceptor if required by the City Engineer.

Discharge of debris is covered by Section 9.20.580 General discharge prohibitions which, among several listed items, prohibits the discharge of any waste that could create a nuisance, cause damage to the sewer system, or interference with the system or the regional treatment plant. Section 9.20.640 Limitations on point of discharge prohibits any discharge into a manhole or other opening in a sewer unless the discharge has been approved by the City Engineer and appropriate discharge fees have been paid.

Enforcement Measures

Chapter 9.20 Article XVI. Administrative Enforcement Remedies include enforcement measures for violations of provisions included in the chapter.

Written notice is provided to the persons in violation, with an established time limit for correction. Further enforcement provisions include administrative penalties, liens, judicial enforcement including civil and criminal penalties, and disconnection from the public sewer system. The persons specified in the violation are liable to the City for expense, loss, or damages that have resulted from the occurrence of the violation.

3.3 Control of Inflow/Infiltration from Satellite Collection Systems

A portion of the City of Upland’s sewer service area discharges flow into the City of Montclair’s collection system. Also, individual lots and parcels located in the County of San Bernardino have obtained Irrevocable Annexation Agreements in order to connect to the City of Montclair. Therefore, these entities could be considered to be accessory satellite collection systems to the City of Montclair’s collection system. Currently, there are no observed capacity problems due to inflow/infiltration (I/I) in the City’s collection system (refer to Element 8: Capacity Management). However, the SSMP requires that the City must demonstrate that it has the necessary legal

authority to control I/I into its sewer collection system, including contributions from satellite systems.

The City of Upland discharges flow to the City of Montclair pursuant to the Sewer Service Agreement dated October 6, 1986, enabling a discharge point located at Richton Avenue west of Central Avenue, and the Sewer Service Agreement for the Benson Avenue Sewer Diversion Project dated September 8, 2003. Both agreements specify discharge limitations and monitoring requirements for the connection points to the Montclair collection system. These agreements are summarized in Section 3.5, and are attached in Section B.

Connection points located in the County of San Bernardino are approved on an individual basis. Most county connections are residential connections made to the Montclair sewer system as a result of septic system failure. However, some connections are for commercial uses with small average daily flows, with no connections being permitted that would allow the contribution of wet weather flows.

3.5 Agreements with Other Agencies

As specified in Section 3.3, the City's Municipal Code fulfills the SSMP requirement for legal authority. However, the City does have additional legal agreements with other agencies which are summarized in this section. The City's interagency agreements include:

- Chino Basin IEUA Regional Sewage Service Contract and the associated Regional Pretreatment Agreement (IEUA Regional Wastewater Ordinance No. 82)
- The City of Upland Sewer Service Agreement for the Central Avenue- Richton Interceptor
- The Interjurisdictional Pretreatment Agreement between the City of Montclair and the City of Upland Governing the Collection, Conveyance, and Disposal of Wastewater
- The Cooperative Agreement Between the Cities of Ontario, Upland, and Montclair for the Construction of the Benson Avenue Sewer Diversion Project

The City intends to create a consolidated sewer agreement with the City of Upland for usage of the City of Montclair collection system for the transmission of sewage to the Inland Empire Regional Interceptors. The consolidated agreement, once completed, shall be listed in this section.

3.5.1 Inland Empire Utilities Agency Regional Sewage Service Contract and the Regional Pretreatment Agreement (Regional Wastewater Ordinance No. 82)

Inland Empire Utilities Agency's service area includes the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, and Upland, and the service area of Cucamonga Valley Water District. These agencies, referred to as Regional Contracting Agencies (RCAs), entered into the Regional Sewage Service Contract on April 12, 1984 (amended on October 19, 1994). Pursuant to this agreement, these RCAs consented to deliver all sewage collected by their respective collection systems to the Regional Sewerage System for transmission, treatment, and disposal. The RCAs, in turn, pay monthly sewer usage charges as calculated by Equivalent Dwelling Units (EDUs). The RCAs also provide Supplemental Capital Outlay Funds to IEUA to purchase capacity in the system and for the expansion of the Regional Sewer System. This is done through a Capital Capacity Reimbursement

Account and periodic Capital Capacity Reimbursement Payments. Monthly reports of sewered building activity are provided to IEUA by the RCAs to determine the required amount of the quarterly Capital Capacity Reimbursement Payments.

The contract established a Regional Policy Committee to advise IUEA of the needs and views of the RCAs concerning IEUA's policies and activities associated with the operation of the Regional Sewerage System. The Regional Policy Committee is composed of one member and an alternate member from each Contracting Agency. A Regional Technical Committee was also established comprised of individuals knowledgeable in the design, construction, maintenance, and operation of sewage facilities. This committee also includes one member and an alternate from each RCA.

On December 7, 2005, IEUA adopted Regional Ordinance No. 82. The ordinance recognizes IEUA as the primary control authority over wastewater discharges within its service area. The agreement grants IEUA the authority to regulate the industrial users within the boundaries of the District whose facilities are tributary to the Regional Sewerage System. Additionally, IEUA has full enforceable legal authority as a Publicly Owned Treatment Works (POTW) to inspect, permit, and control indirect dischargers of nondomestic waste within the Regional System.

3.5.2 The City of Upland Sewer Service Agreement for Central Avenue-Richton Interceptor, October 6, 1986

The City of Montclair entered into an agreement with the City of Upland to convey sewage from the area bounded by Arrow Highway on the north, Benson Avenue on the east, Ninth Street on the south, and Central Avenue to the west, to the City of Montclair's sewer collection system at Richton west of Central Avenue. Montclair agreed to deliver the wastewater generated from the specified area in Upland to the Regional Wastewater Treatment Plant as contracted under the IEUA Regional Sewage Service Contract. Upland agreed to pay bimonthly sewer use charges and enforce Montclair's wastewater quality standards for sewer discharges. This agreement superseded related agreements made on April 1, 1985, and September 4, 1984.

Note: A significant portion of the area covered by the 1986 agreement has since been diverted to a new Upland facility that was constructed in the early 1990's. This facility is known as the West Upland Interceptor and serves everything in Upland noted in the 1986 agreement north of the Pacific Electric right-of-way (excluding the small retail development on the east side of Central Avenue immediately south of the Pacific Electric right-of-way, which remains connected to the City of Montclair collection system).

3.5.3 Interjurisdictional Pretreatment Agreement between the City of Montclair and the City of Upland Governing the Collection, Conveyance, and Disposal of Wastewater

Pursuant to the Sewer Use Agreement between the City of Montclair and the City of Upland dated October 6, 1986, Upland utilizes Montclair's wastewater collection and conveyance system for sewage originating in the area bounded by Arrow Highway to the north, Benson Avenue to the east, Ninth Street on the south and Central Avenue to the west. The Interjurisdictional Pretreatment Agreement established Upland's conditions for discharge to Montclair's collection system. All nondomestic wastewater dischargers were mandated to conform to the requirements in the

Montclair municipal code pertaining to restrictions on the use of the sewer system and payment of fees. Wastewater dischargers, in addition to being bound by the municipal code, are bound by all California State and Federal laws, and all rules and regulations governing wastewater dischargers. Also, no user was permitted to discharge nondomestic wastewater into the Montclair collection system unless the user had obtained a valid wastewater discharge permit issued by the City Engineer of Montclair.

Monitoring requirements for the City of Upland were also established at the connection point to Montclair's sewer system at Richton west of Central Avenue. Sewer usage fees are required to be remitted to Montclair bimonthly in accordance with the October 6, 1986, Sewer Use Agreement.

3.5.4 Cooperative Agreement between the Cities of Ontario, Upland, and Montclair for the Construction of the Benson Avenue Sewer Diversion Project

Prior to September 2003, the City of Upland sewer line located in Benson Avenue between 7th Street in Upland and 6th Street in the City of Ontario discharged to the Ontario sewer line in Benson Avenue. It was determined that the Ontario sewer line had a shortage of capacity. The City of Montclair had a sewer line located in Deodar Street, adjacent to the Upland/Ontario discharge point, with sufficient capacity to convey the Upland sewage flows. In fall of 2003, the three cities jointly participated in a project to divert the Upland sewer line in Benson Avenue to Deodar Street. Upland is required on a bimonthly basis to pay sewer treatment fees as routinely required by IEUA and maintain the sewer diversion line up to the point of connection to the Montclair sewer in Deodar Street.

Note: Since the approval of this last agreement, the City of Upland has constructed a sewer main line in 9th Street serving properties north of 9th Street to the Pacific Electric right-of-way between Benson and Central Avenues. The City of Upland has also constructed a sewer line extending under the Metrolink tracks to the northern property line of an industrial development at 5494 and 5512 Arrow Highway, ending at a connection to the City of Montclair sewer line within the development. This line, when further extended, will serve properties between 9th Street and the Metrolink tracks between Benson and Central Avenues.

4. Operations and Maintenance

Element 4 of the SSMP identifies the City's operations, maintenance and other related preventative maintenance measures and activities. This section fulfills the Operations and Maintenance Program SSMP requirements.

4.1 Regulatory Requirements for Operations and Maintenance

The requirements of the operations and Maintenance element of the SSMP are summarized below. Because the requirements of this element are comprised of several categories, this summary has been organized by category:

Collections System Map

Each wastewater collection system agency shall maintain up-to-date maps of its wastewater collection system facilities, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities.

Preventive Operation and Maintenance

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 Preventive Maintenance (PM) program will have a system to document scheduled and conducted activities, such as work orders.

Rehabilitation and Replacement Plan

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 conditions 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 blockage 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.

Training

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

Contingency Equipment and Replacement Inventories

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

4.2 Operations and Maintenance

Supporting documentation for Element 4 is in Section C. This section contains the following documents:

1. Sewer section maps
2. Storm Drain Section maps
3. Equipment and Personnel Listing (Staff Certification Documentation Included)
4. CCTV Section televising summary
5. CCTV Sewer Complaint call outs
6. Hot Spot Maintenance List
7. Routine Maintenance List
8. Vector Maintenance Documentation
9. Collection System Map Discussion

The City maintains Geographic Information System (GIS) maps of their sewer and storm drain systems in pdf format. Complete copies of these maps are included in Section C. Maps are available to be viewed electronically or are printed into a map book for use in the field by maintenance and engineering staff. Each manhole has an assigned ID based on the alignment it is part of. The maps show the manhole ID, pipe length, as well as street names, parcels, and parcel boundaries. When errors are discovered on the maps, the errors are noted on a printed copy of the map book page. Pages with errors are provided to the Information Technology Department for update and correction of the system. Updated maps are then distributed to all field and office personnel. Batch updates to the GIS maps are completed periodically. Since the City is nearly built out, few main line sewers and storm drains are expected to be added to the GIS system. The City plans to review the existing GIS maps bi-annually.

The City of Montclair maintains its As Built drawings electronically in the Bid America access relational database. New As Built drawings are scanned and entered into this database to create a complete inventory of drawings. These drawings show the sewer main line elevations, pipe diameters, and laterals if available.

4.3 Preventive Operations and Maintenance Program

The City of Montclair conducts preventive maintenance activities to maintain the viability of its sewer collection system. This includes scheduled focused cleaning and maintenance, CCTV inspection, investigation of customer complaints and back ups, and periodic root abatement (most often in residential areas).

Sewer Cleaning

Cleaning is the City's primary sewer maintenance activity. The City has both frequent, focused cleaning for hot spots (areas with a higher accumulation of FOG and debris) as well as cyclic cleaning for pipes that are not on the focused cleaning schedule. All sewers are cleaned on an approximate 2-year schedule. The City is divided into 4 sections and is comprised of approximately 85 miles of sewer line.

Root Control

Roots are not a major issue in the main line sewers. More often, root issues are seen during customer complaint calls for sewer blockages. If a CCTV inspection verifies that roots are the cause of a blockage, root cutting is performed with chain flail attachments or with mechanical cutters on a rodder (snake).

Odor Control

The City seldom receives odor complaints and has no official odor control program in place. When there are complaints, the City crews flush the adjacent sewer lines. For all City-wide sewer cleaning activities, plastic plugs have been inserted into manhole lids and are periodically replaced when they are dislodged or are no longer effective.

Customer Complaints

Complaints from the public regarding sewer issues are most often related to sewer stoppages, overflows, or odors. Collection system staff respond to complaints during work hours and after work hours based on a standby overtime system. Most complaints are due to stoppages that occur within the laterals. The City of Montclair is not responsible for maintenance of laterals, although crews initially respond to all stoppage complaints. If the resident has installed a sewer clean-out, the crew will often attempt to remove the blockage, though all lateral maintenance is the responsibility of the property owner, as stated in the City's municipal code.

Maintenance Management and the Work Order System

The City's Maintenance Division uses a paper workflow to log most City maintenance-related programs. The Public Works Operations Assistant Manager (OAM) assigns work orders to the Sewer Maintenance crew each workday morning. The Sewer Maintenance crew, at the end of each work day, completes a paper work sheet of what was accomplished and what sewer line and/or manhole deficiencies they may have encountered. The OAM reviews the report, and documents any deficiencies and reports to the City Engineer to discuss solutions. Hard copies (paper records) of sewer cleaning logs and CCTV inventories are also maintained.

4.4 Rehabilitation and Replacement Program

The City funds sewer system services, including operations and maintenance, through a sewer enterprise fund. This fund is user-supported; it uses revenue from rate payers to fund sewer-related work. The City currently has adequate resources and budget to provide sufficient operations, maintenance, and repair of the collection system as required by the SSMP, and the City evaluates its budget annually.

The City's Capital Improvement Program (CIP) is a comprehensive five-year plan of capital improvement projects and related financing sources for the City of Montclair. The program is reviewed and revised annually. Currently, there are 11 sewer-related capital projects in the City's Five-Year CIP.

The City's sewer system is continuously maintained and inspected using CCTV. Any portion of the sewer system found to be structurally deficient through routine inspection is either immediately

repaired as an emergency repair project or shall be documented in a prioritized list of future short- and long-term sewer rehabilitation projects. Sanitary sewer rehabilitation and/or replacement priority will be based on the severity of the deficiency. Rehabilitation of sewer lines in Montclair in the future (estimated the next 10-20 years) may involve relining and slip-lining of existing sewer pipe, as long as significant offsets in the joints between pipes are not to a degree that a future blockage may occur due to the minimal decrease in capacity of a pipe section caused by the installation of the lining. In cases that involve offsets, complete replacement of pipe sections may be required.

Collection System Condition Assessment

Pursuant to the requirements of this element, rehabilitation and replacement projects should be based on a condition assessment inspection with a ranking system to help prioritize projects to address identified deficiencies.

Manhole Inspection

During routine maintenance, City staff visually inspect manholes for corrosion, debris or damage around the base, cracks, holes, and condition of manhole steps. Manhole inspection data is recorded and kept in binders/files.

Pipeline Inspection

The City conducts routine CCTV inspections but does not have a formal defect coding system. A defect coding system will be developed and shall be implemented immediately. To objectively assess the need for rehabilitation and repair, a numeric structural condition rating will be assigned to each CCTV reach based on the number, type, and severity of structural defects observed during the CCTV inspection. The structural condition rating will then be used to group inspected lines into categories corresponding to poor, moderate, and good structural conditions. Pipe sections containing very severe structural defects will be assigned a poor condition rating, regardless of the number of defects. The defect categories will help the sewer maintenance staff consistently analyze CCTV inspection results. The City will use the system to assist in developing the scope of any annual sewer repair CIP projects.

4.5 Training

The City of Montclair budgets for training sewer collection system maintenance staff annually. The City encourages all sewer staff to become CWEA certified and works to provide training opportunities to enable all sewer maintenance staff to become certified. As almost all of the City's current sewer maintenance staff are certified, the main focus is making sure that all staff obtain the required continuing education units to maintain certification. These continuing education units can be earned through attending conferences, seminars, workshops, and home study courses.

The City uses many outside training programs and also provides in-house on-the-job training for sewer maintenance staff. Some of the training programs that the City uses are:

- California Water Environment Association (CWEA)
- Maintenance Superintendent Association

- Inland Empire Utilities Agency Regional Sewer System Tailgates
- In-house training by supervisors and lead workers
- Vendor sponsored training
- Safety tailgate meetings by vendors or supervisors

Montclair uses the Operation and Maintenance of Wastewater Collection Systems (by Kenneth Kerri) for in-house training. Field training is supervised by experienced supervisors or lead workers.

The City requires that all contractors performing sanitary sewer collection system work have the required training and certification and conform to all Title 8 Confined Space Entry requirements and procedures.

4.6 Contingency Equipment and Replacement Inventories

The City maintains a basic equipment inventory. All sewer maintenance and inventory are stored at the City's Municipal Yard. A list of the City's equipment inventory list is included in Section C. The inventory is maintained to minimize facility downtime in the event of a spill, emergency, or an unplanned failure.

Spare parts that are maintained onsite include items such as manhole lids, valves, hoses, heads for maintenance equipment, and 6-inch and 8-inch diameter VCP pipes.

Contingency equipment that is stored by the City to effectively respond to an emergency includes sewer bypass pumps and piping, a Vac-Con truck, and an emergency backup generator. The City has a basic inventory for responding to overflow emergencies. The City of Montclair has a mutual aid agreement, as described in Element 6, with IEUA and all the Regional Contracting Agencies (RCAs), including the cities of Upland, Chino, Chino Hills, Fontana, Ontario, and the Cucamonga County Water District. This mutual aid agreement provides for the sharing of resources, equipment, and personnel from the RCAs and IEUA in the event of an emergency.

5. Design and Performance

Element 5 of the SSMP identifies the City's design and construction standards. This section fulfills the Design and Performance Provisions requirement of the SSMP.

5.1 Regulatory Requirements for Design and Performance Provisions

The requirements of the Design and Performance Provisions element of the SSMP are listed below:

a. 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;
b. The City 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.

5.2 Design and Performance Provisions

Supporting documentation for Element 5 is in Section D. This section contains the City of Montclair's Standard Drawings

5.3 Design and Construction Standards Discussion

Standards for Installation, Rehabilitation and Repair

The City of Montclair has two sources of standards for the design and performance of its sewer collection system. For manholes, lateral connections, cleanouts and interceptor installations, the City uses the City of Montclair Standard Drawings. For all other standards, the City refers to the Standard Specifications for Public Works Construction (known as the "Greenbook") prepared by the American Public Works Association and the Associated General Contractors of California. These requirements provide reasonable assurance that sewers constructed to these specifications will perform adequately with minimal infiltration or maintenance issues and will maintain structural integrity for the duration of their useful lives.

Many of the specifications in the City of Montclair's Standard Drawings book also apply to sewer pipeline rehabilitation and repair projects.

Additional specifications related to sewer rehabilitation and repair will be added by the City Engineer as needed when such projects have been implemented by the City or will be included in project-specific requirements.

Standards for inspection and Testing of New, Rehabilitated, and Repaired Facilities

The City of Montclair's Engineering department performs inspections to verify that every project has been built to code as designed. For pipeline projects, including the installation of new pipeline, as

well as rehabilitation and repair projects, this is accomplished by requiring inspections by pressure testing, CCTV, and performing sewer pipeline assessments before accepting and commissioning a sewer line.

6. Spill Emergency Response Plan (SERP)

Element 6 of the SSMP provides an overview and summary of the City's emergency response documents and procedures for sewer spills and outlines the Order's requirements of a SERP.

6.1 Regulatory Requirements for Spill Emergency Response

The Order requires collection system agencies to develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, the plan includes the following procedures to:

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

6.2 SERP

Supporting documentation for Element 6 is in Section E. This section contains the following documents, which meet the Order requirements for this element:

1. Inland Empire Utilities Agency spill Unified Response Guidance Plan
2. City of Montclair SERP

6.3 Overview of Sewer Overflow Response Documents

The City's SERP is a policy that outlines procedures and guidelines for responding to sewer spills and related sewer collection system emergencies (i.e., blockages). This plan was designed to provide the City with emergency response procedures for reported spills.

IEUA Spill Unified Response Guidance Plan

The SERP also includes a Mutual Aid Agreement with all member agencies within the IEUA's service area if additional personnel or resources are needed during a spill response. The IEUA has developed a Sanitary Sewer Overflow Unified Response Guidance Plan (RGP) that defines the guidelines for responding to emergency spills. The RGP was developed specifically for IEUA and its Regional Contracting Agencies (RCA) consisting of the Cities of Montclair, Chino, Chino Hills, Fontana, Ontario, Upland, and the Cucamonga County Water District. The RGP addresses the following:

1. Purpose and Objectives
2. Overflow Response Procedures
3. Public Advisory Procedures
4. Plan Update

6.4 Purpose and Objectives

The SERP is designed to provide emergency response procedures for reported spills, protect public health and safety, satisfy regulatory agency requirements, and protect the beneficial uses of the waters of the United States. The SERP was developed specifically for the City and includes procedures on cooperating with Regional Contracting Agencies (RCA) consisting of the Cities of Montclair, Chino, Chino Hills, Fontana, Ontario, Upland, and the Cucamonga County Water District. Additional objectives of the SERP are:

- Protection of the collection system, wastewater treatment facilities, and all appurtenances;
- Protection of water quality;
- Protection of public and private property;
- Provide document policies and standard operating procedures for spill response staff to follow.

6.4.2 Overflow Response Procedures

This section describes the duties of the collection system operators responding to a spill. When a spill is reported, the collections group is responsible for protecting public health and safety to the greatest extent possible by taking steps necessary to minimize the impact of the spill. This includes controlling and limiting the amount of discharge, eliminating the source of the discharge, sampling, and monitoring, if necessary, spill and wastewater recovery, and cleanup/disinfection of affected areas. The SERP directs response staff to assess the need for additional resources through the mutual aid agreement. This section outlines the procedures that take place once a spill report has been received and confirmed in the field, including notification of regulatory agencies, and posting

public advisories if needed. In the Spill Response Procedures, the following subsections are included:

- Notification Procedure
- Spill Response
- Crew Instructions
- Traffic and Crowd Control
- Additional Resources/Mutual Aid Agreements
- Preliminary Assessment of Damage to Private/Public Property
- Overflow Correction, Containment, and Cleanup
- Private Property spill
- Regulatory Agency Notification Plan
- Sewer Overflow and Discharge Report
- Collection System Mapping
- Training

The City of Montclair uses the spill SERP as a guidance document for spill response but maintains a spill Event Reporting Line for all spills within the City, as shown in Figure 2. Figure 2 contains a flowchart depicting the chain of communication and contact information for responding to and reporting spills. The flowchart shows communication from the first observation of a spill to reporting the spill to the appropriate regulatory agencies.

6.4.3 Public Advisory Procedures

In publicly accessed areas signage and barriers must be in place for the duration of the cleanup and disinfection process. Signs warning the public of a sewage release will be posted in the affected area(s). Signs must include, at a minimum, the wording of "RAW SEWAGE." Warning signs must remain posted until the Department of Environmental Health Division of San Bernardino County or RWQCB staff authorizes sign removal, or until receiving water sample results that show that background levels (levels determined by samples taken upstream of the spill) have been attained.

6.4.4 Plan Update

The SERP is a document that is continually revised to reflect current policies and procedures. The plan will be annually reviewed to assess effectiveness and updated as needed.

7. Fats, Oils, and Grease (FOG) Control Program

Element 7 of the SSMP identifies the City's measures for controlling Fats, Oils, and Grease (FOG). These measures include inspections, source control, identification of problem areas, and focused cleaning of problem areas. This element fulfills the FOG Control requirement of the SSMP.

7.1 Regulatory Requirements for the FOG Control Element

The City shall evaluate its service area to determine whether a Fats, Oils, and Grease (FOG) control program is needed. If the City determines that a FOG program is not needed, the City must provide justification for why it is not needed. If FOG is found to be a problem, the City must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. The FOG source control plan shall include the following as appropriate:

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

7.2 Element 7 FOG Program

Supporting documentation for Element 7 is located in Section F. This section contains the following documents:

1. City of Montclair Fats, Oils, and Grease (FOG) Program
2. List of Food Service Establishments
3. Blank Restaurant - Environmental Compliance Report
4. Environmental Compliance Interceptor Evaluation Report
5. FOG Commercial Public Outreach Information
6. Household Hazardous Waste Collection Facility Locations
7. Sewer Hotspot Management Program

7.3 FOG Control Discussion

The City of Montclair has determined that a FOG control program is necessary per the requirements of the SSMP. Over 120 food service establishments (FSE) are located within the City of Montclair that discharge to the sewer collection system. Sewer collection system maintenance staff have observed the tendency of FOG buildup in certain sewer lines most often in the proximity of restaurants. This section outlines the measures that the City of Montclair takes to control FOG in the collection system. The complete FOG Control Program is included in Section F.

The City of Montclair's FOG control program is comprised of regular maintenance schedules and an inspection program focusing on source control. A focused cleaning schedule is in place for areas that have a higher tendency to accumulate grease than other lines. The City maintains the legal authority to conduct inspections, enforce and prohibit the discharge of grease, and require the installation of pretreatment devices such as grease interceptors. During the regularly performed site inspections, public education is provided to FSE staff to reduce the quantity of FOG that is discharged into the collection system. The public outreach serves as a tool to reduce FOG related spills.

7.4 Identification and Sewer Cleaning

One of the most effective means of FOG control that is used by the City of Montclair is the identification of sewer lines that are more prone to the accumulation of grease and a routine cleaning schedule of these areas are on 90-day intervals, as well as root removal measures where grease may accumulate.

a. Identification of Grease Problem Areas. Severity of grease accumulation is noted by the sewer maintenance crew during the routine sewer line cleaning. Areas with a high density of restaurants in the vicinity are considered potential grease problem locations.
b. Focused Cleaning. Cleaning frequencies can also be dependent on a past history of stoppages or spills on a line, as well as areas expected to be more likely to build up grease. The areas around the Montclair Place shopping center and Central Avenue have a high concentration of restaurants; therefore, lines in this area are cleaned on a 90-day schedule. The City's Sewer Maintenance division maintains maps and tables of each manhole to manhole reach that is scheduled for focused cleaning. These tables are also used as cleaning logs, on which the maintenance staff note the date and time of line cleaning and flushing and any additional notes on the severity of debris.
c. Blockage Investigation. A CCTV inspection is done following a blockage. If it is possible to identify the lateral or source of the grease, the City inspection staff conducts an inspection on the restaurant or source of grease.

More information on cleaning and maintenance can be found in Element 9: Monitoring, Measurement, and Program Modifications.

7.5 Legal Authority

The City of Montclair is required to prevent discharges of illicit materials and substances from entering the sewer collection system. Illicit discharges include, but are not limited to, the release of

chemicals, industrial waste, stormwater, unauthorized debris, grease, and cut roots. The City of Montclair's legal authority to prohibit FOG is established through its existing municipal code. All Article Sections listed below are included in Title 9, Public Services and Public Places, Chapter 20 Sewer System. This complete chapter is included in Section B, for reference.

Legal measures available in the municipal code to control sources of FOG include:

- Legal authority to prohibit discharges. Section 9.20.580 General discharge prohibitions (B)(2) of the City's municipal code prohibits the disposal of grease, which is listed among several other items. This section prohibits the discharge of any waste that could create a nuisance, cause damage to the sewer system or interference with the system or the regional treatment plant.
- Inspection and entry authority. Section 9.20.670 Inspection and entry maintains that the City has the authority to enter the premises of all users of the collection system for the purpose of determining compliance with all applicable requirements, inspections, and monitoring. This also provides the City with the necessary authority to inspect all interceptors, pretreatment equipment, and monitoring devices.
- Requirement of a gravity separation interceptor. Section 9.20.690 Gravity separation interceptor of the municipal code mandates the installation of a minimum 750-gallon gravity separation interceptor, if so required by the City Engineer. Subsection E provides interceptor design standards. Subsection F, Interceptor Maintenance, mandates that the interceptor be properly maintained at all times and that grease, solids, and oil in the interceptor shall not exceed 25 percent of the operating capacity at any time. This subsection also requires all FSEs to keep maintenance and pumping records onsite for inspection. The City plans to update this ordinance to
    - specifically mention that the FSE is required to keep all waste hauling records onsite for a period of three years,
    - require floor sink screens in all floor sinks, floor drains, and mop sinks with a maximum permissible orifice opening size of the screens, and
    - require the implementation of additional Best Management Practices (BMPs).
- Enforcement. The municipal code includes enforcement measures for violations for any sewer protection measure, including the discharge of FOG. These measures range from the issuance of a notice of non-compliance to severe criminal penalties. FSEs that are found to be in violation of any FOG-related ordinance are typically issued a notice of non-compliance in an inspection report with a due date for corrective actions, depending on the severity of the violation.

7.6 Facility Inspections

Restaurant inspections enable the City of Montclair to determine which locations have the potential to be problematic for the collection system. The City's NPDES Environmental Compliance Inspector inspects all FSEs and similar facilities at least once per year with the option for additional inspections as needed. The additional inspections will be determined by analyzing the history of the site, the type of restaurant, proximity to a problematic area for grease in the collection system, whether the FSE has a grease interceptor, compliance history, sewer line blockage history,

or spill history. Inspections are conducted to verify that a facility is compliant with all applicable standards as listed in the municipal code, and the City of Montclair FOG Program.

Please refer to the City of Montclair FOG Control Program for additional information on facility inspections. The City of Montclair FOG Program is provided in Section F. Also provided in Section F is a list of FSEs in the City of Montclair, and copies of the inspection forms that are used during routine restaurant inspections.

7.7 Public Outreach

The City of Montclair uses FSE site inspections as the primary education and outreach method to contact the restaurant community. During a restaurant inspection, inspectors educate FSE staff about FOG source control measures and BMPs to prevent FOG from being disposed of into the City's sewer collection system. FSE staff are also provided education on the various laws and regulations that affect their business pertaining to the storm drain and sewer collection systems. The inspector distributes educational material that provides information on proper kitchen BMPs and good housekeeping practices. A copy of the educational material is provided in Section F.

Residential FOG is not a major cause of Spills in Montclair. However, Montclair aims to improve the public outreach in residential areas. The City utilizes a brochure geared towards residents who are affected by a blockage of backup caused by FOG. This brochure is provided to residents by sewer maintenance staff and discusses grease and the role of FOG in causing blockages. A copy of this brochure is included in Section F. Residents are provided information upon request for the disposal of FOG generated at home. The local Household Hazardous Waste Collection Center locations (Upland, Ontario, and Chino) are available for the disposal of residential FOG. A copy of this brochure with the addresses of the locations and their hours of operation is included in Section F.

The City also participates in public outreach campaigns sponsored by other agencies, such as the Water Fair sponsored by the Monte Vista Water District and Inland Empire Utilities Agency.

Table 3. Summary Table of State Required FOG Elements

SSMP Element	Montclair Performance Measure
(a) An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances.	The City utilizes educational material provided to residents affected by FOG blockages. Additional information on residential FOG disposal is available upon request. The City participates in public outreach campaigns to provide education relating to FOG.
(b) A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of substances generated within a sanitary sewer system service area.	FOG generated by restaurants is picked up by contractors selected by the restaurant. Waste hauling manifests are required to remain onsite for inspection for a period of three years to verify compliance with disposal regulations. Residents can dispose of FOG at local Household Hazardous Waste Collection Center Locations (Cities of Upland, Ontario, and Chino). A brochure listing these sites and hours of operation is distributed to residents.
(c) The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages.	The City of Montclair maintains adequate legal authority to prohibit discharges and determine measures to prevent Spills and blockages caused by FOG.

SSMP Element	Montclair Performance Measure
(d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements.	Montclair has an ordinance that mandates the installation of grease interceptors if required by the City Engineer or his designee. The ordinance also requires FSE to: (1) Keep all waste hauling records onsite for a period of three years, (2) require floor drain screens in all floor drains and mop sinks with a maximum permissible orifice, and (3) require the implementation of additional Best Management Practices (BMPs).
(e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance.	The City of Montclair maintains adequate legal authority to inspect grease-producing facilities and enforcement authorities, and It has adequate staff to inspect and enforce the FOG ordinance.
(f) An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section.	Montclair has identified sections of sewer that have a higher tendency for the accumulation of FOG. Often these areas are near a cluster of restaurants. Montclair has found that the current system of identification of potential problem areas, and cleaning these zones on a 90-day frequency has been effective in addressing FOG accumulation and decreasing the potential of Spills.
(g) Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system.	Currently the City's approach of a restaurant inspection program and scheduled cleaning for problem areas has been effective in preventing FOG related Spills.

8. System Evaluation and Capacity Assurance Program

Element 8 of the SSMP discusses the City's capacity management measures, including the most recent 2022 SMP Update and recommended capacity improvement projects. This section fulfills the Capacity Management SSMP requirements.

8.1 Regulatory Requirements for Capacity Management

The City 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:

a) Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to a Spill discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from Spills 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.
b) Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and
c) 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.
d) Schedule: The City shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a) – (c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements.
e) See Section G for information about the Sewer Improvement Projects as part of the adopted 2024-2029 Capital Improvement Program.

8.2 Capacity Evaluation Discussion

Criteria were established to determine the adequacy of existing sewers and to size new sewer pipes in terms of their hydraulic capacity while minimizing the likelihood of a spill. The hydraulic capacity criteria were developed based on the peak depth-to-diameter (d/D) ratios under peak dry weather flow conditions, similar to the 2022 SMP Update. The City is nearly built out, so a large increase in flow to the collection system is not expected. The capacity criteria used to analyze the results of the hydraulic model is the same as the 2022 Sewer Master Plan Update (Section G). Table 4 summarizes the capacity criteria and is consistent with industry standards.

Table 4. Capacity Criteria used in analysis

Purpose	Pipe Size	Maximum Allowable d/D
Evaluation of Existing Sewer Capacity	8” to 12”	0.75
	15” and Larger	0.75
Sizing of Proposed Sewers	8” to 12”	0.50
	15” and Larger	0.75

Under the 2022 CIP Revised Buildout Scenario, the hydraulic model identified 42 deficient sewer line segments totaling approximately 10,919 feet with diameters ranging from 8” to 24”. Considering the recommended CIPs identified in the 2022 SMP Update, there are a total of 83 segments proposed for improvement, evaluating to approximately 21,963 feet with diameters ranging from 8” to 24”. A majority of the deficient segments are along Monte Vista Avenue from San Bernardino Street to Benito Street, Benito Street from Monte Vista Avenue to Ramona Avenue, Ramona Avenue from Benito Street to State Street, and State Street from Ramona Avenue to Silicon Avenue. The newly constructed 15” sewer pipe on Monte Vista Avenue exceeds d/D capacity due to a flatter slope; however, the upstream piping can alleviate some of the flows during its peak time, by providing additional storage in the pipe.

Spills in Montclair have historically not been in the public right of way as a result of the collection system but have occurred mainly from private laterals and occasional construction-related debris found in lines. The City shall continue to monitor capacity and the causes of any overflow events that occur. If Spills are determined to be caused by capacity-related issues, the Plan will be updated, and improvements shall be scheduled in a Pipeline Capacity Capital Improvement Plan.

The City requires all new developments that propose to connect to the City system to provide capacity evaluations on a case-by-case basis to determine whether the existing system can transmit the proposed flows from the new development without exceeding the City’s design criteria. If deficiencies are found, the evaluation must provide solutions to allow the addition of these expanded flows to the collection system without causing spills or system failures. This also includes capacity expansion evaluations for satellite agencies.

8.3 Prioritization of Corrective Actions

The 2022 Sewer Master Plan Update will assist the Engineering Division to create a plan that prioritizes corrective action throughout the sewer system. Prioritization will consider the severity of the consequences of potential spills.

8.4 Capital Improvement Plan

The City is located within the Pomona Valley and is a part of the Inland Empire region in southwestern San Bernardino County. The City is bordered by Pomona to the west, Claremont to the northwest, Upland to the northeast, Ontario to the east, and Chino to the south. The previous sewer master plan was completed in 2017 and was developed by David Evans and Associates. Montclair has since updated its SMP in December of 2022; there have been new planned developments and updates to the previous ones in the City that affect the City’s sewer

system. Innovyze's Infosewer, a hydraulic modeling software, was used to incorporate the City's updated sewer generation loadings and recently constructed sewer projects, and to review and analyze the City's existing sewer system. The hydraulic model was used to analyze alternative projects to mitigate sewer pipeline deficiencies as part of the review.

There have been development updates, additional proposed developments, and constructed sewer improvements. These updates include the following:

- North Montclair Downtown Specific Plan
- Montclair Place
- Arrow Highway Mixed-Use District (AHMUD)
- Installing a new pipe, 15" diameter on Monte Vista Avenue, between south of San Jose Street and Palo Verde Street
- Specific Plan of Development Number 01-2 (Ordinance No. 82-533)

This section provides an update to the 2022 Sewer Master Plan Update. To estimate the capital improvement costs for each project, the estimated construction unit costs have been updated to account for price changes since the 2017 SMP, as well as the current supply chain issues. Table 5 presents the construction unit costs that were used in the cost estimates. Note that the presented construction costs include traffic control, pavement replacement, mobilization, demobilization, sewer bypassing, and lateral reconnection, where applicable. It shall be noted that a deduction of $200/LF was applied to projects that do not require sewer bypassing (such as new pipes on Monte Vista Avenue, and parallel pipe constructions).

Table 5. Estimated Construction Unit Costs

Item	Estimated Construction Unit Cost
8-inch Sewer Open Cut Replacement	$490/LF
10-inch Sewer Open Cut Replacement	$535/LF
12-inch Sewer Open Cut Replacement	$585/LF
15-inch Sewer Open Cut Replacement	$630/LF
18-inch Sewer Open Cut Replacement	$680/LF
21-inch Sewer Open Cut Replacement	$745/LF
24-inch Sewer Open Cut Replacement	$790/LF
27-inch Sewer Open Cut Replacement	$850/LF
Existing Manhole Rechanneling/Rehabilitation	$8,000/EA
New 48" Precast Manhole	$8,500/EA

Table 5 shows the capital cost factor breakdown utilized in the planning-level cost estimates. As a result, the capital cost was calculated as 160% of the total construction cost of each project.

Table 6. Capital Cost Factors

Cost Item	Cost Factor (% of Construction Costs)
Construction Contingency	30%
Administration	10%
Design	10%
Construction Management	10%
Total	60%

9. Monitoring, measurement, and modifications plan

Element 9 of the SSMP discusses the parameters that the City uses to monitor the success of the SSMP and how the City plans to keep the SSMP current. This section fulfills the Monitoring, Measurement, and Program Modifications requirement of the SSMP.

9.1 Regulatory Requirements for Monitoring, Measurement, & Program Modifications

The requirements for the Monitoring, Measurement, and Program Modifications element of the SSMP are summarized below. The City shall:

a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
c) Assess the success of the preventive maintenance program;
d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
e) Identify and illustrate spill trends, including frequency, location, and volume.
f) Monitoring and Measurement Discussion

9.2 Monitoring and Measurement Discussion

The City already tracks several performance measures through maintenance reports including but not limited to cause and location of stoppages; number, cause, location, and volume of spills as maintained in the SWRCB CIWIQS database; number and reason for customer complaints; length of pipe cleaned, and type of debris found; and CCTV records. The City plans to continue tracking all these performance measures.

To maintain the effectiveness of the SSMP, the City of Montclair has selected certain parameters that can be documented and compared on an annual basis. These parameters were selected because they are quantitative and are based on measurable results. Evaluation of these parameters will indicate the success of the SSMP, or problems that need to be investigated further.

Table 7 lists each SSMP element, the basic purpose of the element, and the parameters that the City intends to track to help in determining the success of the SSMP. The City of Montclair will use the cost factors listed in Table 6 to assist in the completion of the annual SSMP Audit described in Element 10. As previously stated, the City will continue to collect data from the performance measures that are currently tracked. This information will be used to determine the successes and limitations of the SSMP.

Table 7. SSMP Monitoring Parameters by SSMP Element

SSMP Element	Summary of Element Purpose	Parameters for Tracking Effectiveness (Annual)
Goals	Establish priorities of City and provide focus for City staff.	• None needed.
Organization	Document organization of City staff and chain of communication for SPILL response.	• None needed.
Overflow Emergency Response	Provide timely and effective response to SPILL emergencies and comply with regulatory reporting requirements.	• Average and maximum response time. • Percent of total overflow volume contained or returned to sewer.
Fats, Oils, & Grease Control	Minimize blockages and overflows due to FOG.	• Number of blockages due to FOG. • Number of spills due to FOG. • Number of FOG producing facilities inspected.
Legal Authority	To show that the City has adequate legal authority to properly maintain the collection system.	• None needed.
Measures and Activities	Minimize blockages and Spills by properly maintaining the system and keeping the system in good condition.	• Total number and volume of spills. • Number of repeat spills (same location as any previous spill, regardless of year of occurrence). • Total number of mainline blockages. • Number of pipe failures. • Length of pipe CCTV'd. • 3-yr backlog for rehabilitation and repair projects.

SSMP Element	Summary of Element Purpose	Parameters for Tracking Effectiveness (Annual)
Design and Construction Standards	Requiring new facilities are properly designed and constructed.	• None needed.
Capacity Management	Minimize SPILLs due to insufficient capacity by evaluating system capacity and implementing necessary projects.	• Number of spills due to capacity limitations or wet weather. • Date of completion of most recent capacity evaluation. • 3-yr backlog for capacity improvement projects.
Monitoring, Measurement, & Program Modifications	Evaluate effectiveness of SSMP, keep SSMP up- to-date, and identify necessary changes.	• None needed.
Program Audits	Formally identify SSMP effectiveness, limitations, and necessary changes on an annual basis.	• Date of completion of last annual audit.
Communication Plan	Communicate with the public and satellite agencies.	• None needed

10. Internal SSMP Audits

Element 10 of the SSMP describes the City's auditing program for the SSMP. This section fulfills the SSMP Audit requirements.

10.1 Regulatory Requirements for SSMP Audits

The requirements for the SSMP Audits element of the SSMP are summarized below:

The City Shall conduct periodic internal audits, appropriate to the size of the system and the number of spills. 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 City's compliance with the SSMP requirements identified in this subsection, including identification of any deficiencies in the SSMP and steps to correct them.

10.2 Element 10

Completed SSMP audits are stored in Section H.

10.3 SSMP Audits Discussion

The City of Montclair will complete annual audits of the SSMP's effectiveness. The audit will include the following categories:

- Review of progress made on the development of SSMP elements
- Review of monitoring and measurement parameters outlined in Element 9
- Identification of successes of implementing the SSMP elements and needed improvements
- Description of system improvements planned for the next year, with an estimated schedule of completion and implementation

When the City has completed the audit, a copy of the report will be kept on file to fulfill the requirements of this section. A copy of each annual audit will be stored in Section H.

11. SSMP communication program

Element 11 of the SSMP discusses the City's communications with the public and satellite agencies. This section fulfills the communication Program requirement for the SSMP.

11.1 Regulatory Requirements for Communication Program

The requirements for the Communication Plan element of the SSMP are summarized below:

The City 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 with the opportunity to provide input to the City as the program is developed and implemented.

The City shall also create a plan of communication with systems that are tributary and/or satellite to the City's sanitary sewer system.

11.2 Communications Program Discussion

The City maintains a website to inform the public about City activities and events. The City's website is an effective communication channel for its residents. The main page of the website provides important updates and announcements, alerts, and news to the public.

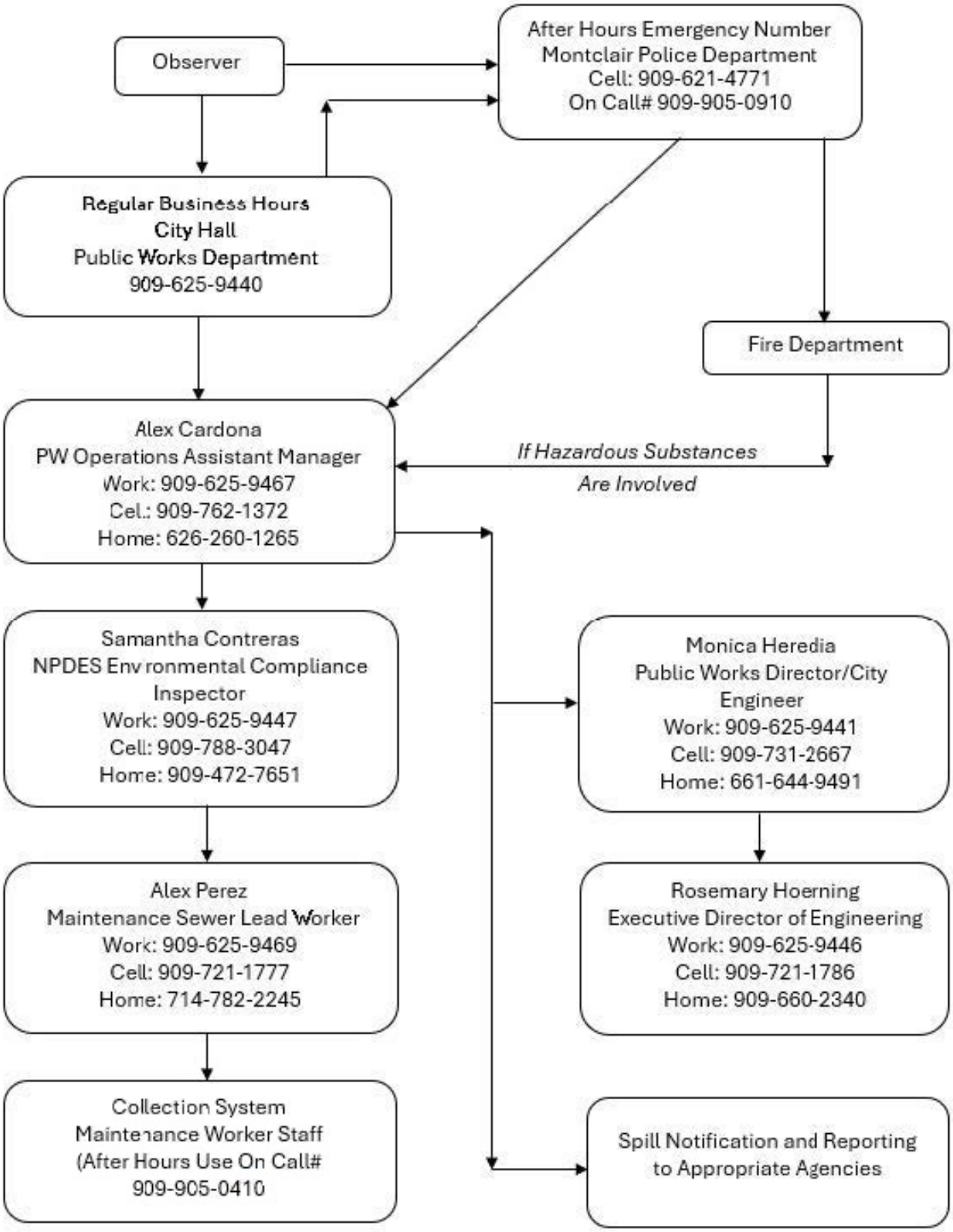
The City plans to post an update on its website notifying the public that the SSMP has been completed. The completed SSMP will be certified by the City Council at a City Council Meeting. The City will also plan to use the website to notify the public about important activities and information related to sewer system management.

Entities that the City needs to communicate regularly with include the City of Upland, which discharges some flow to the City's sewer system, as well as Inland Empire Utilities Agency, which is the sewer treatment purveyor for the city. The City and the IEUA Regional Contracting Agencies (RCAs) attended monthly Regional Technical and Policy Committee meetings where both collections system and sewer treatment plant issues within the IEUA service area are discussed.

SECTION 1

- Spill Response Chain of Communication

Spill Response Chain of Communication



SECTION 2

- City of Montclair Municipal Code Title - Chapter 9.20 Sewer System
- Inland Empire Regional Sewage Service Contract and Regional Pretreatment Agreement
- City of Upland Sewer Service Agreements

Article I. Title and Scope of Provisions

9.20.010 Title.

This chapter shall be known as the "City Sewer System Regulations" and may be cited as such. (Prior code § 6-6.101)

9.20.020 Scope.

A. The provisions of this chapter shall apply to the design, construction, alteration, use and maintenance of the City sewer system, including, but not limited to, main line sewers, building sewers, building laterals, wastewater pretreatment systems, regional wastewater treatment plants, gravity separation interceptors, and other appurtenances; the issuance of permits and the collection of fees therefor, to cover the costs of checking plans, inspecting construction, and making record plans of the facilities permitted; and provision for penalties for the violation of any of the provisions of this chapter.

B. Design and construction of the City sewer system shall be pursuant to the document entitled "Specifications for the Design and Construction of Public Works Facilities for the City of Montclair" as adopted by the Montclair City Council.

C. The purpose of this chapter is to provide for the maximum beneficial use of the City sewer system, groundwater resources and effluent-receiving waterways through regulation of wastewater discharges by establishing terms, limits and conditions of discharge through the enforcement of general requirements for domestic wastewater users and the issuance of industrial user discharge permits; to provide for equitable distribution of the City's costs; and to provide procedures for complying with requirements placed upon the City by State and federal regulations. This is accomplished in compliance with the NPDES permits issued by the California Regional Water Quality Control Board in conformity with 40 CFR, Part 403, the Clean Water Act as amended by the Water Quality Act of 1987, and the California Water Code as amended.

D. The objectives of this chapter are:

1. To prevent the introduction of pollutants into the City sewer system which would interfere with operation of the regional system or contaminate the resulting sludge;
2. To prevent the introduction of pollutants into the City sewer system which would pass inadequately treated through the regional system into receiving waters or into the atmosphere or otherwise be incompatible with the regional system;
3. To improve the opportunity to recycle and reclaim wastewater and sludge from the system;
4. To provide for regulation of direct and indirect contributors to the City sewer system through the issuance of industrial user discharge permits to certain nondomestic users and through the enforcement of general requirements for other users, to authorize monitoring and enforcement activities, to require user reporting, to provide that existing customers' capacity will not be preempted, and to provide

for the setting of fees for the equitable distribution of costs resulting from the program established in this chapter.
E. Any fines imposed by a regulatory agency other than the City as a result of a violation of the provisions of this chapter shall be in addition to any charges or fees imposed by the City. (Prior code § 6-6.102)

Article II. General Provisions

9.20.030 Sewer connection fees--Deposits.

Except as otherwise provided, all money received pursuant to this chapter shall be deposited as follows:
A. Regional Fees. All money received pursuant to Sections 9.20.430 through 9.20.460 of this chapter shall be deposited into the Sewer Fund.
B. Main Line Connection Fees and Main Line Construction Fees. All money received pursuant to Section 9.20.260 of this chapter shall be deposited into the Sewer Fund.
C. Reimbursement Districts. All money received pursuant to Section 9.20.550 of this chapter shall be deposited into the sewer reimbursement liability account within the General Fund. (Ord. 99-791 Exh. A (part); prior code § 6-6.301)

9.20.040 Use of the Sewer Fund.

Money deposited in the Sewer Fund, as provided in Section 9.20.030 of this article, may be expended by the City, contingent upon the receipt and availability of such funds, to accomplish the purposes set forth in Section S471 of the California Health and Safety Code for which no other provisions have been made or for such other sewer purposes, including sewerage facilities, storm drain systems, and maintenance and development of the same, not in conflict with applicable laws or legal requirements. (Ord. 99-791 Exh. A (part); prior code § 6-6.302)

9.20.050 Enforcement of provisions.

The Public Works Director and City Engineer, or their designees, shall enforce all the provisions of this chapter and in doing so shall have the powers of peace officers. Such powers shall not limit or otherwise affect the powers and duties of the San Bernardino County Health Officer. (Ord. 99-791 Exh. A (part); prior code § 6-6.303)

9.20.060 Service of notices.

Unless otherwise specifically provided, all notices required hereunder shall be given in writing and served by messenger or by first class, certified or registered mail. Notice shall be deemed received as follows, depending upon the method of transmittal:

A. By messenger as of the date delivered; and
B. By United States mail, first class, certified or registered, as of 72 hours after deposit in the United States mail. (Ord. 99-791 Exh. A (part); prior code § 6-6.304)

9.20.070 Time limits.

Any time limit provided for in this chapter may be extended by mutual written consent of both the City and the permittee, applicant or other person affected, unless specifically restricted in this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.305)

9.20.080 Access to facilities.

No object or structure, whether permanent or temporary, shall be placed in such a position as to interfere with the ready access to any facility described in Section 9.20.200 of this chapter. Any such obstruction, upon request of the Director of Public Works, shall be immediately removed by the violator at no expense to the City and shall not be replaced. (Ord. 99-791 Exh. A (part); prior code § 6-6.306)

9.20.090 Interference with inspectors.

No person shall, during reasonable hours, refuse, resist, or attempt to resist the entrance of the Director of Public Works into any building, factory, plant, yard, field or other place, or portion thereof, in the performance of his/her duties within the powers conferred upon him/her by applicable laws or legal requirements. (Ord. 99-791 Exh. A (part); prior code § 6-6.307)

9.20.100 Opening manholes.

No unauthorized person shall, for any purpose whatsoever, open or enter or cause to be opened or entered, any manhole to any public sewer. (Ord. 99-791 Exh. A (part); prior code § 6-6.308)

9.20.110 Reimbursement for repairs and maintenance.

If any person causes obstructions to, removal of, or damages to, the City sewer system or any appurtenances thereto, he/she shall reimburse the City for the costs of flushing, cleaning, repairing and/or reconstructing such portion of such system within 30 days after the City Engineer renders an invoice for the same. The amount, when paid, shall be deposited into the sewer maintenance fee account within the Sewer Fund. (Ord. 99-791 Exh. A (part); prior code § 6-6.309)

9.20.120 Dedication of sewers to public.

A. Before plans for the construction of any public main line sewer are approved by the City Engineer, the person causing such plans to be prepared shall provide the

following information, using forms provided by the City:
1. An offer of dedication signed and acknowledged by all persons sharing the cost of such sewer; and
2. A letter of participation describing the property of the persons who participated in such cost.
B. When the construction of the sewer has been completed and accepted by the City Council, the sewer shall become part of the City sewer system. No sewer shall be accepted for dedication by the City unless such sewer has been constructed in conformity with the requirements of this chapter and the document known as "Specifications for the Design and Construction of Public Works Facilities for the City of Montclair." (Ord. 99-791 Exh. A (part); prior code § 6-6.310)

Article III. Inspection of System Construction and Maintenance of System

9.20.130 Construction inspections.

The Director of Public Works may inspect, as often as he/she deems necessary, every main line sewer, building lateral, building sewer, wastewater pretreatment system, interceptor, and other appurtenances to the City sewer system to ascertain whether such facilities under construction are being installed in accordance with the provisions of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.401)

9.20.140 Inspections--Notice of readiness.

Immediately after work is ready for inspection and at least 24 hours before an inspection is to be made, the permittee shall request such inspection by the City Engineer. (Ord. 99-791 Exh. A (part); prior code § 6-6.402)

9.20.150 Inspections--Convenience of work to be inspected.

At the time of the inspection, the permittee shall have all work uncovered and convenient, giving the City Engineer the opportunity to make a thorough examination. The permittee shall apply air pressure tests as required by the document entitled "Standard Specifications for Public Works Construction." (Ord. 99-791 Exh. A (part); prior code § 6-6.403)

9.20.160 Inspections--Prior removal of obstructions.

If any pipes are enclosed or covered in any way which obstructs a thorough inspection of the sewer construction or installation and the City Engineer notifies the permittee to remove such obstruction(s), the City Engineer need not inspect the work until such obstruction(s) are removed. (Ord. 99-791 Exh. A (part); prior code § 6-6.404)

9.20.170 Inspections--Tests, labor and equipment.

The permittee shall furnish all labor, tools and materials necessary for all tests, and the permittee or his/her representative shall be present at the job site at the time the inspection is made. (Ord. 99-791 Exh. A (part); prior code § 6-6.405)

9.20.180 Inspections--Prior connection of facilities.

In the event a building lateral, building sewer, interceptor, pretreatment system, or other appurtenance to the City sewer system is placed in use and fails to pass inspection, the permittee shall have a period of time as determined by the City Engineer in which to make the construction conform to the requirements of this chapter. Failure to do so shall constitute a violation of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.406)

9.20.190 Correction of defects.

If the City Engineer notifies a permittee that any work is defective, either in its construction or material, the permittee shall reconstruct or remove such work, causing conformance to the provisions of this chapter within a period of time as determined by the City Engineer. (Ord. 99-791 Exh. A (part); prior code § 6-6.407)

9.20.200 Maintenance of building sewers, building laterals, wastewater pretreatment systems, gravity-separation interceptors, and related appurtenances.

Building sewers, building laterals, wastewater pretreatment systems, gravity-separation interceptors, and related appurtenances shall be maintained by the owners thereof in a safe and sanitary condition; all devices or safeguards which are required by the provisions of this chapter for the operation of such facilities shall be maintained in good working order. The provisions of this chapter shall not be construed as permitting the removal or nonmaintenance of any devices or safeguards on existing facilities unless authorized in writing by the Director of Public Works. (Ord. 99-791 Exh. A (part); prior code § 6-6.408)

Article IV. Connections to Sewer System

9.20.210 Connecting cesspools and septic tanks.

No person shall connect, or cause to be connected, any cesspool seepage pit or septic tank to any main line sewer or to any building lateral or building sewer leading thereto. (Ord. 99-791 Exh. A (part); prior code § 6-6.501)

9.20.220 Connecting sewers on private property.

No person shall connect, or cause to be connected, any sewer on private property unless:

A. Such sewer has been laid under the supervision of, and to the satisfaction of, the City Engineer; and

B. If dedication of such private property is required, such private property has been dedicated, and the City Council has accepted such dedication. (Ord. 99-791 Exh. A (part); prior code § 6-6.502)

Article V. Sewer Construction Permits

9.20.230 Construction permit required.

No person shall commence, do, construct, use or alter, or cause to be commenced, done, constructed, used or altered, any public sewer, main line sewer, building lateral, building sewer, or other appurtenance to the City sewer system without first obtaining a construction permit from the City to do so. All such work performed pursuant to such permit shall be constructed by a licensed contractor. (Ord. 99-791 Exh. A (part); prior code § 6-6.601)

9.20.240 Permits not transferable.

Permits issued pursuant to the provisions of this article shall not be transferable from one person to another person or from one location to another location. (Ord. 99-791 Exh. A (part); prior code § 6-6.602)

Article VI. Sewer-Related Fees

9.20.250 Construction permit fees.

Before granting any permit for the construction of a main line sewer, building lateral, building sewer, or any industrial waste pretreatment or disposal system, the City shall collect from the applicant a construction permit fee. The formula for the development of this fee shall be established by resolution of the City Council and shall be based on the estimated construction cost of the project. (Ord. 99-791 Exh. A (part); prior code § 6-6.701)

9.20.260 Sewer-connection fees.

A. The City Engineer may issue a permit to make a sewer connection to the main line sewer in any area annexed to the City having frontage parallel to such main line sewer that was constructed by Montclair Assessment District No. 2 or constructed by the City after the formation of Montclair Assessment District No. 2. A map of Montclair Assessment District No. 2 boundaries is attached as Exhibit A to this chapter.

B. The City Engineer may issue a permit to make a sewer connection to the main line sewer in any unincorporated area having frontage parallel to a City main line sewer when the property owner desiring such sewer connection has an executed and approved irrevocable annexation agreement with the City.

C. Payment of the sewer connection fee shall be made at the time of application for a building permit to construct a building sewer. The fee for a sewer connection permit as described in this section shall be calculated as follows:

1. Main line connection fee in annexed areas:
a. Two Hundred Fifty (250) Dollars in an R-1 zone,
b. Two Hundred Ninety (290) Dollars in an R-2 zone,
c. Three Hundred Thirty (330) Dollars in an R-3 zone,
d. Three Hundred Seventy (370) Dollars in an AP, C or M zone per acre of the lot or parcel sought to be connected; and
2. Main Line Construction Fee. In addition to the main line connection fee, the applicant shall pay a proportionate share of the entire cost of the construction of the main line sewer. Such cost shall be calculated as follows:

MLCF = Main line construction fee
PF = Property frontage (linear frontage measurement of subject property)
PFC = Per foot cost
TMLCC = Total main line construction cost
TPF = Total of property frontages (linear frontage measurement of all properties along the subject main line)

$$\frac{\text{TMLCC}}{\text{TPF}} = \text{PFC}$$

$$\text{PFC} \times \text{PF} = \text{MLCF}$$

The total property frontage paralleling the construction of the main line sewer will be divided into the total cost of the main line constructed to establish a per-foot cost. The per-foot cost will then be multiplied by the property frontage to establish the fee.
If the shape of the lot or parcel is other than the usual rectangular shape or is unusual in area, and strict adherence to the formula would require the payment of an amount not commensurate with the benefits to be received, the amount to be charged may be modified as determined by the City Engineer. (Ord. 99-791 Exh. A (part); prior code § 6-6.702)

9.20.270 Plan-checking fees.

Persons desiring plan checking as required by the provisions of this chapter shall pay to the City an advance plan-checking fee that will be determined by the City Engineer at the time that plans are submitted for review. Plan-checking fees will be determined by the actual total cost incurred by the City Engineer's office to review and/or approve such plans. The advance plan-checking fees shall be applied to the actual total plan-checking cost to determine if additional fees will be required. If the advance plan-checking fees are in excess of the actual cost, the remaining advance plan-checking fees shall be refunded to the payer. (Ord. 99-791 Exh. A (part); prior code § 6-6.703)

9.20.280 Regional capital outlay fees-- Residential.

Residential regional capital outlay fees are as set forth in Section 9.20.430. (Ord. 99-791 Exh. A (part); prior code § 6-6.704)

9.20.290 Regional capital outlay fees-- Commercial.

Commercial regional capital outlay fees are as set forth in Section 9.20.440. (Ord. 99-791 Exh. A (part); prior code § 6-6.705)

9.20.300 Regional capital outlay fees-- Industrial.

Industrial regional capital outlay fees are as set forth in Section 9.20.450. (Ord. 99-791 Exh. A (part); prior code § 6-6.706)

9.20.310 Sewer-maintenance fees.

Sewer-maintenance fees are determined as set forth in Section 9.20.360. (Ord. 99-791 Exh. A (part); prior code § 6-6.707)

9.20.320 Future assessments.

In the event a lot or parcel specifically described in a sewer connection application receives additional benefit from any public sewer, nothing contained in this chapter shall relieve the property owner from future payment of connection fees as provided in this article; nor shall the property owner be relieved from the levy of a special assessment statute of the State for such additional benefit. (Ord. 99-791 Exh. A (part); prior code § 6-6.708)

9.20.330 Fees--Records.

A permanent and accurate accounting of all fees received pursuant to the provisions of this chapter shall be kept. Such accounting shall include the names and addresses of the persons on whose accounts the same were paid, the date and amount thereof, and the number of permits granted, if any. (Ord. 99-791 Exh. A (part); prior code § 6-6.709)

9.20.340 Fees--Refunds.

In the event any person shall have paid a plan-checking fee, sewer-connection fee, or a fee for the processing of reimbursement documents and no such work has been completed, such person, upon presentation to the City Engineer of a request therefor in writing, shall be entitled to a refund in an amount equal to the fee actually paid, minus any costs incurred by the City relative to such application. The Director of Public Works shall determine the validity of such request and the amount of such refund. Such refund shall be paid as provided by law for the payment of claims against the City. (Ord. 99-791 Exh. A (part); prior code § 6-6.710)

9.20.350 Fee adjustments.

Fee adjustments are determined as set forth in Section 9.20.470. (Ord. 99-791 Exh. A (part); prior code § 6-6.711)

Article VII. Sewer-Maintenance Fees

9.20.360 Bimonthly sewer-maintenance fee formula.

An occupant, owner or tenant whose premises is served by a connection to the City sewer system, whereby the domestic wastewater or nondomestic wastewater, or either or both, are disposed of by the City through the facilities of the regional treatment and disposal works owned by the Inland Empire Utilities Agency, or otherwise, shall pay a sewer-maintenance fee based on the number of service units for the various property classifications as determined by the following formula:
A. A sewer unit factor is developed by the following formula:

$$SU = \frac{F}{270}\left(0.37 + \frac{(0.31)(BOD)}{230} + \frac{(0.32)(SS)}{220}\right)$$

SU = Sewer units in gallons
F = Sewage flow in gallons per day based on sewage factor applied to water meter readings
BOD = Users discharge--biochemical oxygen demand (mg/l)
SS = Users discharge--suspended solids concentration (mg/l)

B. Conversion from gallons per day (GPD) to hundreds of cubic feet (HCF):
1. Residential Sewer Fees. The residential sewer rate is based on 270 GPD, regardless of actual water consumption; therefore, it is not necessary to make the calculation from GPD to HCF for residential rates.
2. Commercial and Industrial Sewer Fees. Commercial and industrial sewer fees are based on actual water consumption. The SU formula is based on GPD of sewer discharge, and meter readings are based on HCF of water consumption. One HCF is equivalent to 748 gallons of water. In order to establish a sewer billing formula based on metered consumption, a conversion from GPD to HCF has to be made. The following is how this conversion is accomplished:

270 GPD x 365 days ÷ 6 billing periods ÷
748 = 21.96
(Sewer bills are generated bimonthly, resulting in six billing periods per year.)
21.96 represents the equivalent daily discharge (EDD) over a two-month period as measured in HCF.

Equivalent Dwelling Unit (EDU) Calculation. The next step in the rate-development process is to determine the number of EDU's by using the SU formula, substituting 270 GPD with the equivalent daily discharge factor, and then multiplying the result by the bimonthly water consumption (BWC) as follows:

$$EDU = \frac{F}{21.96}\left(0.37 + \frac{(0.31)(BOD)}{230} + \frac{(0.32)(SS)}{220}\right) \times BWC$$

F* = Sewage flow in gallons per day based on sewage factor applied to water meter readings
BOD = Users discharge--biochemical oxygen demand (mg/l)
SS = Users discharge--suspended solids concentration (mg/l)
BWC = Bimonthly water consumption
* Add landscape factor to (F) if applicable. If an account has combined domestic and landscape usage in the HCF-metered water consumption reading, then the HCF reading shall be multiplied by 0.55 prior to the EDUs being calculated in the formula. Fifty-five (55) percent represents the amount of consumption that is contributable to the domestic consumption. If an account has a special circumstance and can show that the landscape usage is different than the norm established in this section, that account can be so adjusted, provided the billing agency documents the change in the landscape factor and can provide that information to the auditor if required.

Sewer EDU Determinations for Commercial Categories

		BOD/SS	Flow (F) as Percent of Sewer Water Use	Bimontly Rate Factor
1.	**Residential Property**			
	a. Single-family	230/220	270	1.00
	b. Mobile home	230/220	270	1.00
	Multiple-family (3 or more dwelling units)			
		230/220	270	1.00
2.	**Commercial/Industrial Property**			
a.	Office, day care center,			
	market without grinder,			
	public facility without			
	dining, bar/tavern without			
	food, retail/service,			
	recreation/amusement			
	without dining	230/220	80	.0364
b.	Mortuary	250/350	95	.0526
c.	Hotel with dining, motel			
	with dining, bar/tavern			
	with dining, recreation/			

	amusement with dining,			
	public facility with			
	dining, hospital-full			
	service, convalescent			
	facility	300/400	85	.0525
d.	Laundromat, car wash	100/150	95	.0313
e.	Laundry--commercial			
	industrial, dry cleaner	350/500	85	.0607
f.	Motel without dining,			
	health spa, church/			
	worship	300/100	80	.0335
g.	Outpatient facility,			
	medical/dental			
	office	225/100	90	.0336
h.	Restaurant, full			
	service; restaurant,			
	fast food; market with			
	grinder, bakery	400/300	85	.0521
i.	Schools:			
	Public/private, K-12	230/220	5 GPD/s	.0370
		x # students		
	College	10 GPD/s	.0740	
		x # students		

GPD/s = gallons per day per student

The sewer-maintenance fee for schools is based on the number of students as reported by the schools in October of each year.

D. The final step in development of the sewer bill is to multiply the EDUs by the EDU billing rate as established in Section 9.20.460. (Ord. 99-791 Exh. A (part); prior code § 6-6.801)

9.20.370 Sewer fees applicable where sewers are available.

The fees fixed by the provisions of this chapter shall be applicable only to premises to which a main line sewer is available. (Ord. 99-791 Exh. A (part); prior code § 6-6.802)

9.20.380 Sewer maintenance fees where water services have been discontinued.

When water services have been discontinued, no sewer-maintenance fee shall be levied on such premises during the period of such discontinuance. (Ord. 99-791 Exh. A (part); prior code § 6-6.803)

9.20.390 Sewer-maintenance fee.

The sewer-maintenance fee, as authorized in Section 9.20.360, shall be composed of three parts, to-wit:
Part 1 - Sewage Treatment - That fee charged by the Inland Empire Utilities Agency for sewage treatment
Part 2 - Sewer Maintenance - That fee necessary to maintain the City sewer system including all sewer mainline, manholes, and cleanouts
Part 3 - Sewer Rehabilitation/Replacement - That fee necessary to develop a fund to construct, repair, replace, and/or rehabilitate the City Sewer System
The following maximum rates per month per equivalent dwelling unit (EDU) for the use of sewer services is established for structures discharging domestic or nondomestic waste into the City sewer system as follows:

Effective Date	Part 1	Part 2	Part 3	Total
July 1, 2007	$ 9.19	$3.10	$1.00	$13.29
July 1, 2008	10.00	3.26	1.50	14.76
July 1, 2009	10.75	3.42	1.50	15.67
July 1, 2010	11.50	3.59	1.50	16.59
July 1, 2011	12.25	3.77	1.50	17.52
July 1, 2012	13.00	3.96	1.50	18.46
July 1, 2013	13.75	4.16	1.50	19.41
July 1, 2014	14.50	4.37	1.50	20.37
July 1, 2015	15.25	4.59	1.50	21.34
July 1, 2016	16.00	4.82	1.50	22.32

Any revision of these fees shall be made in accordance with State statute and other applicable laws. (Ord. 07-890 § 1: Ord. 99-791 Exh. A (part); prior code § 6-6.804)

9.20.400 Sewer-standby assessment.

The rate for the sewer-standby assessment is established at Two Dollars and Thirty-Five Cents ($2.35) for structures or vacant lot units having access, but not being connected, to the City sewer system. Any revision of this assessment shall be made upon satisfaction of any conditions imposed by state statute or other applicable laws. (Ord. 99-791 Exh. A (part); prior code § 6-6.805)

9.20.410 Collection of sewer-maintenance fees and sewer-standby assessments.

The City Council may contract with Monte Vista Water District, or such other agency as designated by the City Council, the duty of collecting the sewer-maintenance fee or sewer-standby assessment on developed properties as provided for in this chapter. The City will collect the sewer-standby assessment on vacant land to which sewer service is made available as part of the property owner's

annual San Bernardino County tax bill. (Ord. 99-791 Exh. A (part); prior code § 6-6.806)

9.20.420 Deposit of sewer-maintenance fees and sewer-standby assessments.

All moneys received from the collection of sewer maintenance fees and sewer-standby assessments as established by this chapter shall be deposited in the sewer fund. The money in such fund shall be used as permitted by Section 5471 of the California Health and Safety Code. (Ord. 99-791 Exh. A (part); prior code § 6-6.807)

Article VIII. Regional Requirements

9.20.430 Regional capital outlay fees-- Residential.

Every person constructing a new residential structure in the City who connects to the City sewer system shall pay to the City a regional capital outlay fee for each residential unit pursuant to Section 9.20.460 of this chapter. This fee is not required for a residential unit built as a replacement for a similar unit which had been connected to the City sewer system. A residential unit is defined as each unit designated for the purpose of providing permanent housing for one family or tenant. This includes, but is not limited to, a single-family detached residence, apartment, townhouse, condominium, mobile home, or trailer space. Each unit shall constitute one equivalent dwelling unit (EDU). (Ord. 99-791 Exh. A (part); prior code § 6-6.901)

9.20.440 Regional capital outlay fees-- Commercial.

Every person constructing a new structure in the City for the purpose of providing permanent housing for enterprises engaged in the exchange of goods and services, who connects to the City sewer system, shall pay to the City a regional capital outlay fee. Commercial industrial units shall include, but are not limited to, all private business and service establishments, schools, churches, and public entities. This fee shall be paid pursuant to Section 9.20.460 of this chapter. The EDU number shall be determined by multiplying the fixture units (as defined by the Uniform Plumbing Code) shown on the approved building plans by the appropriate sewage factor from the following category use:

		Sewer Flow		
		Gallon/Fixture		Sewage
Category	Use	Unit	BOD/SS	Factor
I	Motel/hotel	12	230/220	0.0444
	Recreation/amusement			
	Restaurant (fast food)			
	Office			

	Retail store			
	Market (without butcher shop)			
	Bar/tavern			
II	Market (with butcher shop)	24	250/350	0.1081
	Bakery			
	Mortuary			
III	Convalescent home	42	250/300	0.1780
	Hospital			
	Health spa with pool			
	Restaurant (full service)			
IV	Laundromat	43	350/500	0.2499
	Laundry			
	Dry cleaner (processor)			
V	Car wash (Coin Operated)	102	150/500	0.4910
VI	Church	17	230/220	0.0630
	School			
	Public facility			
VII	Health spa without pool Laundromat (See Note A)	42	230/220	0.1555

A. For commercial Laundromats. if high-efficiency front-load washers from approved Metropolitan Water District of Southern California (MWD) washer list are used. the number of fixture units per machine is established at 2 fixture units.

Commercial centers with various use categories will be the sum of EDUs computed for each use. The sewage factor is derived from the formula:

$$SF = K\left[.37 + .31\frac{BOD}{230} + .32\frac{SS}{220}\right]$$

When: SF = Sewage Factor
K = Gallons per fixture unit divided by the average domestic household flow of 270 gallons
BOD = Biochemical Oxygen Demand (mg/l)
SS = Suspended Solids (mg/l)

Computation of Equivalent Dwelling

Unit (EDU)

EDU = (WF)(AFU)
SF=Sewage Factor
AFU = Number of Actual Fixture Units

(Ord. 99-791 Exh. A (part); prior code § 6-6.902)

9.20.450 Regional capital outlay fees--Industrial.

A. Every person constructing a new structure in the City for the purpose of providing permanent housing for an enterprise engaged in the production, manufacturing or processing of material who connects to the City sewer system shall pay to the City a regional capital outlay fee. The EDU's for industrial users shall be determined as follows:
1. For domestic wastewater, the EDU number is computed by multiplying the fixture units (as defined by the Uniform Plumbing Code) as shown on the approved building plans by a wastewater factor of 0.0741, based on 20 gallons per fixture-unit flow per day.
2. For nondomestic wastewater, the EDU number is computed from information contained on the industrial user discharge permit application using the following formula:

$$EDU = \frac{\text{Estimated non - domestic flow}}{270}\left[.37 + .31\frac{BOD}{230} + .32\frac{SS}{220}\right]$$

3. The total EDU number equals the combined resultant of the EDU numbers derived from subsections (A)(1) and (2) of this section.
B. For any newly constructed commercial unit or industrial unit connected to the City sewer system with an estimated wastewater flow exceeding 15,000 gallons per day, the amount of the EDU number shall be determined by the Regional Technical Committee and approved by the Inland Empire Utilities Agency. (Ord. 99-791 Exh. A (part); prior code § 6-6.903)

9.20.460 Equivalent dwelling unit value.

The Regional Sewage Supplemental Capital Outlay Fee for residential, commercial, and industrial structures shall be the equivalent dwelling unit (EDU) number multiplied by the EDU value of Four Thousand Four Hundred Fifty (4,450) Dollars as established by the Inland Empire Utilities Agency effective July 1, 2007; and Four Thousand Six Hundred Seventy-Three (4,673) Dollars as established by the Inland Empire Utilities Agency effective July 1, 2008. The EDU value is based on construction costs and takes into consideration the current Engineering News-Record Construction Cost Index for the Los Angeles area. (Ord. 07-892 § 1: Ord. 06-884 § 1: Ord. 05-863 § 1: Ord. 04-847 § 1: Ord. 03-831 § 1: Ord. 02-818 § 1: Ord. 01-813 § 1: Ord. 00-804 § 1: Ord. 99-792 § 1: Ord. 99-791 Exh. A (part); prior code § 6-6.904)

9.20.470 Fee adjustments.

An owner of any project subject to a fee described in this chapter may apply to the City Engineer for a reduction of or adjustment to the fee, or a waiver of that fee, based upon the absence of any reasonable relationship or nexus between the amount of the fee charged and either the wastewater impacts of that development or the type of sewer facilities to be built, improved or expanded. The application shall state, in detail, the factual basis for the claim of the reduction, adjustment or waiver. If a reduction, adjustment or waiver is granted, any change in use within the project shall invalidate the reduction, adjustment or waiver of this fee and authorize the City to impose and collect the applicable fee. (Ord. 99-791 Exh. A (part); prior code § 6-6.905)

Article IX. Sewer Reimbursement Districts

9.20.480 Reimbursement agreement defined.

As used in this chapter, "reimbursement agreement" means a contract entered into between the City and any other entity providing for the construction of sewer facilities by said entity and for the collection by the City of a fee or charge for the connection with such sewer facilities by any other party. Reimbursement to said entity shall be made from the proceeds of such collections. (Ord. 99-791 Exh. A (part); prior code § 6-6.1001)

9.20.490 Reimbursement agreement prerequisites.

Whenever an entity, as referred to in Section 9.20.480 of this chapter, has been required by the City to install main line sewer facilities as a condition precedent to the issuance of a building permit, or as a condition precedent to the approval of a tentative or final subdivision map, or for any other reason the City Council deems to be in the public interest, and said entity agrees to construct such facilities at its sole expense in accordance with the requirements of the City, and it is found by the City Council that such facilities will be for the benefit of, or usable by, other properties in the City adjacent to such sewer, the City Council may, by resolution, approve a reimbursement agreement with said entity whereby the City shall collect from any other person using or connecting with such facilities a charge for making such connection. No such agreement may be entered into unless the sewer facilities are designed and constructed pursuant to all City design standards and requirements, and said entity also agrees thereby to dedicate such sewer facilities to the City for public use. (Ord. 99-791 Exh. A (part); prior code § 6-6.1002)

9.20.500 Reimbursement district-- Establishment.

Upon the execution of a reimbursement agreement, there shall be established a reimbursement district consisting of those properties the City Council finds will be benefited by such facilities. (Ord. 99-791 Exh. A (part); prior code § 6-6.1003)

9.20.510 Connection charges required.

Charges shall be made only to those persons desiring to connect to such sewer facilities with property lying in whole or in part within such reimbursement district. A map of the district and a schedule of the charges necessary to make connection to such sewer facilities shall be maintained by the City.
After the execution of a reimbursement agreement, no other person shall connect to the sewer facilities indicated thereon without payment of the charges provided for in Section 9.20.550 of this chapter. No building or construction permit shall be issued until the City Treasurer has certified that the payment, as required by the reimbursement agreement, has been made; however, no reimbursement shall be forwarded until the entity who originally paid for said installation has fully complied with all the terms and conditions in the reimbursement agreement. (Ord. 99-791 Exh. A (part); prior code § 6-6.1004)

9.20.520 Accounting of payments received.

There is created a sewer reimbursement liability account within the General Fund, and all charges made and received in accordance with reimbursement agreements entered into pursuant to this article shall be deposited in such account. Payments to the entity as provided in the reimbursement agreement shall be transferred semiannually to the entity, together with a description of the properties for which the payments have been made. These payments are subject to an administrative fee as provided in the reimbursement agreement. Any amounts remaining in such account after all disbursements have been made to the entity shall be transferred annually to the Sewer Fund. (Ord. 99-791 Exh. A (part); prior code § 6-6.1005)

9.20.530 Limitation of disbursements.

No disbursements of funds collected as provided in the reimbursement agreement shall be made to the entity after 10 years from the dedication of such facilities to the City for public use. (Ord. 99-791 Exh. A (part); prior code § 6-6.1006)

9.20.540 Agreement not required.

Nothing in this article shall be construed as requiring the City to enter into any such reimbursement agreement even though it may have required the installation of off-site facilities, nor shall the City be liable for any reimbursement of the cost of such facilities except from the proceeds of such charges actually collected by the City. (Ord. 99-791 Exh. A (part); prior code § 6-6.1007)

9.20.550 Sewer connections in reimbursement districts--Fees.

Any person who elects to connect to a sewer in a reimbursement district shall make a written application to the City Engineer.
If the City Engineer finds that the property described in such application for a sewer connection is located within a reimbursement district as defined in Section

9.20.500 of this chapter, and for which the City has reimbursed, or has agreed to reimburse, such entity who originally paid for the sewer improvements, the City Engineer shall determine the appropriate connection charge, as scheduled pursuant to Section 9.20.510 of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.1008)

9.20.560 Reimbursement district document fee.

For each entity requesting a reimbursement agreement with the City that will involve the processing of reimbursement documents and maps, the applicant shall pay, in addition to the plan-checking fee pursuant to Section 9.20.270, a reimbursement district document fee as established by City Council resolution. (Ord. 99-791 Exh. A (part); prior code § 6-6.1009)

9.20.570 Collection and refund of costs.

A. The City shall endeavor to collect such costs as called for in Section 9.20.550 and cause the sum so collected to be refunded as provided in subsection B of this section, but the City shall not be liable for any failure to make such collection or refund. Such obligation to collect such cost shall terminate 10 years from the date of such contract.

B. All sums so paid by any property owner shall be refunded to the entity, who shall have contributed toward the construction of such sewer facilities and who entered into a reimbursement agreement with the City, in proportion that the amount contributed bears to the entire amount contributed, less that portion distributed against the property of the entity who entered into such reimbursement agreement.

C. It shall be the obligation of the entity to inquire of the City whether any amounts have been paid to the City by a property owner who did not contribute toward the cost of the construction of the sewer facilities. If any such money remains on deposit with the City without being claimed by the party rightfully entitled to it within one year after it is deposited, such money shall be forfeited to the City and transferred to the General Fund of the City.

D. The City may contribute toward the construction of any such sewer facilities; and if it does so, it shall be entitled to a refund under the same provisions and method set forth in this section. (Ord. 99-791 Exh. A (part); prior code § 6-6.1010)

Article X. Sewer Discharge Regulations

9.20.580 General discharge prohibitions.

A. No user shall contribute, or cause to be contributed to the City sewer system, directly or indirectly, any pollutant or wastewater which will pass through or

interfere with the system or the regional treatment plant. These specific prohibitions apply to all users of the City sewer system whether or not the user is subject to National Categorical Pretreatment Standards or any other national, State or local pretreatment standards or requirements.

B. A user shall not contribute the following substances to the City sewer system:

1. Any liquids, solids or gases, or pollutants such as gasoline, benzene, naphtha, solvents, and
fuel oils which, by reason of their nature or quantity, are or may be sufficient to cause fire or explosion or be injurious in any other way to the regional treatment plant, including, but not limited to, waste streams with a closed-cup flash point of less than 140 degrees Fahrenheit (60 degrees centigrade) using the test methods specified in 40 CFR Part 261.21;

2. Any waste which cannot be carried freely under normal flow conditions prevailing in the City sewer system. This prohibition shall apply to, but not be limited to, solid or viscous substances which may cause obstruction to the flow in a sewer, or other interference with the operation of the regional treatment plant, such as grease; garbage with particles greater than 1/2 inch in any dimension; animal guts or tissues; paunch manure, bones, hair, hides, fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, or diatomaceous earth; stone or marble dust; metal, glass, straw, grass clippings, mud, rags, spent grains, spent hops, waste paper, wood, plastics, gas, tar, or asphalt residue; residue from refining or processing of fuel or lubricating oil; or glass grinding or polishing wastes;

3. Any wastewater having a corrosive property capable of causing damage or hazard to structures, equipment, or personnel and in no case wastewater with a pH below 6.0 or greater than 10.0 or that which will change the pH of the City's discharge to the Inland Empire Utilities Agency's regional interceptor to below 7.0 or above 9.0;

4. Any wastewater containing toxic pollutants in sufficient quantity, either singly or by interaction with other pollutants, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a toxic effect in the receiving waters of the regional treatment plant, or exceed the limitation set forth in the National Categorical Pretreatment Standards. A toxic pollutant shall include, but not be limited to, any pollutant identified pursuant to Section 307(a) of the Act;

5. Any noxious or malodorous liquids, gases or solids which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or hazard to life, or are sufficient to prevent entry into the sewers for maintenance and repair;

6. Any substance which may cause the regional treatment plant's effluent or any other product of the regional treatment plant, such as residue, sludge or scum, to be unsuitable for reclamation and reuse or to interfere with the reclamation process. In no case shall a substance discharged to the City sewer system cause the regional treatment plant to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under Section 405 of the Act; any criteria, guidelines or regulations affecting sludge use or disposal developed pursuant to the Toxic Substances Control Act, the Resource Conservation and Recovery Act, or State criteria applicable to the sludge management method being used;

7. Any discharge of pollutant(s) which alone, or in combination with other discharges, will persist after treatment or will cause the regional treatment plant to violate its NPDES and/or State disposal system permit or the receiving water quality standards;
8. Any wastewater that discolors normal treatment plant influent such that it is detrimental to treatment plant operations or causes violation of the NPDES permit;
9. Any waste having a temperature of 140 degrees Fahrenheit or higher, or causes the wastewater influent to a treatment plant to exceed 104 degrees Fahrenheit;
10. Any slug load;
11. Any radioactive wastes, unless:
a. The user is authorized to use radioactive materials by the State Department of Health or other governmental agency empowered to regulate the use of radioactive materials, and
b. The waste is discharged in strict conformity with current California Radiation Control Regulations (California Code of Regulations, Title 17) for safe disposal, and
c. The user is in compliance with all other applicable laws and legal requirements;
12. Any wastewater which causes a hazard to human life or creates a public nuisance;
13. Any emulsifying agent which suspends or emulsifies any fat, grease or oil and is specifically used to prevent oil and grease buildup in any gravity separation device or interior plumbing;
14. Any unpolluted water, including cooling water, stormwater, subsurface water, and single-pass cooling water. The City Engineer may approve, on a temporary basis, the discharge of such water only when no reasonable alternative method of discharge is available. The user shall pay all applicable charges and fees;
15. Any discharge from any vehicle radiator, including, but not limited to, radiator fluid or radiator flush chemicals;
16. Any overflow from a septic tank, cesspool, chemical toilet, or any liquid or sludge pumped from trailers, buses, or similar vehicles having wastewater holding tanks, except at such place and in such manner as may be prescribed by the City Engineer;
17. Any waste transported from one location or facility to another for the purpose of treating and discharging it directly or indirectly into the City sewer system without written permission from the City Engineer;
18. Any amounts of petroleum oil, nonbiodegradable cutting oil, or products of mineral origin which form persistent water emulsions or that will cause interference, upset or pass-through;
19. Any discharge that results in toxic gases, vapors, or fumes within the City sewer system in a quantity that may cause acute worker health and safety problems;
20. Any waste containing excessive quantities or concentrations of benzene or other volatile organic compounds or any other waste constituent that alone or in combination with other materials adversely affects air quality;
21. Any waste containing toxic or poisonous solids, liquids or gases in such quantities that alone or in combination with other waste substances may create a

hazard for humans, animals, or local environment; interfere with wastewater treatment processes; cause a public nuisance; cause any hazardous condition in the City sewer system; or cause interference, upset or pass-through;
22. Any wastes which cause excessive incrustations or scale, precipitate on sewer walls, or have any corrosive or detrimental characteristics that may cause damage to the City sewer system or injury to service and maintenance personnel;
23. Any waste containing excessive quantities or concentrations of chlorides, fluorides, sulfates, borates, or any other materials that can cause a pass-through at a wastewater treatment plant and degrade water quality or limit reuse of the wastewater;
24. Any amount of a hazardous substance or toxic pollutant except as allowed in subsection (B)(11) of this section;
25. Any hazardous waste discharged to any portion of the City sewer system or treatment plants by truck, rail, or dedicated pipeline;
26. Any wastes with excessively high BOD, COD, or other oxygen-demanding substances;
27. Any waste containing excessive quantities or concentrations of ammonia;
28. Any excessive quantities of deionized water, steam, condensate, or distilled water;
29. Any wastes containing excessive quantities or concentrations of thiosulfate or any other waste constituent which requires chemical applications above levels used in the normal operation of the City sewer system;
30. Any recognizable portions of the human anatomy;
31. Any waste containing substances that may precipitate, solidify, gel, polymerize, or become viscous at temperatures between 40 degrees Fahrenheit and 100 degrees Fahrenheit;
32. Any quantity of chlorinated hydrocarbons, pesticides, or fertilizers which cause interference, upset or pass-through;
33. Any waste generated outside the City boundaries and discharged into the City sewer system, unless otherwise approved by the City Council;
34. Any wastes requiring an excessive quantity of chlorine or other chemical compound to be used for disinfection purposes;
35. Any waste containing detergents, surface-active agents, or other substances which may cause excessive foaming in the City sewer system;
36. Any discharge of trucked or hauled pollutants except at discharge points as may be designated by the City Engineer;
37. Any infectious waste unless prior written approval for such discharge is given by the City Engineer. (Ord. 99-791 Exh. A (part); prior code § 6-6.1101)

9.20.590 Affirmative defense.

A user shall have an affirmative defense in any action brought against it alleging a violation of this chapter when a user can demonstrate, according to 40 CFR Part 403.5(a)(2)(i, ii)(A, B) that:
A. User did not know or have reason to know that its discharge, alone or in conjunction with a discharge or discharges from other sources, would cause pass-through, upset or interference; and

B. A local limit designed to prevent pass-through, upset or interference was developed in accordance with 40 CFR Part 403.5(c) and the user was in compliance with each such local limit directly prior to and during the pass-through, upset or interference; or
C. A local limit designed to prevent pass-through and interference was not developed in accordance with 40 CFR Part 403.5(c) and the user's discharge directly prior to and during the pass-through, upset or interference did not change substantially in nature or constituents from the user's prior discharge activity when the regional treatment plant was regularly in compliance with the regional treatment plant's NPDES permit requirements, and in the case of interference, was regularly in compliance with applicable requirements for wastewater sludge use or disposal. (Ord. 99-791 Exh. A (part); prior code § 6-6.1102)

9.20.600 Pretreatment standards.

Users shall comply with all applicable federal regulations and pretreatment standards contained in 40 CFR Part 403-471 and all amendments thereto or any applicable, more stringent State wastewater discharge regulations and standards and including but not limited to the limits outlined in Section 9.20.610 of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.1103)

9.20.610 Local concentration limitations.

No person shall, except as specifically allowed by the Public Works Director, on a temporary basis or as provided in this article, discharge or cause to be discharged to the regional treatment plant any wastewater which contains pollutants in concentrations exceeding those shown as follows:

Pollutant	Local Pollutant Limitations Maximum Concentration (Mg/L)
Arsenic, total	0.15
Barium, total	8.04
BOD	300.00
Boron, total	0.70
Cadmium, total	0.02
Chloride	116.70
Chromium, total	0.99
Cobalt, total	1.74
Copper, total	0.11
Cyanide, total	0.27
Dissolved sulfides	0.05
Fluoride	2.36
Iron, total	1.62
Lead, total	0.12
Manganese, total	0.42

Mercury, total	0.02
MBAS (Methylene Blue	
Activated Substances)	22.41
Nickel, total	0.06
Oil and grease, total	100.00
pH	6 to 10 units
Selenium, total	0.10
Silver, total	0.71
Sodium, total	129.30
Sulfate	111.13
Total hardness (as $CaCO_3$)	243.00
Total dissolved solids	1000.00
Total suspended solids	300.00
Zinc, total	0.51

The Public Works Director may authorize the discharge of nondomestic wastewater with BOD and TSS concentrations greater than 300 milligrams per liter, subject to conditional waivers and/or payment of a surcharge fee to the City. Any surcharge fee assessed against the City by the district for discharge of City wastewater with surchargeable concentrations of BOD and TSS, pursuant to the regional sewer service contract, shall be allocated to the industrial users who discharge wastewater with BOD or TSS concentrations above 300 milligrams per liter on the basis of total pounds of BOD or TSS discharged over the district's surcharge period.
The Public Works Director may specify an electrical conductivity limit of 1540 micromhos per centimeter at 25 degrees centigrade in lieu of the TDS limit listed in this section if there is reason to believe that there may be significant interference with the analytical procedure to determine TDS. (Ord. 99-791 Exh. A (part); prior code § 6-6.1104)

9.20.620 Dilution prohibition.

In accordance with 40 CFR Part 403.6(d), no user shall increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitute for adequate pretreatment to achieve compliance with the limitations contained in the National Categorical Pretreatment Standards or in any other pollutant specific limitation developed by the City or State. (Ord. 99-791 Exh. A (part); prior code § 6-6.1105)

9.20.630 Accidental discharges.

Each industrial user shall provide spill containment and/or protection from accidental discharge of prohibited materials or other substances regulated by this chapter. Facilities to prevent accidental discharge of prohibited materials shall be

provided and maintained at the owner's or user's expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to the City for review and shall be approved by the City before construction of such facility. Industrial users may not discharge into the City sewer system until such accidental discharge procedures have been approved by the City. Review and approval of such plans and operating procedures shall not relieve the industrial user from the responsibility to modify the user's facility as necessary to meet the requirements of this chapter. In the case of an accidental discharge, slug load, or bypass of any pretreatment equipment, it is the responsibility of the user to immediately telephone and notify the City of the incident. The notification shall include location of discharge, type of waste, concentration and volume, and corrective actions.

A. Written Notice. Within five days following an accidental discharge, slug load, or bypass, the user shall submit to the City Engineer a detailed written report describing the cause of the discharge and the measures to be taken by the user to prevent similar occurrences. Such notification shall not relieve the user of any fines, civil penalties, or compliance with all applicable laws and legal requirements.

B. Notice to Employees. A notice shall be permanently posted on the user's bulletin board or other prominent place advising employees whom to call in the event of an accidental discharge, slug load, or bypass. Employers shall ensure that all employees who may cause such a discharge to occur are advised of the emergency notification procedure. (Ord. 99-791 Exh. A (part); prior code § 6-6.1106)

9.20.640 Limitations on point of discharge.

No person shall cause any discharge into a manhole or other opening in a sewer unless such discharge is approved by the City Engineer upon written application by the user and payment of the applicable charges and fees. (Ord. 99-791 Exh. A (part); prior code § 6-6.1107)

9.20.650 Limitations on disposal of spent industrial solutions and sludge.

Spent solutions, sludge, recovered pretreatment wastes and materials of quantity or quality to be in violation of or prohibited by this chapter or prohibited by any industrial user discharge permit issued pursuant to this chapter must be disposed of in a legal manner at a legally acceptable point of disposal as defined by the appropriate regulatory agency. All waste manifests shall be retained for a minimum of three years and be made available to the City upon request. (Ord. 99-791 Exh. A (part); prior code § 6-6.1108)

9.20.660 Bypass.

A. Bypassing is prohibited and the City may take enforcement action against a user unless:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe

property damage;
2. There were no feasible alternatives to the bypass, such as the use of auxiliary pretreatment systems, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment was not installed in the exercise of reasonable engineering judgment to prevent a bypass from occurring during normal periods of equipment downtime or preventive maintenance; and
3. The user submitted notice as required in Section 9.20.630 of this chapter entitled, "Accidental discharges."
B. If a user knows in advance of the need for a bypass, the user shall submit a notice of such bypass for approval by the City Engineer at least 10 days before the date of the bypass.
C. The City Engineer may approve an anticipated bypass, after considering its adverse effects, if the City Engineer determines that it will meet the conditions listed in Section 9.20.580 of this chapter entitled, "General discharge prohibitions."
D. A user shall verbally notify the City Engineer of an unanticipated bypass immediately after the user becomes aware of the bypass. The user shall submit a written report to the City Engineer within five days of the time the user becomes aware of the bypass. The written report shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times; and if the bypass has not been corrected, an estimate of the anticipated time the bypass is expected to continue and the steps planned to reduce, eliminate, and prevent reoccurrence of the bypass.
E. Notification provided pursuant to this section shall not relieve the user of any expense, loss, damage, or other liability which may be incurred as a result of damage or loss to the City or any other damage or loss to persons or property; nor shall such notification relieve the user of any charges and fees or other liability which may be imposed under this chapter or other applicable law or legal requirements. (Ord. 99-791 Exh. A (part); prior code § 6-6.1109)

Article XI. Compliance Monitoring

9.20.670 Inspection and entry.

A. The City shall be authorized to enter the premises of all users to determine compliance with all applicable requirements, inspect facilities and monitoring equipment, take photographs, and take samples of the wastes discharged to the City sewer system insofar as such inspection and sampling is reasonably related to enforcement and compliance with this chapter and the users' industrial user discharge permit conditions, requirements, and discharge limitations. Such inspection shall also include the right to inspect and copy records required to be maintained by the permittee under federal, State or local industrial user discharge permit requirements.
B. Inspection may include every facility that is directly or indirectly involved with the discharge of wastewater to the City sewer system as determined by the City.

Authorized personnel of the City shall be provided immediate access to all such facilities. No person shall interfere with, delay, resist, or refuse entrance to authorized City personnel attempting to inspect any facility involved directly or indirectly with the discharge of wastewater to the City sewer system.
C. City identification will be provided to all inspectors, monitoring personnel, and other authorized personnel; these persons will make themselves known when entering any user's property for inspection or sampling purposes.
D. Any permanent or temporary obstruction to the safe and easy access to any facility to be inspected shall promptly be removed by the user or property owner at the written or verbal request of the City Engineer and shall not be replaced.
E. When a user has security measures in force which require proper identification and clearance before entry into its premises, the user shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, City employees shall be permitted to enter without delay for the purposes of performing specific tasks.
F. Unreasonable delays in allowing the City Engineer access to the user's premises shall be a violation of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.1201)

9.20.680 Search warrants.

The City may seek issuance of a search or inspection warrant from a court of competent jurisdiction if:
A. The City has been refused access to a building, structure or property, or any part thereof, and is able to demonstrate probable cause to believe that there may be a violation of this chapter; or
B. There is a need to conduct an inspection and/or take a sample as part of a routine inspection and sampling program of the City designed to verify compliance with this chapter or any permit or order issued hereunder; or
C. To protect the overall public health, safety and welfare of the community. (Ord. 99-791 Exh. A (part); prior code § 6-6.1202)

Article XII. Special Restrictions

9.20.690 Gravity separation interceptor.

A. Food Service Establishments. Any person who operates, owns or maintains a food service establishment shall cause all floor drains, floor sinks, sinks, waste container wash racks, dishwashers, and garbage grinders to be directed through a minimum 750-gallon gravity separation interceptor and shall keep all domestic wastewater from rest rooms, showers, drinking fountains, and condensate (i.e., ice melt or air conditioning) separate from the food service wastewater until the food service wastewater has passed through all necessary pretreatment equipment, devices, or monitoring stations.
B. Vehicle Servicing Facilities. Any facility maintained for the servicing or repair of vehicles, construction equipment, industrial transportation, or power equipment shall install and maintain adequate sand and oil interceptors. All wastewater arising

from the servicing and repair of vehicles shall pass through this interceptor before being discharged into the City sewer system. If the vehicle servicing facility does not include facilities for the washing of more than one vehicle at a time, the interceptor shall have an operation fluid capacity of at least 750 gallons. If the vehicle servicing facility has the capacity for washing or cleaning more than one vehicle at a time, the size of the interceptor shall be determined on a case-by-case basis.

C. Conditional Waivers. Conditional waivers for the grease and/or sand and oil interceptor requirement may be granted by the City Engineer for food service establishments or vehicle service facilities if it is determined that such waiver would not have an adverse effect on the City sewer system or the Inland Empire Utilities Agency's regional treatment plant. Conditional waivers may be revoked for the following reasons:

1. Changes in menu;
2. Falsification of information submitted;
3. Change in operation hours;
4. Changes in equipment used;
5. Changes in number of vehicles washed; or
6. Such waiver causes adverse effects on the City sewer system or the Inland Empire Utilities Agency's regional treatment plant.

D. Interceptor Requirements.

1. All interceptor chambers shall be immediately accessible at all times for the purpose of inspection and cleaning. At no time shall any material, debris, obstacle or obstruction be placed in such a manner as to prevent immediate access to the interceptor.
2. Any interceptor legally and properly installed before December 7, 1973, shall be acceptable as an alternative to the interceptor specified in this section, provided such interceptor is effective in removing floatable and settleable material and is so designed and installed that it can be inspected and properly maintained.
3. If the City Engineer finds that an interceptor is incapable of adequately retaining the floatable and settleable material in the wastewater flow, is structurally incomplete, or is undersized for the facility, he/she shall condemn such interceptor and declare that it does not meet the requirements of this chapter and shall require the user to install, at the user's expense, an acceptable interceptor.

E. Interceptor Designs. Wastewater from domestic usage shall be routed so that it shall not be allowed to pass through the interceptor. The interceptor shall be designed to retain any oil and grease which will float and any sand which will settle. It shall be watertight, structurally sound and durable, and easily accessible for cleaning. The City Engineer shall have the right to periodically inspect the interceptor for proper operation.

F. Interceptor Maintenance. The interceptor shall be properly maintained. It shall be cleaned as often as is necessary to ensure that settleable and floatable materials do not accumulate to impair the efficiency of the interceptor. When an interceptor is cleaned, the accumulated sediment and floating material shall be removed by trucking to a legally designated disposal site. All locations required to use and maintain a grease trap or interceptor shall keep maintenance and pumping records.

These records shall include the date, the name of the waste hauler, and the disposal site of the waste. An interceptor is not considered to be properly maintained if accumulations of sediments and floating material total more than 25 percent of the operating fluid capacity. The owner of any vehicle servicing facility, the lessee and sublessee, if there is such, and any proprietor, operator or superintendent of such facility are individually and severally liable for any failure of proper maintenance of such interceptor. (Ord. 99-791 Exh. A (part); prior code § 6-6.1301)

9.20.700 Residential water-softening appliances.

A. Certification Required. Prior to installation of a residential water-softening appliance, such equipment shall be certified as being in compliance with State standards. An affidavit of certification form as supplied by the Public Works Department must be submitted and approved prior to application for a plumbing permit for installation of said appliance. The affidavit of certification may be submitted by the person who is proposing to install such appliance, either the homeowner or a licensed contractor. The affidavit shall contain the following information:

1. Name and address of homeowner/contractor;
2. Manufacturer and model number of the water softening or conditioning appliance;
3. Pounds of salt used per regeneration;
4. Salt efficiency rating at the time of certification; and
5. Manufacturer, model number and number of any water-saving devices being installed.

B. Permit Required. Upon submittal and approval of the affidavit of certification, the person proposing to install the equipment shall obtain a plumbing permit prior to the installation of the subject residential water-softening appliance.

C. Installation. No residential water softening or conditioning appliance shall be installed except in either of the following circumstances:

1. The regeneration of the appliance is performed at a nonresidential facility separate from the location of the residence where the appliance is used; or
2. The regeneration of the appliance discharges to the waste disposal system of the residence where the appliance is used and both of the following conditions are satisfied:

a. The appliance is certified to control the quantity of salt used per regeneration by a preset device and the settings of the device are limited so that a salt efficiency rating of no less than 2850 grains of hardness removed per pound of salt used in regeneration is achieved with a clock control, manually initiated control, or demand control, and

b. The installation of the appliance is accompanied by the simultaneous installation of the following softened or conditioned water conservation devices on all fixtures using softened or conditioned water, unless the devices are already in place or are prohibited by State plumbing and building standards or unless the devices will adversely restrict the normal operation of the following fixtures:

i. Faucet flow restrictors,

ii. Shower head restrictors,

iii. Toilet reservoir dams,
iv. A piping system installed so that untreated (unsoftened or unconditioned) supply water is carried to hose bibs and sill cocks that serve water to the outside of the house, except that bypass valves may be installed on homes with slab foundations constructed prior to the date of installation, condominiums constructed prior to the date of installation, or otherwise where a piping system is physically inhibited.
D. Compliance. The provisions of this chapter shall not be construed to permit the alteration or nonmaintenance of any equipment installed pursuant to this article unless authorized in writing by the Public Works Director. (Ord. 99-791 Exh. A (part); prior code § 6-6.1302)

9.20.710 Hospital and medical waste.

A. Hospital and medical waste which is defined as "infectious waste" by the Hospital Council of Southern California may be disposed of in the City sewer system subject to the following limitations and requirements:
1. The material shall be ground by an approved grinder system capable of meeting the fineness of grind requirements of 1/2 inch in any dimension. Entry to the grinding mechanism shall be restricted to a 6-inch by 9-inch opening.
2. Pathologic specimens may not be disposed of into the City sewer system. Pursuant to the requirements of the Hospital Council of Southern California, pathologic specimens shall be segregated from other solid wastes and shall be contained in plastic bags or other suitable disposable containers which shall not exceed a capacity of 5 gallons and shall be colored red for identification. Container and contents shall be weighed and the weight recorded prior to disposal by means other than through the City sewer system. These records shall be retained for a minimum of three years and be made available to the City Engineer upon request.
B. Disposable hypodermic needles, syringes, and associated articles following their use in hospitals, outpatient clinics, medical and dental offices, etc., may be ground and discharged to the City sewer system subject to the following limitations and requirements:
Such material shall be ground by an approved grinder not exceeding 5 horsepower and shall meet the fineness of grind requirements of 1/2 inch in any dimension. Entry to the grinding mechanism shall be restricted to a 6-inch by 9-inch opening.
C. Traps are to be installed and maintained in all waste sinks and toilets. (Ord. 99-791 Exh. A (part); prior code § 6-6.1303)

Article XIII. Administration

9.20.720 Industrial user discharge permits--Application.

A. Any person proposing to discharge nondomestic wastewater into the City sewer system shall complete and submit an industrial user discharge permit application to the City Engineer. The application shall contain information regarding the type and amount of nondomestic wastewater being discharged or proposed for discharge, plans and specifications for any pretreatment facilities designed to prevent

discharge of materials to the City sewer system which exceed the allowable limitations set forth in this chapter, and any other pertinent information necessary to control discharge to the City sewer system. This application is considered an integral part of the industrial user discharge permit. Based on the information submitted on the industrial user discharge permit application and the City's investigation of the user's establishment, an industrial user discharge permit may be required. Users not required to obtain an industrial user discharge permit are still required to meet the City's discharge limitations.

B. Any industrial user discharge permit application submitted shall include, but not be limited to:

1. Name, address, mailing address, and location (if different from the mailing address);

2. Standard Industrial Classification (SIC) number;

3. Wastewater constituents and characteristics including, but not limited to, those mentioned in Article X of this chapter as determined by a State certified water laboratory; sampling and analysis shall be performed in accordance with procedures established by the EPA pursuant to Section 304(g) of the Act and contained in 40 CFR Part 136, as amended:

4. Time and duration of contribution;

5. Site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, sewer connections, and appurtenances by size, location, and elevation;

6. Description of activities, facilities, and plant processes on the premises, including all materials which are, or could be, discharged to the sewer;

7. If additional pretreatment and/or operation and maintenance will be required to meet the National Categorical Pretreatment Standards, a compliance time schedule (CTS) shall be submitted to the City Engineer. This CTS shall outline the shortest schedule by which the user will provide such additional pretreatment, the deadline for submittal of which shall be no later than the compliance date established for the applicable pretreatment standard as established in 40 CFR. The CTS is subject to the approval of the City Engineer. The following conditions shall apply to such compliance time schedules:

a. The CTS shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the user to meet the applicable pretreatment standards (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.),

b. No increment referred to in subsection (B)(7)(a) of this section shall exceed nine months. The total time in the CTS shall not exceed 18 months unless approved by the City Engineer,

c. Not later than 14 days following each date in the CTS and the final date for compliance, the user shall submit a progress report to the City Engineer including, as a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay, and the steps being taken by the user to return the construction to the established schedule. In no event shall more than nine months

elapse between such progress reports to the City Engineer,
d. Any industrial user regulated by National Categorical Pretreatment Standards and classified as a "new source" shall install and have in operating condition and shall start up all pollution-control equipment required to meet applicable pretreatment standards before beginning to discharge. Within the shortest feasible time, not to exceed 90 days, new sources must meet all applicable pretreatment standards;
8. Each product produced by type, amount, process or processes, and rate of production;
9. Type and amount of raw materials processed (average and maximum per day);
10. Number and type of employees, hours of operation, and proposed or actual hours of operation of pretreatment system;
11. A waste minimization plan to conserve water, investigate product substitution, provide inventory control, and determine other steps as necessary to minimize the total quantity of waste produced;
12. A valid business plan from the San Bernardino County Department of Environmental Health Services or letter exempting the user from such plan. If exempt, Material Safety Data Sheets (MSDS) for all materials on site shall be provided; and
13. Any other information as may be deemed by the City to be necessary to evaluate the permit application.
C. The City Engineer will evaluate the data furnished by the user and may require additional information. After evaluation and acceptance of this data, the City Engineer shall determine whether or not an industrial user discharge permit is required. If so required, the City Engineer shall issue an industrial user discharge permit to the applicant. (Ord. 99-791 Exh. A (part); prior code § 6-6.1401)

9.20.730 Industrial user discharge permits--Requirements.

A. All significant industrial users who discharge nondomestic wastewater into the City sewer system shall be required to have an industrial user discharge permit issued by the City.
B. The City may require nonsignificant industrial users to obtain industrial user discharge permits as necessary to carry out the purposes of this chapter. An initial or renewed industrial user discharge permit is valid for up to a five-year period from the date of issuance unless suspended or revoked.
C. Noncompliance with any term or condition of a user discharge permit shall constitute a violation of this chapter and shall subject the permittee to enforcement actions pursuant to this chapter. Obtaining an industrial user discharge permit does not relieve a permittee of his/her obligation to comply with all applicable laws and other legal requirements.
D. The City Engineer may issue a permit to discharge nondomestic wastewater to the City sewer system if:
1. The quality of the wastewater conforms to the requirements of this chapter;
2. All required pretreatment systems are approved by the City Engineer and it is demonstrated by the user that the systems can adequately achieve existing City point source limits or EPA categorical limitations, whichever are the more

stringent, as well as having the capability to handle or to be easily modified to handle future requirements;
3. A City approved monitoring vault, manhole, or other approved monitoring station has been constructed or shall be constructed and has been included in the compliance time schedule;
4. The City sewer system has adequate capacity for the volume of wastewater to be discharged;
5. A permit application has been completely and correctly filled out and signed by the user's industrial wastewater representative;
6. A compliance time schedule (CTS), if required, has been approved by the City Engineer and is on file with the City; and
7. Industrial users who use a pretreatment system have established and maintained a daily operation and maintenance log for their pretreatment system, and it contains, at a minimum, the following information:
a. Dates and times of routine maintenance and calibrations,
b. A description of all maintenance and calibration work being done on the system,
c. Date and time of any major repair and/or downtime on the system,
d. The emergency or backup system or program to be utilized if the pretreatment system were out of operation, and
e. The name of the supervisor responsible for the pretreatment system. (Ord. 99-791 Exh. A (part); prior code § 6-6.1402)

9.20.740 Industrial user discharge permits--Conditions.

A. All industrial user discharge permittees shall be subject to all provisions of this chapter and all other applicable regulations. In addition to the requirements in Section 9.20.720, all permits shall be subject to the following:
1. The unit charge or schedule of user charges and fees for the wastewater to be discharged into the City sewer system;
2. Limits on the average and maximum wastewater constituents, characteristics, and mass emission rates. Mass emission rates shall be defined as the mass of material discharged into the City sewer system during a given time interval, unless otherwise specified; the mass-emission rate shall mean pounds per day of a particular constituent or combination of constituents. The City Engineer may impose mass emission rate limitations on users if necessary;
3. Limits on the average and maximum rate and time of discharge requirements for flow regulations and equalization;
4. Requirements for installation and maintenance of inspection and sampling stations;
5. Specifications for monitoring programs which may include sampling stations, frequency of sampling, numbers and types of samples, standards for tests, and reporting schedules;
6. Compliance time schedules;
7. Requirements for submission of technical reports or discharge reports per this chapter;
8. Requirements for maintaining and retaining plant records related to wastewater discharge, as specified by the City, and affording the City access thereto;

9. Requirement for notification to the City of any new introduction of wastewater constituents or any substantial change in the volume or character of the wastewater constituents being introduced into the City sewer system;
10. Requirements for notification of slug discharges per Section 9.20.630; and
11. Other conditions as deemed appropriate by the City Engineer to ensure compliance with this chapter.
B. It is unlawful to discharge into the City sewer system, directly or indirectly, any nondomestic wastewater without a valid industrial user discharge permit from the City, except that the City Engineer shall grant such reasonable time extensions on existing permits as may be necessary for business alterations; changes in processes or designs; or the acquisition, manufacture, installation and testing of a wastewater pretreatment system or other facilities for which additional time is required, but not to exceed one year, provided there are no point-source limitation violations.
C. In the event a wastewater violation exists, discharges exceed the point source limitations or a violation of Section 9.20.580 exists and such violation does not involve hazardous substance(s) or hazardous waste as defined by the EPA, a compliance time schedule for all pretreatment and/or wastewater cleanup procedures and practices must be submitted to the City and approved by City Engineer as specified in 40 CFR Part 403.8(f)(1).
D. Modifications or changes in a compliance time schedule may be granted by the City Engineer upon written request provided the new compliance dates are not in violation of the current EPA compliance dates for the type of discharge in question.
E. All industrial users must keep, for a minimum of three years, copies of all their wastewater reports, surveys, permits, monitoring reports, any correspondence related to their pretreatment system, violation notices, and chain-of-custody logs; and upon request, this information must be made available for review and/or copying by any government agency as specified in 40 CFR Part 403.12(1).
F. The user chain-of-custody logs shall consist of the following: dates of sample collection, type of sampling, how the sample was preserved and stored, listing of the constituents and parameters to be tested, name of the individual who collected the sample, name of the laboratory at which the test(s) were conducted, and the date and time the sample was turned over to the laboratory.
G. The installation, design, and adequacy of any facility constructed pursuant to the provisions of this chapter shall not impute any liability, but does not relieve the owner or proprietor of responsibility for compliance with the provisions of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.1403)

9.20.750 Industrial user discharge permits--Appeals.

If the industrial user wishes to appeal or challenge any condition imposed in a discharge permit, a petition shall be filed for modification or reissuance of the permit. Such petition shall be filed within 30 days of the receipt of the permit. The following conditions shall apply:
A. Failure to submit a timely petition shall be deemed to be an acceptance of all conditions.
B. In its petition, the appealing party must indicate the condition to which the objection is being made, the reasons for this objection, and the alternative

condition, if any, it seeks to place in the permit.
C. The effectiveness of the permit shall not be stayed pending the appeal.
D. Such appeals shall be heard by the Director of Public Works within 30 days of receipt of the petition. The decision of the Director of Public Works shall be final. (Ord. 99-791 Exh. A (part); prior code § 6-6.1404)

9.20.760 Industrial user discharge permits--Modifications.

Within nine months of the promulgation of the National Categorical Pretreatment Standards or amendments thereto, the industrial user discharge permits of users subject to such standards shall be revised to require compliance with such standards within the time frame prescribed by such standards. If a user who is subject to the National Categorical Pretreatment Standards has not previously submitted an application for an industrial user discharge permit as required by Section 9.20.720, the user shall apply for an industrial user discharge permit within 180 days after the promulgation of applicable National Categorical Pretreatment Standards and amendments thereto. In addition, all users with existing industrial user discharge permits shall submit to the City Engineer within 180 days after the promulgation of applicable Federal Categorical Pretreatment Standards and amendments thereto the information required by Sections 9.20.720 and 9.20.870. If any person proposes to alter a pretreatment system or any connection to the City sewer system or if he/she proposes to increase or decrease the discharge volume by more than 25 percent or to discharge nondomestic wastewater of a different nature, type or substance not consistent with the original industrial user discharge permit, he/she shall submit to the City Engineer a letter requesting the approval of such an alteration along with an updated discharge permit application and shall pay all applicable fees. (Ord. 99-791 Exh. A (part); prior code § 6-6.1405)

9.20.770 Industrial user discharge permits--Duration.

Industrial user discharge permits shall be issued for any period of time up to five years. The user shall apply for permit reissuance a minimum of 90 days prior to the expiration of the user's existing permit. The terms and conditions of the permit may be subject to modification by the City during the term of the permit as limitations or requirements, as identified in this chapter, are modified or other just cause exists. The user shall be informed of any proposed changes in the permit at least 30 days prior to the effective date of such change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance. (Ord. 99-791 Exh. A (part); prior code § 6-6.1406)

9.20.780 Industrial user discharge permits--Temporary.

A permit shall be required of all users granted temporary permission by the City to discharge unpolluted water or wastewater from industrial startup operations directly or indirectly into the City sewer system. This temporary permit may be granted when no alternate method of disposal is reasonably available. The provisions of Section 9.20.580 of this chapter pertaining to general discharge

prohibitions and limitations shall apply. (Ord. 99-791 Exh. A (part); prior code § 6-6.1407)

9.20.790 Industrial user discharge permits--Transfers.

Industrial user discharge permits are issued to a specific user for a specific operation. A permit shall not be reassigned or transferred or sold to a new owner, new user, different premises, or a new or changed operation without the approval of the City. (Ord. 99-791 Exh. A (part); prior code § 6-6.1408)

9.20.800 Pretreatment required.

A. Industrial users shall provide necessary wastewater pretreatment as required to comply with this chapter and shall achieve compliance with all National Categorical Pretreatment Standards within the time limitations as specified by the Federal Pretreatment Regulations (40 CFR Part 403.6). Any equipment required to pretreat wastewater to a level acceptable to the City shall be provided, operated and maintained at the user's expense. Detailed plans showing the pretreatment systems and operating procedures shall be submitted to the City for review and shall be approved by the City before construction of the pretreatment system commences. The review of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the system as necessary to produce an effluent acceptable to the City under the provisions of this chapter. Any subsequent changes to the pretreatment system or method of operation shall be submitted for City review and approval prior to the user's initiation of the changes.

B. Pursuant to Section 9.20.850, the City shall annually publish a list of the users who were in significant noncompliance with any pretreatment requirements or standards during the previous 12-month period.

"Significant noncompliance" shall be defined as follows:

1. Violations of Wastewater Discharge Limits.

a. Chronic violations exist where 66 percent or more of the measurements are in any magnitude of excess of the same daily maximum limit or the same average limit by more than the technical review criteria (TRC) in a six-month period,

b. Technical review criteria (TRC = 1.4 for BOD, TSS, fat, oil and grease; and 1.2 for all other pollutants except pH). Violations exist when 33 percent or more of all of the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC,

c. Any other violation(s) of an effluent limit (average or daily maximum) that the City believes has caused, alone or in combination with other discharges, interference (e.g., slug loads), or pass-through, or endangered the health of wastewater personnel or the public,

d. Any discharge of a pollutant that has caused imminent endangerment to human health/welfare or to the environment and has resulted in the regional treatment plant's exercise of its emergency authority to halt or prevent such a discharge;

2. Violations of Compliance Time Schedules. Failure to comply with any compliance time schedule increment within 90 days after its due date;

3. Failure to meet reporting requirements for schedules of compliance, self-monitoring data, or categorical standards (baseline monitoring reports), 90-day compliance reports, and/or other periodic reports within 30 days from their due dates;
4. Failure to accurately report noncompliance;
5. Any other violation or group of violations that the City considers to be significant.
C. All records related to compliance with pretreatment standards shall be made available to officials of the EPA or the Regional Board upon request. (Ord. 99-791 Exh. A (part); prior code § 6-6.1409)

9.20.810 Record keeping.

All industrial users shall keep records of waste hauling, reclamations, monitoring device calibration reports, sample analysis data, flow meter chart recordings, and records of flow meter calibration at the site of generation. All records are subject to inspection and shall be copied as needed. All records must be kept at the site of generation for a minimum of three years. The records retention period may be extended beyond three years in the event criminal or civil action is taken or if deemed necessary by the City Engineer. (Ord. 99-791 Exh. A (part); prior code § 6-6.1410)

9.20.820 Confidentiality.

All information provided by a user or obtained by the City through monitoring and inspection shall be made available to the public, unless the user specifically requests confidentiality and can demonstrate to the City that release of such information will violate the user's right to protection of trade secrets under applicable State law. Wastewater quantity and quality data shall not be treated as confidential information. Information determined by the City to be confidential shall not be disclosed without providing the user with a reasonable opportunity to seek judicial protection from such release. (Ord. 99-791 Exh. A (part); prior code § 6-6.1411)

9.20.830 Waivers.

A. If any discharge into the City sewer system contains, or may contain, constituents which will cause it to fail to conform to any of the requirements of this chapter, the City Engineer may grant approval for such discharge to the City sewer system with a waiver or modification of the requirement(s) which cannot be met if the following is determined:
1. The discharge will not cause harm to the City sewer system nor unreasonably or inequitably burden the operation of the system; and
2. When considered together with similar excesses in discharge of others limited by this chapter, will not materially affect the ability of the City to meet the requirements of the Chino Basin (Inland Empire) regional wastewater contract.
B. Waivers shall not apply to any National Categorical Pretreatment Standards

and/or requirements.
C. When granting such waiver or modification of requirements, the City Engineer shall state in writing which requirement(s) are being waived or modified, along with the reasons as to why the waiver or modification is being issued. Any waiver granted pursuant to this section shall be subject to withdrawal at any time the City Engineer makes a subsequent finding that the City sewer system is unreasonably burdened or the ability of the City to meet the Chino Basin (Inland Empire) regional wastewater service contract requirements is materially affected by such waiver. (Ord. 99-791 Exh. A (part); prior code § 6-6.1412)

9.20.840 Industrial user discharge permits--Revocation.

A. The Public Works Director may revoke an industrial user discharge permit for good cause, including, but not limited to, the following reasons:
1. Failure to notify the City of significant changes to the wastewater prior to the changed discharge;
2. Failure to provide prior notification to the City of changed conditions pursuant to Section 9.20.870(B)(4) of this chapter;
3. Misrepresentation or failure to fully disclose all relevant facts in the industrial user discharge permit applications;
4. Falsifying self-monitoring reports;
5. Tampering with monitoring equipment;
6. Refusing to allow the City timely access to the facility premises and records;
7. Failure to meet effluent limitations;
8. Failure to pay fines;
9. Failure to pay sewer charges;
10. Failure to meet compliance time schedules;
11. Failure to provide advance notice of the transfer of business ownership permitted facility; or
12. Violation of any pretreatment standard or requirement or any terms of an industrial user discharge permit or this chapter.
B. Industrial user discharge permits shall become void upon cessation of operations or transfer of business ownership. All industrial user discharge permits issued to a particular user are void upon the issuance of a new industrial user discharge permit to that user. (Ord. 99-791 Exh. A (part); prior code § 6-6.1413)

9.20.850 Publication of noncompliance.

In accordance with 40 CFR 403.8(2)(vii), the City shall annually publish in the area's largest daily newspaper a list of all industrial users who, over the previous 12-month period, have been in significant noncompliance as defined in Section 9.20.800 of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.1414)

Article XIV. Reporting Requirements

9.20.860 Compliance data report.

Within 90 days following the date for final compliance with applicable pretreatment standards or, in the case of a new source, following commencement of the introduction of wastewater into the City sewer system, any user subject to pretreatment standards and requirements shall submit to the City Engineer a compliance data report. Such report shall indicate the nature and concentration of all pollutants in the discharge from the regulated process which are limited by pretreatment standards and requirements and the average and maximum daily flow for these process units in the user's facility which are limited by such pretreatment standards or requirements. The report shall state whether the applicable pretreatment standards or requirements are being met on a consistent basis and, if not, what additional operation and maintenance procedures or pretreatment is necessary to bring the discharge into compliance with the applicable pretreatment standards or requirements. This statement shall be signed by an authorized representative of the user. (Ord. 99-791 Exh. A (part); prior code § 6-6.1501)

9.20.870 Baseline monitoring reports and periodic reports on continued compliance.

A. Baseline Monitoring Reports. Any user subject to a pretreatment standard (categorical user) is required to submit a baseline monitoring report (BMR) containing the information described in 40 CFR Part 403.12(b)(1--7). All existing users of the system have 180 days after their final categorical compliance date to file their company's BMR. All new users of the system must submit a BMR at least 90 days prior to plant start up.

The baseline monitoring report shall include the following:

1. Name, address, and telephone number of the facility, including the name of the operator and owners;
2. List of any environmental control permits held by or for the facility;
3. A brief description of the nature, average rate of production and Standard Industrial Classification (SIC) of the operation(s);
4. Average and maximum daily flow data in gallons per day;
5. Current and past chemical analyses of each regulated waste stream with sampling and analysis to be performed in accordance with the techniques prescribed in 40 CFR Parts 136 and 403.12(b)(5);
6. On-site plumbing and pretreatment system plans;
7. A statement signed by an authorized wastewater representative of the industrial user and certified by a qualified professional, indicating whether pretreatment standards are being met on a consistent basis; and
8. A compliance time schedule if additional pretreatment equipment or operation and maintenance is required to meet the pretreatment standards.

B. Periodic Reports on Continued Compliance. The EPA has established specific monitoring and reporting procedures with regard to periodic reports on continued compliance. Refer to 40 CFR Parts 403.12(b)(4,5), 403.12(e)(1,2,3) and 403.12(h)(l)(o) for details. The City may require up to four periodic reports on continued compliance for all significant industrial users each year, three months apart.

The periodic report on continued compliance shall consist of the following:

1. Results of any self monitoring of the permitted discharge for the reporting period;
2. The measured average and maximum daily flows in gallons per day from each permitted discharge point going to the City sewer system;
3. A reasonable measure of the long-term production rate for industrial users subject to equivalent mass or concentration limits or actual average daily production rate for the reporting period for all industrial users on production based standards pursuant to 40 CFR Part 403.12(e)(3);
4. Plant operation and maintenance changes including those for pretreatment system equipment that could affect the wastewater quality or quantity from the user's facility;
5. A total toxic organic chemical compliance status report may be required of a significant industrial user. It may include the following: the most current toxic organic chemical analysis, a statement of compliance, and a compliance time schedule if there is an organic chemical violation. A toxic organic management plan (TOMP) may be required by the City if any of the toxic organic chemicals are found in the facility's effluent in excess of .01 mg/l or on the facility premises;
6. A cover letter signed by the industrial user's authorized representative stating that all the above items are current and are on file with the City and that they represent the industrial user's periodic report on continued compliance.
C. At the discretion of the City Engineer and in consideration of such factors as local high or low flow rates, holidays, budget cycles, etc., the City Engineer may agree to alter the months during which the above reports are to be submitted. The City reserves the right, however, in accordance with Section 308 of the Clean Water Act, to take grab or composite samples of the wastewater effluent to ensure compliance with National Categorical Pretreatment Standards.
D. The City Engineer may impose mass pollutant limitations on users. In such cases, the periodic reports required by subsection B of this section shall indicate the mass of pollutants regulated by pretreatment standards in the effluent of the user. Sampling shall be performed in accordance with techniques approved by the City Engineer.
E. Written reports will be deemed to have been submitted on the postmarked date. For reports which are not mailed, postage prepaid, to a mail facility serviced by the United States Postal Service, the date of the receipt of the report shall govern. (Ord. 99-791 Exh. A (part); prior code § 6-6.1502)

9.20.880 Monitoring requirements.

Any sample of effluent taken from a sample box, monitoring manhole, or other representative sampling location and presumed to be discharging into the City sewer system shall be subject to the following requirements:
A. The handling, storage and analysis of all samples taken for the determination of the characteristics of wastewater discharged shall be performed in accordance with 40 CFR Part 136. When 40 CFR Part 136 does not include a sampling and/or analytical technique for the pollutant in question, sampling and analysis shall be performed in accordance with the procedure set forth in the EPA publication Sampling and Analysis Procedures for Screening of Industrial Effluent for Priority

Pollutants (April 1977) and amendments thereto, or with any other sampling and analytical procedures approved by the City Engineer.

B. The City Engineer may require periodic measurements of flow and wastewater characteristics for compliance with the requirements specified in the industrial user discharge permit or this chapter. Measurements of flow, suspended solids (SS), and biochemical oxygen demand (BOD) for surcharge determination shall be made by those industrial users specifically designated by the City Engineer. The City Engineer shall determine the number of 24-hour or 48-hour flow measurements and samples required, but the minimum requirement shall be two per year for all designated industrial users. Continuous monitoring may be required in cases involving large fluctuations in quantity or quality of wastes or if the wastewater appears to have characteristics which may damage the City sewer system.

C. All flow measurements, samplings and analyses shall be performed by qualified engineering personnel and laboratories acceptable to the City Engineer. All costs for such flow measurements, samplings, and analyses shall be borne by the industrial user.

D. When an industrial user operates as an integrated complex involving varying processes and having separate industrial waste sewer connections within the same contributory area, such industrial user may be considered as one unit with multiple connections. An analysis for each connection shall be required.

E. Should measurements or other investigations by the City Engineer reveal that an industrial user's BOD and/or SS significantly differ from those upon which the quality surcharge has been based, the industrial user shall apply for an amended permit and pay the appropriate charges and fees.

F. Samples shall represent the normal waste flow from the premises over a 24-hour or 48-hour period. The samples shall be composited by equal time or flow intervals, either manually with at least one sample collected hourly or by automatic integrated sampling equipment approved by the City Engineer. Samples for oil and grease, temperature, pH, cyanide, sulfides, and volatile organic compounds must be obtained using grab collection techniques. (Ord. 99-791 Exh. A (part); prior code § 6-6.1503)

Article XV. Monitoring Stations

9.20.890 Monitoring station specifications.

A. The City Engineer may require an industrial user to provide and operate monitoring stations, the purpose of which is to allow inspection, sampling, and flow measurement of the building sewer and/or the wastewater treatment or pretreatment system at the user's facility. The monitoring station shall be located so that samples can be taken immediately downstream from the wastewater treatment or pretreatment station, if any exists, or where no wastewater treatment or pretreatment is employed, immediately downstream from the regulated waste stream. The monitoring station should normally be situated on the user's premises, but the City Engineer may, when such a location would be impractical or cause undue hardship on the user, allow the station to be constructed in the public street or sidewalk area and to be located so that it shall be accessible at all times.

There shall be ample room in or near the sampling manhole or monitoring station to allow accurate sampling, and preparation of samples for analysis. The monitoring station sampling and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the user.
B. If the City requires an industrial user to install monitoring stations, each such user shall submit construction plans and/or instrumentation for approval by the City showing the following:
1. A pH-recording instrument with a strip chart to record all flows on a 24-hour continuous basis;
2. A conductivity meter with a strip chart to record all flows on a 24-hour continuous basis;
3. A calibrated flume, weir, flow meter, or similar device approved by the City and suitable to measure the nondomestic flow rate and total volume.
C. Upon plan approval, the City Engineer shall notify the industrial user of such approval in writing.
D. Whether constructed on public or private property, the sampling and monitoring stations shall be provided in accordance with the City's requirements and all applicable local construction standards and specifications. Monitoring stations may be required to include a security closure that can be locked by the City during sampling or upon termination of service. Construction shall be completed within 90 days following written notification by the City Engineer. (Ord. 99-791 Exh. A (part); prior code § 6-6.1601)

9.20.900 Accessibility of monitoring stations.

The City shall be permitted to enter all properties from which waste or wastewater is being or is capable of being discharged into the City sewer system for purposes of inspecting, measuring, sampling and testing the discharge of waste or wastewater to ascertain whether the intent of this chapter is being met and the user is complying with all requirements. The City shall have the right to set up on the user's property such devices as are necessary to conduct monitoring operations. When a user has security measures in force, the user shall make necessary arrangements so that City personnel are permitted to enter without delay for the purpose of performing their specific responsibilities.
Routine inspections and effluent monitoring by the City is required by the Federal Pretreatment Program, 40 CFR Part 403. Actual costs for such inspections and monitoring incurred by the City shall be borne by the industrial user. (Ord. 99-791 Exh. A (part); prior code § 6-6.1602)

9.20.910 Record keeping, maintenance, and operation of monitoring equipment.

All industrial users shall keep and maintain records regarding the maintenance, calibration and standardization of the pH, conductivity, and flow meter for a minimum of three years. All monitoring equipment shall be maintained and calibrated according to the manufacturer's specifications. Once installed, all

monitoring equipment shall be operated to facilitate continuous measurement. (Ord. 99-791 Exh. A (part); prior code § 6-6.1603)

Article XVI. Administrative Enforcement Remedies

9.20.920 Applicability.

A. This chapter provides for administrative remedies in addition to all other legal remedies, criminal or civil, which may be pursued by the City to address any violation of this chapter.
B. The City of Montclair Pretreatment Program Enforcement Response Guide is incorporated in this article as if set out in its entirety. (Ord. 99-791 Exh. A (part); prior code § 6-6.1701)

9.20.930 Hearing board defined--Purpose.

The Hearing Board, as used in this chapter, shall consist of three members appointed by the City Manager, one of which shall be from the Public Works Department.
The Hearing Board shall be convened pursuant to Section 9.20.970 of this chapter for the purpose of determining whether a violation has occurred and, if it has, to issue an administrative order to gain correction of violation. (Ord. 99-791 Exh. A (part); prior code § 6-6.1702)

9.20.940 Emergency enforcement.

Should the Director of Public Works determine that any discharge of pollutants to the City sewer system reasonably appears to present an imminent endangerment to the health or welfare of persons or the environment, he/she may immediately and effectively halt or prevent this discharge after informal notice to the user. All costs for severing and/or reinstating sewer service shall be borne by the user. (Ord. 99-791 Exh. A (part); prior code § 6-6.1703)

9.20.950 Notice of Violation.

A. Whenever the Director of Public Works determines that a violation of any provision of this chapter is occurring or exists, the Director may issue a written Notice of Violation to any person responsible for the violation. The notice of violation may include one or more of the following:
1. Stop Work Order. The City Engineer may serve a written stop work order on any person engaged in doing or causing to be done new construction, tenant improvements, alterations, or additions if:
a. No industrial user discharge permit has been granted by the City,
b. Work has begun without prior written approval by the City Engineer, or
c. Violations of this chapter are found at the site of the new construction, tenant improvements, alterations, or additions;
Any person served a stop work order shall stop such work forthwith until written

authorization to continue is received from the City Engineer;
2. Cease and Desist Order. Cease and desist orders shall direct a user to cease and desist all discharge violations, to comply immediately with all discharge requirements, and to take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened discharge violation, including halting operations and/or terminating the discharge;
3. Compliance Time Schedule. Compliance time schedules direct a user to achieve or restore compliance by a specific date. If the user fails to achieve compliance within the time provided, sewer service may be discontinued; or
4. A requirement that the user shall submit to the City Engineer, within a prescribed period specified in the notice, which period shall not be less than 10 working days unless an emergency situation dictates a shorter period, a plan indicating the cause of the violation, corrective actions that will be taken to prevent recurrence and, if required, a proposed compliance time schedule indicating the dates those corrective actions will be completed.
B. A Notice of Violation issued pursuant to this chapter shall contain the following information:
1. The date and location of the violation;
2. The section of this chapter violated and a description of the violation;
3. The actions required to correct the violation;
4. The time period after which administrative penalties will begin to accrue if compliance with the notice of violation has not been achieved; and
5. Either a copy of this chapter or an explanation of the consequences of noncompliance with this chapter and a description of the hearing procedure. (Ord. 99-791 Exh. A (part); prior code § 6-6.1704)

9.20.960 Method of service.

A. All notices required by this chapter shall be served as provided in Section 9.20.060 of this chapter.
B. Written notice shall be mailed to the user at the site location or other business address, and to the property owner at the address as shown on the last equalized County assessment roll.
C. When personal service or service by mail upon the property owner is unsuccessful, a copy of the Notice of Violation shall be conspicuously posted at the property which is the subject of the Notice of Violation.
D. The failure of any person to receive any notice required under this chapter shall not affect the validity of any proceedings taken under this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.1705)

9.20.970 Hearing.

A. If the Director of Public Works determines that all violations have been corrected within the time specified in the notice of violation, no further action shall be taken.
B. If full compliance is not achieved within the time specified in the Notice of Violation, the Director of Public Works shall direct that the Hearing Board be

convened to consider the matter.
C. If the recipient of the Notice of Violation disputes the allegation(s) set out in the Notice of Violation, such recipient may request in writing to the Director of Public Works that the Hearing Board be convened to consider the matter.
D. The Hearing Board shall cause a written Notice of Hearing to be served on the violator and, when real property is involved, a Notice of Hearing shall be served on the property owner at the address as it appears on the last equalized County assessment roll available on the date the notice of hearing is prepared. (Ord. 99-791 Exh. A (part); prior code § 6-6.1706)

9.20.980 Notice of Hearing.

A. Every Notice of Hearing shall contain the date, time and place at which such hearing shall be conducted by the Hearing Board.
B. Each hearing shall be set for a date not less than 10 days nor more than 30 days from the date of the Notice of Hearing unless the Director of Public Works determines that the matter is urgent or that good cause exists for an extension of time.
C. This hearing serves to provide a full opportunity for a person to object to the determination that a violation has occurred and/or that the violation has continued to exist. The failure of any person to appear at such hearing shall constitute that person's failure to exhaust administrative remedies. (Ord. 99-791 Exh. A (part); prior code § 6-6.1707)

9.20.990 Hearing--Findings and order.

A. At the place and time set forth in the Notice of Hearing, the Hearing Board shall conduct a hearing on the Notice of Violation issued pursuant to Section 9.20.950 of this chapter.
B. The Hearing Board shall consider any written or oral evidence presented regarding the violation and compliance by the user and/or by the real property owner.
C. Within 20 days following the conclusion of the hearing, the Hearing Board shall make findings as supported by evidence received at the hearing and shall issue written findings on each alleged violation as follows:
1. If the Hearing Board finds by a preponderance of the evidence that a violation has occurred and that the violation was not corrected within the time period specified in the Notice of Violation, the Hearing Board shall issue an administrative order pursuant to Section 9.20.1000 of this chapter.
2. If the Hearing Board finds that no violation has occurred or that the violation was corrected within the time period specified in the Notice of Violation, the Hearing Board shall issue a finding of those facts. (Ord. 99-791 Exh. A (part); prior code § 6-6.1708)

9.20.1000 Administrative order.

If the Hearing Board determines that a violation occurred which was not corrected within the time period specified in the Notice of Violation, the Hearing Board shall issue an administrative order which imposes any or all of the following:
A. An order to correct, including a compliance time schedule when appropriate;
B. Administrative penalties as provided in Section 9.20.1010 of this chapter;
C. Administrative costs as provided in Section 9.20.1020 of this chapter;
D. Reimbursement of costs incurred by the City for abatement, remediation and restoration pursuant to Section 9.20.1030 of this chapter;
E. Termination of sewer service;
F. Revocation of industrial user discharge permit pursuant to Section 9.20.840 of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.1709)

9.20.1010 Administrative penalties.

A. The Hearing Board may impose administrative penalties for the violation of any provision of this chapter in an amount not to exceed a maximum of One Thousand (1000) Dollars per day for each ongoing violation, except that the total administrative penalty shall not exceed Twenty-Five Thousand (25,000) Dollars for any related series of violations, exclusive of administrative costs, interest and restitution for compliance reinspections, and for reimbursement of costs incurred by the City pursuant to Section 9.20.1030 of this chapter.
B. In determining the amount of the administrative penalty, the Hearing Board may take any or all of the following factors into consideration:
1. The duration of the violation;
2. The frequency, recurrence and number of violations, related or unrelated, by the same violator;
3. The seriousness of the violation;
4. The good faith efforts of the violator to come into compliance;
5. The economic impact of the penalty on the violator;
6. The impact of the violation on the community;
7. Such other factors as justice may require.
C. Administrative penalties imposed by the Hearing Board shall accrue from the date specified in the Notice of Violation and shall cease to accrue on the date established pursuant to subsection H of this section.
D. The Hearing Board, at its discretion, may suspend the imposition of applicable penalties for any period of time during which:
1. The violator has filed for necessary permits; and
2. Such permits are required to achieve compliance; and
3. Such permit applications are actively pending before the City.
E. Administrative penalties assessed by the Hearing Board shall be due by the date specified in the administrative order.
F. Administrative penalties assessed by the Hearing Board are a debt owed to the City and, in addition to all other means of enforcement, if the violation is located on real property, may be enforced by means of a lien against the real property on which the violation occurred.
G. If the violation is not corrected as specified in the Hearing Board's administrative order, administrative penalties shall continue to accrue on a daily

basis until the violation is corrected, subject to the maximum amount set forth in subsection A of this section.
H. If the violator gives written notice to the Director of Public Works that the violation has been corrected and if the Director of Public Works finds that compliance has been achieved, the Director of Public Works shall deem the date such written notice was postmarked or personally delivered to the City, or the date of the final inspection, whichever first occurred, to be the date the violation was corrected. If no written notice is provided to the Director of Public Works, the violation will be deemed corrected on the date of the final inspection. (Ord. 99-791 Exh. A (part); prior code § 6-6.1710)

9.20.1020 Administrative costs.

A. The Hearing Board shall assess administrative costs against the violator when it finds that a violation has occurred and that compliance has not been achieved within the time specified in the Notice of Violation.
B. The administrative costs may include any and all costs incurred by the City in connection with the matter before the Hearing Board, including, but not limited to, costs of investigation, staffing costs incurred in preparation for the hearing and for the hearing itself, and costs for all reinspections necessary to enforce the Notice of Violation. (Ord. 99-791 Exh. A (part); prior code § 6-6.1711)

9.20.1030 Costs incurred by the City for abatement, remediation and/or restoration.

In the event the user fails to take corrective action as called for in an administrative order, the City may make such corrections. The user shall be responsible for all costs and expenses incurred by the City as a result of such action. (Ord. 99-791 Exh. A (part); prior code § 6-6.1712)

9.20.1040 Failure to comply with administrative order.

Failure to comply with the term of an administrative order of the Hearing Board may be enforced as:
A. A personal obligation of the violator; and/or
B. If the violation is in connection with real property, a lien upon the real property. The lien shall remain in effect until all of the administrative penalties, interest, administrative costs, and costs incurred by the City pursuant to Section 9.20.1030 of this chapter are paid in full. (Ord. 99-791 Exh. A (part); prior code § 6-6.1713)

9.20.1050 Recovery of penalties and costs.

The City may collect the assessed administrative penalties, administrative costs, and costs incurred by the City pursuant to Section 9.20.1030 of this chapter by use of all available legal means, including recordation of a lien pursuant to Section 9.20.1070 of this chapter. (Ord. 99-791 Exh. A (part); prior code § 6-6.1714)

9.20.1060 Right of judicial review.

Any person aggrieved by an administrative order of the Hearing Board may obtain review of the administrative order in the Superior Court by filing with the court a petition for writ of mandate as provided by law. (Ord. 99-791 Exh. A (part); prior code § 6-6.1715)

9.20.1070 Lien procedure.

A. Whenever the amount of any cost incurred by the City pursuant to Section 9.20.1030 of this chapter, any administrative penalty and/or administrative cost imposed by the Hearing Board pursuant to this chapter in connection with real property, has not been satisfied in full within 90 days of imposition and/or has not been successfully challenged by a timely writ of mandate, this obligation may constitute a lien against the real property on which the violation occurred.
B. Prior to the recording of any such lien, the Public Works Director shall prepare and file with the City Clerk a report stating the amounts due and owing. The City Clerk shall then fix a time, date and place for hearing such report and any protests or objections thereto by the City Council.
C. The Director of Public Works shall cause written notice to be served on the property owner not less than 10 days prior to the time set for the hearing. Such notice shall be served as provided in Section 9.20.060 of this chapter.
D. Any person whose real property is subject to a lien may file a written protest with the City Clerk and/or may protest orally at a City Council meeting.
E. Each written protest or objection must contain a description of the property in which the protesting party is interested and the grounds of such protest or objection.
F. The City Council, after the hearing, shall adopt a resolution confirming, discharging or modifying the amount of the lien.
G. Thirty days following the adoption of a resolution by the City Council imposing a lien, the City Clerk shall file the same as a judgment lien in the Office of the County Recorder of San Bernardino County, California.
H. The lien provided in this section shall have no force and effect until recorded with the County Recorder. Once recorded, the administrative order shall have the force and effect and priority of a judgment lien governed by the provisions of Section 697.340 of the Code of Civil Procedure and may be extended as provided in Sections 683.110 to 683.220, inclusive, of the Code of Civil Procedure.
I. Interest shall accrue on the principal amount of the judgment remaining unsatisfied pursuant to law. (Ord. 99-791 Exh. A (part); prior code § 6-6.1716)

9.20.1080 Satisfaction of lien.

Once payment in full is received by the City for outstanding penalties and costs, the Director of Public Works shall either record a Notice of Satisfaction or provide the property owner or financial institution with a Notice of Satisfaction so they may record this notice with the Office of the County Recorder. Such Notice of

Satisfaction shall cancel the City's lien. (Ord. 99-791 Exh. A (part); prior code § 6-6.1717)

9.20.1090 Judicial enforcement remedies.

A. Injunctive Relief. If the City determines that any person has engaged in, is engaged in, or is about to engage in any acts or practices which constitute or will constitute a violation of this chapter or any regulation or order promulgated thereunder, the City Attorney may make application to the Superior Court for an order enjoining the acts or practices or for an order directing compliance. As established in 40 CFR Part 403.8(f)(l)(vi)(A) a permanent or temporary injunction, restraining order, or other appropriate order may be granted upon a showing that the person(s) has (have) engaged in, is (are) engaged in, or is (are) about to engage in the challenged acts or practices.

B. Civil Penalties. A user who has violated or continues to violate any provision of this chapter, an industrial user discharge permit, or order issued hereunder or any other pretreatment standard or requirement shall be liable to the City for a minimum civil penalty of not less than One Thousand (1000) Dollars and no more than a maximum civil penalty of Twenty-Five Thousand (25,000) Dollars per violation per day. In the case of a monthly or other long-term average discharge limit, penalties shall accrue for each day during the period of violation.

The City may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses and the cost of any actual damages incurred by the City.

In determining the amount of civil liability, the court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained by the user through the user's violation, corrective actions by the user, the compliance history of the user, and any other factor as justice requires.

Filing a suit for civil penalties shall not be a bar against or a prerequisite for taking any other action against a user.

C. Criminal Penalties. Any person who negligently or knowingly violates any of the provisions of this chapter is guilty of a misdemeanor punishable by a fine of not less than One Thousand (1000) Dollars per day of violation or by imprisonment for not more than one year or by both.

Any person who negligently or knowingly introduces into the City sewer system any pollutant or hazardous substance, which such person knew or reasonably should have known could cause personal injury or property damage or is not in compliance with all applicable federal, State, or local requirements or permits, which causes the POTW to violate any effluent limitation or condition in a permit issued to the City or the Inland Empire Utilities Agency under the Clean Water Act, shall be punishable by a fine of not less than One Thousand (1000) Dollars per day of violation or by imprisonment for not more than one year or by both.

Any person who knowingly makes a false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to this chapter or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be

maintained pursuant to this chapter is guilty of a misdemeanor punishable by a fine of not less than One Thousand (1000) Dollars per day of violation or by imprisonment for not more than one year or by both.
D. Remedies Nonexclusive. The remedies provided for in this chapter are not exclusive. The City may take any, all, or any combination of enforcement actions against a noncompliant user. Enforcement of pretreatment violations will generally be in accordance with the City's Pretreatment Program Enforcement Response Guide; however, the City may take other action against any user when the circumstances warrant. (Ord. 99-791 Exh. A (part); prior code § 6-6.1718)

9.20.1100 Recovery of fines or penalties imposed on the City.

In the event the City is subject to the payment of fines or penalties pursuant to the legal authority and actions of other regulatory or enforcement agencies based on a violation of law, regulation or agreement and said violation can be established by the City as being caused by the discharge of any user of the City sewer system which is in violation of any provisions of this chapter or the user's industrial user discharge permit, the City shall be entitled to recover from the user all costs and expenses, including, but not limited to, the full amount of said fines or penalties to which the City has been subjected. (Ord. 99-791 Exh. A (part); prior code § 6-6.1719)

9.20.1110 Damage to facilities or interruption of normal operations.

Any obstruction, damage or other impairment to the City sewer system, including, but not limited to, spill containment, recovery and disposal systems, or the Inland Empire Utility Agency's sewer system or facilities, caused by a discharge of waste and/or wastewater may result in the Director of Public Works assessing a charge against the user for the work required to clean or repair the facility or the cost to resume normal operation. An administrative fee shall be added to the charges payable within 30 days of invoicing by the City. These charges and fees shall be in addition to any other fines, penalties, assessments and fees imposed by other regulatory or service agencies. (Ord. 99-791 Exh. A (part); prior code § 6-6.1720)

9.20.1120 Regional Pretreatment Agreement.

It is acknowledged that the City approved that certain agreement known as the Regional Pretreatment Agreement, entered into by and among the Inland Empire Utilities Agency, the Cucamonga County Water District, and the cities of Montclair, Chino, Chino Hills, Fontana, Upland, and Ontario. Pursuant to the conditions of this agreement, the City allows and authorizes the Inland Empire Utilities Agency to regulate industrial users within the corporate limits of the City who are tributary to the regional sewer system and provides the Inland Empire Utilities Agency fully enforceable legal authority as the operator of the regional treatment plant to inspect, permit and control indirect discharges to the regional plants. (Ord. 99-791 Exh. A (part); prior code § 6-6.1721)

Exhibit A
(to Ordinance No. 96-782)

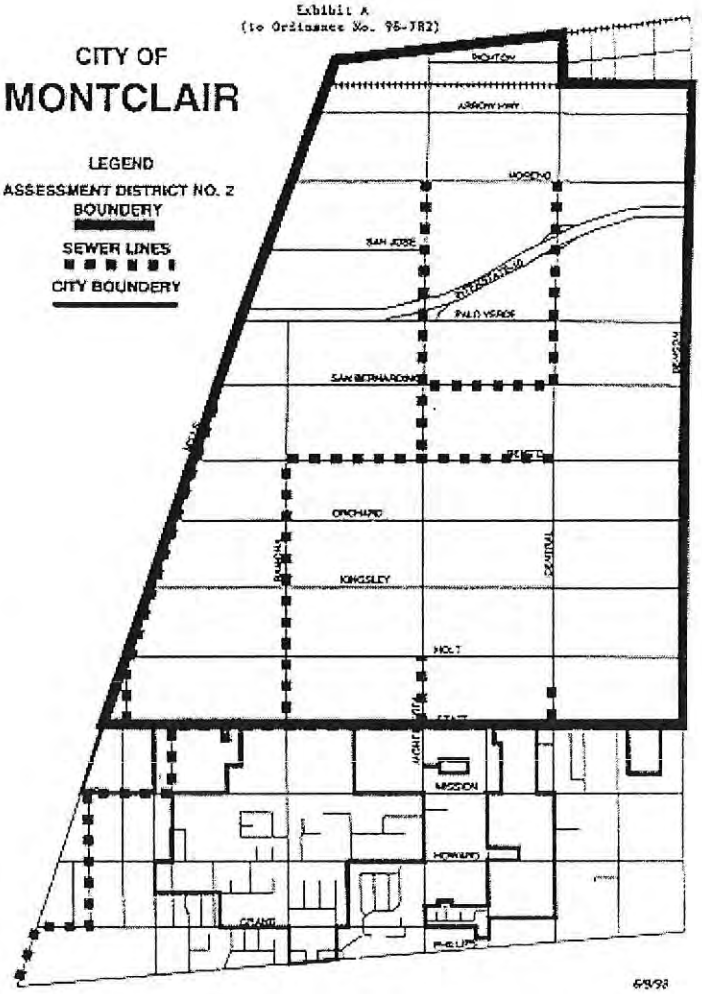
CITY OF
MONTCLAIR

LEGEND

ASSESSMENT DISTRICT NO. 2 BOUNDERY

SEWER LINES

CITY BOUNDERY



Inland Empire Regional Sewage Service Contract and Regional Pretreatment Agreement

CHINO BASIN REGIONAL

SEWAGE SERVICE CONTRACT

(AS AMENDED APRIL 12, 1984,

AS AMENDED OCTOBER 19, 1994)

October 19, 1994

CHINO BASIN REGIONAL

SEWAGE SERVICE CONTRACT

(AS AMENDED APRIL 12, 1984,

AS AMENDED OCTOBER 19, 1994)

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CHINO BASIN REGIONAL

SEWAGE SERVICE CONTRACT

(AS AMENDED APRIL 12, 19984, AS AMENDED

OCTOBER 19, 1994)

Section 1. DEFINITIONS

Unless otherwise required by the context, various terms used in this contract, including the recitals, shall have the meanings set forth in this section. The singular number includes the plural and the plural the singular.

"Acquire" or "Acquisition" means to acquire or make the acquisition of one or more of the following:

A. Fee simple title to land.

B. Any interest in land by deed, easement, lease, sublease, contract or otherwise.

C. Title to or any interest in any existing facilities located upon land.

D. Interests or capacity rights in any land or facilities owned by others.

"Capacity Demand" means the volume and strength (i.e., biochemical oxygen demand and suspended solids) of sewage discharged from the Community Sewer System of a Contracting Agency into the Regional Sewerage System expressed in Equivalent Dwelling Units. (Added April 12, 1984)

"Capital Outlay Ordinance" means Ordinance No. 24 of CBMWD (Added April 12, 1984)

"Capital Capacity Reimbursement Account" means the accounts established and maintained by the Contracting Agencies and to which are deposited or credited Capital Capacity Reimbursement Payments. (Added April 12, 1984)

"Capital Capacity Reimbursement Payment" means a deposit or credit made to the Capital Capacity Reimbursement Account of a Contracting Agency for new connections to its Community Sewer System. (Added April 12, 1984)

"CBMWD" means the Chino Basin Municipal Water District, a municipal water district.

"Chino Basin" means that area underlain by the Chino And Cucamonga groundwater basins and that portion of the Claremont Heights groundwater basin within San Bernardino County which groundwater basins are described in Bulletin No. 53 of the California Division of Water Resources, dated March, 1947, and entitled "South Coastal Basin Investigation - Overdraft on Groundwater Basins."

"Commercial Unit" means a building, establishment or premises where businesses selling goods or providing professional or other services to the public or governmental offices are or will be located. (Added April 12, 1984)

"Community Sewer System" means all facilities owned, controlled or operated by a sewage collection agency for the purpose of collecting and conducting sewage to a delivery point, including collector sewers conducting sewage from the originating premises, trunk sewers conducting sewage from

tributary collector sewers or other trunk sewers and any facilities appurtenant to the foregoing.

"Contracting Agency" means any sewage collection agency located, in whole or in part, within the boundaries of CBMWD which has entered into a Service Contract with CBMWD. (Amended April 12, 1984)

"Demand Deficit" means the difference between the aggregate total Forecasted Demand of a Contracting Agency and the total aggregate Equivalent Dwelling Units connected to its Community Sewer System during an eight-year period commencing with the fifth fiscal year preceding the fiscal year for which CBMWD is at the time of the determination of such difference preparing a Ten-Year Forecast, and including the initial three fiscal years of such Ten-Year Forecast. (Added April 12, 1984)

"Delivery Point" means the transfer point at which sewage is delivered from a Community Sewer System into the Regional Sewerage System.

"Dispose" or "Disposal" means any process or method for the elimination or beneficial use of sewage and any effluent or solid waste residuals thereof, including exportation from the Chino Basin.

"Disposal Facilities" means all facilities owned, controlled and operated by CBMWD to meet effluent discharge requirements, excluding reclamation facilities operated by CBMWD to meet obligations under the judgment entered in the action entitled Orange County Water District v. City of Chino, et al.

(Case No. 117628, Superior Court, County of Orange), or to meet the requirements of Contracting Agencies exercising the right of first purchase of reclaimed effluent. (Added April 12, 1984)

"Effluent" means the liquid outflow at the discharge point of any treatment or reclamation facility.

"Equivalent Dwelling Unit" or "EDU" means a measure of sewage flow equivalent in quantity and strength to the daily flow of an average single family household determined as provided in Exhibit "J" hereto. (Added April 12, 1984)

"Expansion" means the acquisition or construction of new facilities for the Regional Sewerage System and the making of any replacements, betterments, additions or extensions of the Regional Sewerage System.

"Facilities" means any pipelines, buildings, structures, works, improvements, fixtures, machinery, equipment, or appliances and any real property, or interests therein, necessary or convenient for the construction, maintenance and operation of any of the foregoing.

"Fiscal Year" means a 12-month period commencing on July 1 and ending on the following June 30.

"Forecasted Demand" means the yearly forecasted or estimated volume and strength of sewage discharged from the Community Sewer System of a Contracting Agency into the Regional Sewerage System expressed in Equivalent Dwelling Units as set forth in a Ten-Year Forecast. (Added April 12, 1984)

"Industrial Unit" means a building, establishment or premises where manufacturing, fabrication or assembly operations or industrial or chemical processes are conducted. (Added April 12, 1984)

"Industrial Waste" means any waste water and any water borne solid, liquid, or gaseous wastes resulting from any producing, manufacturing, or processing operations of whatever nature as more particularly defined, from time to time, by any federal, state, or regional agency authorized by law to prescribe quality standards for the discharge of sewage effluent and industrial waste effluent within the Chino Basin.

"Interceptor Sewer" (Deleted April 12, 1984)

"Non-Domestic Waste" means waste or wastewater discharged into the Community Sewer System of a Contracting Agency which has a greater concentration of total dissolved solids or biochemical oxygen demand or any other constituents limited by CBMWD than the waste or wastewater discharged from the typical single family domestic household in the Contracting Agency's Service Area. as defined in the current contract. (Amended October 19, 1994)

"Non-Reclaimable Waste Disposal System" means the system owned and operated by CBMWD primarily for the disposal of nonreclaimable industrial waste. (Added April 12, 1984)

"Original Contracting Agencies" means any one or any two or more of the Cucamonga County Water District or the Cities of Upland, Ontario, Montclair, Chino or Fontana who, on or before July 31, 1972, shall have authorized execution of a

Service Contract with CBMWD.

"Outfall Sewer" means any sewer transmitting treated effluent from the discharge point of a sewage treatment and disposal plant to a point of disposal or reuse.

"Reclaim" or "Reclamation" means any process or method for altering the quality of treated sewage effluent to standards superior to those prescribed for treatment, as specified in Exhibit "A" attached hereto and made a part hereof.

"Regional Interceptor" means a sewer which receives sewage from the most downstream trunk or collector sewer of a Community Sewer System, or a portion thereof, for the purpose of transmitting the sewage to a Regional Treatment Plant or to any other point of disposal, and any facilities appurtenant thereto, or any sewer which is utilized for the transmission of the sewage of two or more Contracting Agencies to such a plant or point of disposal. (Added April 12, 1984)

"Regional Policy Committee" means the committee provided for in Section 24 hereof. (Added April 12, 1984)

"Regional Sewerage System" means all facilities owned, controlled or operated by CBMWD and any interest or capacity rights of CBMWD in facilities owned, controlled, or operated by others, for the purpose of transmitting, treating and disposing of sewage, including interceptor sewers, sewage treatment and disposal plants, outfall sewers, facilities for the disposal of effluent and solid waste residuals and any facilities appurtenant to the foregoing; the Regional Sewerage System shall

not include any reclamation facilities or portions of reclamation facilities which are operated by or for the benefit of CBMWD to meet obligations under the judgment entered in the action entitled Orange County Water District v. City of Chino, et al. (Case No. 117628, Superior Court, County of Orange), or to meet the requirements of Contracting Agencies exercising the right of first purchase of reclaimed effluent; provided that the Regional Sewerage System shall include all other disposal facilities which are required to meet the requirements of the National Pollutant Discharge Elimination System Permit or permits or Waste Discharge Requirements issued to CBMWD by the Regional Water Quality Control Board, Santa Ana Region, for the operation of the Regional Treatment Plants and, to the extent it is used as provided in Section 8 hereof, the Nonreclaimable Waste Disposal System. (Amended April 12, 1984)

"Regional Technical Committee" means the committee provided for in Section 25 hereof. (Added April 12, 1984)

"Regional Treatment Plant" means a sewage and wastewater treatment plant operated by CBMWD as part of the Regional Sewerage System. (Added April 12, 1984)

"Regional Wastewater Capital Improvement Fund" means the fund of CBMWD into which is deposited or to which is credited all Improvement District "C" tax revenues and standby charge revenues received by CBMWD and all Supplemental Capital Outlay Funds received by CBMWD from the Contracting Agencies for the acquisition, construction, improvement and expansion of the

Regional Sewerage System. (Added April 12, 1984)

"Residential Unit" means a single family residence, a condominium unit, an apartment unit or other such structure or portion thereof which is equipped and suitable for human habitation or a mobile home space in a mobile home park, not including, however, transient lodging rooms in motels or hotels which are considered to be commercial units. (Added April 12, 1984)

"Service Area" means all territory now or hereafter served by the Community Sewer System owned, controlled or operated by any sewage collection agency.

"Service Contract" means this contract and any substantially similar contract between CBMWD and a Contracting Agency providing for the transmission, treatment and disposal of the sewage of the agency by means of the Regional Sewerage System.

"Sewage" means any liquid waste and water borne solid waste resulting from residential, commercial, industrial, or institutional activities or uses.

"Sewage Collection Agency" means the County of San Bernardino and any city or special district, other than CBMWD, which is located in whole or in part within CBMWD and which is authorized to own, control and operate a Community Sewer System.

"Sewer" means any pipeline conducting sewage, either by gravity or by pressure, and any facilities appurtenant thereto.

"Sewer User Charge" means any charge, fee, rental, or rate, excluding property taxes and Capital Capacity Reimbursement Payments, which is imposed on and collected from the owner, lessee, or occupant of property for providing him with the services and facilities of any Community Sewer System or the Regional Sewerage System, or both. (Amended April 12, 1984)

"Supplemental Capital Outlay Funds" means contributions by a Contracting Agency from its Capital Capacity Reimbursement Account reserves to CBMWD to supplement the funding of the planning, design and construction of Regional Sewerage System capital improvement projects. (Added April 12, 1984)

"Transmit" or "Transmission" means the conducting (i) of sewage from any delivery point to a sewage treatment and disposal plant or other point of disposal or (ii) of effluent from a sewage treatment and disposal plant to a point of disposal or reuse.

"Treat" or "Treatment" means any process or method for altering the quality of sewage to standards equal to those prescribed in Exhibit "A" hereof.

"Undersigned Contracting Agency" includes only the contracting agency specifically designated in the first paragraph of this sewage service contract and the signatory of this particular contract.

Section 2. RIGHTS AND OBLIGATIONS

The Contracting Agencies shall have the right to deliver all sewage collected by their respective Community Sewer Systems to the Regional Sewerage System and CBMWD shall have the obligation to receive into the Regional Sewerage System all sewage so delivered by the Contracting Agencies. Notwithstanding the foregoing, a Contracting Agency may acquire, construct, own and operate a wastewater treatment plant or permit another person, firm or corporation to acquire or construct a wastewater treatment plant which will be controlled and operated by the Contracting Agency when to do so is not detrimental to the operation of the Regional Sewerage System.

A Contracting Agency which intends to acquire or construct and own, operate and maintain a wastewater treatment plant shall notify CBMWD and the Regional Technical Committee in writing of its intentions. Such a notice shall include the following information: the location and capacity of the proposed wastewater treatment plant, the method and location of disposal or reuse of the effluent therefrom, the area which will be sewerage through said plant and the quantity of wastewater flow, if any, which will be removed from any Regional Treatment Plant. The Regional Technical Committee shall make a recommendation as to whether the Contracting Agency's operation of the proposed Wastewater treatment plant will be detrimental to the operation of the Regional Sewerage System within 45 days of the receipt of the Contracting Agency's written notice. Upon

receipt of such recommendation, the Board of Directors of CBMWD shall within 45 days of the receipt of the Regional Technical Committee recommendation make a determination as to whether the Contracting Agency's operation of the proposed wastewater treatment plant will be detrimental to the operation of the Regional Sewerage System, and thereafter forthwith notify the Contracting Agency and all other Contracting Agencies in writing of such determination. Any Contracting Agency may within 20 days of the date of such written notification file a written request for a hearing with the Secretary of CBMWD. Upon receipt of such a written request, the Board of Directors of CBMWD shall schedule and conduct a hearing on its determination within 30 days of the date of receipt of such written request, and at the conclusion thereof shall affirm or modify its determination. The provisions of Section 26A hereof shall apply with respect to such hearings.

The failure of the Regional Technical Committee or the Board of Directors of CBMWD to take any action required by this section within the time specified herein or to take any action required by said Section 26A within the time specified therein shall be deemed a determination by said committee or said Board that the operation of the proposed wastewater treatment plant by the Contracting Agency giving notice will not be detrimental to the operation of the Regional Sewerage System; provided that, said committee or said Board may extend the time within which action is required of it under this section for a period of 30

days by giving written notice of such extension to all Contracting Agencies at least seven days prior to the expiration of the time specified herein.

Notwithstanding the prior provisions of this section, removal of sewage flows by a Contracting Agency from an existing Regional Treatment Plant to a wastewater treatment plant to be owned or controlled and operated by the Contracting Agency shall not be considered detrimental to the operation of the Regional Sewerage System, providing that the remaining flows into said Regional Treatment Plant will meet the quality standards set forth in and established by CBMWD and will not result in the effluent from said plant violating the waste discharge requirements prescribed for said plant by the California Regional Water Quality Control Board; and provided further that the construction by a Contracting Agency of a wastewater treatment plant for the treatment and disposal of sewage from a Community Sewer System constructed by the Contracting Agency in an area which was prior to the construction of said plant unsewered shall not be considered to be detrimental to the operation of the Regional Sewerage System.

A Contracting Agency which constructs such a plant may enter into a contract with CBMWD for the maintenance and operation of the plant; provided that CBMWD shall not be obligated to enter into such a contract. A Contracting Agency which acquires or constructs such a wastewater treatment plant shall be solely responsible for the cost and expense of the

acquisition or construction and maintenance and operation of said plant. Any such wastewater treatment plant which is acquired or constructed and owned by a Contracting Agency shall not be acquired or operated by CBMWD as a part of the Regional Sewerage System without the written consent of all other Contracting Agencies except the State of California. (Amended April 12, 1984)

Section 3. COMMUNITY SEWER SYSTEMS

Each Contracting Agency shall have the exclusive right to own and operate a Community Sewer System within its Service Area and to determine in which areas within its Service Area it will operate a Community Sewer System. Each Contracting Agency shall be responsible for all costs and expenses of the acquisition, construction, maintenance and operation of its Community Sewer System. (Amended April 12, 1984)

Section 4. SEWER USER CHARGES

Each Contracting Agency may, in the manner provided by law, impose and collect sewer user charges within its Service Area for providing the services and facilities of its Community Sewer System and of the Regional Sewerage System and shall be entitled to retain, use and expend the charges for any lawful purpose. CBMWD shall not impose sewer user charges within the Service Area of any Contracting Agency without the prior consent of the Contracting Agency. (Amended April 12, 1984)

Section 5. REGIONAL INTERCEPTORS

Regional Interceptors are a part of the Regional Sewerage System and their design and construction or acquisition shall be financed as provided in section 9 hereof. Any Contracting Agency may make a written request to CBMWD for a determination as to whether or not an existing sewer has become a Regional Interceptor. Each such request received by CBMWD shall be referred to the Regional Technical Committee and such committee shall make a written recommendation to the Board of Directors of CBMWD as to whether or not the interceptor in question shall be acquired by CBMWD as a Regional Interceptor. Any Contracting Agency which disagrees with such a recommendation of the Regional Technical Committee may file a written request for a hearing thereon with the Secretary of the Board of Directors of CBMWD. Upon receipt of such a request, said Board of Directors shall schedule and conduct a hearing and give notice thereof in accordance with the provisions of section 26A hereof. Notwithstanding the preceding provisions of this section, a sewer which is utilized for the transmission of sewage of two or more Contracting Agencies and which is transmitting less than 300,000 gallons per day of sewage for the most upstream Contracting Agency shall not be acquired by CBMWD as a Regional Interceptor unless it is determined by the Board of Directors of CBMWD after recommendation by the Regional Technical Committee that such acquisition is in the best interest of the Regional Sewerage System. (Amended April 12, 1984)

Section 6. (DELETED April 12, 1984)

Section 7. REGIONAL SEWERAGE SYSTEM

CBMWD shall own and operate a Regional Sewerage System for the transmission, treatment and disposal of sewage delivered by the Contracting Agencies. The Regional Sewerage System, including any interests or capacity rights of CBMWD in facilities owned, controlled or operated by others, shall be as shown or described in the Chino Basin Regional Sewerage Plan, as provided in the Capital Outlay Ordinance, Ordinance No. 24 of CBMWD, a copy of which is attached hereto as Exhibit "B", or any amendment thereof.

Since August 14, 1972 CBMWD has proceeded with the construction of regional treatment, disposal and transmission facilities shown and described in the said Chino Basin Regional Sewerage Plan and shown on the map attached hereto as Exhibit "E". Future construction and expansion of said Regional Sewerage System facilities will be required to meet the needs of the Contracting Agencies and shall be funded as provided in Section 9 hereof.

CBMWD shall pay all costs and expenses incurred in the acquisition, construction, maintenance, and operation of the Regional Sewerage System. Each Contracting Agency shall, as provided in Section 17 hereof, pay to CBMWD service charges representing a pro rata share of all net audited costs incurred by CBMWD in the maintenance and operation of the Regional Sewerage System, and each Contracting Agency shall contribute

Supplemental Capital Outlay Funds to CBMWD for the improvement and expansion of the Regional Sewerage System as provided in Section 9 hereof. (Amended April 12, 1984)

Section 8. DISPOSAL OF SEWAGE BY CBMWD'S NON-RECLAIMABLE WASTE DISPOSAL SYSTEMS

CBMWD may provide for the transmission, treatment and disposal of any sewage delivered by a Contracting Agency either by means of the Regional Sewerage System, CBMWD's existing Nonreclaimable Waste Disposal System or any other nonreclaimable waste disposal system which CBMWD may hereafter own or have an interest in. For the purpose of this contract, sewage delivered into a Nonreclaimable Waste Disposal System by a Contracting Agency shall be deemed delivered into the Regional Sewerage System and the Contracting Agency shall be liable only for payment of the service charges hereinafter provided for. To the extent that sewage of any Contracting Agency is transmitted, treated and disposed of by means of a Nonreclaimable Waste Disposal System, a portion of the costs of the maintenance and operation of that system shall be included in the net audited costs of the maintenance and operation of the Regional Sewerage System and in the service charge rate as provided in Section 17 hereof. Such portion shall include: (i) charges actually paid or incurred by CBMWD to any person or public or private entity providing for the further transmission, treatment and disposal of the sewage delivered by a Contracting Agency and (ii) a pro rata share of the total costs of maintenance and operation of

those parts of the Nonreclaimable Waste Disposal System actually used by CBMWD for the transmission of said sewage to the person or public or private entity providing for the further transmission, treatment, and disposal thereof. Said pro rata share shall be in the proportion that the quantity of sewage delivered into the Nonreclaimable Waste Disposal System by all Contracting Agencies bears to the total quantity of all sewage and nonreclaimable industrial wastes delivered by CBMWD to the person or public or private entity providing for the further transmission, treatment, and disposal thereof.

Any capital costs associated with the disposal of Regional Sewerage System sewage through a Nonreclaimable Waste Disposal System, including the cost of acquiring permanent capacity or usage rights in Nonreclaimable Waste Disposal System facilities, shall be funded as provided in Section 9 hereof. (Amended April 12, 1984)

Section 9. CAPITAL FINANCING OF REGIONAL SEWERAGE SYSTEM

A. General

The Regional Sewerage System and any improvement or expansion of that system will provide benefits to the entire territory served by that system in that the entire territory will be benefited by the protection of public health, the protection of the quality of water sources, the improvement of water management through integrated use of all sources of water supply, including sewage treatment plant effluent, the

improvement of general conditions for individual, residential, commercial and agricultural development and the reduction in costs for the transmission, treatment, and disposal of sewage by the pro rata sharing of all costs incurred by CBMWD in the maintenance and operation of the Regional Sewerage System.

The acquisition, construction, improvement and expansion of the Regional Sewerage System shall be financed with Improvement District "C" real property tax revenues, revenues from sewage service standby or availability charges levied by the Board of Directors of CBMWD, grants and other financial assistance which may be available from any federal, state, local or other source and Supplemental Capital Outlay Funds contributed by the Contracting Agencies.

B. Improvement District "C" - Acquisition From Original Contracting Agencies and Expansion of Regional Sewerage System

CBMWD has heretofore initiated and completed proceedings under the provisions of Part 8 (commencing with Section 72000) of Division 20 of the Water Code for the formation of Improvement District "C" for the purpose of (i) acquiring certain existing sewage facilities for the Regional Sewerage System from some of the Contracting Agencies, (ii) the expansion of that system, and (iii) levying and collecting taxes in said improvement district for payment of the costs and expenses of the foregoing. The boundaries of Improvement

District "C" are shown on Exhibit "D" attached hereto and made a part hereof.

C. Acquisition of Sewage Treatment Plants and Interceptor Sewers of Other Sewage Collection Agencies; Annexation to Improvement District "C"

Upon obtaining the written approval of all Contracting Agencies, other than the State of California, CBMWD may acquire all or any part of any existing sewage treatment and disposal plant or interceptor sewers owned by any sewage collection agency and all such property, upon its acquisition, shall become a part of the Regional Sewerage System.

Any agreement by CBMWD for the acquisition of any existing sewage treatment and disposal plant or interceptor sewer, as part of the Regional Sewerage System, shall provide for either the annexation of the area benefited by said existing facilities to Improvement District "C" or sewer service under provisions of Section 12 hereof for the benefited area, and for the designation of the Contracting Agency which shall be responsible for the operation of the Community Sewer System within said area. CBMWD agrees that if it initiates and conducts proceedings for the annexation of such territory to Improvement District "C", the Contracting Agency responsible for the operation of the Community Sewer System therefore shall be liable as a condition of annexation for payment of (i) all costs

and expenses incurred by CBMWD incident to such annexation proceedings, including legal and engineering fees, reproduction, publication, mailing, administration any other related costs and expenses, (ii) capital outlay charges and extraordinary capital outlay charges, as provided for in Section 12 hereof, and (iii) Capital Capacity Reimbursement Payments which would have been payable or credited to the Contracting Agency's Capital Capacity Reimbursement Account if the annexed territory had been part of said improvement district from its formation. The total of such charges and payments shall be adjusted for the present value of the sewage facilities acquired by CBMWD. All such payments received by CBMWD pursuant to this part C shall be credited to the Regional Wastewater Capital Improvement Fund.

D. Improvement District "C" Taxes; Sewage Service Standby or Availability Charges

The primary source of financing the acquisition, improvement and expansion of the Regional Sewerage System shall be CBMWD's share of the property tax revenues allocated each fiscal year by the County Auditor of the County of San Bernardino to CBMWD for Improvement District "C". Upon receipt, CBMWD shall deposit or credit the total amount of such property tax revenues in or to the Regional Wastewater Capital Improvement Fund and all such amounts together with all interest earned thereon shall be available to and utilized by CBMWD solely for the purpose of financing the acquisition, improvement

and expansion of the Regional Sewerage System.

The Board of Directors of CBMWD may fix, levy, and collect sewage service standby or availability charges for the propose of financing the acquisition, improvement and expansion of the Regional Sewerage System. When collected, such charges shall be deposited in or credited to the Regional Wastewater Capital Improvement Fund and use for the aforesaid purpose. Any ordinance or any amendment of an ordinance imposing such charges shall be adopted by the Board of Directors of CBMWD in the manner provided in section 5 of the Capital Outlay Ordinance, or any amendment thereof, and the applicable provisions of the Municipal Water District Act of 1911, Division 20 of the Water Code. Notwithstanding the preceding provisions of this paragraph, upon receiving written request from a majority of the Contracting Agencies for the levy and collection by CBMWD of such sewage service standby or availability charges, the Board of Directors of CBMWD shall initiate the proceedings necessary for the fixing, levying and collection of such charges; provided that the Board of Directors of CBMWD may, after the public hearing on the fixing, levying and collection of such charges, elect not to fix, levy and collect such charges if it determines in its sole discretion that such an election is in the best interest of the Contracting Agencies and CBMWD.

E. Capital Capacity Reimbursement Account and Capital Capacity Reimbursement Payments

1. General

For the purpose of providing Supplemental Capital Outlay Funds to CBMWD, each Contracting Agency shall establish and maintain throughout the term of this Contract a Capital Capacity Reimbursement Account to which the Contracting Agency shall deposit or credit its Capital Capacity Reimbursement Payments. The amounts so deposited or credited by a Contracting Agency to its said account shall be used by the Contracting Agency only for the purpose of providing Supplemental Capital Outlay Funds to CBMWD; provided that interest earned on such amounts shall not be so restricted and may be used by the Contracting Agency for any lawful purpose. The source of Capital Capacity Reimbursement Payments shall be at the discretion of each Contracting Agency.

2. Capital Capacity Reimbursement Payments

Each Contracting Agency shall have deposited or credited to its Capital Capacity Reimbursement Account a Capital Capacity Reimbursement Payment for each connection which has been or will be made to its Community Sewer System or for each change in use of an existing commercial or industrial connection in an amount determined as follows:

(a) Prior to July 1, 1984:

(1) $950 for each newly constructed, Residential Unit which is connected to the Contracting Agency's Community Sewer

System after July 1, 1979, not including, however, any such units which are replacements for similar units which were connected to said system.

(2) For each newly constructed Commercial Unit or Industrial Unit which is connected to the Contracting Agency's Community Sewer System after January 1, 1980, the amount of such payment shall be $150 plus $30 per fixture unit as defined in the Uniform Plumbing Code and $0.50 per gallon estimated sewage flow in excess of 3,000 gallons per day up to a maximum of 15,000 gallons per day; provided that for any such unit or use having an estimate sewage flow in excess of 15,000 gallons per day, the amount of the Capital Capacity Reimbursement Payment therefore shall be determined by the Regional Technical Committee and approved by CBMWD.

(b) After the date set forth in paragraph (a) above the amount of the Capital Capacity Reimbursement Payment for each new connection to a Contracting Agency's Community Sewer System and for each change in use of any existing Commercial Unit or Industrial Unit which results in an increase in volume or strength of sewage therefrom shall be determined by computing the number of Equivalent Dwelling Units therefor as provided in Exhibit "J" attached hereto and made a part hereof and applying the then current Capital Capacity Reimbursement Payment amount as established by the Regional Policy Committee to each such EDU.

Notwithstanding the preceding provisions of this subpart 2, the amount which a Contracting Agency is required to have deposited in or credited to its Capital Capacity Reimbursement account for any such new connection or change of use shall be reduced by payments, if any, made by the Contracting Agency to CBMWD for the new connection or change of use under either of the following agreements: The agreement entitled "Agreement to Increase Capacity of Regional Plant No. 2 of the Chino Basin Municipal Water District", entered into on May 26, 1979, between CBMWD, City of Chino and the County of San Bernardino or the agreement entitled "Agreement for Interim Sewage Treatment Plant between Chino Basin Municipal Water District and the Cities of Upland and Ontario and the Cucamonga County Water District," entered into on January 23, 1979.

A Capital Capacity Reimbursement Payment shall be deposited or credited to a Contracting Agency's Capital Capacity Reimbursement Account for such a new connection or change of use at the time of the issuance of a building permit or a sewer connection permit, whichever is issued earlier, or for changes in the use of existing Commercial Units and Industrial Units, the permit required therefor.

3. Capital Capacity Reimbursement Reports

(a) Each Contracting Agency shall report monthly to CBMWD, at such time as CBMWD shall designate, the balance of the funds in its Capital Capacity Reimbursement Account as of the last day of the preceding month. Such monthly reports shall be

in writing and shall also contain the number of building permits and sewer permits which were issued in the Contracting Agency's Service Area during the preceding month and estimated volume of sewage flows for all residential, commercial and industrial connections within the Contracting Agency's Service Area for the current month and the cumulative total thereof. Commercial and industrial sewer connection permits shall be listed by individual permit with the number of fixture units and expected volume and strength of sewage for each permit.

(b) CBMWD shall maintain a summary accounting of the Capital Capacity Reimbursement Account reserves of all Contracting Agencies and shall make written quarterly reports to the Contracting Agencies on or before January 15, April 15, July 15 and October 15 of each fiscal year which shall include: (i) the amounts of the Capital Capacity Reimbursement Account reserves of all Contracting Agencies as of the last day of the second month of the preceding quarter (i.e., November 30, February 28, May 31 and August 31, respectively), (ii) the amount of the Regional Wastewater Capital Improvement Fund reserves as of the last day of the preceding quarter (i.e., the preceding three calendar months), (iii) a summary of all expenditures from said fund during the preceding quarter for each Regional Sewerage System capital improvement project then in progress, (iv) an estimate of the amounts to be expended from said fund for each such project during the quarter then commencing or in progress (the "current quarter"), (v) the

estimated amount of Supplemental Capital Outlay Funds, if any, which it will be necessary for the Contracting Agencies to contribute to CBMWD during the current quarter in order to provide a working capital balance in said fund which shall not exceed $1,000,000 on the last day of the second month of the quarter next succeeding the current quarter (i.e., May 31, August 31, November 30 and February 28, respectively), and (vi) the amount, if any, of the contribution of Supplemental Capital Outlay Funds for each Contracting Agency for the current quarter, determined as provided in subparts 5 and 6 of this part E.

4. Determination of Demand Deficits

Annually at the time of the preparation of each Ten-Year Forecast, pursuant to Section 9A hereof, CBMWD shall determine each Contracting Agency's Demand Deficit, if any. The determination of Demand Deficits pursuant to this subpart is for the sole purpose of allocating shortages in Supplemental Capital Outlay Fund payments as provided in subpart 6 of this part E. Except as provided in said subpart 6, such determinations shall not result in the creation of an obligation or indebtedness on the part of any Contracting Agency to CBMWD or other Contracting Agencies.

5. Supplemental Capital Outlay Fund Payments

On July 15, October 15, January 15, and April 15 of any fiscal year CBMWD may require payment by each Contracting Agency from its Capital Capacity Reimbursement Account of

Supplemental Capital Outlay Funds for the planning, design and construction of Regional Sewerage System capital improvement projects in the amount, if any, set forth for the Contracting Agency in the quarterly report due from CBMWD on such date. Upon receiving such a demand from CBMWD each Contracting Agency shall pay the amount demanded to CBMWD within 45 days of receipt of such demand. The amount of each Contracting Agency's proportionate share of the total amount of Supplemental Capital Outlay Funds demanded by CBMWD from all Contracting Agencies shall be determined based on the percentage which the amount of Supplemental Capital Outlay Funds demanded by CBMWD from all Contracting Agencies is to the total amount of the current Capital Capacity Reimbursement Account reserves of all Contracting Agencies set forth in the quarterly report upon which the demand is based. The amount demanded by CBMWD from each Contracting Agency on any such date shall be an amount determined by applying the percentage thus obtained to the balance of the reserves, not including interest, in the Contracting Agency's Capital Capacity Reimbursement Account set forth in the quarterly report upon which the demand is based. All amounts received by CBMWD from the Contracting Agencies as Supplemental Capital Outlay Funds shall be deposited in or credited to the Regional Wastewater Capital Improvement Fund. All such amounts together with all interest earned thereon shall be available and utilized by CBMWD solely for the purpose of financing the acquisition, improvement and expansion of the

Regional Sewerage System.

6. Allocation of Supplemental Capital Outlay Fund Shortages

If at the time of any demand by CBMWD for Supplemental Capital Outlay Funds, pursuant to subpart 5 of this part E, there are not sufficient funds deposited or credited to the Capital Capacity Reimbursement Accounts of all Contracting Agencies to pay the full amount of the demand, each Contracting Agency which has a Demand Deficit shall pay to CBMWD the full balance then deposited or credited to its Capital Capacity Reimbursement Account plus an amount determined based on the percentage which the amount of its Demand Deficit is of the total Demand Deficit for all Contracting Agencies. The amount to be paid by each such Contracting Agency shall be determined by multiplying the difference between the Supplemental Capital Outlay Fund demand and the total amount of the Capital Capacity Reimbursement Account balances of all Contracting Agencies by the percentage thus determined. (Amended April 12, 1984)

F. Investment of Regional Wastewater Capital Improvement Fund

All amounts deposited or credited to the Regional Wastewater Capital Improvement Fund shall be invested by CBMWD in a prudent manner in accordance with sound investment practices for the investment of public funds and pursuant to Section 53635 and 53651 of the Government Code. All earnings from such investments shall remain in the Regional Wastewater

Capital Improvement Fund and shall be reinvested and used solely for the purpose of financing the acquisition, improvement and expansion of the Regional Sewerage System.

Section 9A. FORECASTING AND PLANNING

A. Contracting Agency Reports

1. Annual Forecast

Prior to January 15, of each year, each Contracting Agency shall submit to CBMWD an updated forecast of its Capacity Demand for the succeeding ten fiscal years, which shall contain in a format required by CBMWD an estimate of the annual increase in volume of combined residential, commercial and reclaimable domestic strength industrial sewage to be delivered from the Contracting Agency's Community Sewer System into the Regional Sewerage System for each such year and the number of Equivalent Dwelling Units associated with such estimated volume.

2. Monthly Reports

On such date as CBMWD may designate, each Contracting Agency shall submit to CBMWD monthly reports of sewered building activity. Each such report shall contain the following information in a format which will allow tracking through the development process:

(a) The number of building permits issued during the month for structures which will contribute sewage to the Regional Sewerage System;

(b) Estimate volume of sewage and EDUs for such building permits;

(c) The tract number and number of lots for each tentative tract map approved during the month;

(d) The tract number and number of lots or dwelling units for each final tract map recorded during the month;

(e) The number of final inspections or certificates of occupancy issued during the month for structures which will contribute sewage to the Regional Sewerage System;

(f) The estimate volume of sewage and EDUs for all such structures.

B. CBMWD Reports

1. Ten-Year Forecast

Prior to April 1 of each year, CBMWD shall prepare and deliver to the Regional Technical Committee and the Regional Policy Committee a ten-year forecast of the Capacity Demands of all Contracting Agencies and a forecast of the dates of commencement and completion of the design and construction of capital improvement projects which will be necessary to enable the Regional Sewerage System to meet the forecasted Capacity Demands of all Contracting Agencies. Such forecasts, hereinafter referred to as the "Ten-Year Forecast," shall include:

(a) Estimates for each Regional Treatment Plant of the Capacity Demand of each Contracting Agency which receives sewerage service thereat as of June 30 of each year;

(b) An estimate of the amount of existing unused capacity for each Regional Treatment Plant as of July 1 of each year;

(c) Projected dates for the commencement and completion of design and construction of capital improvement projects necessary to meet forecasted Capacity Demands;

(d) An estimate of the amount of capacity to be added by each such project;

(e) Projected annual expenditures for the design and construction of such projects;

(f) The current balance of funds in the Regional Wastewater Capital Improvement Fund and an estimate for each year identified by source of the amount to be deposited into said fund;

(g) Current reserves in the Capital Capacity Reimbursement Accounts of all Contracting Agencies;

(h) The estimate Supplemental Capital Outlay Funds to be contributed by each Contracting Agency to CBMWD for each fiscal year included in the Ten-Year Forecast;

(i) The Demand Deficit, if any, of each Contracting Agency;

(j) A recommendation as to whether the amount of the Capital Capacity Reimbursement Payment should be increased or decreased and, if so, the amount of increase or decrease.

2. Mid-Year Report as to Financial Requirements

Prior to October 1 of each year, CBMWD shall prepare

and submit to the Regional Technical Committee and the Regional Policy Committee for review and comment a report as to the progress and status of the design and construction of capital improvement projects. Said report shall also contain revisions or current information regarding the matters referred to in subparagraphs (a), (b), (e), (g), (i) and (j) of subpart 1 of this part B.

3. Review by Regional Policy Committee

A. Ten-Year Forecast

Within 45 days after receipt from CBMWD of a Ten-Year Forecast, the Regional Policy Committee shall prioritize the capital improvement projects recommended therein and make such further recommendations to CBMWD as it deems appropriate. Capital improvement projects shall be prioritized based on the Forecasted Demands for all Contracting Agencies who do or will receive sewerage service therefrom or thereat as of the end of the third fiscal year included in the Ten-year Forecast, and facilities having the highest ratio of forecasted rates of flow to rated capacity shall be given the highest priority. Interceptor sewers shall be considered to be at 100 percent of capacity when the forecasted rate of flow therein will result in a depth of flow therein of three-fourths of the pipe diameter thereof; sewage treatment and disposal plants shall be considered to be 100 percent of capacity when the projected rate of flow into the plant will exceed 80 percent of the rated capacity thereof as determined by the Regional Technical

Committee. The prioritization of the Regional Policy Committee shall be binding upon CBMWD, and CBMWD shall follow the recommendations of the Regional Policy Committee with respect to scheduling of design and construction of prioritized capital improvement projects unless the Board of Directors of CBMWD determines, based on specific findings, that the Regional Policy Committee's recommended schedule for design and construction would impair its ability to operate the Regional Sewerage System or would impose unreasonable burdens upon it with respect to construction supervision or administration or financing of Regional Sewerage System capital improvement projects or unless a Contracting Agency objects in writing to the recommendations of the Regional Policy Committee. In the event of such a determination by CBMWD's Board of Directors or such a written objection, the hearing procedures set forth in Section 26A hereof shall apply and CBMWD's Board of Directors shall not make a final determination with respect to the Regional Policy Committee's recommendation until such hearing procedures have been completed.

B. Mid-Year Reports

Within 45 days after receipt from CBMWD of a mid-year report as provided in subpart 2 of this part B the Regional Policy Committee may but need not make recommendations or comments to CBMWD with respect thereto. CBMWD's Board of Directors shall follow the recommendations of the Regional Policy Committee with respect to such reports unless it

determines, based on specific findings, that to do so would impair its ability to operate the Regional Sewerage System or impose unreasonable burdens with respect to the timing of design and construction or financing of design and construction of Regional Sewerage System capital improvement projects or unless a Contracting Agency objects thereto in writing. In the event of such a determination by said Board of Directors or the filing of such a written objection, the hearing procedures set forth in Section 26A hereof shall apply and CBMWD's Board of Directors shall not make a final determination with respect to the Regional Policy Committee's recommendations until such hearing procedures have been completed.

C. Determination of Capital Capacity Reimbursement Amount; Amendment of Exhibit "J"

The Regional Policy Committee may prior to July 1 or January 1 of any year determine to increase or decrease the amount of the Capital Capacity Reimbursement Payment to be deposited or credited by the Contracting Agencies to their Capital Capacity Reimbursement Accounts for all new connections to their Community Sewer Systems based upon the estimated financial requirements set forth in a Ten-Year Forecast or mid-year report received from CBMWD. Prior to either of said dates, the Regional Policy Committee may also determine to modify the table and formulae set forth in Exhibit "J" hereto for determining Equivalent Dwelling Units and the amount of Capital Capacity Reimbursement Payment for new connections to Community

Sewer Systems. If the Regional Policy Committee determines that it is necessary to increase or decrease the amount of such payment or to modify such formulae, or both, the chairman of said committee shall communicate such determination or determinations in writing to the Board of Directors of CBMWD, and upon receiving such a communication, said Board of Directors shall adopt a resolution implementing the increase or decrease in the amount of Capital Capacity Reimbursement Payment and the modification of said table and formulae or both, and setting forth the date when such increase or decrease or such modification or both will become effective. Such a determination or determinations by the Regional Policy Committee and the adoption of such a resolution by the Board of Directors of CBMWD shall be binding on all Contracting Agencies, and they shall expeditiously implement the resulting change in the amount of Capital Capacity Reimbursement Payment by appropriate legislative and administrative action.

D. Reclaimable Industrial Waste

No allowance shall be made in Contracting Agency reports submitted to CBMWD pursuant to part A of this section or in any Ten-Year Forecast for any expected increase in the volume or strength of sewage attributable to proposed new industrial connections to Community Sewer Systems which are expected to discharge more than 15,000 gallons per day of reclaimable domestic strength industrial waste. All such proposed new

connections shall be reviewed by CBMWD and the Regional Technical Committee on a case-by-case basis to determine whether the waste to be discharged therefrom shall be taken into the Regional Sewerage System and the appropriate connection point' provided that, CBMWD and the Regional Technical Committee shall not disapprove such an industrial connection to a Contracting Agency's Community Sewer System unless it is determined by CBMWD or said committee that the sewage to be discharged there from will not meet the quality standards set forth by CBMWD, or will adversely affect the ability of the Regional Treatment Plant where the sewage therefrom will be treated to meet the Forecasted Demands of other Contracting Agencies which also receive sewerage service thereat, or will result in the effluent from said plant violating the waste discharge requirements prescribed for said plant by the California Regional Water Quality Control Board. (Amended October 19, 1994)

E. Forecast for Purposes of Determining Demand Deficits

Notwithstanding the preceding provisions of this section, for purposes of determining the Demand Deficits, if any, of the Contracting Agencies, as provided in subpart 4 of part E of Section 9 hereof, the Forecasted Demand for each Contracting Agency for each of the initial two years of each Ten-Year Forecast shall be deemed to be the same as was set forth for each of said years in the preceding Ten-Year Forecast. CBMWD shall set forth separately in each Ten-Year Forecast the

Forecasted Demand for each Contracting Agency for the initial two years thereof, determined as in this part provided. Said portion of each such Ten-Year Forecast shall be applicable only for purposes of determinations to be made pursuant to said subpart 4 and for no other purpose. Notwithstanding the preceding provisions of this part E, if in this most recent Annual Forecast, pursuant to subpart 1 of part A of this Section 9A, preceding the preparation of any Ten-Year Forecast a Contracting Agency has increased its Forecasted Demand for either of the initial two years of the Ten-Year Forecast over the Forecasted Demand set forth in the preceding Ten-Year Forecast, the Forecasted Demand for that Contracting Agency for each of such initial two years of the Ten-Year Forecast then begin prepared shall be the increased Forecasted Demand set forth therefor in the Contracting Agency's said Annual Forecast. (Added April 12, 1984)

Section 9B. AVAILABLE SEWERAGE CAPACITY

A. Monitoring and Reports

To ensure that available unused capacity in the Regional Sewerage System is and will be utilized to provide sewerage service to the Contracting Agencies based on their Forecasted Demands contained in the Ten-Year Forecasts, and that no Contracting Agency is deprived of sewerage service based on its Forecasted Demand as the result of any other Contracting Agency or Contracting Agencies utilizing capacity of the Regional Sewerage System substantially in excess of its or their

Forecasted Demand or Demands, respectively, CBMWD shall, at intervals not exceeding 60 days in duration, determine the quantity of sewage entering the Regional Sewerage System from the Community Sewer System of each Contracting Agency. On or before March 1 and September 1 of each fiscal year CBMWD shall submit to the Regional Policy Committee a written report regarding the relationship between the actual Capacity Demand of each Contracting Agency and the Contracting Agency's Forecasted Demand for the fiscal year.

B. New Connections

So long as the Capacity Demand of a Contracting Agency does not at any time in any fiscal year exceed its Forecasted Demand for the year by more than 15 percent or 100,000 gallons per day, whichever is greater, or if said 15 percent exceeds 200,000 gallons per day, the Contracting Agency may allow new connections to its Community Sewer System without restriction. However, if at any time during any fiscal year the Contracting Agency's Capacity Demand exceeds its Forecasted Demand for the year by more than 15 percent or 100,000 gallons per day, whichever is greater, or if said 15 percent exceeds 200,000 gallons per day, the Contracting Agency shall not allow further connections to its Community Sewer System until and unless it is determined by CBMWD that the Contracting Agency's Capacity Demand no longer so exceeds its Forecasted Demand.

C. Transfer of Capacity Demand

Notwithstanding the provisions of part B of this section, a Contracting Agency whose Capacity Demand exceeds its Forecasted Demand by more than 15 percent or 100,000 gallons per day, whichever is greater, or if said 15 percent exceeds 200,000 gallons per day ("Exceeding Contracting Agency"), may continue to allow new connections to its Community Sewer System if it receives a transfer of a portion of the Forecasted Demand of a Contracting Agency which receives sewerage service at the same Regional Treatment Plant and whose Capacity Demand is more than 15 percent or 100,000 gallons per day, whichever is greater, less than its Forecasted Demand. In the event of such a transfer, the portion of the Forecasted Demand of the transferring Contracting Agency to be transferred shall be deducted from the Forecasted Demand of the transferring agency and added to the Forecasted Demand of the Exceeding Contracting Agency for purposes of determining whether the Exceeding Contracting Agency's Capacity Demand will continue to exceed its Forecasted Demand by more than 15 percent or 100,000 gallons per day, whichever is greater, or if said 15 percent exceeds 200,000 gallons per day. Such transfers of Forecasted Demand between Contracting Agencies shall become effective upon the filing with CBMWD of a written agreement between the affected Contracting Agencies. A transferring Contracting Agency shall not receive

any payment or other consideration from the Exceeding Contracting Agency for the transfer of Forecast Demand.

D. Policy Committee Review

If CBMWD determines that a Contracting Agency's Capacity Demand is exceeding the Contracting Agency's Forecasted Demand for the fiscal year by more than 15 percent or 100,000 gallons per day, whichever is greater, or if said 15 percent exceeds 200,000 gallons per day, or if a Contracting Agency determines at any time that its Capacity Demand will so exceed its Forecasted Demand, the Contracting Agency may request the Regional Technical Committee and the Regional Policy Committee to determine whether because of Regional Sewerage System capital improvement projects then under construction or the construction of which will be commenced within the next six months, it can nevertheless be allowed to continue to make new connections to its Community Sewer System without affecting the availability of capacity in the Regional Treatment Plant where it receives sewerage service for other Contracting Agencies which also receive such service at such plant.

Such a request shall be made in writing and copies thereof shall be delivered to CBMWD and all Contracting Agencies. Upon receipt of any such written request, the Regional Technical Committee shall conduct an investigation and make recommendations to the Regional Policy Committee as to whether or not because of such current and pending Regional

Sewerage System capital improvement projects the Contracting Agency requesting the determination may be allowed to continue to make new connections to its Community Sewer System without affecting the availability of capacity in the Regional Treatment Plant where it receives sewerage service for other Contracting Agencies.

The Regional Policy Committee shall upon the basis of such recommendation determine whether or not the Contracting Agency requesting the determination should be allowed to continue to make new connections to its Community Sewer System and make a recommendation thereon to CBMWD; provided that, CBMWD shall not allow a Contracting Agency requesting such a determination to make new connections to its Community Sewer System at any time after its Capacity Demand exceeds its Forecasted Demand for a fiscal year by more than 15 percent or 100,000 gallons per day, whichever is greater, or if said 15 percent exceeds 200,000 gallons per day, if the Regional Policy Committee recommends against such new connections unless, following a hearing conducted pursuant to the provisions of Section 26A hereof, the Board of Directors of CBMWD determines by resolution containing specific findings that because of such current and pending Regional Sewerage System capital improvement projects the Contracting Agency should be allowed to continue to make new connections to its Community Sewer System. (Added April 12, 1984)

Section 9C. MAJOR CONSTRUCTION CONTRACTS

A. Construction Contracts

CBMWD shall not proceed with the award of a construction contract for a budgeted Regional Sewerage System capital improvement project which will involve an expenditure in excess of $1,000,000 without the approval of the Regional Policy Committee. (Such projects are hereinafter referred to as "Major Projects.") To assist in the Regional Policy Committee's review of Major Projects, CBMWD shall prepare and submit to the Regional Policy Committee a short-term financial forecast for each Major Project which shall cover the anticipated duration of the project. The forecast shall include and consider current building and sewer connection activity as reported by each Contracting Agency, Regional Wastewater Capital Improvement Fund and Capital Capacity Reimbursement Account balances and other relevant data requested by the Regional Policy Committee. The Regional Policy Committee shall meet to approve or disapprove any Major Project within 45 days after receipt of the completed short-term financial forecast therefor. Such approval or disapproval shall be based on the availability of Regional Wastewater Capital Improvement Fund and Capital Capacity Reimbursement Account balances to finance the construction of the project.

B. Design Contracts

1. Prioritized Projects

CBMWD shall not award a contract for the design of any Major Project which has not been prioritized by the Regional Policy Committee pursuant to subpart 3 of part B of Section 9A hereof.

2. Selection of Design Engineers

Before proceeding with the design of any Major Project, CBMWD shall prepare and issue requests for proposals to qualified engineering firms experienced in the design of wastewater facilities. The Regional Technical Committee shall review all proposals received and, within 45 days after receipt thereof, deliver to CBMWD an unranked recommended list of no less than three (3) qualified engineering firms. CBMWD shall select the design engineer from the committee's recommended list. Upon failure of the Regional Technical Committee to deliver such a listing to CBMWD within 45 days after receipt of the proposals for the design of a project, CBMWD may select any qualified engineering firm submitting a proposal as the design engineer.

3. Design Review

CBMWD shall keep the Regional Technical Committee fully informed of the progress and details of design of all Major Projects through three (3) formal meetings with the design engineer and periodic progress reports by CBMWD. The three formal meetings shall occur:

(a) The first meeting shall occur within thirty (30) days after the design engineer is given notice to proceed. At that meeting the general details of design shall be discussed and agreed upon by the committee and the design engineer.

(b) The second meeting shall occur upon the completion of 10 percent of the design work. At that meeting the design engineer shall have completed and submit to the committee an analysis of unit process requirements and sizing, preliminary layouts and flow sheets, and a preliminary estimate of construction cost. Based on the discussion at this meeting, the design engineer shall prepare and deliver to the committee a written report, which shall when agreed to by the committee, serve as the basis for final design.

(c) The third meeting shall occur upon the completion of 60 to 70 percent of the design work and shall be for the purpose of an in depth review by the committee. (Added April 12, 1984)

Section 10. (Deleted April 12, 1984)

Section 11. AVAILABILITY OF REGIONAL SYSTEM; CBMWD'S PERFORMANCE

A. Contracting Agencies

The services and facilities of the Regional Sewerage System shall be available to any property within Improvement District "C," subject to such terms and conditions as may be prescribed by a Contracting Agency for connection to its Community Sewer System.

B. Other Sewage Collection Agencies

CBMWD shall not make the services and facilities of the Regional Sewerage System available, other than on a temporary, emergency basis, to any sewage collection agency which is not a party to a Service Contract until such agency has entered into a service contract. Any Contracting Agency may restrain violations of the provisions of this part B by mandamus, injunction or other appropriate remedy.

C. CBMWD's Performance

CBMWD shall exert every reasonable effort to insure that capital improvement projects necessary to enable the Regional Sewerage System to meet the Forecasted Demands of all Contracting Agencies are planned, designed and constructed in a timely manner and so that the Regional Sewerage System will at all time be able to provide for the Capacity Demands of all Contracting Agencies. The Contracting Agencies recognize that the timing of the planning, design and construction of such capital improvement projects is largely dependent upon the Contracting Agencies making reasonable accurate projections of increased connections to and usage of their Community Sewer Systems. (Amended April 12, 1984)

Section 12. EXTRA-TERRITORIAL SEWER SERVICE

A. Service Outside the Boundaries of CBMWD and Improvement District "C"

1. Upon the Effective Date of a Service Contract

Any Contracting Agency which, upon the effective date

of the Service Contract with that agency, was furnishing sewer service to any territory outside the boundaries of CBMWD and Improvement District "C," may continue to furnish such service and shall be entitled to the services and facilities of the Regional Sewerage System for that purpose. Each Contracting Agency providing sewer service to any such outside territory shall file a map or maps with the secretary of CBMWD showing the boundaries of all such territory.

2. After the Effective Date of a Service Contract

Any Contracting Agency, after the effective date of the Service Contract with that agency, may furnish sewer service to additional territory outside the boundaries of CBMWD and of Improvement District "C." Prior to furnishing such sewer service, the Contracting Agency shall file a written request with CBMWD. Upon receipt of such a written request, CBMWD shall notify all other Contracting Agencies in writing of the receipt of the request. At the written request of any Contracting Agency, CBMWD shall schedule a hearing on the written request for extra-territorial service, and the hearing shall be conducted by CBMWD in accordance with the hearing procedures set forth in Section 26A hereof; provided that such a request for a hearing must be received by CBMWD within thirty (30) days after the date of CBMWD's written notice of the receipt of the request.

The hearing shall be upon the question of authorizing sewer service to the additional territory. Upon the conclusion

of the hearing, the Board of Directors of CBMWD shall by resolution authorize sewer service to all or any part of the additional territory by the applicant or applicants unless it determines that such service is not in the public interest, in which case the resolution of said Board of Directors shall set forth findings in support of that determination.

B. Annual Capital Outlay Charge for Territory Outside CBMWD and Improvement District "C"

In addition to the payment of service charges, each Contracting Agency providing the services and facilities of the Regional Sewerage System to territory outside CBMWD and Improvement District "C" shall be obligated to pay CBMWD special capital outlay charges for such territory, as provided in subpart 1 or 2 of this part B or both such subparts, if both are applicable. Moneys received by CBMWD in payment of special capital outlay charges shall be deposited or credited to the Regional Wastewater Capital Improvement Fund and utilized, together with all interest earned thereon, solely for the purpose of financing the acquisition, improvement and expansion of the Regional Sewerage System.

1. Annual Capital Outlay Charge

The Contracting Agency shall annually pay CBMWD a special capital outlay charge in an amount equivalent to the amount of the property tax and other revenue which CBMWD would have received during the fiscal year if such property were within Improvement District "C." Such charge shall be payable

by the Contracting Agency during each fiscal year in the amounts and at the times specified by CBMWD.

2. Extraordinary Capital Outlay Charge

If any Contracting Agency furnishes sewer service to any additional territory outside of CBMWD and Improvement District "C" pursuant to subpart 2 of part A of this section after the effective date of the Service Contract with that agency, the Contracting Agency shall pay to CBMWD an extraordinary capital outlay charge with respect to such territory. Such charge shall be in an amount equal to the total of (i) all past capital outlay taxes which would have been imposed by CBMWD prior to July 1, 1978 upon taxable property within such territory had it been subject to taxation by CBMWD for capital outlay taxes under the Capital Outlay Ordinance, (ii) an amount equivalent to the total property tax revenue which would have been received by CBMWD pursuant to Sections 96 through 99 of the Revenue and Taxation Code for all fiscal years subsequent to July 1, 1978, and (iii) and an amount equal to all other revenues which CBMWD would have received had such territory been within Improvement District "C." CBMWD may authorize any extraordinary capital outlay charges to be paid in deferred installments plus interest over a period not exceeding 25 years from the commencement of sewer service to the extra-territorial territory or the unexpired term of this contract, whichever may be the shorter.

C. Capital Capacity Reimbursement Account Payments

If any Contracting Agency furnishes sewer service to any additional territory pursuant to subpart 2 of part A of this section after the effective date of the Service Contract with that agency, the Contracting Agency shall deposit or credit to its Capital Capacity Reimbursement Account a Capital Capacity Reimbursement Payment for each new Residential Unit which was or is connected to its Community Sewer System within that territory subsequent to July 1, 1979 and for each newly constructed Commercial Unit or Industrial Unit which was or is connected to the Community Sewer System within that territory subsequent to January 1, 1980, the amount of which shall be determined as provided in subpart 2 of part E of Section 9 hereof. (Amended April 12, 1984)

Section 13. DELIVERY POINTS: CONNECTION COSTS

Each Contracting Agency shall deliver sewage from its Community Sewer System into the Regional Sewerage System at such delivery points as may, from time to time, be requested by the Contracting Agency and approved by CBMWD. CBMWD shall give the Regional Technical Committee not less than 60 days' written notice of its intention to approve any new delivery point. Upon receipt of a favorable report and recommendation from the committee or upon failure of the committee to report within said 60-day period, CBMWD may authorize the new delivery point. If the Regional Technical Committee recommends against a new delivery point for any Contracting Agency, the Contracting Agency may file a written request for a hearing with the

secretary of the Board of Directors of CBMWD. Upon receipt of such a request, said Board of Directors shall schedule and conduct a hearing in accordance with the provisions of Section 26A hereof. All costs and expenses of making the connection between the Regional Sewerage System and the Community Sewer System of any Contracting Agency shall be borne by the Contracting Agency. (Amended April 12, 1984)

Section 14. DETERMINATION OF SEWAGE DELIVERIES: COSTS OF MEASURING EQUIPMENT

CBMWD shall determine the amount of sewage delivered to the Regional Sewerage System by all Contracting Agencies and shall maintain accurate and complete records thereof. The amount of sewage delivered to the Regional Sewerage System by each Contracting Agency shall be determined by CBMWD based on a standard daily measurement or contribution per Equivalent Dwelling Unit agreed to from time to time by CBMWD and the Regional Technical Committee.

If required by CBMWD, after recommendation of the Regional Technical Committee, a Contracting Agency shall install, at its expense, and CBMWD shall maintain and operate at its expense, measuring devices and equipment for measuring the flow of sewage from the Contracting Agency's Community Sewer System into the Regional Sewerage System. Prior to installation, CBMWD shall approve the design of such measuring devices and equipment and shall inspect and approve their installation. Such measuring devices and equipment shall be

examined, tested and serviced regularly, but not less than once a year, by CBMWD to insure their accuracy. At any time CBMWD or any Contracting Agency may inspect any such measuring device and equipment and all records and measurements taken therefrom. (Amended April 12, 1984)

Section 15. CONTROL AND DISPOSITION OF SEWAGE: CONTRACTING AGENCIES RIGHT OF PURCHASE OF TREATED OR RECLAIMED EFFLUENT

A. General

Subject to the provisions of this Section 15 and Section 16, CBMWD shall have total ownership and control of all sewage delivered into the Regional Sewerage System for the purpose of transmission, treatment and disposal thereof; subject to the right of first purchase by any Contracting Agency, the use of all treated effluent from the Regional Sewerage System shall be within the sole discretion of CBMWD. If any Contracting Agency exercises its right of first purchase of treated effluent, then such agency shall have the total ownership and control of all treated effluent delivered to it and the use thereof shall be within the sole discretion of that agency.

B. Right of Purchase of Treated or Reclaimed Effluent

Each Contracting Agency, at its option, shall have the right of first purchase of treated or reclaimed effluent under either of the following two alternatives:

1. Each Contracting Agency shall have the right of first purchase of treated effluent, as provided in Section 16 hereof; or

2. Upon written request by any Contracting Agency, CBMWD shall enter into an agreement, substantially similar to Exhibit G, attached hereto and made a part hereof, for reclamation of treated effluent and the right of first purchase of reclaimed effluent. Upon execution by a Contracting Agency of such an agreement and upon the availability to the Contracting Agency of reclaimed effluent pursuant thereto, all or any portion of the disposal costs of the Regional Sewerage System attributable to the disposal of the treated effluent of the Contracting Agency and to the disposal of reclaimed effluent by CBMWD downstream from any CBMWD reclamation facility or facilities reclaiming the treated effluent of the Contracting Agency shall be excluded from the service charge of the Contracting Agency as determined under Sections 17 and 18 hereof, and shall be financed by CBMWD from sources other than service charges, Improvement District "C" tax revenues and Supplemental Capital Outlay Funds. (Amended April 12, 1984).

Section 16. SALE, BENEFICIAL USE OR DISPOSAL OF TREATED EFFLUENT

A. Purchase of Treated Effluent from CBMWD

1. Contracting Agencies: Right of Purchase

Each Contracting Agency shall have the right of first purchase from CBMWD of treated effluent in a total quantity not

exceeding the base entitlement of the Contracting Agency.

2. Base Entitlement of Contracting Agencies

The total base supply of effluent which is subject to the right of first purchase from CBMWD by the Contracting Agencies receiving sewerage service at any Regional Treatment Plant shall be the total quantity of sewage delivered into the Regional Sewerage System by all such Contracting Agencies, measured at the intake point of the Regional Treatment Plant, less normal processing losses resulting from the treatment of sewage. Sewage exported from the Chino Basin by CBMWD pursuant to Section 8 hereof shall not be part of the total base supply.

Each Contracting Agency, including any Contracting Agency whose sewage is exported pursuant to Section 8 hereof, shall have a base entitlement to a portion of the total base supply of effluent, said portion being in the proportion that the quantity of sewage delivered into the Regional Sewerage System by the Contracting Agency bears to the total quantity of sewage delivered into the Regional Sewerage System by all Contracting Agencies.

3. Delivery Points

Unless otherwise agreed by CBMWD, the delivery point or points of any Contracting Agency exercising its rights of first purchase of treated effluent shall be the discharge point or points of each Regional Treatment Plant or any disposal facility of CBMWD which provides further treatment and disposal of wastewater from any Regional Treatment Plant.

4. Exercise of Base Entitlement at Various Discharge Points

If none of the sewage collected by a Contracting Agency is exported pursuant to Section 8 hereof, the base entitlement of such agency shall be exercised as provided in paragraph a of this subpart 4. If all of the sewage collected by a Contracting Agency is exported, the base entitlement of such agency shall be exercised as provided in paragraph b of this subpart E. If only a portion of the sewage collected by a Contracting Agency is exported, the portion of the base entitlement of such agency represented by nonexported sewage shall be exercised as provided in said paragraph a and the portion represented by exported sewage shall be exercised as provided in said paragraph b.

The base entitlement of each Contracting Agency shall be exercised in quantities and at delivery points determined as follows:

a. If the sewage collected by a Contracting Agency ("agency sewage") is treated:

(1) At a single Regional Treatment Plant, the total base entitlement of such agency shall be exercised from treated effluent discharge from that plant or any disposal facility of CBMWD providing further treatment and disposal of wastewater from that plant.

(2) At two or more Regional Treatment Plants, the base entitlement of such agency shall be exercised from each such plant in the proportion that the total sewage of the particular agency which is treated at that plant bears to the total sewage of all agencies whose sewage is treated at that plant or any disposal facility of CBMWD providing further treatment and disposal of wastewater from that plant.

b. If all of the sewage collected by a Contracting Agency is exported, the base entitlement of such agency shall be exercised from a pro rata share of treated effluent discharged from each of the Regional Treatment Plants, computed as follows:

(1) Based upon the preceding fiscal year, a determination of the ratio of the total quantity of all agency sewage treated by each Regional Treatment Plant to the total quantity of all agency sewage treated by all such plants or all such plants and any disposal facility of CBMWD providing further treatment and disposal of wastewater from any such plant.

(2) The pro rata share of an exporting agency for each Regional Treatment Plant shall be determined by multiplying the ratio for that plant, computed under (1) above, by the base entitlement of such agency.

b. 15% to the Regional Wastewater Capital Improvement Fund.

C. Measurement of Treated Effluent

CBMWD shall install, maintain, and operate measuring devices and equipment for the measurement of deliveries of treated effluent to the Contracting Agencies at a location or locations mutually agreed upon by CBMWD and the Contracting Agencies. The measuring devices and equipment shall be examined, tested and serviced regularly to insure their accuracy. At any time, CBMWD or any Contracting Agency may inspect any measuring devices and equipment and all records and measurements taken therefrom.

D. Notice of Proposed Delivery

Prior to the commencement of each fiscal year, notice of the delivery of treated effluent shall be given as follows:

1. Request by CBMWD

Between the first day of January and the first day of March of each year, CBMWD shall request each Contracting Agency to provide CBMWD with a schedule of the estimated flow and quantity of treated effluent to be delivered to each person or agency during the next fiscal year and the proposed points of delivery. The rates of flow and quantity shall not exceed the delivery capability of the facilities then in operation.

2. Response by Contracting Agencies

Within 30 days of the date of each such request by CBMWD, each Contracting Agency shall provide CBMWD with the schedule requested pursuant to subpart 1 above; provided that if a Contracting Agency does not intend to exercise its right of first purchase, it need not respond in any manner to CBMWD.

3. Allocation of Treated Effluent

On or before the first day of May of each year, CBMWD shall allocate treated effluent to the Contracting Agencies that have submitted schedules pursuant to subpart 2 above.

4. Additional Allocation of Treated Effluent

At any time during the fiscal year and upon 60 days written notice to CBMWD, a Contracting Agency may apply for the delivery of any treated effluent then available at a rate of flow or quantity greater than that allocated pursuant to subpart 3 above. However, the rates of flow and quantity shall not exceed the delivery capability of the treatment facilities then in operation. (Amended April 12, 1984)

Section 17. SERVICE CHARGES FOR MAINTENANCE AND OPERATION OF THE REGIONAL SEWER SYSTEM

All Contracting Agencies shall pay service charges for all sewage delivered to the Regional Sewerage System. Each Contracting Agencies shall pay its pro rata share of all net audited costs incurred by CBMWD in the maintenance and operations of the system. Net audited costs consist of:

A. Costs of maintenance and operation of all transmission and treatment facilities comprising the Regional Sewerage System and all disposal facilities required for the disposition of any treated effluent discharged from that system; and

B. Any other costs reasonably related to the maintenance and operation of the system; and

C. Based upon generally accepted engineering and accounting principles, reasonable reserves for the estimated costs and expenses of:

1. Replacement of any facilities where the costs and expenses of replacement are customarily considered a part of the costs and expenses of extraordinary maintenance which adds to the normal service life of facilities; and

2. Unforeseen contingencies; and

D. Actual costs and expenses incurred by CBMWD for the transmission, treatment and disposal of any sewage delivered by a Contracting Agency through Nonreclaimable Waste Disposal System of CBMWD as provided for in Section 8 hereof.

(Amended April 12, 1984)

Section 18. SERVICE CHARGE RATE

Concurrently with adoption of the Regional Sewerage System budget, the Board of Directors of CBMWD shall fix the service charge rate for the fiscal year. The rate shall be expressed in dollars and cents for each Equivalent Dwelling Unit (EDU) of sewage and shall be computed by subtracting from the

total estimated maintenance and operation expenses of the Regional Sewerage System the amount of any estimated revenues from the sale of effluent or sludge or other such offsetting revenues, and dividing the difference by the total estimated EDU's of sewage to be delivered into the system, all as set forth in the Regional Sewerage System budget adopted for the fiscal year. The estimated EDU's of sewage delivered into the Regional Sewerage System shall be determined based on a standard daily measurement or contribution of sewage per EDU agreed to from time to time by CBMWD and the Regional Technical Committee. (Amended April 12, 1984)

Section 19. REGIONAL SEWERAGE SYSTEM BUDGETS

A. Fiscal Year Budgets

For each fiscal year the Board of Directors of CBMWD shall cause to be prepared and shall adopt a Regional Sewerage System budget.

B. Form and Content of Budgets

The budget for each fiscal year shall contain a plan of financial operations for the Regional Sewerage System for the fiscal year and shall contain an estimate of the requirements for expenditures, including provisions for any reserves, and the means of financing such requirements. The budget shall be itemized and shall show in reasonable detail the nature and purpose of each item of revenue and expense and the actual or estimated amount thereof. The budget shall be in two parts. One part shall consist of a plan of financial operations for the

capital costs of the acquisition and construction of the Regional Sewerage System, and the other part shall consist of a plan of financial operation for the maintenance and operation of the system, prepared as follows:

1. Capital Improvement Fund Budget

The part covering the costs of the acquisition and construction of the Regional Sewerage System shall show:

a. The various items and amounts of capital costs and the total thereof;

b. The total amount in the Regional Wastewater Capital Improvement Fund and the available and unencumbered balance of such fund as of the commencement of the fiscal year and an estimate of the amount therein and the unencumbered balance thereof as of the end of the fiscal year;

c. The amounts, if any, of CBMWD revenues from sources other than Improvement District "C" property taxes which are or will be available for payment of capital costs and the total thereof;

d. The estimated amount of Improvement District "C" property taxes to be received during the fiscal year;

e. The projected amount of Supplemental Capital Outlay Fund contributions required from each Contracting Agency during the fiscal year and the total thereof.

2. Maintenance and Operations Fund Budget

The part covering the maintenance and operation of the Regional Sewerage System shall show:

a. The various items and amounts of maintenance and operation expenses and the total thereof;

b. The total amount in any reserves theretofore established, and the available and unencumbered balance in such reserves as of the commencement and end of the fiscal year;

c. The amount of service charges payable by each Contracting Agency and the total paid or payable by all Contracting Agencies;

d. The amounts, if any, of revenue from sources other than services charges which will be available for payment of maintenance and operation expenses and the total thereof;

e. The total amount required to be raised from service charges for payment of maintenance and operations expenses;

f. The quantity of sewage to be delivered by each Contracting Agency during the fiscal year and the total thereof;

g. The rate of the service charge for the fiscal year;

h. The amount of any surplus of service charges received by CBMWD during the fiscal year preceding the fiscal year the fiscal year then in progress in excess of the cost of maintenance and operation of the Regional Sewerage System for that year which was transferred to the Regional Sewerage System Operation and Maintenance Fund reserve for replacement of Regional Sewerage System facilities as a result of the annual audit for such preceding fiscal year, or the amount, if any, of

any shortage in the amount of service charges received by CBMWD during such preceding fiscal year less than the cost of maintenance and operation of the Regional Sewerage System for that year which was transferred from said reserve during the year then in progress as a result of the annual audit for such preceding fiscal year;

i. The proportionate amount of any such shortage which will be added to the total service charge of each Contracting Agency for the fiscal year next succeeding the fiscal year then in progress.

C. Comparative Data

For comparative purposes, the amounts and rates set forth in budgets shall be shown as follows:

1. On an actual basis for the second fiscal year preceding that to which the budget is to apply;

2. On an estimated or actual basis for the first fiscal year preceding that to which the budget is to apply;

3. On an estimated basis for the fiscal year to which such budget is to apply;

D. Preparation and Approval of Proposed Budgets

Not later than April 1 of each year, the Board of Directors of CBMWD shall direct its General Manager, or such other person or persons as the Board may designate, to prepare and submit to the Board a proposed budget for the next fiscal year. Upon submission of the proposed budget, the Board of Directors may make changes therein and, not

later than May 1 of each year, shall adopt a resolution declaring its intention to adopt the proposed budget and specifying a time, not earlier than June 1 nor later than June 30, and a place at which the Board of Directors will hold a hearing on the question of the adoption of such budget.

E. Notice and Hearing on Proposed Budget

Immediately after adoption of the resolution of intention, the secretary of CBMWD shall mail a copy of the resolution and the proposed budget to each Contracting Agency and to each member of the Regional Policy Committee. The Regional Policy Committee shall review the proposed budget and, not later than 10 days preceding the date fixed for hearing, shall submit its written report and recommendation thereon to the General Manager of CBMWD and to each Contracting Agency.

At the hearing on the proposed budget, the Board of Directors of CBMWD shall consider the report and recommendations of the Regional Policy Committee and the comments of all interested persons. At any time prior to the adoption of the budget, the Board may make such changes in the proposed budget as it deems advisable.

F. Adoption of Budget and Determination of the Service Charge Rate

Not later than June 30 of each year, the Board of Directors of CMBWD shall by resolution adopt the budget and determine the rate of service charge for the fiscal

year. The several amounts of proposed expenditures specified in the adopted budget shall be deemed appropriated for the fiscal year and for the purposes specified in the budget and the Board of Directors of CBMWD shall be authorized to make expenditures and incur obligations in accordance therewith. The Board of Directors shall alter or adopt the budget in accordance with the report and recommendations of the Regional Policy Committee, unless the Board of Directors, based on specific findings in said resolution, determines that such alteration or adoption impairs CBMWD's ability to operate the Regional Sewerage System. Such resolution shall set forth findings in support of the determinations of the Board of Directors.

If the Board of Directors fails to adopt a budget by June 30 of any fiscal year then, until such time as the Board shall adopt such budget, the budget last adopted and the service charge rate determined therein shall constitute the budget and rate for such fiscal year.

G. Capital Improvement Projects

The several amounts of proposed expenditures specified in the adopted budget for any fiscal year for capital improvements shall be deemed appropriated for the fiscal year and for the projects specified in the budget and the Board of Directors shall be authorized to make expenditures and incur obligations in accordance therewith. In the event that subsequent County Auditor estimates of Improvement District "C"

property tax revenues are received which adversely impact the funding of budgeted capital improvement projects, CBMWD shall initiate a budget review through the Regional Policy Committee and amend the budget as necessary. If the Board of Directors fails to adopt a budget by June 30 of any fiscal year then, until such time as the Board shall adopt such budget, funds necessary to complete capital acquisition and improvement projects initiated as a result of the last approved budget shall be considered appropriate and work in progress continued. No new capital improvement projects shall be initiated prior to adoption of the budget. However, the Contracting Agencies shall continue to be obligated to make Supplemental Capital Outlay Fund payments to CBMWD pursuant to subpart 5 of part E of Section 9 hereof.

H. Adoption of Separate Budgets

Notwithstanding the preceding provisions of this section, the Board of Directors of CBMWD may elect for any fiscal year to separately prepare and adopt a Capital Improvement Fund Budget and a Maintenance and Operation Fund Budget. If said Board elects to so proceed, each such separate budget shall be prepared in accordance with the provisions of this section which are applicable thereto. Both said budgets shall be processed and adopted in accordance with the procedures and pursuant to the time schedule set forth in parts D, E and F of this section. (Amended April 12, 1984)

Section 20. BILLING AND PAYMENT OF SERVICE CHARGES

A. Monthly Statements of Service Charges

Not later than 15 days after the end of each month, CBMWD shall mail a statement of service charges to each Contracting Agency, setting forth the quantity and Equivalent Dwelling Units of sewage delivered during such month from the Contracting Agency's Community Sewer System into the Regional Sewerage System and the total thereof, the service charge rate applicable thereto and the total service charge due and payable to CBMWD for said month. Monthly service charges shall be based on the service charge rate fixed in the Regional Sewerage System budget for the fiscal year then in progress. The Equivalent Dwelling Units (EDU) of sewage delivered by the Contracting Agencies shall be determined based on a standard daily measurement or contribution of sewage per EDU agreed to from time to time by CBMWD and the Regional Technical Committee.

B. Payment of Statements; Interest on Overdue Payments

Each Contracting Agency shall pay the amount of the service charge set forth in any statement on or prior to its due date, namely, the forty-fifth day following the date of the mailing of such statement. Any such amount not paid by the due date shall accrue interest on a monthly basis from the due date at an annual rate equal to the current federal discount rate plus 2 percent.

Interest paid upon any delinquent amount shall be credited to the Regional Sewerage System Maintenance and Operation Fund unless, by reason of such delinquency, CBMWD shall have advanced the amount of the delinquency from other sources, in which case, the interest shall be credited to such fund as the Board Of Directors of CBMWD may designate.

A Contracting Agency shall not be entitled to withhold payment, in whole or in part, of the amount of any statement for service charges pending action pursuant to part D of this Section 20.

C. Adjustment for Net Audited Costs

If, upon completion of the CBMWD annual audit for fiscal year, it is determined that the amount received by CBMWD during such year from service charges is more or less than the cost of maintenance and operation of the Regional Sewerage System for the year, the surplus or shortage, as the case may be, shall be transferred to or made up from the Regional Sewerage System Operation and Maintenance Fund reserve for replacement of Regional Sewerage System facilities (the "Replacement Reserve"). If such an audit results in a surplus being transferred to the Replacement Reserve, an appropriate adjustment shall be made in the budget for the fiscal year next succeeding the fiscal year then in progress and the rate of the service charge for that fiscal year shall be adjusted accordingly. If such an audit results in a shortage being made up out of the Replacement Reserve, an

appropriate adjustment shall be made in the budget for the fiscal year next succeeding the fiscal year then in progress to provide for the reinstatement of the amount of the shortage, and the service charge rate for that fiscal year shall be adjusted accordingly.

D. Adjustment for Overpayment or Underpayment

Upon disagreement between any Contracting Agency and CBMWD over the amount of service charges or the discovery of an error in computation of service charges for a Contracting Agency, which is not resolved within 30 days, CBMWD shall immediately provide written notice of such disagreement or error to the Regional Technical Committee and shall request a recommendation and report from the committee. If such a written report is filed with CBMWD within 60 days of giving notice, CBMWD shall credit or debit any affected Contracting Agency's service charge account for the following month in the manner recommended by the Regional Technical Committee. If such a written report is not filed with CBMWD within 60 days of giving notice, or upon request of the Regional Technical Committee or any Contracting Agency, the Board of Directors of CBMWD shall initiate hearing procedures on said disagreement or error in accordance with Section 26A hereof. Upon the conclusion of the hearing, the Board of Directors of CBMWD shall, by resolution, make its determination on service charge adjustments, due dates and any interest due, and shall provide for the appropriate

credit to or debit of any affected Contracting Agency's service charge account for the following month.

E. Deposit of Payments in Maintenance and Operation Fund

All monies received by CBMWD in payment of service charges shall be deposited in and credited to a separate fund or account in the treasury of CBMWD, to be known as the "Regional Sewerage System Maintenance and Operation Fund." All monies in said fund and interest earned thereon shall be used and expended only for payment of maintenance and operation expenses paid or incurred by CBMWD under the provisions of this contract. (Amended April 12, 1984)

Section 21. (DELETED October 19, 1994) (See Regional Pretreatment Agreement)

Section 22. (DELETED October 19, 1994) (See Regional Pretreatment Agreement)

Section 23. GRANTS AND FINANCIAL ASSISTANCE

CBMWD and the Contracting Agencies shall exercise their best efforts to obtain the maximum amounts of grants and other financial assistance which may be available from any federal, state, local, or other source for defraying all or any part of the capital costs and the maintenance and operation expenses of the Regional Sewerage System. The General Manager of CBMWD, the Regional Policy Committee, and the Regional Technical Committee shall keep each other fully informed of any available grant or financial assistance programs known to any of them.

Prior to undertaking negotiations for a grant or

other financial assistance affecting the Regional Sewerage System, CBMWD shall give the Regional Policy Committee written notice of its intention to do so. Thereupon the committee may designate one representative who shall be entitled to participate with CBMWD in all such negotiations. The representative shall be a person skilled in the design, construction, maintenance, and operation of sewage facilities and may be a member of the Regional Technical Committee. The representative shall keep the Regional Policy Committee and the Regional Technical Committee fully informed concerning the status of the negotiations and the nature and contents ,of any proposed final application or agreement for grant or other financial assistance.

In addition, CBMWD shall annually submit a report to the Regional Policy Committee on any pending or proposed applications for grants or other financial assistance. Such report shall accompany each proposed annual budget and be mailed in the manner provided in part E of Section 19 hereof.

Each Contracting Agency shall be jointly responsible with CBMWD for all conditions, restrictions, or limitations imposed by any agency as a condition for extending a grant or other financial assistance. Any such agency, CBMWD, or any Contracting Agency may restrain any violation of such conditions, restrictions, or limitations by mandamus, injunction or other appropriate remedy.

CBMWD's costs for the acquisition, construction,

maintenance, or operation of the Regional Sewerage System shall be reduced by amounts of any grants or other financial assistance received therefor by CBMWD from the federal or state government. (Amended April 12, 1984)

Section 24. REGIONAL POLICY COMMITTEE

The parties desire to provide for a Regional Policy Committee to advise CBMWD of the needs and views of the Contracting Agencies concerning CBMWD's policies and activities in the financing, acquisition, construction, maintenance and operation of the Regional Sewerage System, to make reports and recommendations with respect thereto, and to fully inform the Contracting Agencies concerning such policies and activities.

Each Contracting Agency shall appoint one regular member and one alternate member to the Regional Policy Committee. Both such members shall be members of the Contracting Agency's governing body. The regular and alternate members so appointed shall serve at the pleasure of the appointing agency. Each Contracting Agency shall give the secretary of CBMWD immediate notice of all appointments and removals made by it and of the name and mailing address of each appointee. CBMWD shall appoint one regular member and one or more alternates to the Regional Policy Committee. The members so appointed shall be members of the Board of Directors of CBMWD and shall serve at the pleasure of CBMWD. The CBMWD member shall be entitled to participate at all regular and special

meetings of the committee but shall have no vote.

Each regular member of the Regional Policy Committee or his alternate, except the member or alternate appointed by CBMWD, shall have one vote.

A majority vote shall be required to carry any matter before the committee. A majority shall consist of members representing a majority of the Contracting Agencies, not including the State of California.

The committee shall hold a regular meeting on or before the second Thursday of every other month and shall meet in special meeting at the call of any member or at the call of CBMWD. The committee may adopt such procedures and rules as it deems advisable concerning its officers, meetings and the manner and method of making its reviews, reports and recommendations on any matter affecting the acquisition, construction, maintenance and operation of the Regional Sewerage System.

CBMWD shall, if requested by the committee, provide the committee with a meeting place and with the services, advice and assistance of members of its staff. All records, reports and other information of CBMWD pertaining to the financing, acquisition, construction, maintenance and operation of the Regional Sewerage System shall be available for inspection by members of the committee. CBMWD agrees to maintain and make available to the committee accurate records of all of its costs, disbursements and receipts with respect to activities under this contract. (Amended April 12, 1984)

Section 25. REGIONAL TECHNICAL COMMITTEE

The parties desire to provide for a Regional Technical Committee. The members and alternate members of the Regional Technical Committee shall be appointed, vote and be governed in the same manner provided in Section 24 hereof for the Regional Policy Committee, except that the members and alternates shall be officers or employees of the Contracting Agencies, or other persons knowledgeable in the design, construction, maintenance and operation of sewage facilities, and that CBMWD shall be entitled to appoint one member and one alternate member with the same right of participation and voting as other members. The committee shall hold a regular bimonthly meeting and shall meet in special meeting at the call of any member.

The committee may, and upon request by the Regional Policy Committee or CBMWD shall, review and make recommendations concerning any of the following technical matters: the acquisition, design, construction, maintenance, operation, or financing of sewer facilities, sewage treatment, reclamation, or disposal facilities, sewage and effluent measuring devices and equipment, Community Sewer Systems and the Regional Sewerage System; sewer user charges; service charges; quality standards for sewage and any effluent; and any other technical matter related to any of the foregoing. (Amended April 12, 1984)

Section 26. INSPECTION OF FACILITIES

Any authorized officer or employee of CBMWD may enter and inspect any part of the Community Sewer System of any Contracting Agency or any member of the Regional Policy Committee or Regional Technical Committee may enter and inspect any part of the Regional Sewerage System. Except during emergencies, such inspections shall be made during normal working hours on regular business days and upon the giving of not less than 24 hours prior notice of the inspection. Any inspecting officer, employee or member of the Regional Policy Committee or Regional Technical Committee shall bear proper credentials of authority and identification. The right of entry and inspection shall be limited to public streets, easements and property within which the systems shall be located. The rights of inspection shall include observation, measurement, sampling and testing. (Amended April 12, 1984)

Section 26A. HEARINGS

The provisions of this section and the procedures herein set forth shall apply to all hearings to be conducted by the Board of Directors of CBMWD with respect to determinations, reports and recommendations of the Regional Policy Committee and protests and complaints of Contracting Agencies with respect to determinations of said committee and CBMWD.

A. Notice of Hearings

The secretary of CBMWD shall give notice of hearings by publication, posting and mailing as specified below:

1. Publication. Notice of hearings shall be published pursuant to Section 6066 of the Government Code in one or more newspapers of general circulation within CBMWD. Publication of notice shall be commenced at least 15 days prior to the date specified therein for hearing.

2. Posting. Notice of hearing shall be posted on or near the door of the meeting room of the Board of Directors of CBMWD. Posted notice shall be commenced at least 15 days prior to the date specified therein for hearing and shall continue to the time of the hearing.

3. Mailing. Mailed notice shall be given to all members of the Regional Policy Committee and to all Contracting Agencies and to all other persons requesting such notice in writing. Mailed notice shall be sent by first class mail and shall be deemed to have given when so deposited in the United States mail postage prepaid.

B. Hearing

Hearings shall be held upon the date and at the time specified in the notice and may be continued from time to time, but not to exceed 60 days from the date specified in the notice. At each hearing, prior to consideration of any protests, objections or evidence, the Board of Directors of CBMWD shall cause to be read aloud or summarized any reports and recommendation made by the Regional Policy Committee and, in the case of annexations, the Local Agency Formation Commission. Thereafter, the Board of Directors of CBMWD shall hear and

receive all oral and written protests, objections and evidence which may be made, presented or filed by any Contracting Agency or any interested person. Any Contracting Agency or person who shall have filed a protest may withdraw the same at any time prior to the conclusion of the hearing.

C. Hearing Resolution

Not later than 30 days after the conclusion of the hearing, the Board of Directors of CBMWD shall by resolution make its determination on the matter being considered. Such resolution shall contain findings in support of the determination and shall be deemed a final administrative action. A certified copy of each such resolution adopted by the Board of Directors of CBMWD shall be mailed by the secretary of CBMWD in the manner provided for in subpart 3 of part A of this section to each Contracting Agency and person who presented or filed a protest, objection or evidence at the hearing within 15 days of the date of the adoption of the resolution. Any Contracting Agency may challenge any such resolution and determination by administrative mandamus, injunctive or other appropriate action or proceeding. (Added April 12, 1984)

Section 27. EFFECTIVE DATE OF CONTRACT

This contract between CBMWD and the undersigned Contracting Agency shall become effective after the occurrence of all of the following events:

(1) The authorization and execution of this contract by CBMWD and the undersigned Contracting Agency.

(2) The acquisition or construction by CBMWD of facilities for the Regional Sewerage System adequate to provide for the transmission, treatment, and disposal of all sewage then collected by the Community Sewer System of the undersigned Contracting Agency.

(3) The initiation and conduct of proceedings for and the completion of the formation of Improvement District "C" (either with or without elections, as provided by law) in substantial conformity with resolution of intention, Exhibit "C" hereof, and with boundaries substantially identical to those specified in Paragraph B of Section 9 hereof.

(4) The adoption by the Board of Directors of CBMWD of a capital outlay ordinance, substantially in the form set forth in Exhibit "B" hereof.

Not later than 15 days following the occurrence of the last such event, CBMWD shall give written notice thereof to the undersigned Contracting Agency. The notice shall specify a date, as determined by CBMWD, which shall be the effective date of this contract. The effective date shall be the first day of any calendar month occurring not sooner than one month nor later than one year after the date of giving the written notice.

Section 28. TERM OF CONTRACT

The term of this contract and any other Service Contract entered into between CBMWD and any sewage collection agency, shall be 50 years from the earliest effective date specified, in the original Service Contract between CBMWD and

any Contracting Agency, said date being January 2, 1973. It is the intent of the parties that all Service Contracts providing for the services and facilities of the Regional Sewerage System shall have the same termination date, without regard to the effective dates of the individual contracts.

In order to provide for a periodic review and update, as necessary, of the provisions of this contract, CBMWD and the Contracting Agencies agree to enter good faith discussions at intervals not exceeding five years or at the request of the majority of the Contracting Agencies. (Amended April 12, 1984)

Section 29. RENEWAL; OPTION FOR CONTINUED SERVICE

No later than two years prior to the end of the term of this contract or any earlier termination or extension of this contract, the parties shall negotiate for the extension or renewal of this contract upon comparable terms and conditions. If the parties have been unable to agree thereon, then any Contracting Agency, by written notice given to CBMWD at least 12 months prior to the expiration of said term, may elect to receive continued service after the expiration of said term upon the following conditions:

A. If, by reason of continued service, no expansion is required in any facilities of the Regional Sewerage System in existence upon the expiration of the term of this contract, the Contracting Agency may deliver sewage into the system in any quantity and at any flow rates. If, by reason of continued service, such expansion shall be required, the annual quantity

and flow rates of sewage to be delivered into the Regional Sewerage System by the Contracting Agency shall not exceed the quantity and flow rates delivered by the agency during the last full fiscal year preceding the expiration of said term.

B. The service charge rate shall be determined as provided in Section 18 hereof.

C. The sewage quality standards shall be in accordance with those in effect during the last full fiscal year preceding the expiration of said term or any higher standards prescribed by any federal, state or regional agency authorized by law to prescribe quality standards for effluent discharges.

D. CBMWD shall maintain and operate the Regional Sewerage System under substantially the same physical conditions of service as prevailed during the last fiscal year preceding the expiration of said term.

Other terms and conditions of continued service shall be reasonable and equitable and shall be mutually agreed upon and, if they provide for continued service for a specified number of years, a Contracting Agency shall have the option to receive further continued service upon the expiration of that and each succeeding period of continued service. (Amended April 12, 1984)

Section 30. AUTHORIZATION AND EXECUTION OF SEWAGE SERVICE AND ACQUISITION CONTRACTS

A. Authorization of Any Sewage Collection Agency

All proposed contracts between CBMWD and any sewage collection agency for the purpose of (i) providing the agency

with the services and facilities of the Regional Sewerage System under a Service Contract, (ii) the acquisition by CBMWD of any existing sewage treatment and disposal plant or interceptor sewer, or (iii) both (i) and (ii), shall be authorized for execution by CBMWD. The agency shall furnish CBMWD with a certified copy of the resolution authorizing execution by the agency, together with a certified copy of the proposed contract referred to therein. The resolution shall contain all restrictions, limitations, and conditions, if any, which may have been imposed on the execution of the contract.

B. Amendment of Any Existing Contract; New Contracts with Subsequent Contracting Agencies

If CBMWD proposes (i) to amend or rescind any existing Service Contract with a Contracting Agency or (ii) to enter a new Service Contract or a contract for the transfer of any existing sewage facilities to CBMWD, as part of the Regional Sewerage System, the Board of Directors of CBMWD shall adopt a resolution declaring its intention to do so and shall specify a time, not sooner than 60 days after the adoption of the resolution, and a place at which the Board will hold a hearing on the question of the proposed amendment, rescission or new contract, as the case may be. Immediately thereafter the secretary of CBMWD shall mail a copy of the resolution, together with a copy of the proposed amendment, rescission or new contract to the clerk or secretary of each Contracting Agency and to each member of the Regional Policy Committee. The

Regional Policy Committee shall review the proposal and, not later than 10 days preceding the date of the hearing, shall submit its written report and recommendation thereon to the general manager of CBMWD and to each Contracting Agency.

At the hearing on the proposal, the Board shall consider the report and recommendation of the Regional Policy Committee and shall hear representatives of any Contracting Agency, members of the committee, and any other interested persons. The Board may modify the proposal and, upon the conclusion of the hearing, order the authorization for execution by CBMWD of the proposed amendment, rescission, or new contract, as the case may be. (Amended April 12, 1984)

Section 31. NOTICE

Notices authorized or required to be given by any provision of this contract shall be deemed to have been given upon delivery, if delivered personally, or upon deposit in the mails, if enclosed in a properly addressed envelope and deposited in the United States mails for delivery by registered or certified mail.

Notice shall be given to the parties by delivery or mailing to the following officers of the parties at the following addresses:

CBMWD Secretary, Chino Basin Municipal Water District
8555 Archibald Avenue
Rancho Cucamonga, California

Undersigned Contracting Agency:

_____
_____
_____
_____

At any time a party may give written notice to the other party of a change in the designated officer or address.

Notice to members of the Regional Policy Committee or the Regional Technical Committee shall be given to the persons and at the addresses designated in the notices of appointment filed with the Secretary of CBMWD.

Section 32. PARTIAL INVALIDITY

The invalidity of any provision of this contract shall not affect the validity of the remainder thereof which can be given effect without such invalid provision.

Date of Execution

November 28, 1994

CHINO BASIN MUNICIPAL WATER DISTRICT

By: Bill Hues
President of the Board of Directors

ATTEST:
John L. Anderson
Secretary of the Board of Directors

Date of Execution

10/25/94

CITY OF CHINO

By: Eunice M. Ulloa
Mayor

ATTEST:
City Clerk

Date of Execution

October 24, 1994

CITY OF MONTCLAIR

By: _____
Mayor

ATTEST:

_____
City Clerk

Date of Execution

October 25, 1994

CITY OF ONTARIO

By: _____
Mayor

ATTEST:

_____
City Clerk

CITY OF ONTARIO - INCORPORATED - DECEMBER 1891 - CALIFORNIA

Date of Execution

October 27, 1994

CITY OF UPLAND

By: _____
Mayor

ATTEST:

_____
City Clerk

EXHIBIT A

QUALITY STANDARDS
FOR
CENTRAL TREATMENT OF SEWAGE

Sewage treatment in this Agreement shall be defined as the following processes or methods for altering the quality of raw sewage.

I. Primary Treatments

A. Removal of sand and grit, floating solids and coarse suspended solids by

1. Racks
2. Medium screens
3. Grit chambers
4. Skimming tanks, with or without aeration

B. Removal of fine suspended solids by

1. Fine screens
2. Sedimentation by plain sedimentation tanks, with or without mechanized sludge-removal devices

II. Secondary Treatments

A. Oxidation by

1. Filters
   a. Intermittent sand filters
   b. Contact filters
   c. Trickling filters
2. Aerations
   a. Activated sludge
   b. Contact aerators

EXHIBIT "A"

3. Chlorinators

4. Oxidation ponds

III. Disinfection

A. Chlorination or other acceptable chemical

IV. Treatment, Handling and Disposal of Sewage Solids

A. Screenings

1. Medium screenings by shredding and digestion

2. Fine screenings by digestion

B. Settled solids

1. Digestion

2. Conditioning

3. Vacuum filtration

4. Drying

C. Excess activated sludge by

1. Thickening

2. Digestion

3. Conditioning with chemicals

4. Vacuum filtration

5. Drying

The above list is not intended to be all inclusive and it is anticipated that other methods and processes will be utilized to obtain similar changes in the quality of raw sewage. If such other methods of processes are utilized then treatment shall be defined as that part of the total process which will yield the following maximum reduction in Total Suspended Solids and BOD.

Constituent	Maximum Percent Reduction Plant Influent to Effluent
Total Suspended Solids	90
B.O.D.	90

Compliance with the definition for treatment as defined above by maximum percent reduction for total suspended solids and BOD shall be based on the annual average results of 24 hour composite samples analyzed once each month.

EXHIBIT B

CHINO BASIN
MUNICIPAL
WATER
DISTRICT
J. ANDREW SCHLANGE
GENERAL MANAGER
TELEPHONE (714) 987-1712

August 8, 1974

TO: City Clerks of all Contracting Agencies
Regional Audit Committee Members
Regional Technical Committee Members

SUBJECT: Exhibit "B" to Regional Sewerage Service Contract

Attached is a copy of CBMWD Ordinance No. 24 adopted by our Board of Directors at their July 24, 1974, meeting. This Ordinance provides for the "creation and accumulation of a Capital Outlay Fund."

This Ordinance replaces the existing Exhibit "B" to the Regional Sewerage Service Contract.

Very truly yours,

J. Andrew Schlange
General Manager
CHINO BASIN MUNICIPAL WATER DISTRICT

Attachment

/lf

8555 ARCHIBALD AVENUE - POST OFFICE BOX 697 - CUCAMONGA, CALIFORNIA 91730

CARL B. MASINGALE, President · RAY W. FERGUSON, Vice-President · ERNEST L. KEECHLER, Secretary · JACK F. COMSTOCK, Director · DICK W. PEHL, Director

ORDINANCE NO. 24

ORDINANCE OF THE BOARD OF DIRECTORS OF THE CHINO BASIN MUNICIPAL WATER DISTRICT, SAN BERNARDINO COUNTY, CALIFORNIA, PROVIDING FOR THE LEVY AND COLLECTION OF TAXES WITHIN IMPROVEMENT DISTRICT "C", FOR THE CREATION AND ACCUMULATION OF A CAPITAL OUTLAY FUND AND FOR THE EXPENDITURE OF MONEYS IN SAID FUND IN ACCORDANCE WITH A REGIONAL SEWERAGE SYSTEM PLAN

WHEREAS, the Board of Directors of the Chino Basin Municipal Water District has approved a plan on file with the Secretary of the District entitled "General Plan for Water and Waste Water Systems" in the Chino Basin which, among other things, recommends that local sewage collection agencies own, control and operate all community sewer systems for the collection of sewage and that the District own, control and operate a regional sewerage system for the transmission, treatment and disposal of all sewage collected by said community sewer systems; and

WHEREAS, it is anticipated that the plan will be carried out in stages over a period of years and that, from time to time, the District will acquire existing transmission, treatment and disposal facilities owned by various sewage collection agencies as part of its regional sewerage system; and

WHEREAS, to implement said plan and to provide the District with a portion of its regional sewerage system, the District has acquired or proposes to acquire certain existing transmission, treatment and disposal facilities from certain sewage collection agencies; and

WHEREAS, the Board of Directors has initiated proceedings for the formation of Improvement District "C" for the acquisition and expansion of the regional sewerage system, including the construction of new facilities for the transmission, treatment and disposal of sewage and the making of replacements, betterments, additions or extensions of or to the system, all in accordance with the "Chino Basin Regional Sewerage System Plan," hereinafter referred to; and

WHEREAS, the Board of Directors deems it advisable to provide for the levy and collection of taxes within Improvement District "C", upon and after its formation, and for the creation and accumulation of a capital outlay fund for the purpose of the payment of all or part of the costs and expenses of the acquisition and expansion of the regional sewerage system; and

WHEREAS, it is in the public interest that moneys accumulated in said capital outlay fund be expended in accordance with a regional sewerage system plan, and for that purpose, the Board of Directors desires to adopt such a plan and to provide for the continuing review and amendment of such plan:

NOW, THEREFORE, BE IT ORDAINED by the Board of Directors of the Chino Basin Municipal Water District as follows:

Section 1. A capital outlay fund, to be known and be designated as the "Regional Waste Water Capital Improvement

Fund," is hereby created in the treasury of the District for the following purposes:

(a) The payment of all or part of the capital costs and expenses of the acquisition and expansion of the regional sewerage system for Improvement District "C", including the acquisition of certain existing facilities, the construction of new facilities for the transmission, treatment and disposal of sewage and the making of replacements, betterments, additions or extensions of or to the system, and the establishment of reasonable reserves for any of the foregoing, including reserves for unforeseen contingencies and for extraordinary capital costs and expenses, all as more particularly shown and described in the Chino Basin Regional Sewerage System Plan of the District.

The regional sewerage system shall consist of facilities owned and operated by the District and, if in the opinion of the Board of Directors any territory in Improvement District "C" can be more economically or conveniently served by facilities owned, in whole or in part, and operated by others, the system may include interests or capacity rights in facilities owned by others.

Section 2. For the purpose of the creation of and the accumulation of moneys in the capital outlay fund and until such time as the purposes of the capital outlay fund

have been accomplished, the Board of Directors shall annually cause a capital outlay tax to be levied and collected upon all taxable property within Improvement District "C". The annual capital outlay tax shall be in an amount which, together with any amounts then accumulated in the capital outlay fund, the estimated amounts of capital outlay taxes to be levied and collected in future years and the estimated amounts of any other moneys expected to be available for payment of any part of the costs and expenses of the acquisition and expansion of the regional sewerage system, shall be sufficient to provide for the payment of all costs and expenses, as the same become due, of the acquisition and expansion of said system and for any amounts required to be set aside annually in any reserves theretofore established. The capital outlay tax shall be in addition to all other taxes and shall be levied and collected in the same manner as other district taxes. All moneys collected from capital outlay taxes shall be deposited to the credit of the capital outlay fund and shall be expended and disbursed for no other purposes than those set forth in Section 1 hereof.

Section 3. Until such time as the purposes of the capital outlay fund have been accomplished, the Board of Directors shall adopt and maintain a regional sewerage system plan. The plan shall describe the existing and proposed facilities of the regional sewerage system, all territory within Improvement District "C" and any territory proposed

to be annexed thereto upon expansion of the system, and shall specify the methods of financing the costs and expenses of the expansion of the system from the capital outlay fund and any other available moneys. The plan shall include:

(a) Drawings showing the general nature, location and extent of all existing and proposed facilities of the regional sewerage system.

(b) Maps showing the boundaries of Improvement District "C" and any territory outside of the District which is served by the regional sewer system.

(c) Schedules indicating the anticipated dates for the acquisition and expansion and the construction of various portions of the proposed facilities.

(d) Estimates of the costs and expenses for the acquisition and expansion and the construction of all proposed facilities.

(e) If any of the facilities are proposed to be acquired or constructed pursuant to lease, purchase or contract requiring payments in future years, statements of the amounts or estimated amounts to become due in each future year by reason thereof.

(f) Estimates of the amount of capital outlay tax and the tax rate required during each future year for the acquisition and expansion of the system.

(g) Such other drawings, data and explanations as may be necessary or convenient for the understanding of the plan.

Section 4. The proposed "Chino Basin Regional Sewerage System Plan" submitted by the General Manager, and on file with the Secretary is hereby adopted and, until amended, shall constitute the regional sewerage system plan of the district.

Section 5. The Board of Directors, from time to time, may amend the regional sewerage system plan and annex territory to Improvement District "C" and, for that purpose, shall cause a continuing review of the regional sewerage system plan to be made by the General Manager and by the Regional Audit Committee provided for in any sewage service contract between the District and local sewage collection agencies.

Before ordering any substantial amendments to the plan or the annexation of territory to Improvement District "C", the Board of Directors shall adopt a resolution declaring its intention to order the amendments, describe the proposed amendments and specify a time, not sooner than sixty (60) days after the adoption of the resolution, and a place at which the Board of Directors will hold a hearing on the question of the adoption of such amendments. Immediately thereafter the Secretary shall mail a copy of the resolution to the clerk or secretary of each local sewage collection agency

having a sewage service contract with the District and to each member of the Regional Audit Committee provided for in said contracts. The Regional Audit Committee shall review the proposed amendments or annexations and, not later than ten (10) days preceding the date of the hearing, shall submit its written report and recommendation thereon to the General Manager and to each contracting sewage collection agency.

At the hearing on the proposed amendments or annexations, the Board shall consider the report and recommendations of the Regional Audit Committee and shall hear representatives of any contracting agency, members of the Audit Committee and any other interested persons. The Board of Directors may modify the proposed amendments or territory proposed to be annexed to Improvement District "C" and, upon the conclusion of the hearing, order the amendments or the annexations. For the purpose of expenditures and disbursements authorized to be made from the capital outlay fund, the plan, as most recently amended, shall be deemed the Chino Basin Regional Sewage System Plan.

Section 6, The invalidity of any section, clause, sentence or provision of this Ordinance shall not affect the validity of any other part of this Ordinance which can be given effect without such invalid part or parts.

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN BERNARDINO)

I, ERNEST L. KEECHLER, Secretary of the Board of Directors of the Chino Basin Municipal Water District, DO HEREBY CERTIFY that the foregoing ordinance was duly adopted by the Board of Directors of said district at a regular meeting of said Board held on the 24th day of July, 1974, and that it was so adopted by the following vote:

AYES: Directors Masingale, Ferguson, Keechler, Comstock

NOES: None

ABSENT: Director Pehl

Ernest L Keechler
Secretary of the Chino Basin Municipal Water District and of the Board of Directors thereof.

(SEAL)

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN BERNARDINO)

I, ERNEST L. KEECHLER, Secretary of the Board of Directors of the Chino Basin Municipal Water District DO HEREBY CERTIFY that the above and foregoing is a full, true and correct copy of Ordinance No. 24 of said Board, and that the same has not been amended or repealed.

DATED: July 24, 1974.

Ernest L Keechler
Secretary of the Chino Basin Municipal Water District and of the Board of Directors thereof.

(SEAL)

Section 7. This Ordinance shall be in full force and effect from and after its passage.

ADOPTED this 24th day of July, 1974.

President of the Chino Basin Municipal Water District and of the Board of Directors thereof.

ATTEST:

Secretary of the Chino Basin Municipal Water District and of the Board of Directors thereof.

(SEAL)

EXHIBIT C

RESOLUTION NO.

RESOLUTION OF THE BOARD OF DIRECTORS OF THE CHINO BASIN MUNICIPAL WATER DISTRICT DECLARING ITS INTENTION TO FORM AN IMPROVEMENT DISTRICT, DESIGNATED AS IMPROVEMENT DISTRICT "C", AND FIXING THE TIME AND PLACE OF HEARING

WHEREAS, Chino Basin Municipal Water District had approved a plan entitled "General Plan for Water and Waste Water Systems" which, among other things: (i) recommends that sewage collection agencies own, control and operate all community sewer systems within the Chino Basin and that Chino Basin Municipal Water District own, control and operate a regional sewerage system serving all community sewer systems within the Chino Basin by providing for the transmission, treatment, reclamation and disposal of all sewage, and (ii) states that the goals and objectives of the regional sewerage system include, not only the protection of public health, but also the enhancement of the entire area served by the regional sewer system by protecting the quality of existing and future water sources, by improvement of water management through integration of the various sources of water supply, including sewage effluent, and by improving general conditions for industrial, residential, commercial and agricultural development; and

WHEREAS, Chino Basin Municipal Water District may use sewage from municipal treatment facilities in satisfaction of its obligation in Orange County Water District v. City of Chino, Superior Court for Orange County, Case No. 117628; and

EXHIBIT "C"

WHEREAS, said general plan will be implemented in stages over a period of years and, from time to time, Chino Basin Municipal Water District will acquire various existing interceptor sewers and sewage treatment facilities as part of its regional sewerage system; and

WHEREAS, Chino Basin Municipal Water District proposes to enter an agreement or agreements for the purchase or lease of certain existing interceptor sewers and sewage treatment and disposal facilities which shall constitute a portion of its regional sewerage system; and

WHEREAS, said general plan recommends that Chino Basin Municipal Water District finance the capital costs of the acquisition and construction of all existing and future facilities comprising its regional sewerage system through the formation of an improvement district and the imposition of ad valorem taxes, sewage standby or availability charges and other charges and that all agencies contracting for the services of the regional sewerage system pay the costs and expenses incurred by Chino Basin Municipal Water District for maintenance and operation of its regional sewerage system;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Chino Basin Municipal Water District as follows:

Section 1. That this Board of Directors deems it necessary and hereby declares its intention to form an improvement district, pursuant to Sections 72000 et seq. of the Water

Code, for the purpose of undertaking and implementing said regional sewerage system.

Section 2. That, in the opinion of this Board of Directors, only a portion of the Chino Basin Municipal Water District will be benefited by the accomplishment of the purpose stated herein, which portion shall be designated as Improvement District "C" of the Chino Basin Municipal Water District, and that the exterior boundary of said Improvement District "C" shall be described as follows:

(legal description of Improvement District "C")

Section 3. That, in order to undertake and implement said regional sewerage system, this Board of Directors acting in behalf of said proposed improvement district shall be authorized and empowered to investigate, study, analyze, appraise, finance, acquire, construct, operate, maintain, extend, repair or improve works and facilities for the transmission, treatment and disposal of sewage, waste and storm water including equipment for operation and maintenance of said works and facilities and for the foregoing appurtenances and appurtenant works, and including acquisition of all lands, easements, machinery, equipment, materials, apparatus and other property necessary therefor, and including all engineering, inspection, appraisal, accounting, legal, fiscal agent and financial consultant fees and costs, cost of special elections, cost of issuing bonds, notes, warrants and

any other evidence of indebtedness, interest on any indebtedness and all other costs and expenses incidental to or connected with undertaking and implementing said regional sewerage system.

Section 4. That, based upon costs for the year 1972, the average annual expenditures to undertake and implement said regional sewerage system are estimated to be $1,500,000 per year.

Section 5. That said regional sewerage system shall be financed by any or all of the following means: ad valorem taxes levied exclusively upon taxable property within said proposed improvement district; sewage standby or availability charges levied exclusively on acreage within said proposed improvement district; fees and charges for annexation to said proposed improvement district; extraordinary capital outlay charges and annual capital outlay charges levied on territory outside of said proposed improvement district as compensation for receiving services of the regional sewerage system; service charges collected for sewage delivered into the regional sewerage system; charges for delivery or sale of sewage treated and reclaimed in the regional sewerage system; and such additional amount of ad valorem taxes as may be necessary to pay principal of and interest on bonds issued in connection with said regional sewerage system.

Section 6. That _____, the _____ day of _____, 1972, at the hour of _____ o'clock __.M., of said day, at the _____,

located at _____, California, be and the same is hereby fixed by this Board of Directors as the time and place for a hearing by this Board of Directors on the formation and extent of said proposed improvement district; on the purpose for which said proposed improvement district is to be formed; on the estimated expenses of carrying out such purposes; and in any other matters set forth in this resolution.

Section 7. That at the time and place fixed for said hearing, or at any time and place to which said hearing is adjourned, this Board of Directors shall proceed with the hearing and shall hear and consider all written and oral objections, protests or comments from any person interested, including all persons owning property in the Chino Basin Municipal Water District or in said proposed improvement district, to any matters set forth in this resolution.

Section 8. That a map showing the exterior boundaries of said proposed improvement district, with relation to the territory immediately contiguous thereto, is on file with the Secretary of Chino Basin Municipal Water District and is available for inspection by any person or persons interested at the Offices of the Chino Basin Municipal Water District, located at 8555 Archibald Avenue, Cucamonga, California.

Section 9. That said map showing the exterior boundaries of said proposed improvement district shall govern for all details as to the extent of said proposed improvement district.

Section 10. That notice of said hearing shall be given

by the Secretary of this Board of Directors by publication of a copy of this resolution in the _____, a newspaper of general circulation printed and published in said proposed improvement district, pursuant to Section 6066 of the Government Code.

Section 11. That further notice of said hearing shall be given by the Secretary of this Board of Directors by posting a copy of this resolution in three (3) public places within said proposed improvement district at least two (2) weeks prior to the time fixed for said hearing.

Section 12. That said copy of this resolution so published and posted shall be accompanied by a notice subscribed by said Secretary, with the seal of the district attached, to the effect that the hearing referred to in this resolution will be had at the time and place above specified, that at said time and place this Board of Directors shall hear and consider all written and oral objections, protests and comments from any person interested on any matters set forth in this resolution, and that a map of said proposed improvement district is on file with the Secretary of the district and available for inspection by any interested person.

Section 13. That said Secretary is directed to give further notice of said hearing by placing in the mail, postage prepaid, first class, copies of said notice and of this resolution, addressed to all persons owning property within said

proposed improvement district, as shown on the last equalized assessment roll used by the district, said mailing to be completed at least fifteen (15) days prior to said hearing.

ADOPTED this _____ day of _____, 1972.

_____
President of the Chino Basin Municipal Water District and of the Board of Directors thereof.

ATTEST:

_____
Secretary of the Chino Basin Municipal Water District and of the Board of Directors thereof.

(SEAL)

EXHIBIT D

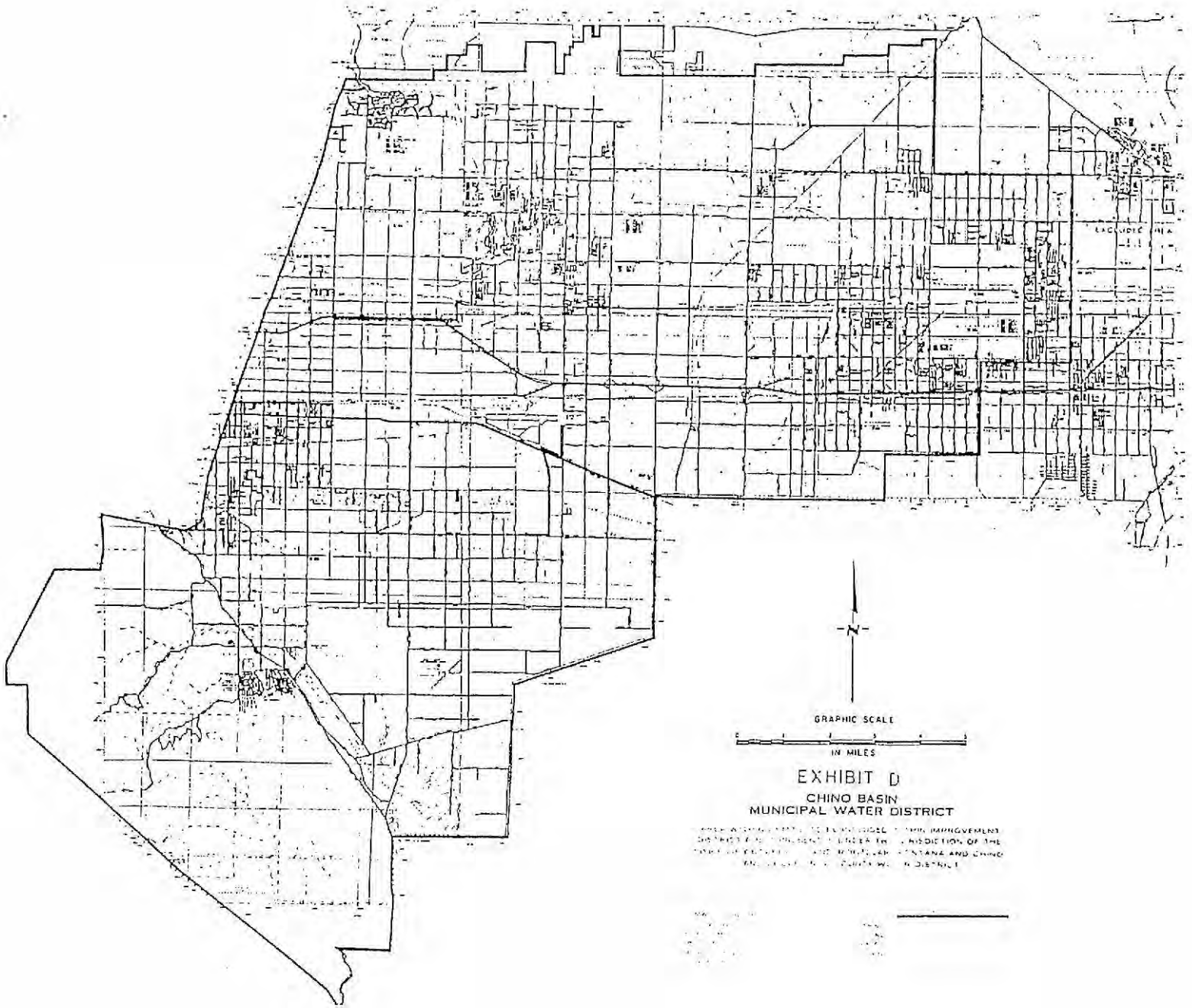

EXHIBIT D

CHINO BASIN
MUNICIPAL WATER DISTRICT

EXHIBIT E



EXHIBIT E

CHINO BASIN MUNICIPAL WATER DISTRICT

MAP SHOWING EXISTING PIPELINES AND FACILITIES TO BE ACQUIRED AND PROPOSED FACILITIES TO BE CONSTRUCTED BY CBMWD TO IMPLEMENT THE REGIONAL PLAN

EXHIBIT F

EXHIBIT F

LOCATION OF DELIVERY AND METERING POINTS TO DISTRICT REGIONAL FACILITIES

GENERAL

The location described below are points where sewage initially would be accepted for delivery to the Chino Basin Reclaimable Waste Water System. Metering of flows would be at selected locations as described below. It is anticipated that these locations may be replaced or supplemented by other delivery or metering points at a later date.

1. CITY OF CHINO

Sewage from the City of Chino shall be delivered to the Chino Interceptor of the Chino Basin system at manholes located at or near to each of the following street intersections:

a. At the site of the old sewage treatment plant near Monte Vista and Merrill Avenue, County of San Bernardino.

b. On Central Avenue about 1,000 feet northwesterly from the intersection of Mountain and Central Avenues, County of San Bernardino.

Sewage from the City of Chino shall be metered at the existing City of Chino Wastewater Treatment Plant.

2. CUCAMONGA COUNTY WATER DISTRICT

Sewage from the CCWD shall be delivered to and metered at manholes at three locations; being:

a. In Archibald Avenue at a point 1,210 feet northerly of the centerline of Colton Avenue ("G" Street).

b. In Turner Avenue, at a point 1,797 feet northerly of the centerline of Colton Avenue ("G" Street).

c. Colton Avenue, east of Day Creek channel. Temporary connection to the non-reclaimable waste system with future connection to the Chino Basin Municipal Water District reclaimable wastewater system at this point.

3. CITY OF FONTANA

Sewage from the City of Fontana shall be delivered to the manhole at the intersection of Beech and Jarupa Avenues and metered at the existing metering station at the influent of the existing Fontana Sewage Treatment Plant.

4. CITY OF UPLAND

Sewage from the City of Upland shall be delivered to manholes at two locations; being:

a. In Grove Avenue northerly of Eighth Street at the northerly property line of the Atcheson Topeka and Santa Fe Railway.

b. In a sanitary sewer easement abutting the northerly side of the San Bernardino Freeway right-of-way at a point 1,218 feet south easterly of the centerline of Campus Avenue.

Sewage from the City of Upland shall be metered at the metering station on the north side of Interstate 10 approximately 85 feet southeast of the centerline of Grove Avenue.

5. CITY OF ONTARIO

Sewage from the City of Ontario shall be discharged at manholes adjacent to the following intersections:

a. Haven Avenue and the Southern Pacific Railroad right-of-way, County of San Bernardino.

b. Northerly extension of Humboldt Avenue and Fourth Street, City of Ontario.

c. Humboldt Avenue and southerly frontage road, State Route 10, City of Ontario.

d. Imperial Avenue and "I" Street, City of Ontario.

e. Imperial Avenue and alley northerly of "G" Street, City of Ontario.

f. Imperial Avenue and "D" Street, City of Ontario.

g. Imperial Avenue and Holt Avenue, City of Ontario.

h. Imperial Avenue and Easement adjacent to northerly right-of-way line of Southern Pacific Railroad, City of Ontario.

i. Easement located adjacent to westerly end of east-west runway at Ontario International Airport at a point located approximately 800 feet southerly of State Street and 1,400 feet easterly of Grove Avenue, City of Ontario.

j. A point located approximately 1,400 feet easterly of Grove Avenue and the easterly extension of California Street, City of Ontario.

k. Vineyard Avenue and a point located approximately 200 feet northerly of Mission Boulevard, City of Ontario.

l. A point located approximately 300 feet easterly of Vineyard Avenue and 200 feet northerly of Mission Boulevard, City of Ontario.

m. Northerly extension of Ironcraft Street and Francis Street, City of Ontario.

n. A point located on the northerly extension of Ironcraft Avenue and approximately 300 feet northerly of Mission Boulevard, City of Ontario.

o. Chino Avenue and point located approximately 100 feet southerly of Philadelphia Avenue, City of Ontario.

p. Manhole on 24-inch trunk sewer on site of Regional Waste Water Treatment Plant No. 1 immediately upstream of flow metering structure of that treatment facility, City of Ontario. Said metering structure is located approximately 1,800 feet southerly of Philadelphia Avenue and 1,100 feet easterly of Chino Avenue, City of Ontario.

Sewage from the City of Ontario shall be metered at the existing influent lines to Wastewater Treatment Plants 1 and 2.

6. CITY OF MONTCLAIR

Sewage from the City of Montclair shall initially be delivered to either or both of two existing alternative delivery systems, as follows:

a. A manhole of Sanitation District No. 21 of Los Angeles County located within the right-of-way of Phillips Avenue approximately 750 feet westerly of East End Avenue, County of Los Angeles.

b. A manhole at the intersection of Ramona Avenue and Grand Avenue.

Sewage from the City of Montclair shall be metered in two locations in Phillips Avenue; as follows:

a. In the vicinity of Pipeline Avenue.

b. In the vicinity of Ramona Avenue.

7. IMPROVEMENT DISTRICT B, CHINO BASIN MWD

Sewage from Improvement District "B", Chino Basin MWD, shall be delivered to and metered at a manhole located approximately 150 feet, westerly of Telephone Avenue and adjacent to the north-easterly right-of-way line of the Chino Creek Channel, County of San Bernardino.

EXHIBIT G

CHINO BASIN AGREEMENT FOR

RECLAMATION OF TREATED EFFLUENT

EXHIBIT G

6/4/72

CHINO BASIN AGREEMENT FOR RECLAMATION OF TREATED EFFLUENT

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6/4/72

CHINO BASIN AGREEMENT FOR RECLAMATION OF TREATED EFFLUENT

AGREEMENT made and entered this ____ day of _____, 1972 between CHINO BASIN MUNICIPAL WATER DISTRICT ("CBMWD"), a municipal water district and _____, ("undersigned purchasing agency"), a _____.

RECITALS

WHEREAS, CBMWD and the undersigned purchasing agency, prior hereto or concurrently herewith, have entered a service contract entitled "Chino Basin Regional Sewage Service Contract" whereby CBMWD agrees to provide for the ownership and operation by it of a regional sewerage system and for the transmission, treatment, and disposal of all sewage collected by the undersigned purchasing agency and by certain other purchasing or sewage collection agencies; and

WHEREAS the parties hereto desire to enter this agreement whereby CBMWD will be provided with an assured supply of treated effluent from the regional sewerage system for the purpose of the reclamation of said effluent and the undersigned purchasing agency and other purchasing agencies will be provided with a right of first purchase of the reclaimed effluent.

COVENANTS

NOW, THEREFORE, IN CONSIDERATION of the mutual promises and covenants herein contained, the parties agree as follows:

Section 1. DEFINITIONS

Unless otherwise required by the context, various terms used in this agreement, including the recitals, shall have the meanings set forth in this section. The singular number includes the plural and the plural the singular.

"Acquire" or "Acquisition" means to acquire or make the acquisition of one or more of the following:

A. Fee simple title to land.

B. Any interest in land by deed, easement, lease, sub-lease, contract, or otherwise.

C. Title to or any interests in any existing facilities located upon land.

D. Interests or capacity rights in any land or facilities owned by others.

"CBMWD" means the Chino Basin Municipal Water District, a municipal water district.

"Chino Basin" means that area underlain by the Chino and Cucamonga groundwater basins and that portion of the Claremont Heights groundwater basin within San Bernardino County which groundwater basins are described in Bulletin No. 53 of the California Division of Water Resources, dated March, 1947 and entitled "South Coastal Basin Investigation -

Overdraft on Groundwater Basins."

"Effluent" means the liquid outflow at the discharge point of any treatment or reclamation facility.

"Facilities" means any pipelines, buildings, structures, works, improvements, fixtures, machinery, equipment, or appliances and any real property, or interests therein, necessary or convenient for the construction, maintenance, and operation of any of the foregoing.

"Purchasing agency" includes the undersigned purchasing agency and any other sewage collection agency which is located, in whole or in part, within the boundaries of CBMWD and which has entered a service contract with CBMWD and, to the extent provided in Paragraph B of Section 3 of the service contracts, includes CBMWD.

"Reclaim" or "Reclamation" means any process or method for altering the quality of treated sewage effluent to standards superior to those prescribed for treatment, as specified in Exhibit "A" attached to and made a part of the service contracts.

"Regional sewerage system" means all facilities owned, controlled, or operated by CBMWD for the purpose of the transmission, treatment, and disposal of sewage collected by purchasing agencies, all as more particularly defined in the service contracts.

"Service contract" means any contract between CBMWD and a purchasing agency for the transmission, treatment and dis-

posal, by means of the regional sewerage system, of all sewage collected by the agency.

"Sewage" means any liquid waste and water borne solid waste resulting from residential, commercial, industrial, or institutional activities or uses.

"Treat" or "Treatment" means any process or method for altering the quality of sewage to standards equal to those prescribed in Exhibit "A" attached to and made a part of the service contracts.

"Undersigned purchasing agency" includes only the purchasing agency specifically designated in the first paragraph of this agreement and the signatory of this particular agreement.

Section 2. SCOPE OF AGREEMENT

This agreement shall apply only to (i) reclamation facilities acquired, constructed, or operated by CBMWD for the reclamation of treated effluent discharged from any treatment and disposal facility of the regional sewerage system and (ii) reclaimed effluent discharged from said reclamation facilities. Except as otherwise provided herein, this agreement shall not apply to any transmission, treatment and disposal facilities which are part of the regional sewerage system or to sewage or treated effluent discharged into or from the regional sewerage system.

Upon execution of this agreement and the availability of reclaimed effluent to the undersigned purchasing agency, the agency shall have no further right of first purchase of treated effluent pursuant to Sections 15 and 16 of the service contract with the agency.

Section 3. RIGHTS AND OBLIGATIONS

A. Ownership of Reclamation Facilities by CBMWD

Except as to any reclamation facilities of CBMWD existing or under construction on the date of this agreement, CBMWD shall not be obligated to acquire, construct or operate any future reclamation facilities or any additions to any existing reclamation facilities for the reclamation of any sewage or treated effluent discharged into or from the regional sewerage system, unless such future facilities or additions are required for the exercise of the right of first purchase of reclaimed effluent by a purchasing agency, in which case, the agency shall give CBMWD not less than three years written notice of its intention to exercise its right of first purchase. CBMWD, in its sole discretion, may own, acquire, construct, or operate any other reclamation facilities that it deems advisable.

B. Degree of Reclamation

Unless otherwise mutually agreed between CBMWD and the purchasing agency, CBMWD shall be obligated to provide

reclamation facilities and methods consisting only of those required for the coagulation, sedimentation, filtration and disinfection of treated effluent.

C. Delivery and Reclamation of Treated Effluent

If and to the extent that CBMWD owns, acquires, or constructs any reclamation facilities:

1. CBMWD shall have an assured supply of treated effluent for the operation of the reclamation facilities and shall be entitled to take delivery of and reclaim any or all treated effluent discharged into or from any part of the regional sewerage system.

2. Each purchasing agency shall have the right of first purchase of reclaimed effluent from CBMWD as herein provided; CBMWD shall be obligated to operate its reclamation facilities to the extent necessary for the exercise of said right of first purchase.

All contracts by CBMWD with any person or public agency, other than a purchasing agency, for the beneficial use, sale or other disposition of reclaimed effluent shall provide that they are made subject to the provisions of all reclamation agreements entered into by CBMWD and all purchasing agencies.

Section 4. BASE ENTITLEMENTS AND MANNER OF EXERCISE

A. Base Entitlements

For the purpose of this agreement, the total quantity

of reclaimed effluent which is subject to the right of first purchase from CBMWD by any purchasing agency shall be the base entitlement of said agency, determined in the manner provided in subparagraph 2 of Paragraph A of Section 16 of the service contract with that agency, less normal processing losses resulting from the reclamation of treated effluent.

B. Delivery Points

Unless otherwise agreed by CBMWD, the delivery point or points of any purchasing agency exercising its right of first purchase of reclaimed effluent shall be the discharge point or points of each reclamation facility of CBMWD.

C. Exercise of Base Entitlement at Various Discharge Points

If none of the sewage collected by a purchasing agency is exported from the Chino Basin pursuant to Section 8 of the service contract, the base entitlement of such agency shall be exercised as provided in subparagraph 1 of this Paragraph C. If all of the sewage collected by a purchasing agency is exported, the base entitlement of such agency shall be exercised as provided in subparagraph 2 of this Paragraph C. If a portion only of the sewage collected by a purchasing agency is exported, the portion of the base

entitlement represented by nonexported sewage shall be exercised as provided in subparagraph 1 and the portion represented by exported sewage shall be exercised as provided in subparagraph 2.

Base entitlements of each purchasing agency shall be exercised in quantities and at delivery points determined as follows:

1. If the treated effluent originating from sewage collected by any purchasing agency ("agency effluent") is reclaimed:

a. By a single reclamation facility, the total base entitlement of such agency shall be exercised from reclaimed effluent discharged from that facility.

b. By two or more reclamation facilities, the base entitlement of such agency shall be exercised from each such facility in the proportion that the total agency effluent of the particular agency which is reclaimed by that facility bears to the total agency effluent of all agencies whose agency effluent is reclaimed by that facility.

2. If the sewage collected by a purchasing agency is exported, the base entitlement of such agency shall be exercised from a prorata share of reclaimed effluent discharged from each of the several reclamation facilities, computed as follows:

a. Based upon the preceding fiscal year, determine the ratio of the total quantity of all agency effluent re-

claimed by each individual reclamation facility to the total quantity of all agency effluent reclaimed by all reclamation facilities.

b. The prorata share of an exporting agency for each individual reclamation facility shall be determined by multiplying the ratio for that facility, computed under a., above, by the base entitlement of such agency.

c. The computations described in a. and b., above, may be diagrammed as follows:

$$\frac{\text{Total agency effluent, each Facility}}{\text{Total agency effluent, all facilities}} \times \text{Base entitlement} = \text{Agency prorata share at each facility}$$

D. Priorities

If any existing reclamation facilities shall be inadequate for the exercise of the rights of first purchase by two or more purchasing agencies, then until such time as the capability of said facilities shall be expanded, any purchasing agency making an earlier exercise of its rights of first purchase from said facilities shall, to the extent of the capability of the existing facilities, have a priority in the exercise of such rights to a flow and quantity of reclaimed effluent equal to that delivered to it during the preceding fiscal year, but not to exceed its base entitlement, over any other purchasing agency seeking to make a later exercise of its rights of first purchase of reclaimed effluent from said existing facilities.

Section 5. RECLAMATION FACILITIES, COSTS, AND RECLAMATION CHARGES

A. Financing Reclamation Facilities and Delivery Costs

All costs of CBMWD for reclamation facilities and for the delivery of reclaimed effluent shall be financed by CBMWD from sources other than service charges collected pursuant to service contracts and improvement district taxes levied and collected within Improvement District "C".

B. Reclamation Facilities

Except as otherwise mutually agreed upon by CBMWD and a purchasing agency, for the purposes of determining net audited costs of reclamation under this agreement, the reclamation facilities and methods shall (i) include only those required for the coagulation, sedimentation, filtration and disinfection of treated effluent and any additional facilities and methods which may be required by any federal, state, or regional agency authorized by law to prescribe quality standards for the types of proposed use of effluent, and (ii) shall exclude all or any portion of the disposal costs of the regional sewerage system and the reclamation facilities which are attributable to the disposal of treated or reclaimed effluent of the agency and which are located downstream from any treatment or reclamation facilities treating sewage of that agency or reclaiming treated effluent

resulting therefrom.

C. Net Audited Costs for Reclamation Facilities; Grants and Financial Assistance

CBMWD's net audited costs for reclamation facilities owned and operated by it shall consist of:

1. Straight line depreciation upon the reclamation facilities, based upon CBMWD's historical costs and on an estimated useful life of 40 years.

2. Costs of maintenance and operation of the reclamation facilities and applicable overhead of CBMWD.

3. Costs of real property necessary for the maintenance and operation of the reclamation facilities, based upon CBMWD's historical costs and amortized on a straight line basis over the estimated useful life of the reclamation facilities constructed on said real property.

CBMWD's net audited costs for reclamation facilities shall be reduced by the amounts of any grants or financial assistance received therefor by CBMWD from the federal or state governments or any county, city or special district.

D. Delivery Facilities For and Costs of Delivery of Reclaimed Effluent

Delivery facilities shall consist of any facilities for the delivery of reclaimed effluent from the point of discharge of any reclamation facilities of CBMWD to the

point of use of the effluent. This agreement and the reclamation charge provided herein shall not apply to any such delivery facilities or the financing thereof. CBMWD or any purchasing agency may, at their own expense, acquire, construct or make a contribution towards the financing of capital costs and maintenance and operation expenses of any delivery facilities. CBMWD, or any purchasing agency or agencies, or any combination thereof, may provide for delivery facilities by contract entered into between or among themselves or with any other person or public or private agency.

E. Reclamation Charge Rate

A reclamation charge rate shall be annually fixed by CBMWD for each separate reclamation facility of CBMWD. Except as otherwise provided in this Paragraph E, said charge shall be fixed in the manner provided in the service contracts for the fixing of the service charge rate. The reclamation charge rate shall be expressed in dollars and cents for each million gallons of reclaimed effluent and shall be computed for each separate reclamation facility by dividing the total estimated net audited cost of reclamation for that facility by the total estimated quantity of effluent to be reclaimed by that facility. Any purchasing

agency receiving delivery of reclaimed effluent shall pay therefor at the reclamation charge rate fixed for the reclamation facility or facilities from which such delivery is made.

With respect to any reclamation facility hereafter acquired or constructed by CBMWD, the reclamation charge rate shall be estimated by CBMWD for the initial period between the commencement of operation of said facility and the end of the next succeeding fiscal year. Within 60 days after the end of said fiscal year, CBMWD shall determine the difference between a reclamation charge rate based on actual net audited costs and said estimated rate and, with respect to any purchasing agency which has purchased reclaimed effluent, either refund the amount of any excess resulting from overpayment or submit a statement for the amount of any deficiency resulting from underpayment. Within 60 days after the submission of a statement of deficiency, the purchasing agency shall pay CBMWD the amount of the deficiency.

F. Measurement of Reclaimed Effluent

CBMWD shall install, maintain, and operate measuring devices and equipment at a location or locations mutually agreed upon by CBMWD and the purchasing agencies. The measuring devices and equipment shall be examined, tested

and serviced regularly to insure their accuracy. At any time CBMWD or any purchasing agency may inspect any measuring devices and equipment and all records and measurements taken therefrom.

G. Billing and Payment of Reclamation Charges

Charges to purchasing agencies for the delivery of reclaimed effluent shall be billed and paid in the manner provided in Section 20 of the service contracts for the billing and payment of service charges.

Section 6. CONTROL AND DISPOSITION OF EFFLUENT

CBMWD shall have the total ownership and control of all treated effluent delivered to it for the purpose of reclamation, transmission and disposal; subject to the right of first purchase by any purchasing agency, the use of all reclaimed effluent resulting from said reclamation shall be within the sole discretion of CBMWD. If any purchasing agency exercises its right of first purchase of reclaimed effluent, then such agency shall have the total ownership and control of all reclaimed effluent delivered to it and the use thereof shall be within the sole discretion of that agency.

Any purchasing agency exercising its right of first purchase of reclaimed effluent may make any lawful use thereof, including beneficial use, sale or other disposition and

shall be entitled to retain all charges received by it as a result of any such use.

To the extent that any of the purchasing agencies fail to exercise their respective rights of first purchase of reclaimed effluent, CBMWD may make any lawful use of such effluent, including beneficial use, sale or other disposition inside or outside the Chino Basin; provided, that:

A. CBMWD shall not, for a consideration, sell or otherwise dispose of any reclaimed effluent for beneficial use inside the Chino Basin without the prior consent of all purchasing agencies; and

B. If CBMWD, for a consideration, sells or otherwise disposes of any reclaimed effluent for beneficial use outside the Chino Basin, any portion of the consideration in excess of CBMWD's net audited costs of reclamation and delivery of the reclaimed effluent shall be apportioned and credited:

1. 85% to the Regional Sewerage System Maintenance and Operation Fund, established pursuant to the service contracts, and

2. 15% to the Regional Waste Water Capital Improvement Fund, established pursuant to the service contracts.

Section 7. NOTICE OF EXERCISE OF RIGHT OF FIRST PURCHASE

Any purchasing agency desiring to exercise its right

of first purchase of reclaimed effluent shall give CBMWD written notice as follows:

A. Notice by CBMWD

On or before the first day of March of each year CBMWD shall give each purchasing agency written notice requesting the agency to provide CBMWD with a schedule of the estimated flow and quantity of reclaimed effluent proposed to be delivered to the agency during the next fiscal year from each reclamation facility from which that agency is entitled to receive delivery of such effluent. The rates of flow and quantity shall not exceed the capability of the reclamation facilities then in operation.

B. Notice by Contracting Agency

On or before the first day of April of each year, each purchasing agency shall provide CBMWD with a schedule pursuant to the immediately preceding Paragraph A.

C. Allocation of Reclaimed Effluent

On or before the first day of May of each year, CBMWD shall allocate reclaimed effluent to purchasing agencies based upon schedules submitted pursuant to the immediately preceding Paragraph B. Immediately after making the allocation, CBMWD shall give a written notice of allocation to each agency stating the flow and quantity allocated to that agency during the next fiscal year.

D. Additional Allocation of Reclaimed Effluent

At any time during a fiscal year and upon 60 days written notice to CBMWD, a purchasing agency may apply for the delivery of any reclaimed effluent then available at a rate of flow or quantity greater than that specified in the notice of allocation given pursuant to the immediately preceding Paragraph C. The rates of flow and quantity shall not exceed the capability of the reclamation facilities then in operation.

E. Additional Facilities

If the rates of flow or quantity of reclaimed effluent specified in the schedule filed by any purchasing agency exceed the capabilities of the reclamation facilities then in operation, the purchasing agency shall give CBMWD three years' notice to permit construction of additional facilities of sufficient capability for such increased rates of flow or quantity.

Section 8. RECLAMATION AGREEMENTS BY CBMWD WITH PERSONS AND AGENCIES OTHER THAN PURCHASING AGENCIES

CBMWD may enter reclamation agreements with any sewage collection agency, other than a purchasing agency, located inside or outside the boundaries of CBMWD, provided, that any such agreements shall not be inconsistent with the provisions of reclamation agreements of purchasing agencies.

Subject to the rights of all purchasing agencies, as herein provided, CBMWD may by contract provide for the utilization of any reclamation facilities owned and operated by it for the reclamation of treated effluent of any person or agency, other than a purchasing agency. Any such contract shall require (i) payment to CBMWD of the net audited costs of reclamation and delivery of the reclaimed effluent and (ii) if the treated effluent delivered to CBMWD for reclamation shall be of a quality inferior to the standards prescribed in Exhibit "1" attached hereto and made a part hereof, in addition to the reclamation charge, shall require payment of a surcharge for the additional capital, maintenance, and operation costs of CBMWD in treating and reclaiming the inferior treated effluent.

Section 9. CONTRACTS OF PURCHASING AGENCIES FOR JOINT EXERCISE OR TRANSFER OF RIGHTS OF FIRST PURCHASE

Subject to the rights of CBMWD hereunder, any or all of the purchasing agencies may by contract provide for the joint exercise of their respective rights of first purchase of reclaimed effluent or for the sale, exchange, or transfer of such rights. Certified copies of all such contracts shall be filed with CBMWD by the parties thereto.

Section 10. INSPECTION OF FACILITIES

Any authorized officer or employee of a purchasing agency may enter and inspect any reclamation facilities of CBMWD. The inspection shall be made during normal working hours on regular business days and upon the giving of not less than 24 hours prior notice to CBMWD of the inspection. Any inspecting officer or employee shall bear proper credentials of authority and identification. The right of entry and inspection shall be limited to public streets, easements, and property within which the facilities shall be located. The right of inspection shall include observation, measurement and sampling.

Section 11. EMINENT DOMAIN

If the whole of one or more reclamation facilities of CBMWD or so much thereof as to render the remainder unusable for the purposes contained herein shall be taken under the power of eminent domain, then the provisions of this agreement applicable to the facilities so taken shall terminate as of the da possession shall be so taken. If less than the whole of any such reclamation facilities shall be taken under the power of eminent domain, and the remainder is usable for the purposes contained herein, then this agreement shall continue in full force and effect and shall not be terminated by virtue of such taking and the parties waive the benefit of any law to the contrary. Any award made in eminent domain proceedings for the taking or

damaging of all or any part of any reclamation facilities shall be paid to District; provided, however, that District shall not, without the consent of all purchasing agencies, expend the proceeds of such award for any purpose other than the replacement of the reclamation facilities so taken with comparable reclamation facilities.

Section 12. TERM OF AGREEMENT

The term of this reclamation agreement and any other reclamation agreement entered into between CBMWD and any other sewage collection agency shall be 50 years from the earliest effective date specified in any service contract between CBMWD and any sewage collection agency. It is the intent of the parties that all reclamation agreements for the reclamation of treated effluent and all service contracts for the services and facilities of the regional sewerage system for the transmission, treatment, and disposal of sewage shall have the same termination date, without regard to the effective dates of the individual agreements and contracts.

Section 13. RENEWAL: OPTION FOR CONTINUED SERVICE

Within five years prior to the end of the term of this agreement or any earlier termination or extension of this agreement, the parties shall negotiate for the extension or renewal of this agreement upon comparable terms and conditions. If the parties have been unable to agree thereon,

then the undersigned purchasing agency, by written notice given to CBMWD at least 12 months prior to the expiration of said term, may elect to receive continued service after the expiration of said term upon the following conditions:

A. If, by reason of continued service, no expansion is required in the capacity of any reclamation facilities in existence upon the expiration of the term of this agreement, the undersigned purchasing agency may exercise all or any part of its base entitlement from said facilities. If, by reason of continued service, such expansion shall be required, the annual quantity and flow rates of reclaimed effluent to be delivered to the undersigned contracting agency shall not exceed the quantity and flow rates delivered to the agency during the last full fiscal year preceding the expiration of said term.

B. The reclamation charge rate shall be determined as provided in Section 5 hereof.

C. CBMWD shall maintain and operate the reclamation facilities under substantially the same physical conditions of service as prevailed during the last fiscal year preceding the expiration of said term.

Other terms and conditions of continued service shall be reasonable and equitable and shall be mutually agreed

upon and, if they provide for continued service for a specified number of years, the undersigned purchasing agency shall have the option to receive further continued service upon the expiration of that and each succeeding period of continued service.

Section 14. NOTICE

Notices authorized or required to be given by any provision of this agreement shall be deemed to have been given upon delivery, if delivered personally, or upon deposit in the mails, if enclosed in a properly addressed envelope and deposited in the United States mails for delivery by registered or certified mail.

Notice shall be given to the parties by delivery or mailing to the following officers of the parties at the following addresses:

CBMWD: Secretary, Chino Basin Municipal Water District
8555 Archibald Avenue
Cucamonga, California

Undersigned Purchasing Agency:

_____

_____

_____

At any time a party may give written notice to the other party of a change in the designated officer or address

Section 15. PARTIAL INVALIDITY

The invalidity of any provision of this agreement shall not affect the validity of the remainder thereof which can be given effect without such invalid provision.

CHINO BASIN MUNICIPAL WATER DISTRICT
("CBMWD")

By _____
Its President

ATTEST:

By _____
Its Secretary

_____
("Undersigned Purchasing Agency")

By _____
Its _____

ATTEST:

By _____
Its _____

EXHIBIT 1

EXHIBIT I

DESIGN STANDARDS

FOR THE CONSTRUCTION OF

COMMUNITY SEWER SYSTEMS

SECTION I - DEFINITIONS

For the purposes of these "Design Standards," certain words or phrases used in these Standards are defined in this Section I as follows:

1. "Engineer" shall mean the City Engineer or his authorized deputy, agent, representative, or inspector if the work is to be constructed within the service area of a City that is a contracting agency as described in the Chino Basin Regional Sewage Service Contract. It shall mean the agency's Chief Engineer or his authorized deputy, agent, representative, or inspector if the work is to be constructed within the service area of an agency other than a City that is a contracting agency as described in said Service Contract. It shall mean the District Engineer of the Chino Basin Municipal Water District or his authorized deputy, agent, representative, or inspector if the work is to be constructed outside all service areas of contracting agencies to said Service Contract.

2. "Service lateral" shall mean that part of the horizontal piping beginning at the property line or sewer right-of-way line and extending to its connection with the main line sewer through which sewage is discharged.

3. "Main line sewer" shall mean any public sewer, except sewers that are a part of the Chino Basin Municipal Water District Non-Reclaimable Waste Sewerage System, in a dedicated right-of-way in which changes in alignment and grade occur only at manholes or where angle points or curves between manholes have been approved by the Engineer.

SECTION II - GENERAL PROVISIONS

1. Permit Required

No person shall commence, do, or cause to be done, construct, or cause to be constructed, use or cause to be used, or alter or cause to be altered any main line sewer, service lateral, sewage pumping plant, or other similar appurtenance without first obtaining a sewer permit from the Engineer to do so.

2. Permits Not Transferable

Permits issued pursuant to the provisions of these Design Standards shall not be transferable.

3. Permit Application

a. Application required. Any person requiring a sewer permit shall make written application to the Engineer.

b. Form. The Engineer shall provide printed application forms for such permits indicating thereon the information to be furnished by the applicant. The Engineer may require, in addition to the information furnished by the printed form, any additional information from the applicant which will enable the Engineer to determine that the proposed work or use complies with the provisions of these Design Standards.

4. Main Line Sewers

Before granting a permit for the construction of any main line sewer, with or without house laterals, the Engineer shall check and approve the plans therefor as to their compliance with County, State, and other governmental laws and as to conformity with the standards of design set forth herein.

5. Inspections: Required

All work done pursuant to the provisions of these Design Standards shall be subject to inspection by, and shall meet the approval of, the Engineer.

6. Standard Specifications for Materials and Construction Work

All material used in any work and all methods of construction utilized to accomplish said work shall comply with the minimum standards established by these Design Standards including the adopted Standard Drawings numbered 1 through 6 and the Standard Specifications.

The Standard Specifications controlling materials and methods of construction shall be the "Standard Specifications for Public Works Construction," 1971 Edition, latest amendments, written and promulgated by the Southern California Chapters of American Public Works Association and Associated General Contractors of America Joint Cooperative Committee.

SECTION III - DESIGN STANDARDS

1. Main Line Sewers

New main line sewers shall at least conform to the provisions of these Design Standards unless otherwise specifically excepted.

2. Pumping Plants

New sewage pumping plants shall conform to the provisions of these Design Standards unless otherwise specifically excepted.

3. Service Laterals

New service laterals shall conform to the provisions of these Design Standards and the Standard Drawings unless otherwise specifically excepted.

4. Conformance of Work and Plans to Design Standards

All plans required by the provisions of these Design Standards for the construction of main line sewers and service laterals shall conform to the standards of design prescribed by these Standards.

5. Main Line Sewers: Size

Main line sewer pipe shall have an inside diameter of not less than eight (8") inches and shall have sufficient capacity to carry sewage from the area tributary thereto when computed by a rational basis accounting for present and future land development. Main line sewers shall be designed to flow 1/2 full when carrying the design average volume of flow.

The Engineer shall determine said rational method for computing design flows and shall approve any modification thereof.

6. Main Line Sewers: Velocity

A main line sewer shall be designed to provide a self-cleaning velocity of flow. The following minimum and maximum gradients shall apply to all new main line sewer construction:

Dia.	Min. Slope	Max. Slope
8"	0.40%	8.00%
10"	0.32%	7.00%
12"	0.24%	5.00%
15"	0.18%	4.00%
18"	0.14%	3.00%
21"	0.12%	2.50%
24"	0.10%	2.00%

If drop manholes are required to meet the criteria of the maximum slopes designated above, the manholes shall be constructed in accordance with the attached Standard Drawing.

7. Main Line Sewers: Location in Streets

Main line sewers will normally be located not more than six (6) feet from the center lines of streets or alleys except on major highways where separate sewers may be required. If separate sewers are required, they will normally be located

in the roadway six (6) feet from each curb line.

Exceptions to the standard locations set forth in these Standards may be made only upon approval by the Engineer.

8. Main Line Sewers and Service Laterals: Depth

The minimum depth for main line sewers shall be six (6) feet. The minimum depth for service laterals shall be four (4) feet below the curb grade or center line street or alley grade at the property line.

Exceptions to the minima set forth in these Standards may be made only on approval of the Engineer.

9. Manhole Structures

Manhole structures shall be placed in the main line sewer at all changes of alignment and gradient. The maximum distance between structures on sewer lines of 8" through 15" in diameter shall be not more than 350 feet. Manhole spacing on lines of over 15" diameter pipe shall be determined by the Engineer. All structures shall be designed according to the standard drawings for structures attached hereto.

Exceptions to these requirements may be made only on approval of the Engineer.

10. Service Laterals: Service

Six (6) inch or four (4) inch service lateral service shall be provided in the street for each lot at the minimum depths provided by these Standards, and, in addition, such depth shall be sufficient to provide a connection to the lowest and/or farthest point of the lot with a cover of one foot and a grade of not less than two (2) percent. All laterals shall be designed according to the standard drawings for laterals attached hereto.

Any exception to these requirements may be made only upon approval of the Engineer.

11. House Laterals. Grades

The alignment and grade of a service lateral shall be straight from the public sewer to the street property line and shall have a fall of not less than two (2) percent toward the public sewer except as otherwise permitted by the Engineer.

12. House Laterals: Depth in Streets

When laid within the limits of a public thoroughfare, no service lateral shall be laid less than four (4) feet below the established grade of the same or below the surface, when no grade is established, except by special permission in writing from the Engineer.

13. Pipe Kinds, Sizes, and Strengths

All pipe shall be either clay or cast iron. Use of the following alternate pipe materials may be permitted subject to the approval of the Engineer: Epoxy-lined astestos cement, asbestos cement, RPM, and PVC. All clay pipe shall be first-class, extra-strength vitrified clay pipe. All cast iron pipe four (4) inches or six (6) inches in diameter shall be service weight or better cast iron soil pipe. Cast iron pipe eight (8) inches or larger in diameter shall be Class 150. That portion of the pipe extending from the main line sewer to the property line shall not be less than four (4) inches in internal diameter.

14. Substructures

All substructures which will be encountered in the construction or which will be installed as part of the improvement shall be shown and designated on the plan. Large substructures which require special treatment in the design of the sewer shall also be shown in the profile.

15. Soil Conditions.

Soil conditions, particularly in areas known to have high ground water tables, rock, or filled ground, shall be prospected, and the results shall be shown on the profile, if required by the Engineer.

16. Bench Marks

A system of bench marks adequate to construct the work shall be shown on the profile. This bench mark system shall be related to or tied to the datum utilized by the controlling agency when a Regional Bench mark system is established. This system shall be utilized as directed by the Engineer. The elevation of the sewer at the point where the system is to be discharged shall be shown as determined in the field from the above shown datum.

SECTION IV - VARIANCES FROM PROVISIONS

1. Impossibility of literal compliance

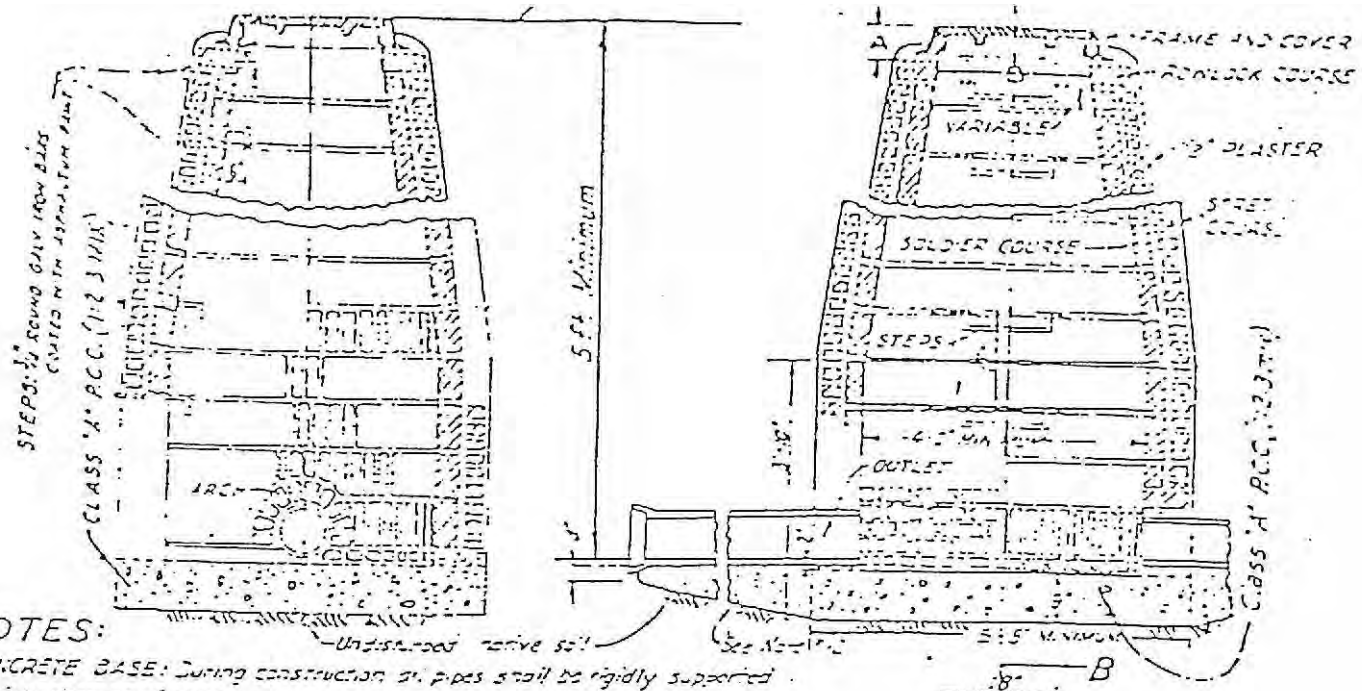
If a literal compliance with any engineering requirement of this exhibit is impossible or impractical because of peculiar conditions in no way the fault of the person requesting an exception, and the purposes of this exhibit may be accomplished, and the public safety secured by an alternate construction or procedure, and the Engineer so finds, he may grant an exception permitting such alternate construction or procedure.

2. Conflicts with standards within service areas of contracting agencies and standards of this exhibit.

   If it is determined that there is a conflict between the standards established in this exhibit and the standards in use within the service area of a contracting agency, the Engineer of said contracting agency shall enforce the more restrictive of the two standards.

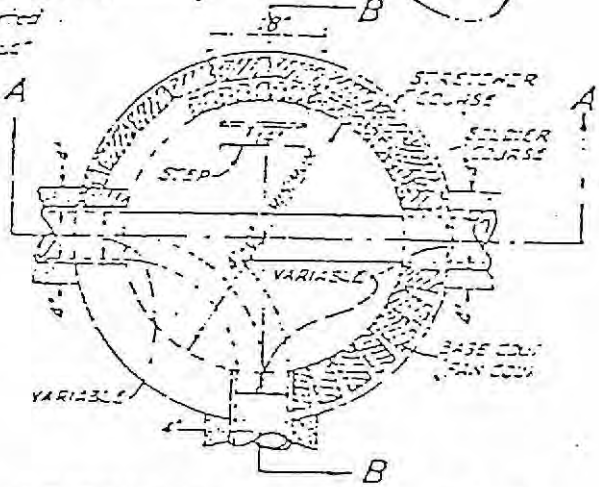
3. Additions, amendments, or modifications to this exhibit.

   The technical committee established by the Chino Basin Regional Sewerage Contract shall periodically review the standards established by this exhibit and this committee shall be empowered to adopt any amendments, additions, or standards, or to delete or discontinue any requirements presented in this exhibit as deemed appropriate by said committee. Any such changes or additions shall become effective sixty (60) days following said adoption by the technical committee and they will remain in effect as if they were presented in this original exhibit. When changes are adopted, written notice of said changes shall be mailed to all members of the technical committee and this notice shall designate the effective date of said change. The Engineer may be directed to enforce a change immediately if the technical committee determines the change resolves an emergency situation. In this case, the sixty (60) day notice period shall not apply.

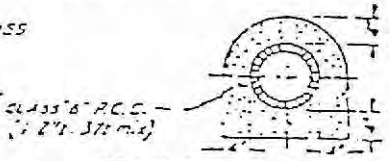


NOTES:

1. CONCRETE BASE: During construction all pipes shall be rigidly supported by brick piers one foot deep, located just outside the structure. Construct top of concrete base two inches below invert of lowest pipe. Fill space beneath pipe with mortar and shove from both sides with base course brick to form a water tight joint.
2. BASE OR FAN COURSE: Lay brick flat on radial lines with tops to same level.
3. ARCHES: Lay scalled brick on edge to form a true radial arch with full mortar joint around all pipe openings. Turn arch of two such courses over pipes 15" or more in diameter.
4. SOLDIER COURSES: Lay inside brick on radial lines with first four courses vertical. Lay succeeding courses with a uniform batter to obtain an inside diameter of "B" at top of last or fractional soldier course. Use split brick to close soldier courses.
5. STRETCHER COURSES: Lay outside brick flat in a deep bed of mortar. Shove brick hard together against adjacent soldier course.
6. ROWLOCK COURSE: Lay last course of brick on edge across soldier and stretcher courses, on radial lines, with tops parallel and "A" inches below finished grade. See Schedule.
7. STEPS: Set lower step on top of third soldier course and center brick above. Place upper step immediately below rowlock course and project six inches. Steps shall be spaced not more than 12" apart.
8. JOINTS: Inside joints shall be neatly struck and pointed and shall not exceed ⅜ inch in thickness.
9. CHANNEL BASE: The depth of channel in channel base shall be 2/3 of pipe diameter for pipes 15" or less, and shall equal the pipe diameter for pipes 18" or larger. For special channels in trap or gauging manholes see special plans.
10. Cradle first length of pipe at all inlets and outlets with Class 'B' R.C.C. or undisturbed native soil.

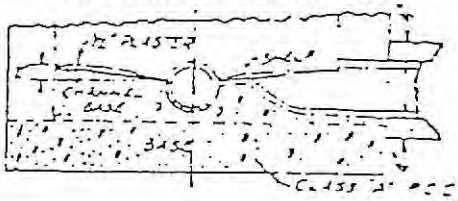


SECTIONAL PLAN OF BASE



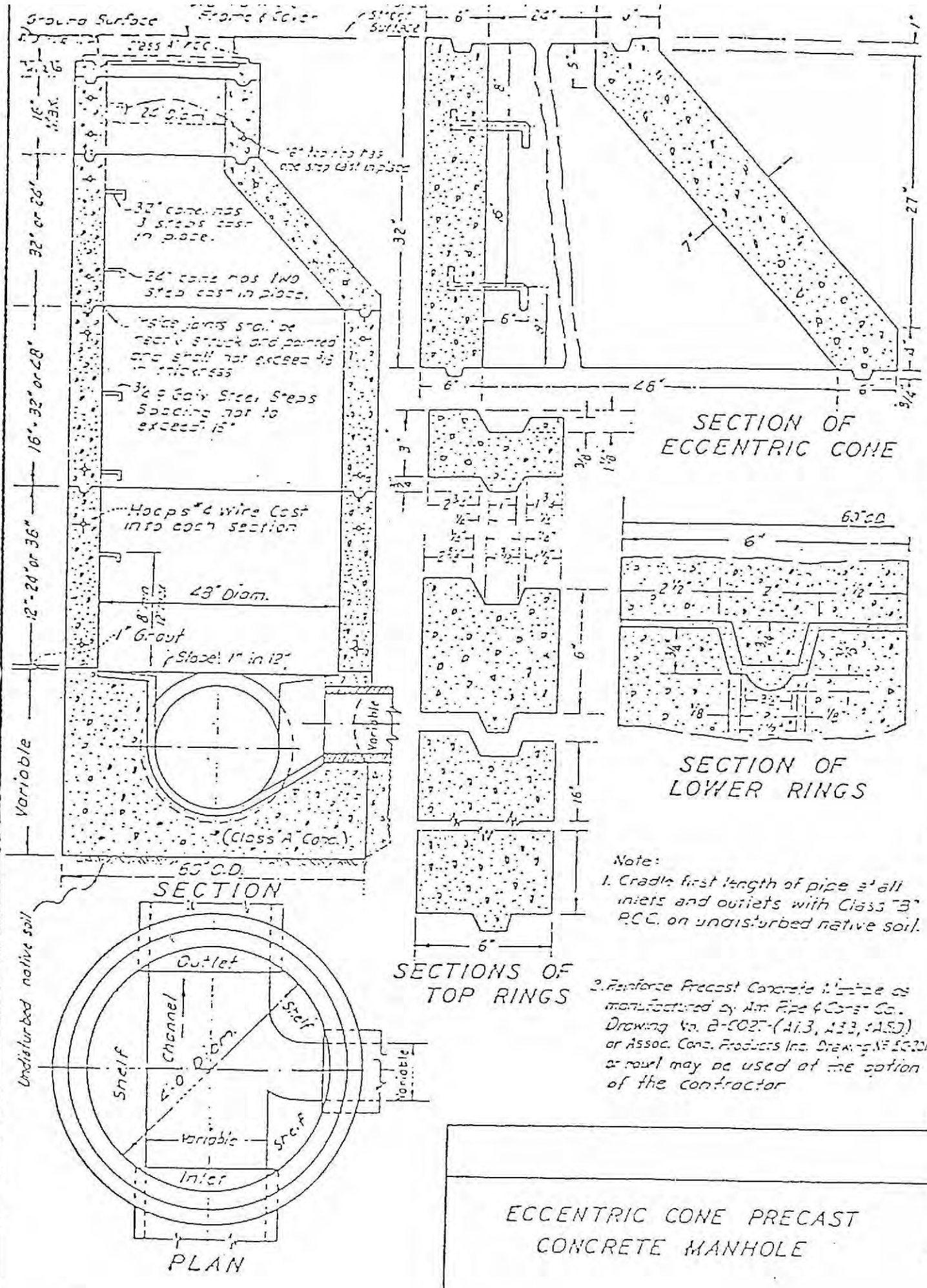
CROSS SECTION OF ENCASEMENT

SECTIONAL ELEVATION B-B
CHANNEL BASE



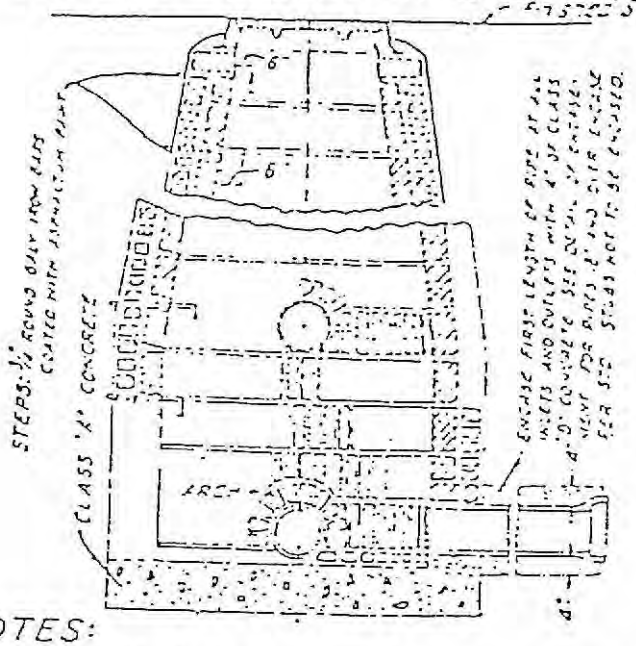
STANDARD PLAN
BRICK SEWER STRUCTURES

STD NO 1

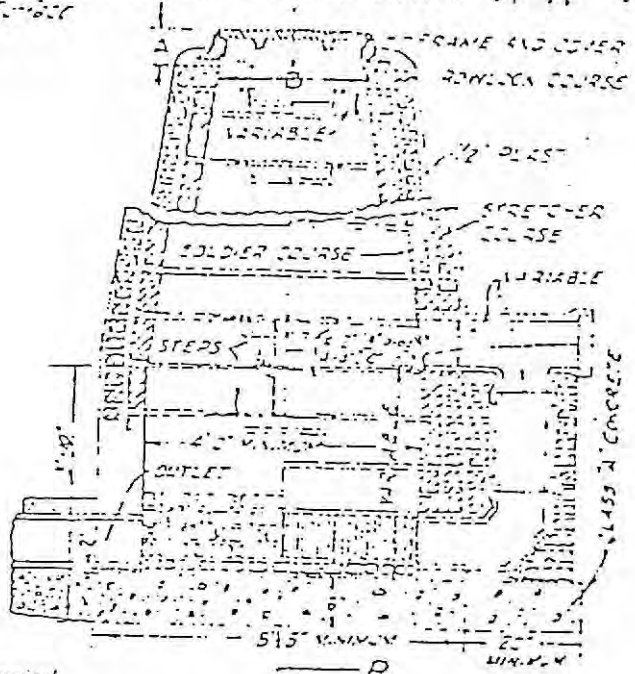


ECCENTRIC CONE PRECAST CONCRETE MANHOLE

SECTIONAL ELEVATION B-B

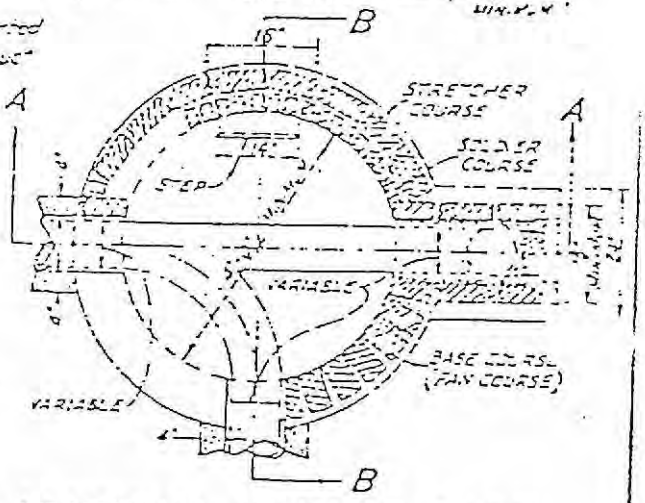


SECTIONAL ELEVATION A-A

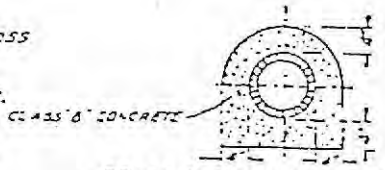


NOTES:

1. CONCRETE BASE - During construction all pipes shall be rigidly supported by brick piers one foot deep, located just outside the structure. Construct top of concrete base two inches below invert of lowest pipe. Fill space beneath pipe with mortar and shape from both sides with base course brick to form a water tight joint.
2. BASE OR FAN COURSE: Lay brick flat on radial lines with tops to same level.
3. ARCHES: Lay spalled brick on edge to form a true radial arch with full mortar joint around all pipe openings. Turn arch of two such courses over pipes 15" or more in diameter.
4. SOLDIER COURSES: Lay inside brick on radial lines with first four courses vertical. Lay succeeding courses with a uniform batter to obtain an inside diameter of "B" at top of last or fractional soldier course. Use split brick to close soldier courses.
5. STRETCHER COURSES: Lay outside brick flat in a bed of mortar. Shove brick hard together against adjacent soldier course.
6. ROWLOCK COURSE: Lay last course of brick on edge across soldier and stretcher courses, on radial lines, with tops parallel and "A" inches below finished grade. See Schedule.
7. STEPS: Set lower step on top of third soldier course and notch brick above. Place upper step immediately below rowlock course and project three inches. If upper invert of Drop manhole is more than four feet above shelf. Set one step on each side of structure at right angles to and not more than four feet below the above inlet.
8. JOINTS: Inside joints shall be neatly struck and pointed and shall not exceed ¾ inch in thickness.
9. CHANNEL BASE: The depth of channel in channel base shall be 2/3 of pipe diameter for pipes 15" or less, and shall equal the pipe diameter for pipes 18" or larger. For special channels in trap or gauging manholes see special plans.
10. PRECAST CONC. MANHOLES: Use class "A" concrete encasement around drop inlet pipe instead of brickwork for all precast conc drop manholes.

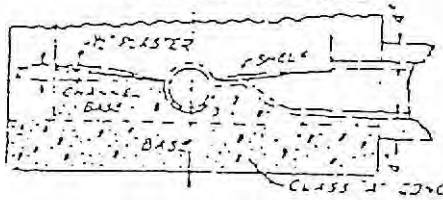


SECTIONAL PLAN OF BASE

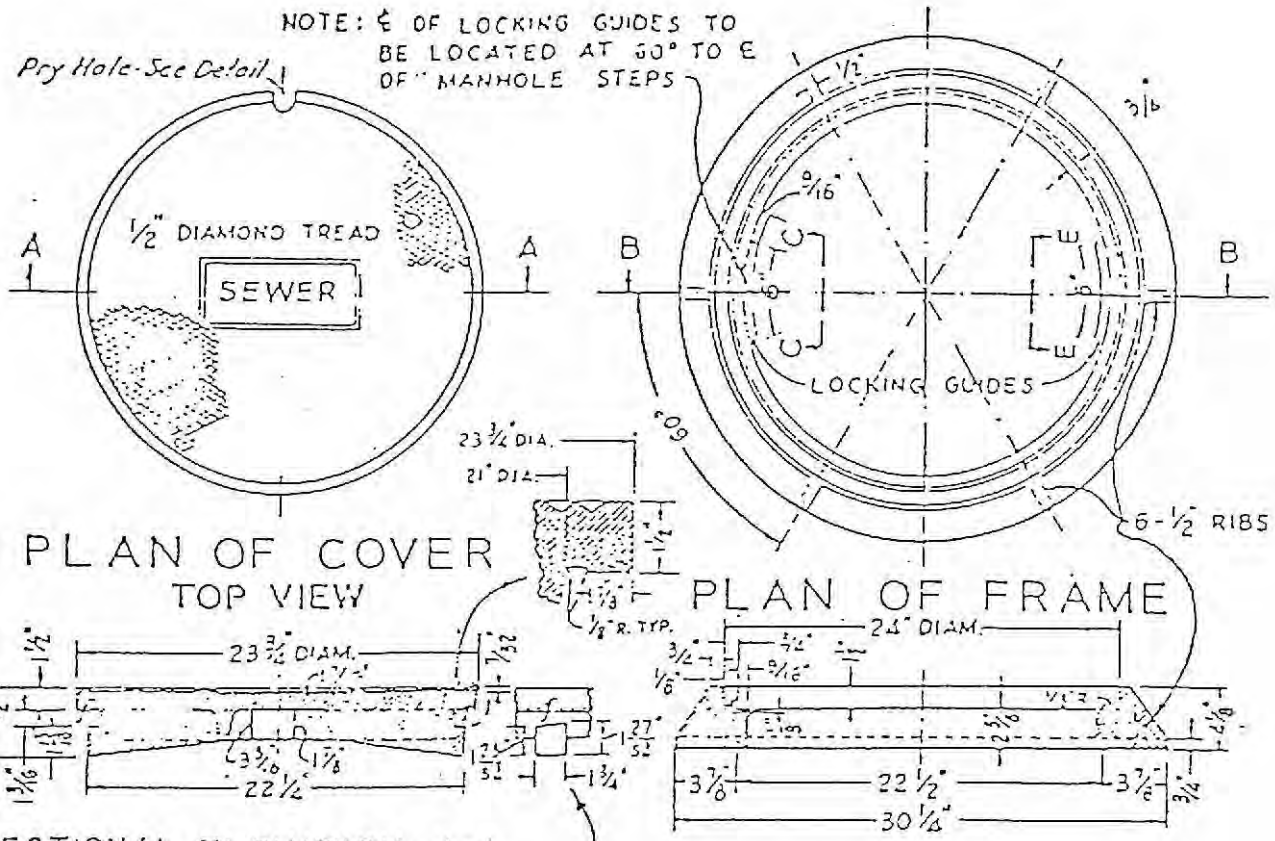


CROSS SECTION OF ENCASEMENT

SECTIONAL ELEVATION B-B
CHANNEL BASE

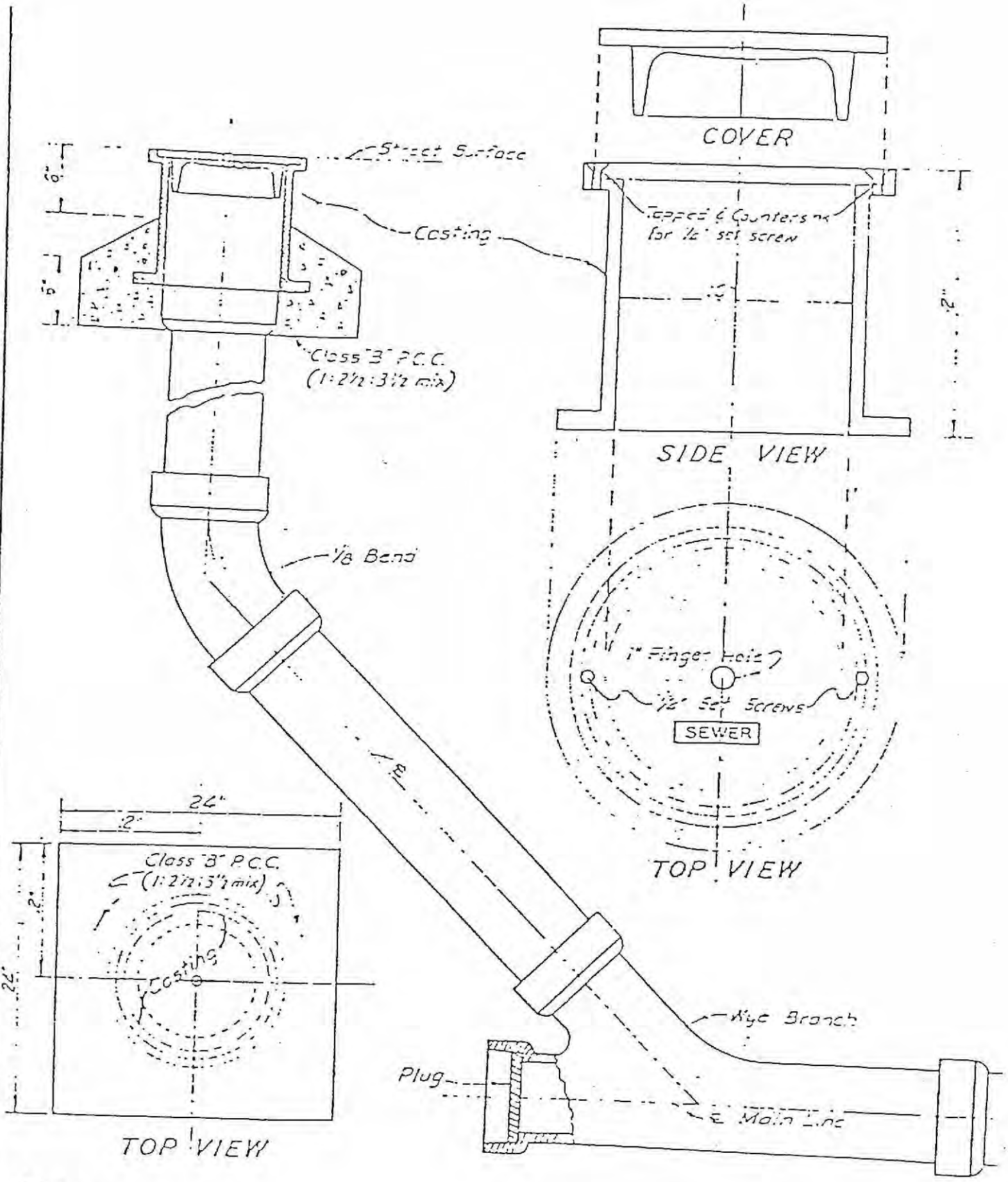


STANDARD PLAN
DROP MANHOLE



NOTE: Machine seats and grind lugs smooth.
Perimeter of cover shall be ground smooth,
Diameter tolerance ± 1/16"
Weight of Manhole Frame - 150 lbs.
Weight of Manhole Cover - 215 lbs.
The Cast Iron used shall have a tensile strength of 30,000 lbs. per sq. in.
Alhambra Foundry No. A 1175 or Apex "X"-107

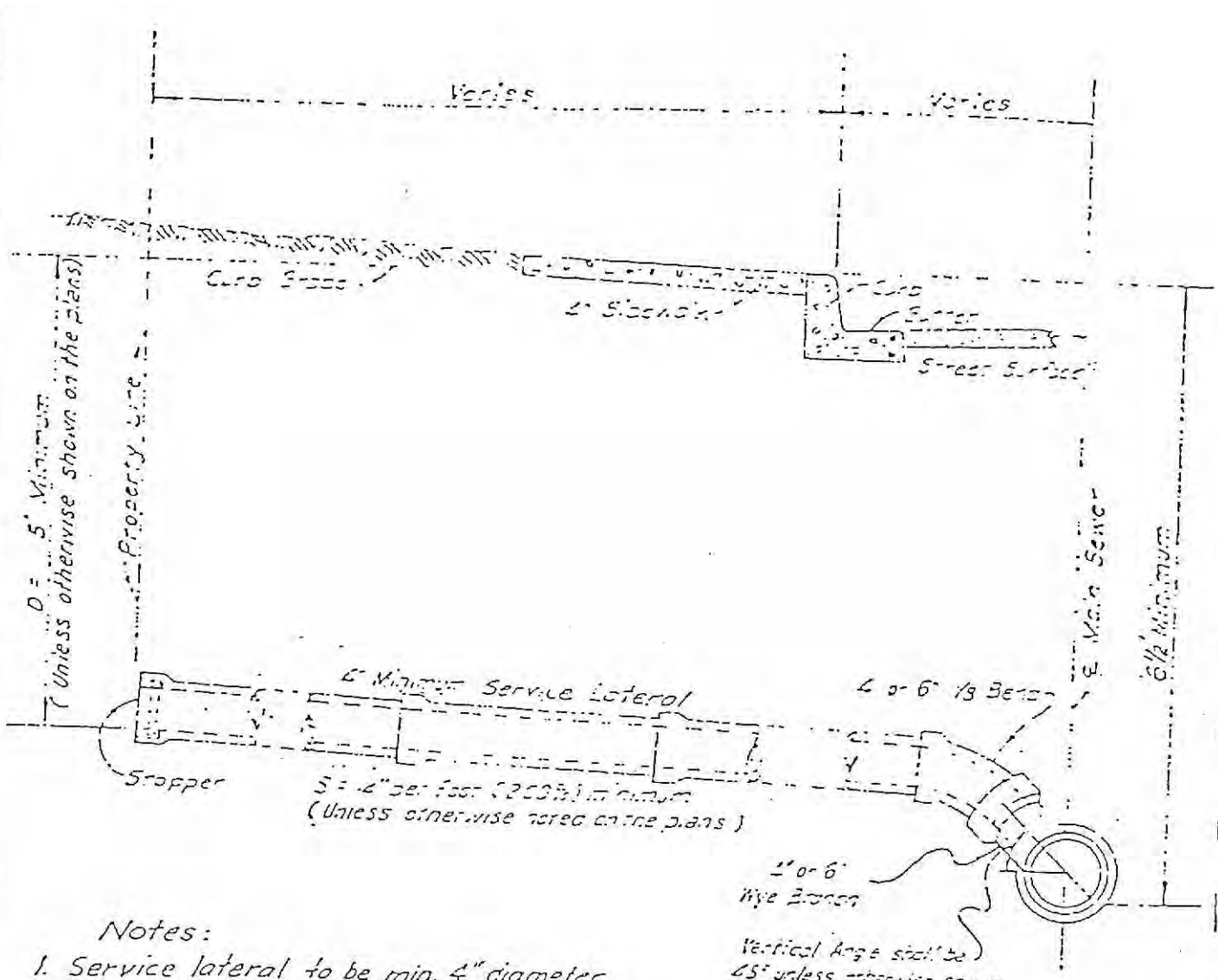
MANHOLE FRAME & COVER



Notes:

1. Clean-out pipe shall be a min. 8" in diameter.
2. Casting may be Ainsombra Foundry Number A-1240 or equal.

SEWER TERMINAL CLEAN-OUT



Notes:

1. Service lateral to be min. 4" diameter serving single family residential lots.
2. Service lateral to be min. 6" diameter serving all other than single family residential lots.

SERVICE LATERAL

foregoing; the Regional Sewerage System shall not include any reclamation facilities or portions of reclamation facilities which are operated by or for the benefit of CBMWD to meet obligations under the judgment entered in the action entitled Orange County Water District v. City of Chino, et al. (Case No. 117628, Superior Court, county of Orange), or to meet the requirements of Contracting Agencies exercising the right of first purchase of reclaimed effluent; provided that the Regional Sewerage System shall include all other disposal facilities which are required to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit or Permits or Waste Discharge Requirements issued to CBMWD by the Regional Water Quality Control Board, Santa Ana Region, for the operation of the Regional Treatment Plants and, to the extent it is used as provided in Section 8 of the Regional Contract, the Non-reclaimable Waste Disposal System.

"Regional Treatment Plant" - shall mean a sewage and wastewater treatment facility owned and operated by CBMWD as part of the Regional Sewerage System.

"Significant Industrial User" - shall mean a Significant Industrial User as defined in 40 CFR Part 403.3(t).

"Slug Load" - shall mean any pollutant released in a wastewater discharge at a flow rate and/or pollutant concentration which may cause Interference, Upset or Pass Through of the Regional

Sewerage System.

"Upset" - shall mean an exceptional incident in which there is unintentional and temporary noncompliance with the Wastewater Discharge Limitations because of factors beyond the reasonable control of an Industrial User. Upset shall not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance or careless or improper operation.

"Waste Discharge Requirements" - shall mean the waste discharge requirements issued by the Approval Authority to CBMWD regarding the Regional Treatment Plants pursuant to the NPDES.

"Wastewater Quality Limitations" - shall mean wastewater quality limitations to be established by the Board of Directors of CBMWD to insure that wastewater discharged by the Contracting Agencies from their Community Sewer Systems to the Regional Sewerage System will be of a quality which will enable CBMWD to satisfy the Waste Discharge Requirements.

Section 2. Pretreatment Regulations

2.1 The parties recognize that they must comply with federal and State pretreatment regulations and other applicable pretreatment requirements. The parties also recognize that

conditions, methods and technology affecting the treatment and disposal of Industrial Wastewater, and the requirements or standards therefor, may change after the effective date of this Agreement. The parties intend to contract in this Agreement in such a manner as to accommodate any such changes that may occur, fulfill the intent of this Agreement and comply with all applicable federal, State and local Pretreatment Standards and Requirements.

2.2 At all times during the term of this Agreement, CBMWD and the Contracting Agencies shall adopt and maintain in full force and effect wastewater ordinances which shall expressly provide that CBMWD has the legal authority to regulate Industrial Users tributary to the Regional Sewerage System as set forth in this Agreement. The provisions of the wastewater ordinances adopted by CBMWD and the Contracting Agencies and any amendments thereof shall at all times be consistent with this Agreement.

2.3 Each Contracting Agency shall establish in its wastewater ordinance, monitoring and reporting requirements, and wastewater limitations in a manner acceptable to the Approval Authority. Each Contracting Agency's Pretreatment Program shall satisfy the requirements of and be approved by the Approval Authority. If a Contracting Agency does not have an approved Pretreatment Program, CBMWD shall undertake the required Pretreatment Program functions for the Contracting Agency until said agency establishes a pretreatment program acceptable to the Approval Authority.

2.4 The parties acknowledge that CBMWD is required by federal law to have the fully enforceable legal authority of a POTW to inspect, permit and control Indirect Discharges, including but not limited to discharges by Significant Industrial Users which are extra-jurisdictional to CBMWD and contribute wastewater to the Regional Sewerage System, as provided for in 40 CFR Part 403.8(f). The parties further acknowledge and agree that CBMWD has the full legal authority to require compliance by such Industrial Users with Pretreatment Standards and Requirements. The parties further acknowledge and agree, however, that CBMWD shall not exercise such authority unless a Contracting Agency is not adequately enforcing its wastewater ordinance as provided in Section 3 of this Agreement.

Section 3. Enforcement Responsibility

3.1 In order to comply with the federal and State pretreatment regulations, the Contracting Agencies and CBMWD may take any action to ensure protection of the Regional Sewerage System and control pollutants which may cause Upset, Interference, or Pass Through at the Regional Sewerage System.

3.2 CBMWD may enter into a separate agreement with a Contracting Agency to undertake all or part of the required Pretreatment Program activities of the Contracting Agency. The Contracting Agency or Industrial Users within the Contracting

Agency's jurisdiction shall pay to CBMWD all costs associated with Pretreatment Program activities which are undertaken by CBMWD pursuant to such an agreement. Absent such an agreement, each Contracting Agency shall have the responsibility to:

(a) Identify, locate and correctly categorize all Industrial Users existing within its jurisdiction.

(b) Inspect, monitor and control all Industrial Users of the Contracting Agency's Community Sewer System, and maintain an adequate inspection and monitoring program with respect to such Industrial Users and the necessary documentation thereof.

(c) Require Significant Industrial Users to conduct Industrial Wastewater self-monitoring in accordance with federal and State pretreatment regulations and all applicable Pretreatment Standards and Requirements.

(d) Require Significant Industrial Users to meet applicable Pretreatment Standards and Requirements, and where appropriate, to meet compliance schedules for installation of adequate Pretreatment Facilities.

(e) Require Significant Industrial Users to maintain Pretreatment Facilities in satisfactory condition and to operate such Pretreatment Facilities at all times so as to comply with applicable Pretreatment Standards and Requirements.

(f) Prohibit each Categorical Industrial User from diluting its Industrial Wastewater discharge to achieve compliance with Categorical Pretreatment Standards and Requirements.

(g) Require Significant Industrial Users to allow inspection and copying by the Contracting Agency and CBMWD of all process and pretreatment records.

(h) Require Significant Industrial Users to allow inspection by the Contracting Agency and CBMWD of Pretreatment Facilities.

(i) Ensure that all Industrial Users of the Contracting Agency's Community Sewer System comply fully with all applicable Pretreatment Standards and Requirements.

(j) Develop, implement and revise as necessary an enforcement response plan in full compliance with all federal and State pretreatment regulations regarding investigation of and response to instances of Industrial User noncompliance with wastewater ordinances and Industrial Wastewater Discharge Permits. At a minimum, the enforcement response plan shall:

(1) Describe how the Contracting Agency will investigate instances of noncompliance;

(2) Describe the types of escalating enforcement actions the Contracting Agency will take in response to anticipated types of Industrial User noncompliance and the time periods within which response will take place;

(3) Identify, by title, the official or officials of the Contracting Agency responsible for each type of response and action; and

(4) Reflect the Contracting Agency's primary responsibility to enforce all applicable Pretreatment Standards and Requirements.

(k) Enforce all Pretreatment Standards and Requirements, including Categorical Pretreatment Standards and Requirements for the discharge of wastewater to the Regional Sewerage System and the general discharge prohibitions contained in 40 CFR Part 403.5 (a).

(l) Issue notices of violation to Industrial Users and take enforcement actions, to obtain compliance by Industrial Users with all applicable Pretreatment Standards and Requirements, including the imposition and collection of fines and penalties as permitted by law.

(m) Seek injunctive relief against Industrial Users when necessary to prevent Industrial Wastewater discharge to the Contracting Agency's Community Sewer System which are not in

compliance with applicable Pretreatment Standards and Requirements so as to protect the Regional Sewerage System.

3.3 Notwithstanding the preceding provisions of this Agreement, if CBMWD determines that a Contracting Agency has not taken appropriate enforcement action against an Industrial User, CBMWD may cause enforcement action against the Industrial User as follows:

(a) The pretreatment managers of CBMWD and the Contracting Agency shall discuss the enforcement action proposed by CBMWD.

(b) If the pretreatment managers do not agree upon the proposed enforcement action to be taken by the Contracting Agency, CBMWD shall send written notice to the administrator of the Contracting Agency's wastewater ordinance, signed by the CBMWD General Manager or his/her designee, specifying that a violation of the requirements of the Contracting Agency's wastewater ordinance has occurred or is occurring with respect to a particular Industrial User within the Contracting Agency's jurisdiction and the nature of the enforcement action which CBMWD contends should be taken. The notice shall contain sufficient information to substantiate the contention of CBMWD as to the need for enforcement action to be taken by the Contracting Agency.

(c) If the administrator of the Contracting Agency's wastewater ordinance agrees with the contention of CBMWD then he/she shall forthwith initiate the mutually agreed upon enforcement action.

(d) If the administrator of the Contracting Agency's wastewater ordinance disagrees with the contention of CBMWD, he/she shall notify CBMWD in writing of such disagreement within fourteen (14) calendar days after CBMWD's written notice is received by the Contracting Agency. Such written notification shall be signed by the administrator of the Contracting Agency's wastewater ordinance and shall state the reasons for the Contracting Agency's disagreement with the enforcement action proposed by CBMWD.

(e) After receiving a written notification from the Contracting Agency pursuant to Section 3.3 (c) of this Agreement, CBMWD may appeal to the governing body of the Contracting Agency by submitting the appeal to the administrator of the Contracting Agency's wastewater ordinance. A hearing shall be held by the governing body of the Contracting Agency no later than thirty (30) calendar days after CBMWD's appeal is received. The thirty (30) day time limit may be extended by mutual agreement. The governing body of the Contracting Agency shall make findings and direct such enforcement or remedial action as it determines is appropriate.

(f) If CBMWD disagrees with the findings or the enforcement or remedial action selected by the governing body of

the Contract Agency, CBMWD may pursue appropriate enforcement action pursuant to applicable federal or State law.

(g) If the CBMWD General Manager determines that circumstances require immediate enforcement action against an Industrial User in order to protect the Regional Sewerage System, CBMWD may proceed with enforcement or remedial action without regard to paragraphs (a) through (e) above, while complying with Section 5.5 of this Agreement.

(h) Joint enforcement action may be taken by CBMWD and a Contracting Agency against any Industrial User violating any condition of its Industrial Wastewater Discharge Permit or the wastewater ordinance when agreed to by the Contracting Agency and CBMWD.

3.4 Civil and criminal fines and penalties payable by Industrial Users shall be paid to the agency (i.e., a Contracting Agency or CBMWD) undertaking the enforcement action. For joint enforcement actions, CBMWD and the Contracting Agency shall divide any recovery equally or as otherwise agreed. In the event of an award of damages or of an award of costs incurred by either CBMWD or a Contracting Agency, the damages shall be paid to the agency whose facilities or processes incurred the damage and the costs reimbursed to the agency that incurred such costs, as may be appropriate.

Section 4. Industrial Wastewater Discharge Permits

4.1 The Contracting Agency's wastewater ordinances shall require that all Industrial Users seeking to obtain, renew or revise an Industrial Wastewater Discharge Permit shall file with the Contracting Agency a permit application as set forth in the wastewater ordinance. After the Contracting Agency has determined that the application is complete, the Contracting Agency shall determine if the permit applicant Industrial User is a Significant Industrial User and develop appropriate permit requirements.

4.2 If an applicant Industrial User is determined to be a Significant Industrial User, the Contracting Agency shall forward a draft Industrial Wastewater Discharge Permit to CBMWD for its review and comment. Unless the Contracting Agency receives written comments or a request for additional information from CBMWD within ten (10) business days from the date of mailing the draft permit, the permit may be issued by the Contracting Agency to the Industrial User in the form of the draft permit submitted to CBMWD. If CBMWD determines that additional information is required to properly evaluate a draft permit for a Significant Industrial User received from a Contracting Agency, CBMWD shall, within the time period specified above, provide written notification of this determination to the Contracting Agency, which shall then obtain the required additional information and provide it to CBMWD.

4.3 In evaluating a draft permit for a Significant Industrial User, CBMWD may specify appropriate terms, conditions or limits for any new or increased contributions of pollutants or any change in the nature of pollutants to be discharged by the Industrial User into the Community Sewer System as follows: (1) to ensure compliance with applicable Pretreatment Standards and Requirements; or (2) if the new, increased or changed contributions of pollutants, alone or in conjunction with other discharges, may cause CBMWD to violate its Waste Discharge Requirements. CBMWD shall notify the Contracting Agency in writing within the time period specified above and the Contracting Agency shall include such additional terms, conditions or limits in the permit.

4.4 Existing Significant Industrial Users which have valid Industrial Wastewater Discharge Permits on file with CBMWD as of the effective date of this Agreement shall be deemed authorized to discharge indirectly to the Regional Sewerage System as long as their permits remain valid.

4.5 All Industrial Wastewater Discharge Permits shall expressly provide that CBMWD has the legal authority to enforce the permit conditions as provided in this Agreement, including:

(a) Surveillance and monitoring of wastewater discharge;

(b) Inspection of any facility or industrial process involved directly or indirectly with any discharge of Industrial

Wastewater, including any Pretreatment Facilities;

(c) Prohibitions of and restrictions on wastewater discharge; and

(d) The requirement that the Industrial User notify CBMWD immediately upon any discharge by the Industrial User of a Slug Load to the Community Sewer System.

Section 5. Inspection and Monitoring of Industrial Users

5.1 The Contracting Agencies shall carry out inspections, surveillance and monitoring necessary to determine, independent of information supplied by Industrial Users, the compliance status of an Industrial User with applicable Pretreatment Standards and Requirements.

5.2 CBMWD shall also have the right to conduct inspections, surveillance and monitoring of Industrial Users in order to identify, independent of information supplied by the Contracting Agencies or Industrial Users, noncompliance with Pretreatment Standards and Requirements.

5.3 Representatives of CBMWD and each Contracting Agency shall be authorized by their wastewater ordinances and the Industrial User's Industrial Wastewater Discharge Permit to enter

on or into any premises of any Industrial User in which an Industrial Wastewater discharge source or Pretreatment Facility is located or in which records are required to be kept to assure compliance with Pretreatment Standards and Requirements.

5.4 Except during emergencies, CBMWD shall give written notice to a Contracting Agency prior to conducting inspection, surveillance or monitoring of any Industrial User discharging Industrial Wastewater to the Contracting Agency's Community Sewer System. The written notice shall contain sufficient information to substantiate the contention of CBMWD as to the need for inspection, surveillance or monitoring and shall be signed by the CBMWD General Manager or his designee. The inspection, surveillance or monitoring of the Industrial User is to be conducted jointly by representatives of the Contracting Agency and CBMWD unless the Contracting Agency waives this right. The representatives shall mutually agree upon the dates and times of the inspection, surveillance or monitoring. A Contracting Agency may waive the aforementioned written notice requirement on a case-by-case basis.

5.5 If the CBMWD General Manager or his designee determines that an emergency exists with respect to discharge of Industrial Wastewater by an Industrial User to the Community Sewer System of a Contracting Agency, in that there is an imminent risk of Upset, Interference, or Pass Through, the General Manager or his/her designee shall give notice of such emergency to the Contracting Agency by telephone. Such notification shall include the

circumstances constituting the emergency. After providing such notice, CBMWD may proceed immediately with such inspection, surveillance or monitoring as it deems appropriate in light of the emergency. Representatives of the Contracting Agency may be present at all times.

Section 6. Pretreatment Program Reporting

6.1 The Contracting Agencies shall submit the following reports to CBMWD:

(a) Quarterly Pretreatment Reports by the twentieth (20th) calendar day following the end of each of the quarterly reporting periods specified in CBMWD's Waste Discharge Requirements.

(b) Annual Pretreatment Reports by the sixtieth (60th) calendar day following the end of each annual reporting period specified in CBMWD's Waste Discharge Requirements.

(c) All other reports specified in 40 CFR Part 403.12 at the request of CBMWD and pursuant to a mutually agreed upon and reasonable schedule.

6.2 The Contracting Agencies shall provide CBMWD with access to all information that the Contracting Agencies obtain as part of

their Pretreatment Program activities on a mutually agreed upon and reasonable schedule. Significant Industrial User Industrial Wastewater discharge data will be made available by the Contracting Agencies and CBMWD to the Approval Authority, EPA and the public without any restriction.

6.3 Each Contracting Agency shall immediately notify CBMWD upon becoming aware of an Industrial Wastewater discharge that constitutes a threat to the health and welfare of the community or to the environment, may cause Upset, Interference, or Pass Through at the Regional Sewerage System; or that may cause CBMWD to violate any Pretreatment Standards and Requirements or the Waste Discharge Requirements.

6.4 If a Contracting Agency becomes aware of the discharge of a Slug Load by any Industrial User within its jurisdiction to its Community Sewer System, the Contracting Agency shall immediately notify CBMWD. The Contracting Agency shall also ascertain what conditions caused the discharge of the Slug Load and whether such conditions could result in the discharge of additional Slug Loads by the Industrial User. The Contracting Agency shall notify CBMWD of its determinations with respect to any such Slug Load and of enforcement or remedial action which has been or is to be undertaken to prevent the reoccurrence of a Slug Load discharge by the Industrial User.

Section 7. Wastewater Quality Limitations

7.1 CBMWD shall establish, and modify as necessary, Wastewater Quality Limitations for wastewater discharged into the Regional Sewerage System by the Contracting Agencies through their respective Community Sewer Systems.

7.2 CBMWD shall, from time to time, amend the Wastewater Quality Limitations when required for compliance with Pretreatment Standards and Requirements or the Waste Discharge Requirements as follows:

(a) Before adopting any such amendment, the Board of Directors of CBMWD shall adopt a resolution declaring its intention to amend the Wastewater Quality Limitations, describing the proposed amendments and specifying a time, not earlier than sixty (60) calendar days after the adoption of the resolution, and a place at which the Board of Directors of CBMWD will hold a hearing on the question of the adoption of such amendments. Immediately thereafter, the secretary of the Board of Directors of CBMWD shall mail a copy of the resolution to each Contracting Agency and to each member of the Regional Policy Committee and the Regional Technical Committee. The Committees shall review the proposed amendments and, not later than ten (10) calendar days preceding the date of the hearing, shall submit their written report and recommendation thereof to the General Manager of CBMWD and to each Contracting Agency.

(b) At the hearing on the proposed amendments, the Board of Directors of CBMWD shall consider the report and recommendations of the Regional Policy Committee and shall hear representatives of Contracting Agencies and any other interested persons. The Board of Directors of CBMWD may modify the proposed amendments and, upon the conclusion of the hearing, adopt the amendments. If the Board of Directors fails to approve any recommendation made by the Regional Policy Committee in its written reports, the resolution adopting the amendments shall set forth findings in support of the determination of the Board of Directors.

7.3 Each Contracting Agency shall monitor the quality of its wastewater discharge to the Regional Sewerage System as provided in Exhibit "A" hereto to ensure compliance with the Wastewater Quality Limitations. Sampling and analyses of any wastewater shall be performed in accordance with the procedures established under 40 CFR Part 136 and Section 304 (g) of the Clean Water Act including subsequent amendments thereto.

Section 8. Surcharges to Contracting Agencies for Deviations from Wastewater Quality Limitations

8.1 All wastewater discharged into the Regional Sewerage System by a Contracting Agency of a quality equal or superior to the Wastewater Quality Limitations shall be paid for by the Contracting Agency at the service rate provided for in Sections 18 and 19 of the Regional Contract. Should any wastewater discharged

by any Contracting Agency into the Regional Sewerage System be of a quality inferior to any of the Wastewater Quality Limitations, but which can be treated at a Regional Treatment Plant, then, in addition to payment of the service charge provided for in Sections 18 and 19 of the Regional Contract, the Contracting Agency shall pay surcharges thereof.

8.2 For the purpose of determining compliance with the Wastewater Quality Limitations, the quality of all wastewater delivered into the Regional Sewerage System by a Contracting Agency shall be determined from the monthly monitoring results obtained at mutually agreed upon sampling locations. Sampling and analysis of wastewater shall be made pursuant to Exhibit "A" of this Agreement.

8.3 The surcharge rate or rates shall be determined annually by the Board of Directors of CBMWD at the time of adoption of the budget, as provided in Section 19 of the Regional Contract. The surcharge rate shall represent the additional capital costs and maintenance and operation expenses of CBMWD in treating or disposing, or both, of the inferior wastewater and shall be based on the biochemical oxygen demand (BOD) and the total suspended solids (TSS) components of the wastewater, measured on a dry weight basis, for the quantity of decomposable matter and suspended solids exceeding the Wastewater Quality Limitations. Any surcharges due from a Contracting Agency shall be billed and paid in the manner provided in Section 20 of the Regional Contract for billing and payment of the service charge. Any portion of the surcharges

received by CBMWD representing additional maintenance and operation expenses shall be credited to the Regional Sewerage System Maintenance and Operation Fund and any portion representing additional capital costs shall be credited to the Regional Wastewater Capital Improvement Fund.

Section 9. Violations of Wastewater Quality Limitations.

9.1 If any Contracting Agency shall fail or refuse to comply with the Wastewater Quality Limitations, CBMWD may exercise, as it deems appropriate, one or more of the remedies specified in Section 10 below:

Section 10. Violations of Sewage Quality Standards

10.1 If any Contracting Agency shall fail or refuse to comply with the Wastewater Quality Limitations, CBMWD shall have and may exercise one or more of the remedies specified herein. The listing of the following remedies shall not be deemed exclusive nor shall CBMWD be prevented from exercising any other remedy provided by law or in equity:

(a) Danger of Public Health Safety and/or Facilities - If any delivery of sewage made by a Contracting Agency to CBMWD constitutes and imminent threat to the public health and safety or

materially endangers the Regional Sewerage System facilities, or their operation, CBMWD shall make a determination that such condition exists and shall give the Contracting Agency immediate notice thereof and an order to immediately correct such imminent threat to public health and safety.

(b) Non-dangerous Violation - If any delivery of sewage by a Contracting Agency to CBMWD is in violation of said quality standards, but the violation does not constitute an imminent threat to public health or safety nor materially endanger any facilities of the Regional Sewerage System or their operation, CBMWD shall give to the Contracting Agency written notice thereof and an order to correct such violation within thirty (30) days thereof.

(c) Damages - If any such violations result in damage to any transmission, treatment or disposal facilities of the Regional Sewerage System or require CBMWD to provide additional treatment, then the violating Contracting Agency shall pay CBMWD the cost, as determined and certified by the General Manager of CBMWD, of repairing any damage to the Regional Sewerage System facilities and all additional necessary costs incurred by CBMWD above actual audited cost of treating such sewage which may be in violation of such quality standards, less the amount of any surcharge payable as a result of the violation, plus an administrative fee equal to 10% of any remaining amount. If any such costs incurred by CBMWD as a result of violations were paid for from the Regional Sewerage System Maintenance and Operation Fund, then to the extent thereof

any payments made to CBMWD by reason of violations shall be credited to such fund.

Section 11. Indemnification

11.1 The following shall apply only to the Regional Pretreatment Agreement.

11.2 Each of the parties (i.e., Contracting Agency and CBMWD) to this Agreement shall indemnify, defend and save harmless the other party, its agents, officers or employees from and against any and all liability, damages, costs, loss claims, and expenses, including reasonable attorney's fees caused by any willful or negligent act or omission of the party, its agents, officers or employees in the performance of this Agreement.

Section 12. Relationship of Agreements

12.1 This Agreement amends and supplements the Regional Contract and specifically supersedes Sections 21 and 22 thereof.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and delivered as of the date first above written.

Date of Execution:

October ~~19~~ 24, 1994

CHINO BASIN MUNICIPAL WATER DISTRICT

By: Bill Hill

President

ATTEST:

John L. Anderson

Secretary of the Board of Directors

Date of Execution:

_____

CITY OF CHINO

By: _____

City Manager

ATTEST:

_____

City Clerk

Date of Execution:

_____

CITY OF CHINO HILLS

By: _____

Mayor

ATTEST:

_____

City Clerk

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and delivered as of the date first above written.

Date of Execution:

_____

CHINO BASIN MUNICIPAL WATER DISTRICT

By: _____

President

ATTEST:

_____

Secretary of the Board of Directors

Date of Execution:

_____

CITY OF CHINO

By: _____

City Manager

ATTEST:

_____ 9/27/94

City Clerk

Date of Execution:

_____

CITY OF CHINO HILLS

By: _____

Mayor

ATTEST:

_____

City Clerk

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and delivered as of the date first above written.

Date of Execution:

_____

CHINO BASIN MUNICIPAL WATER DISTRICT

By: _____

President

ATTEST:

_____

Secretary of the Board of Directors

Date of Execution:

_____

CITY OF CHINO

By: _____

Mayor

ATTEST:

_____

City Clerk

Date of Execution:

Sept. 27, 1994

CITY OF CHINO HILLS

By: Guy Larson

Mayor

ATTEST:

Linda D Leith

City Clerk

August 17, 1994

Date of Execution:

September 27, 1994

CUCAMONGA COUNTY WATER DISTRICT

By: Jerome M. Wil

President of the Board of Directors - Jerome M. Wilson

ATTEST:

T. E. Shollenberger

Secretary of the Board of Directors
T. E. Shollenberger

Date of Execution:

_____

CITY OF FONTANA

By: _____

Mayor

ATTEST:

_____

City Clerk

Date of Execution:

_____

CITY OF MONTCLAIR

By: _____

Mayor

ATTEST:

_____

City Clerk

August 17, 1994

Date of Execution:

_____

CUCAMONGA COUNTY WATER DISTRICT

By: _____

President of the Board of Directors

ATTEST:

_____

Secretary of the Board of Directors

Date of Execution:

10/18/'94

CITY OF FONTANA

By: Gregory C. Devereaux

Gregory C. Devereaux
City Manager

ATTEST:

Linda S. Munn

Deputy City Clerk

Date of Execution:

_____

CITY OF MONTCLAIR

By: _____

Mayor

ATTEST:

_____

City Clerk

August 17, 1994

Date of Execution:

_____

CUCAMONGA COUNTY WATER DISTRICT

By: _____

President of the Board of Directors

ATTEST:

_____

Secretary of the Board of Directors

Date of Execution:

_____

CITY OF FONTANA

By: _____

Mayor

ATTEST:

_____

City Clerk

Date of Execution:

October 4, 1994

CITY OF MONTCLAIR

By: _____

Mayor

ATTEST:

_____

City Clerk

August 17, 1994

Date of Execution:

CITY OF UPLAND

By: _____

Mayor

ATTEST:

City Clerk

CITY OF ONTARIO INCORPORATED DECEMBER 1891 CALIFORNIA

APPROVED AS TO FORM
SEP 2 6 1994
DATE _____
BY _____
CITY ATTORNEY
FOR ONTARIO, CALIFORNIA

Date of Execution:

October 4, 1994

CITY OF ONTARIO

By: _____

Mayor

ATTEST:

_____

City Clerk

August 17, 1994

Date of Execution:

_____

ATTEST:

_____

City Clerk

CITY OF ONTARIO

By: _____

Mayor

Date of Execution:

October 10, 1994

ATTEST:

City Clerk

CITY OF UPLAND

By: Robert R. Nolan

Mayor

EXHIBIT A

MONITORING AND REPORTING REQUIREMENTS FOR SEWAGE DISCHARGED INTO THE REGIONAL SYSTEM BY CONTRACTING AGENCIES

I. DEFINITIONS

Composite Sample – A combination of no fewer that 8 individual samples obtained at equal time or flow intervals for 24 hours.

Grab Sample – Any individual sample collected in less than 15 minutes. Also referred to as a discrete sample.

II. MONITORING REQUIREMENTS

A. All sampling, sample preservation and analysis shall be conducted in accordance with 40 CFR Part 136. All analysis shall be performed by a laboratory certified to perform such analysis by the California State Department of Health Services.

B. Sampling shall be conducted at locations mutually agreed upon by IEUA and each and shall be designed to monitor all significant (Quality/Quantity) sources of wastewater from within the Agency's service area.

C. A Regional Contracting Agency is required to keep the following monitoring records for three (3) years for each sample collected in accordance with this section.

1. Sample date, time, and location.
2. Sample preservation method.
3. Sample container type.
4. Analysis method used.
5. Results of analysis.
6. Name of person taking the sample.
7. Name of the laboratory performing the analysis.

D. Monitoring Frequency and Sample Types

Samples are to be collected at the mutually agreed upon sample location(s) for the following constituents:

Constituent	Sampling Frequency	Sample Type
Biochemical Oxygen Demand	Monthly	24-hour composite
Chemical Oxygen Demand	Monthly	24-hour composite
Total Suspended Solids	Monthly	24-hour composite
Total Dissolved Solids	Monthly	24-hour composite
Total Kjeldahl Nitrogen	Monthly	24-hour composite
Ammonia Nitrogen	Monthly	24-hour composite
Flow (Total)	Semi-Annual	----------
Specific Conductance	Monthly	24-hour composite
Chloride	Monthly	24-hour composite
Sodium	Monthly	24-hour composite
Boron	Monthly	24-hour composite
Fluoride	Monthly	24-hour composite
Sulfate	Monthly	24-hour composite
Total Hardness	Monthly	24-hour composite
Arsenic	Quarterly	24-hour composite
Barium	Quarterly	24-hour composite
Cadmium	Quarterly	24-hour composite
Chromium	Quarterly	24-hour composite

Cobalt	Quarterly	24-hour composite
Copper	Quarterly	24-hour composite
Cyanide	Quarterly	24-hour composite
Iron	Quarterly	24-hour composite
Lead	Quarterly	24-hour composite
Manganese	Quarterly	24-hour composite
Mercury	Quarterly	24-hour composite
Nickel	Quarterly	24-hour composite
Selenium	Quarterly	24-hour composite
Silver	Quarterly	24-hour composite
Zinc	Quarterly	24-hour composite
Sulfide (Total)	Quarterly	24-hour composite
Oil and Grease	Quarterly	Grab
Methylene Blue Active Substance	Quarterly	24-hour composite
Temperature	Monthly	Grab
Calcium	Quarterly	24-hour composite
Magnesium	Quarterly	24-hour composite
Carbonate	Quarterly	24-hour composite
Biracbonate	Quarterly	24-hour composite
Purgeable Halocarbons	Semi-Annual	Grab
Purgeable Aromatic Hydrocarbons	Semi-Annual	Grab
Acrolein & Acrylonitrile	Semi-Annual	Grab

Remaining EPA Priority Pollutants	Semi-Annual	24-hour composite

Quarterly samples shall be collected in March, June, September, and December. Semi-annual samples shall be collected on the 10th working day of June and December. Grab samples shall be collected at peak flow. All metals analysis are to be performed by total metals methodology.

E. Water Supply Monitoring

In August of each year, a sample from each source of the water supplied to the sewered area shall be obtained and analyzed for the following constituents:

Specific Conductance	Sodium	Chloride
Total Filterable Residue	Boron	pH
Total Hardness		

All of the above constituents shall be expressed in "mg/l" (milligrams per liter) except specific conductance and pH, which shall be expressed in "microhmos" and "pH units" respectively.

Any new source shall be sampled for the above constituents upon commencement of service for the new source.

F. pH Monitoring

Upon notification by the Inland Empire Utilities Agency of a pH limit violation, the Regional Contracting Agency (s) shall have the capability to continuously monitor pH throughout their collection system in order to identify the source of the non-compliance. The Regional Contracting Agency (s) shall be required to continuously monitor the non-complying pH monitoring locations until compliance is achieved.

III. REPORTING

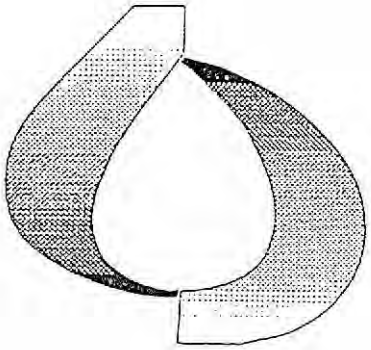
A. All monitoring as listed in section II above shall be reported to IEUA by the end of the month following the month of monitoring except as specified below. Monitoring reports shall also include a 12 - month running average comparison of

constituents with discharge limits and a flow weight 12-month running average of water supply constituents with incremental limits. The report shall be submitted signed and certified by an authorized representative.

B. When a Regional Contracting Agency becomes aware that a specific limitation has been exceeded, within 10 days, the Regional Contracting Agency shall submit a written report of the violation and measures to be taken by the Regional Contracting Agency to prevent similar future occurrences.

C. Reports on water supply flow from each source shall be submitted to IEUA by the 20th day of the month following the calendar month to be reported.

REGIONAL WASTEWATER ORDINANCE



CHINO BASIN
MUNICIPAL WATER DISTRICT

REGIONAL WASTEWATER ORDINANCE

(CBMWD Ordinance No. 57)

OCTOBER 19, 1994

REGIONAL WASTEWATER ORDINANCE

ORDINANCE NO.57

AN ORDINANCE OF THE BOARD OF DIRECTORS OF CHINO BASIN MUNICIPAL WATER DISTRICT REGULATING THE AVAILABILITY AND USE OF THE REGIONAL SEWERAGE SYSTEM IN CHINO BASIN MUNICIPAL WATER DISTRICT, SAN BERNARDINO COUNTY, STATE OF CALIFORNIA

BE IT ORDAINED BY THE Board of Directors of Chino Basin Municipal Water District as follows:

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SECTION 1 - GENERAL PROVISIONS

1.1 - AUTHORIZATION

This Ordinance is enacted pursuant to the authorization of the Municipal Water District Law of 1911, California Water Code Section 71000 et seq., California Government Code Section 54739 et seq., the Clean Water Act (33 U.S.C. 1251 et seq.) and the General Pretreatment Regulations (40 C.F.R. 403).

1.2 - PURPOSE, OBJECTIVES, AND SHORT TITLE

The purpose of this Ordinance is to provide for the maximum possible beneficial use of the Regional Sewerage System, ground water resources, effluent-receiving waterways and operating personnel through regulation of Wastewater discharges by establishing terms, limits, and conditions of discharge through waste Permits, whether from existing, new or increased Pollutant contributions, to provide for equitable distribution of the District's costs, and to provide procedures for complying with requirements placed upon the District by local, State of California, and federal regulations. This is accomplished in compliance with the NPDES Permits issued by the California Regional Water Quality Control Board in conformity with 40 CFR Part 403 the Clean Water Act as amended by the Water Quality Act of 1987 and the California Water Code as amended.

It is the intent of this Ordinance to recognize that Contracting Agencies with Approval Authority approved pretreatment programs have the primary responsibility for compliance monitoring and enforcement of the federal, state and locally mandated pretreatment regulations. However, in the event a Contracting Agency does not take action to enforce Pretreatment Standards and Requirements, the District has the right to take administrative or legal action.

The objectives of this Ordinance are:

(A) To prevent the introduction of Pollutants into the District's Regional Sewerage System collection system which may harm or cause interference with the operation of the Publicly Owned Treatment Works (POTW), to prevent exposure of District employees to chemical hazards created by Industrial Users, or prevent contamination of the resulting sludge;

(B) To prevent the introduction of Pollutants to the Regional Sewerage System which may not be amenable to treatment and/or may Pass Through the POTW if inadequately treated, into the Receiving Waters or the atmosphere; and

(C) To increase the options for the disposal of the sludge resulting from Wastewater treatment.

This Ordinance shall be known as the Regional Wastewater Ordinance and may be cited as such.

1.3 - APPLICABILITY

This Ordinance shall apply to all discharges, whether direct or indirect, to the Regional Sewerage System and shall be interpreted in accordance with definitions set forth in Section 1.7 of the Ordinance. If any conflicting provisions regulating such discharges are contained in any existing District Ordinance, the provisions in this Ordinance shall control.

This Ordinance provides for the regulation of the quantity and quality of Wastewater to be discharged to the Regional Sewerage System, the degree of waste Pretreatment required, the setting of charges to provide for equitable distribution of costs, the issuance of Permits for non-domestic Wastewater discharge, all other Permits as required, and the establishment of penalties for violation of this Ordinance.

1.4 - ORDINANCE IN FORCE

Upon adoption of this Ordinance, District Ordinance 22 and Ordinance 48 are hereby repealed and rescinded in their entirety. This Ordinance shall be in full force and effect from its passage and approval.

1.5 - ADMINISTRATOR

Except as otherwise provided herein, the General Manager shall administer, implement, and enforce the provisions of this Ordinance. The General Manager may, at his discretion, delegate any or all of these powers and duties.

1.6 - ABBREVIATIONS

NPDES - National Pollutant Discharge Elimination System
CFR - Code of Federal Regulations
COD - Chemical Oxygen Demand
BOD - Biochemical Oxygen Demand
TSS - Total Suspended Solids

1.7 - DEFINITION OF TERMS

(A) APPROVAL AUTHORITY - Shall mean the California Regional Water Quality Control Board - Santa Ana Region.

(B) AUTHORIZED REPRESENTATIVE - Shall mean:

1. A Responsible Corporate Officer as defined herein; or

2. A general partner or proprietor, if the User is a partnership or sole proprietorship, respectively; or

3. A duly Authorized Representative of 1 or 2 above, if:

(a) The authorization is made in writing by the individual described in 1. or 2. above;

(b) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company;

(c) The written authorization is submitted to the Control Authority; and

(d) If an authorization under 3. above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements of 3. above must be submitted to the Control Authority prior to or together with any reports to be signed by an Authorized Representative.

(C) BOARD - Shall mean the Board of Directors of Chino Basin Municipal Water District.

(D) BYPASS - Shall mean the diversion of wastestreams from any portion of an Industrial User's treatment facility.

(E) CHEMICAL SUBSTANCES - Shall mean any substance placed in the waste receptacle of a portable toilet for the purpose of controlling odors or decomposition.

(F) CLEAN WATER ACT (CWA) - Shall mean the Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. 1251, et seq., and the regulations adopted thereto.

(G) COMMUNITY SEWER SYSTEM - Shall mean all facilities owned, controlled or operated by a Sewage Collection Agency for the purpose of collecting and conducting sewage to a Delivery Point, including collector sewers conducting sewage from the originating premises, trunk sewers conveying sewer from tributary collector sewers or other trunk sewers and any facilities appurtenant to the foregoing.

(H) CONFIDENTIAL INFORMATION - Shall mean information and data on a User including products used, industrial processes or methods of production, etc. which the User can demonstrate, to the satisfaction of the General Manager, constitute trade secrets. Effluent constituents and characteristics shall not be considered Confidential Information.

(I) CONTRACTING AGENCY - Shall mean any Sewage Collection Agency located, in whole or in part, within the boundaries of CBMWD which has entered into a service contract with CBMWD.

(J) CONTROL AUTHORITY - Shall mean Chino Basin Municipal Water District or a Contracting Agency as defined that has an Approval Authority approved Pretreatment program.

(K) DELIVERY POINT - Shall mean the transfer point at which sewage is delivered from a Community Sewer System into the Regional Sewerage System.

(L) DIRECT DISCHARGE - Shall mean the intentional or unintentional release of treated or untreated Sewage, Wastewater or other Pollutants into the Regional Sewerage System.

(M) DISPOSAL FACILITIES - Shall mean all facilities owned, controlled and operated by CBMWD to meet effluent discharge requirements, excluding reclamation facilities operated by CBMWD to meet obligations under the judgement entered in the action entitled Orange County Water District v. City of Chino, et al. (Case No. 117628, Superior Court, County of Orange), or to meet the requirements of contracting agencies exercising the right of first purchase of reclaimed effluent.

(N) DISPOSAL OR DISPOSE - Shall mean any process or method for the elimination of beneficial use of sewage and any effluent or solid waste residuals thereof, including exportation from the Chino Basin.

(O) DISTRICT - Shall mean the Chino Basin Municipal Water District (CBMWD) and its duly authorized officers, agents, and representatives.

(P) DOMESTIC WASTE HAULER - Shall mean any Person engaged in the vehicular transport of Sanitary Wastes which are discharged into the Regional Sewerage System as a part of, or incidental to, any business.

(Q) DOMESTIC WASTE HAULER PERMIT - Shall mean a Permit issued by the District establishing terms and conditions for discharging vehicular-hauled Sanitary Wastes into the Regional Sewerage System.

(R) ENVIRONMENTAL PROTECTION AGENCY (EPA) - Shall mean the Environmental Protection Agency, or where appropriate the term may also be used as a designation for the Administrator or other duly authorized official of said agency.

(S) FEDERAL CATEGORICAL PRETREATMENT STANDARDS OR CATEGORICAL STANDARDS - Shall mean any regulation containing Pollutant discharge limits promulgated by the EPA in accordance with Section 307 (b) and (c) of the Clean Water Act (33 U.S.C. 1317) which apply to a specific category of Industrial User and which appear in 40 CFR Chapter I, Subchapter N, Parts 405-471.

(T) GENERAL MANAGER - Shall mean the General Manager or a duly Authorized Representative of Chino Basin Municipal Water District.

(U) HAZARDOUS SUBSTANCE - Shall mean, but is not limited to, those substances listed in 40 CFR Part 300.6 (1988). Hazardous Substance shall include any substance designated pursuant to Section 311 (b)(2) (A) of the Clean Water Act (CWA); any element, compound, mixture, solution or substance designated pursuant to Section 102 of CERCLA; any Hazardous Waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress); any Toxic Pollutant listed under Section 307 (a) of the CWA; any hazardous air Pollutant listed under Section 112 of the Clean Air Act; and any imminently hazardous chemical substance or mixture with respect to which the Administrator of EPA has taken action pursuant to Section 7 of the Toxic Substances Control Act.

(V) HAZARDOUS WASTE - Shall mean a Hazardous Waste as defined in 40 CFR Part 261.3 or Title 22, California Code of Regulations.

(W) INDIRECT DISCHARGE - Shall mean the intentional or unintentional release of treated or untreated Sewage, Wastewater, or other Pollutants from any source into a Community Sewer System.

(X) INDUSTRIAL USER - Shall mean any Person that discharges or causes a discharge of non-domestic wastes directly or indirectly to the Regional Sewerage System.

(Y) INDUSTRIAL WASTEWATER - Shall have the same meaning as Non-Domestic Wastewater.

(Z) INDUSTRIAL WASTEWATER DISCHARGE PERMIT - Shall mean a written authorization issued by the District, or by a Contracting Agency in accordance with the Regional Sewage Service Contract, for the discharge of Non-Domestic Wastewater from any Industrial User of the Regional Sewerage System.

(AA INTERFERENCE - Shall mean a discharge which, alone or in conjunction with a discharge or discharges from other sources, either:

1. Inhibits or disrupts the Regional Sewerage System, its treatment processes or operations, or its sludge processes use or disposal; or

2. Causes a violation of any requirement of the NPDES Permit including an increase in the magnitude or duration of a violation or adversely affects of the District's method of sewage sludge use or disposal.

(BB) MAY - is permissive.

(BB) NEW SOURCE - Shall mean:

1. Any building, structure, facility or installation from which there is or may be a discharge of Pollutants, provided that:

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

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

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

2. Construction on a site at which an existing source is located results in a modification rather than a New Source if the construction does not create a new building, structure, facility, or installation meeting the criteria of 1(a) or 1(b) above, but otherwise alters, replaces, or adds to existing process or production equipment.

3. Construction of a New Source as defined under this paragraph has commenced if the owner or operator has:

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

- Any placement, assembly, or installation of facilities or equipment; or

- Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of New Source facilities or equipment; or

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

(DD) NON-DOMESTIC WASTEWATER (or Industrial Wastewater) - Shall mean the Wastewater resulting from or associated with waste flows from commercial, governmental, institutional, and industrial sources including, but not limited to, the following:

Production or refining of petroleum; production, processing, packing, or canning of fruits, vegetables, meat, or beverages; laundering of clothes in public laundries; racks, and garages; production of fertilizer; keeping of livestock or poultry; operation of dairies; production of refuse; washing of equipment or facilities used in non-domestic operations; production and processing of plastic; cleaning of tanks, tank cars, or barrels; plating or processing metals; processing or reclamation of refuse; and the washing of equipment or spaces used in non-domestic operations and any other similar manufacturing, processing, and servicing operations.

Any Wastewaters containing portions of Non-Domestic Wastewaters shall be considered Non-Domestic Wastewaters. Non-Domestic Wastewater shall not include Wastewater from single or multiple residences, and places engaged exclusively in retail business.

(EE) ORDINANCE - Shall mean this Ordinance, unless otherwise specified.

(FF) PASS THROUGH - Shall mean a discharge which exits the Regional Sewerage System into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge

or discharges from other sources, is a cause of a violation of any requirement of the District's NPDES Permit, including an increase in the magnitude or duration of a violation.

(GG) PERMIT - The term Permit when used by itself means either an Industrial Wastewater Discharge Permit or a Domestic Waste Hauler Permit.

(HH) PERSON - Shall mean any individual or entity including but not limited to any person, firm, company, or corporation, partnership or association, any public corporation, political subdivision, city, county, district, the State of California, the United States of America or any department or agency thereof. The singular in each case shall include the plural.

(II) pH - Shall mean the logarithm of the reciprocal of the concentration of hydrogen ions in grams per liter of solution.

(JJ) POLLUTANT - Shall mean something that causes pollution, including but not limited to solid waste, incinerator residue, sewage screenings, sewage sludge, chemical wastes, biological materials, radioactive materials, heat, rock, sand, and industrial, municipal, or agricultural garbage.

(KK) PREMISES - Shall mean any lot, parcel of land, building or establishment, either residential, commercial, or industrial, both public and private, including schools, churches, and institutions without limitation.

(LL) PRETREATMENT - Shall mean the application of physical, chemical or biological processes to reduce the amount of Pollutants in or alter the nature of the Pollutant properties in Wastewater prior to discharging such Wastewater to the Regional Sewerage System.

(MM) PRETREATMENT STANDARDS AND REQUIREMENTS - Shall mean all applicable federal, State of California or local standards or requirements related to Pretreatment or discharge of non-domesti wastes.

(NN) RECEIVING WATERS - Shall mean a natural water course or body of water into which treated sanitary sewage and/or treated non-domestic waste is discharged.

(OO) REGIONAL SEWAGE SERVICE CONTRACT - Shall mean the Chino Basin Regional Service Contract or any subsequent supplemental or successor contracts.

(PP) REGIONAL SEWERAGE SYSTEM - Shall mean all facilities owned, controlled or operated by CBMWD and any interest or capacity rights of CBMWD in facilities owned, controlled, or operated by others, for purpose of transmitting, treating and disposing of sewage, including interceptor sewers, sewage treatment and disposal plants, outfall sewers, facilities for the disposal of effluent and solid waste residuals and any facilities appurtenant to the foregoing. The Regional Sewerage System shall not include any reclamation facilities or portions of reclamation facilities which are operated by or for the benefit of CBMWD to meet obligations under the judgment entered in the action entitled Orange County Water District v. City of Chino, et al. (Case No. 117628, Superior Court, County of Orange), or to meet the requirements of contracting agencies exercising the right of first purchase of reclaimed effluent; provided that the Regional Sewerage System shall include all other Disposal Facilities which are required to meet the requirements of the NPDES Permit or Permits or Waste Discharge Requirements issued to CBMWD by the Regional Water Quality Control Board, Santa Ana Region, for the operation of the Regional Treatment Plants.

(QQ) REGIONAL TREATMENT PLANT - Shall mean a Sewage and Wastewater treatment plant operated by CBMWD as part of the Regional Sewerage System.

(RR) RESPONSIBLE CORPORATE OFFICER - Shall mean a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other Person who

performs similar policy or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operation facilities employing more than 250 Persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(SS) SANITARY WASTE(S) - Shall mean liquid or semi-liquid wastes contained within septic tanks, seepage pits, cesspools, sewage holding tanks or other repositories of only human body wastes and/or Chemical Substances as defined herein. Sanitary Waste does not include non-domestic waste or wastes from grease and oil interceptors. For the purposes of this Ordinance, Sanitary Wastes shall be considered Non-Domestic Wastewater with respect to California Government Code, Section 54739-54740 et seq.

(TT) SERVICE AREA - Shall mean all territory now or hereafter provided Sewage service by the Community Sewer System owned, controlled or operated by any Sewage Collection Agency.

(UU) SEVERE PROPERTY DAMAGE - Shall mean substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a Bypass. Severe Property Damage does not mean economic loss caused by delays in production.

(VV) SEWAGE - Shall mean any liquid waste and water borne solid waste resulting from residential, commercial, industrial, or institutional activities or uses.

(WW) SEWAGE COLLECTION AGENCY - Shall mean the County of San Bernardino and any city or special district, other than CBMWD, which is located in whole or in part within CBMWD and which is authorized to own, control and operate a Community Sewer System.

(XX) SEWER - Shall mean any pipeline conducting sewage, either by gravity or by pressure, and any facilities appurtenant thereto.

(YY) SHALL - is mandatory.

(ZZ) SIGNIFICANT INDUSTRIAL USER (SIU) - Shall mean any Industrial User of the Regional Sewerage System who:

1. Is a categorical User as defined in 40 CFR Subchapter N (Parts 401-471); or,

2. Has a discharge flow rate of twenty-five thousand (25,000) gallons or more per average workday of processed Wastewater; excluding sanitary, non-contact cooling and boiler blow down water; or contributes a process wastestream which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of a Regional Treatment Plant, or;

3. Has in its wastewater Toxic Pollutants, as defined pursuant to Section 307 of the Clean Water Act, or in State of California statutes, regulations or rules; or

4. Is found by the District, state, California Regional Water Quality Control Board, the U.S. Environmental Agency (EPA), to have significant impact, either singly or in combination with other wastewater discharges from contributing industries, on the operation of the Regional Sewerage System, the quality of sludge, the system's effluent quality, or air emissions generated by the system.

(AAA) SIGNIFICANT NON-COMPLIANCE - Shall mean that one or more of the following criteria are met upon review of the industry compliance record:

1. Violations of Wastewater discharge limits:

   (a) Chronic violations: Sixty-six percent or more of all of the measurements taken during a six-month period exceed, by any magnitude, the daily maximum limit or the average limit for the same Pollutant parameter.

   (b) Technical Review Criteria (TRC) violations: Thirty-three percent or more of all of the measurements for each Pollutant parameter taken during a six-month period equal or exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC.

   There are two TRCs:

   1. Group I for conventional Pollutants (BOD, TSS, fats, oil and grease) TRC = 1.4

   2. Group II for all other Pollutants (except pH) TRC = 1.2

   (c) Any other violation(s) of an effluent limit (average or daily maximum) that has caused, alone or in combination with other discharges, Interference or Pass Through including endangering the health of the District Personnel or the public.

   (d) Any discharge of a Pollutant that has caused imminent endangerment to human health/welfare or to the environment or has resulted in the exercise of emergency authority to halt or prevent such a discharge.

2. Violations of compliance schedule milestones, contained in an enforcement order, fo starting construction, completing construction, and attaining final compliance by 90 days or more after the schedule date.

3. Failure to provide reports for compliance schedules, self-monitoring data, or Categorical Standards (baseline monitoring reports, 90-day compliance reports, and periodic reports) within 30 days from the due date.

4. Failure to meet, within 90 days after the scheduled date, a compliance schedule milestone contained in a Industrial Wastewater Discharge Permit or enforcement order, for starting or completing construction or attaining final compliance.

5. Failure to accurately report non-compliance.

6. Any other violation or group of violations that will adversely affect the operation or implementation of the pretreatment program.

(BBB) SLUG LOAD - Shall mean any Pollutant released in a discharge at a flow rate and/or Pollutant concentration which will cause Interference or Upset of the Regional Sewerage System operations.

(CCC) TOXIC POLLUTANT - Shall mean any Pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act (CWA) of 1977 as amended by the Water Quality Act of 1987.

(DDD) USER - Shall mean any Person who contributes, causes or permits the contribution of Wastewater directly or indirectly into the Regional Sewerage System.

(EEE) UPSET - Shall mean an exceptional incident in which there is unintentional and temporary noncompliance with discharge limits because of factors beyond the reasonable control of the

Contracting Agency. An Upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance or careless or improper operation.

(FFF) WASTEWATER - Shall mean the liquid and water-carried industrial or domestic wastes from dwellings, commercial buildings, industrial facilities, and institutions, whether treated or untreated.

1.8 - PROTECTION FROM DAMAGE

No Person shall break, damage, destroy, impair the usefulness, uncover, deface, or tamper with any structure, appurtenance, or equipment which is a part of the Regional Sewerage System.

1.9 - NOTICE PROCEDURE

Unless otherwise provided herein, any notice required to be given by the General Manager under this Ordinance shall be in writing and served in person or by certified mail, return receipt requested. The notice shall be served upon an Authorized Representative, at the last address known to the General Manager or the occupants or owners or owners of record of property upon which the alleged violations occurred.

1.10 - TIME LIMITS

Any time limit provided in any written notice or in any provision of this Ordinance may be extended only by a written approval of the District.

1.11 - FALSIFYING INFORMATION

No Person shall knowingly make false statements, representation, or certification in any application, record, report, plan, or other document provided to the District or required to be maintained pursuant to this Ordinance or Permit, or falsify, tamper with, or knowingly render inaccurate any monitoring device or method required under this Ordinance. The reports and other documents required to be submitted or maintained by this Ordinance shall be subject to the provisions of 18 U.S.C. Section 1001 relating to fraud and false statements, Section 309(c)(4) of the Clean Water Act, as amended, governing false statements, representation or certification and Section 309 (c)(6) of the Clean Water Act regarding Responsible Corporate Officers.

1.12 - RIGHT OF REVISION

The District reserves the right to amend this Ordinance as it deems appropriate.

1.13 - VALIDITY

If any part of this Ordinance is held invalid, the invalidity of that part shall not affect the validity of any other part of this Ordinance.

SECTION 2 - DISCHARGE PROHIBITIONS AND LIMITATIONS

2.1 - GENERAL LIMITATIONS ON WASTEWATER

No Person other than a Contracting Agency or a permitted waste hauler, shall discharge Wastewater directly into the Regional Sewerage System. No Person shall discharge or cause to be discharged directly or indirectly to the Regional Sewerage System or to a Community Sewer System which is tributary to the Regional Sewerage System a quantity or quality of material which causes, or is capable of causing, either alone or by interaction with other substances, Pass Through, Interference, damage to any part of the Regional Sewerage System, abnormal maintenance of the Regional Sewerage System or become a nuisance or a menace to public health. As used herein, "excessive" shall mean any concentration or quantity of material or substance that may by itself or in combination with other discharges, create a hazard to maintenance personnel and/or cause physical damage to the Regional Sewerage System or causes or threatens to cause the District to violate State of California or federal regulations.

The following is a non-exclusive list of prohibited wastes:

(A) Any liquids, solids, gases or Pollutants such as gasoline, benzene, naphtha, solvents, and fuel oils that would cause or tend to cause flammable or explosive conditions including, but not limited to wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit (60 degrees Centigrade) using the test methods specified in 40 CFR 261.21.

(B) Any solids or viscous substances of such size or in such quantities that they may cause obstruction to flow in the sewer or be detrimental to POTW operations. These objectionable substances include, but are not limited to, asphalt, dead animals, ashes, mud, straw, industrial process shavings, metal, glass, rags, feathers, grass clippings, tar, plastics, wood, blood, paunch manure, grease, bones, hair, fleshings, entrails, paper cups, paper dishes, milk cartons, or other similar pape products, either whole or ground.

(C) Any waste except Sanitary Wastes discharged directly into the Regional Sewerage System with a pH less than 7.0 or greater than 9.0 pH units. Sanitary Wastes are prohibited if they have a pH less than 6.0 or greater than 10.0 pH units.

(D) Any discharge that results in toxic gases, vapors or fumes within the regional sewage system in a quantity that may cause acute worker health and safety problems.

(E) Any waste containing excessive quantities or concentrations of benzene or other volatile organic compounds or any other waste constituent that alone or in combination with other materials adversely affects air quality.

(F) Any amounts of petroleum oil, non-biodegradable cutting oil, or products of mineral origin which form persistent water emulsions or that will cause Interference or Pass Through.

(G) Any biodegradable oils, fats and greases, such as lard, tallow or vegetable oil, in concentrations that may cause adverse effects on the Regional Sewerage System except as allowed in Section 2.2.

(H) Any wastes which cause excessive incrustations or scale, or precipitates on sewer walls; or having any corrosive or detrimental characteristics that may cause damage to the Regional Sewerage System or injury to service and maintenance personnel.

(I) Any excessive amounts of dissolved or undissolved solids.

(J) Any waste containing excessive quantities or concentrations of chlorides, fluorides, sulfates, borates, or any other materials that can Pass Through treatment facilities and degrade water quality or limit reuse of the Wastewater.

(K) Any amount of a Hazardous Substance or Toxic Pollutant except as allowed in Section 2.2.

(L) Any Hazardous Waste discharged to any portion of the Regional Sewerage System or treatment plants by truck, rail or dedicated pipeline.

(M) Any Slug Load.

(N) Any radioactive wastes except:

1. When the Industrial User is authorized to use radioactive materials by the State Department of Health or other governmental agency empowered to regulate the use of radioactive materials.

2. When the waste is discharged in strict conformity with current California Radiation Control Regulations (California Code of Regulations, Title 17) for safe disposal.

3. When the Industrial User is in compliance with the sewer use ordinance of the Contracting Agency and all other applicable rules and regulations.

(O) Any waste containing toxic or poisonous solids, liquids, or gases in such quantities that alone, or in combination with other waste substances, may create a hazard for humans, animals, or local environment, interfere with Wastewater treatment processes, cause a public nuisance, cause any hazardous condition in the Regional Sewerage System, or which cause Interference, Upset or Pass Through.

(P) Any strongly odorous waste or waste tending to create odors.

(Q) Any substance listed in Section 307(a) of the Clean Water Act containing quantities toxic to humans, animals, the local environment, or to biological Wastewater treatment processes except as allowed in Section 2.2.

(R) Any rainwater, storm water, groundwater, street drainage, sub-surface drainage, roof drainage, yard drainage, water from yard fountains, ponds or lawn sprays, or any other uncontaminated water. Any discharges from swimming pools, wading pools, and therapy pools will be admitted to the Regional Sewerage System between midnight and 6:00 a.m. subject to Permit by the Contracting Agency which will provide for restricted flow.

(S) Any wastes with excessively high BOD, COD, or other oxygen demanding substances.

(T) Any waste containing excessive quantities or concentrations of ammonia.

(U) Any single pass cooling or heating water. Single pass means once through the equipment or process and does not come in contact with the object being cooled or heated.

(V) Any excessive quantities of deionized water, steam, condensate, or distilled water.

(W) Any waste having a temperature of 140 degrees Fahrenheit or higher, or causes the Wastewater influent to a Regional Treatment Plant to exceed 104 degrees Fahrenheit.

(X) Any wastes containing excessive quantities or concentrations of thiosulfate or any other waste constituent which requires chemical applications above levels used in the normal operation of the Regional Sewerage System.

(Y) Any recognizable portions of the human anatomy.

(Z) Any waste containing substances that may precipitate, solidify, gel, polymerize, or become viscous at temperatures between 40 degrees F and 100 degrees F.

(AA) Any quantity of chlorinated hydrocarbons, pesticides or fertilizers which cause Interference, Upset or Pass Through.

(BB) Any water added for the purpose of diluting wastes.

(CC) Any waste generated outside the District boundaries unless otherwise approved by the Board.

(DD) Any wastes requiring an excessive quantity of chlorine or other chemical compound used for disinfection purposes.

(EE) Any waste containing detergents, surface active agents, or other substances which may cause excessive foaming in the Regional Sewerage System.

(FF) Any Wastewater that discolors normal treatment plant influent such that it is detrimental to treatment plant operations or causes violation of the NPDES Permit.

(GG) Any discharge of trucked or hauled Pollutants except at discharge points designated by the District or a Contracting Agency.

(HH) Any infectious waste except where prior written approval for such discharges is given by the General Manager of CBMWD.

(II) Any waste that is generated in violation of or which violates applicable federal standards or state regulations or discharge limitations or requirements established by the Board as described in Industrial Wastewater Discharge Permits or within Ordinances, resolutions or other rules adopted by the Board.

2.2 - LOCAL LIMITS

The Board may establish quantitative or other limitations or restrictions applicable to Wastewater or Sanitary Wastes when, in its judgement, it is necessary to protect the Regional Sewerage System. Wastewater or Sanitary Waste discharges in excess of the limits established by the Board or any State of California law or applicable Federal Categorical Pretreatment Standard shall constitute excessive concentrations or quantities prohibited by Section 2.1. The Board shall promulgate and maintain a list of limitations established for restricted wastes which are generally applicable to all Contracting Agencies or Domestic Waste Haulers.

The Board may establish quantitative limitations for Contracting Agencies, Domestic Waste Haulers or Users that are not within the jurisdiction of a Contracting Agency that is implementing a pretreatment program pursuant to the Regional Sewage Service Contract which, because of their location, quantity or quality of discharge, can degrade the quality of wastewater treatment plant effluent or residue or air quality to a level that prevents or inhibits efforts to reuse or dispose of the water or residue or causes any unusual operation or maintenance problems in the Regional Sewerage System.

2.3 - SPECIAL RESTRICTIONS ON WATER SOFTENING DEVICES

(A) No Person shall install, replace, enlarge or operate any apparatus (the term being used in this section to mean any silicone or resinous ion-exchange softeners for demineralizers and other similar devices) for softening all or part of a water supply to a property which has a connection to a Community Sewer System when such apparatus is an ion-exchange softener or demineralizer of the type that is regenerated on the site of use with the regeneration wastes being discharged to a Community Sewer System and if the volume of the ion-exchange resin or other similar material used for softening the water supply exceeds two (2) cubic feet and the apparatus produces, in any phase of its use or servicing, a wastewater with a mineral or trace metal content and which exceeds local wastewater discharge standards or limitations. This section shall not apply to any apparatus of the type which is regenerated off-site by a water conditioning company. Such water softening apparatus may be installed or operated if disposal of the Wastewater brine will be disposed by some other methods as approved by the General Manager. Appropriate plans and details of the water softening apparatus are to be submitted by the User of a softening device to the respective Contracting Agency, and a letter of approval for the installation or operation of the apparatus, if deemed adequate, will then be issued by the Contracting Agency.

(B) Any Person installing or operating a water softening apparatus, such as defined in Section 2.3(A), shall make such apparatus accessible to the General Manager for inspection, and shall make such reports as the General Manager may request as to the operation of the apparatus.

SECTION 3 - COMPLIANCE MONITORING

3.1 - INSPECTION AND ENTRY

Unless otherwise specified in the Regional Sewage Service Contract:

(A) The District shall be authorized at any reasonable time to enter the Premises of all Users to determine compliance with all applicable requirements, to inspect facilities and monitoring equipment, take photographs and to take samples of the wastes discharged to the Regional Sewerage System therefrom, insofar as such inspection and sampling is reasonably related to enforcement and compliance with this Ordinance and the Users' Permit conditions, requirements and discharge limitations. Such inspection shall also include the right to inspect and copy records required to be maintained by the Permittee under federal, state, or local Permit requirements.

(B) Inspection may include every facility that is directly or indirectly involved with the discharge of Wastewater to the Regional Sewerage System as determined by the District. Authorized personnel of the District shall be provided immediate access to all of the above facilities. No Person shall interfere with, delay, resist or refuse entrance to authorized District's personnel attempting to inspect any facility involved directly or indirectly with a discharge of Wastewater to the Regional Sewerage System.

(C) Adequate identification will be provided to all inspectors, monitoring personnel and other authorized personnel, and these Persons will make themselves known when entering any Users property for inspection or sampling purposes.

(D) Any permanent or temporary obstruction to the safe and easy access to any sewage facility to be inspected shall promptly be removed by the User or property owner at the written or verbal request of the General Manager and shall not be replaced.

(E) Where a User has security measures in force which require proper identification and clearance before entry into its Premises, the User shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, the District employees shall be permitted to enter without delay for the purposes of performing specific responsibilities.

(F) Unreasonable delays in allowing the General Manager access to the User's Premises shall be a violation of this Ordinance.

3.2 - SEARCH WARRANTS

If the District has been refused access to a building, structure, or property, or any part thereof, and is able to demonstrate probable cause to believe that there may be a violation of this Ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program of the District designed to verify compliance with this ordinance or any permit or order issued hereunder, or to protect the overall public health, safety and welfare of the community, then the District may seek issuance of a search or inspection warrant from a court of competent jurisdiction.

SECTION 4 - USER PERMITS AND CONDITIONS

4.1 - CONDITIONS APPLICABLE TO ALL USERS

(A) FEDERAL, STATE AND LOCAL REQUIREMENTS - A User shall comply with all applicable federal regulations or Pretreatment standards, contained in 40 CFR 403-471 and all amendments thereto or any applicable more stringent state wastewater discharge regulations or standards contained in California Water Code Sections 13000 et seq., and all amendments thereto, and all local wastewater discharge regulations and standards, including but not limited to those contained in the Permit and in this Ordinance.

(B) DUTY TO COMPLY - The User shall comply with all conditions of the Permit. Any Permit non-compliance constitutes a violation of the Ordinance and is grounds for enforcement action as provided for in Section 5. The User shall comply with effluent standards or prohibitions established under Section 307 (a) of the Clean Water Act for Toxic Pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the Permit has not yet been modified to incorporate the requirement.

(C) NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE - It shall not be a defense for a User in an enforcement action that it would be necessary to halt or reduce the Permitted activity in order to maintain compliance with the conditions of the Permit.

(D) PERMIT ACTIONS - The Permit may be modified for cause. The Permit may be suspended for cause as set forth in Section 5.3 or 5.4. The Permit may be revoked for cause as set forth in Section 5.5. The filing of a request by the User for a Permit modification, reissuance or a notification of planned changes or anticipated non-compliance does not stay any Permit condition.

(E) DUTY TO PROVIDE INFORMATION - The User shall furnish to the General Manager, within a reasonable time, any documents or records maintained by the User which the General Manager may request to determine whether cause exists for modifying, revoking, reissuing, or to determine compliance with the Permit. The User shall also furnish to the General Manager upon request, copies of records required to be kept by the permittee.

(F) SAMPLE ANALYSIS - All samples, sample preservation and handling, measurements, tests, and analyses under this Ordinance or a Permit, required to determine the characteristics of wastes discharged to the Regional Sewerage System shall be made in accordance with the test procedures described in 40 CFR 136 of the EPA regulations. Any alternate test procedures desired by the User shall be approved by the General Manager and EPA Administrator.

(G) REOPENER CLAUSE - The Permit shall be modified to incorporate an applicable standard or limitation which is promulgated or approved after the Permit is issued if that standard or limitation is more stringent than the limitation in the Permit, or controls a Pollutant not limited in the Permit.

(H) MODIFICATION OF PERMITS - The Permit may be modified to require corrections or allow for changes in the permitted activity. The General Manager may upon reasonable notice to the User, change or modify the restrictions or conditions of a waste permit from time to time to effectuate the purposes of this Ordinance. Alternatively, the General Manager may require the User to apply for a new or revised Industrial Wastewater Discharge Permit. The General Manager shall allow a User a reasonable period of time to comply with any changes required in the Permit.

(I) AVAILABILITY OF REPORTS - Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of the Permit shall be available for public inspection after General Manager approval. Permit applications, Permits, and effluent data shall not be considered confidential.

(J) CONFIDENTIALITY - All information provided by a User or obtained by the District through monitoring and inspection shall be made available to the public, unless the User specifically reques confidentiality and can demonstrate to the District that release of such information will violate th. User's right to protection of trade secrets under applicable State law. Wastewater quantity and quality data shall not be treated as Confidential Information. Information determined by the District to be confidential shall not be disclosed without providing the User with a reasonable opportunity to seek judicial protection from such release.

(K) SEVERABILITY - The provisions of the Permits are severable, and if any provision of the Permit, or the application of any provision of the Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and remainder of the Permit, shall not be affected thereby.

(L) PERMIT TRANSFER - A Permit is not transferable to a new business location or to a new business or to the new owner of existing business. A User shall immediately notify the District in writing of any change in the name or legal capacity of the User. The new owner shall be required to apply for a new Permit.

(M) SIGNATORY REQUIREMENT - All Permit applications and reports required by the District shall be signed by an Authorized Representative of the User. Any Person signing such documents shall make the following certification:

I have personally examined and am familiar with the information submitted in the attached document, and I hereby certify under penalty of law that this information was obtained in accordance with the requirements of the Regional Wastewater Ordinance. Moreover, based upon my inquiry of those individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(N) OTHER PERMIT CONDITIONS AND LIMITATIONS - The Permit may contain any of the following conditions or limitations:

1. Mass emission rates regulating prohibited wastes.
2. Limits on rate and time of discharge or requirements for flow regulations and equalization.
3. Requirements for submission of technical reports, production data, and/or waste manifests.
4. Requirements to self-monitor including the sampling of wastes and/or Wastewaters.
5. Predetermined rates or values for Wastewater strength characteristics.
6. Requirements to submit copies of tax and/or water bills.
7. Other provisions which may be applicable to ensure compliance with the Ordinance.
8. Other terms and conditions determined by the General Manager to be necessary to protect the Regional Sewerage System.

(O) CIVIL AND CRIMINAL LIABILITY - Nothing in the Permit shall be construed to relieve the User from civil or criminal liabilities.

4.2 - INDUSTRIAL WASTEWATER DISCHARGE PERMITS AND CONDITIONS

(A) No Significant Industrial User shall discharge or cause discharge, either directly or indirectly, of Non-Domestic Wastewater to the Regional Sewerage System without obtaining an Industrial Wastewater Discharge Permit from the District unless the Significant Industrial User is issued an Industrial Wastewater Discharge Permit by a Contracting Agency in accordance with the Regional Sewage Service Contract. An Industrial Wastewater Discharge Permit issued to a Significant Industrial User by a Contracting Agency in accordance with the Regional Sewage Service Contract shall be deemed an Industrial Wastewater Discharge Permit pursuant to this Ordinance. The District shall determine if an Industrial User is a Significant Industrial User as defined in Section 1.7 of this Ordinance. For the purpose of this Section 4.2 only, Contracting Agencies shall not be considered an Industrial User. No Person shall discharge Non-Domestic Wastewater in excess of the quantity or quality discharge limitations stated in the Industrial Wastewater Discharge Permit. Industrial Users shall provide Wastewater treatment as necessary to comply with this Ordinance. Any facilities necessary for compliance shall be provided, operated, and maintained at the Industrial User's expense. Detailed plans describing such facilities and operating procedures shall be submitted to the General Manager for review, and shall be acceptable to the General Manager before such facilities are constructed. The review of such plans and operating procedures shall in no way relieve the Industrial User from the responsibility of modifying such facilities as necessary to produce a discharge acceptable to the District under the provisions of this Ordinance. The District may issue an Industrial Wastewater Discharge Permit provided that all other requirements of this Ordinance and local, State of California, and federal regulations have been met. A Person may request an Industrial Wastewater Discharge Permit through completion and submittal to the District or to a Contracting Agency (if the Contracting Agency has the primary responsibility to perform permitting pursuant to the Regional Sewage Service Contract of an Industrial Wastewater Discharge Permit application and payment of the required application fees). Applications shall be signed and certified in accordance with Section 4.1(M).

(B) Prior to issuance of an Industrial Wastewater Discharge Permit, the District will review the application to assess whether the proposed discharge will, if properly monitored and regulated by the User, comply with applicable Wastewater quality standards including the requirements of Federal Categorical Pretreatment Standards or the State of California requirements and standards. Based upon this assessment, the District may issue the Industrial Wastewater Discharge Permit to allow the discharge, subject to conditions imposed by the District pursuant to this Ordinance.

(C) Prior to commencing any significant change in Non-Domestic Wastewater quantity or quality discharged or making any process modifications, an Industrial Wastewater Discharge Permit holder shall apply for and obtain a new Industrial Wastewater Discharge Permit.

(D) Prior to issuance of an Industrial Wastewater Discharge Permit for wastes to be delivered by truck or rail to the District for disposal, a Permit applicant shall submit certification pursuant to Section 66305, Chapter 30, Division 4, Title 22 of the California Code of Regulations, that the Wastewater is classified as non-hazardous.

(E) SPECIAL STUDIES - Special studies may be required in the processing of an Industrial Wastewater Discharge Permit application, or an Industrial Wastewater Discharge Permit update. In the event a special study is required, the District shall notify the applicant or the Industrial User of the Regional Sewerage System, in writing, of the need for the special study, and what parameters to be addressed in the study. If the District performs the study, the applicant or Industrial User shall deposit with the District the estimated cost of performing the study. All costs shall be borne by the applicant or Industrial User. Final costs will be based upon actual costs incurred by the District.

(F) PROPER OPERATION AND MAINTENANCE - The Industrial User shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Industrial User to achieve compliance with the conditions of the Permit.

Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by an Industrial User when the operation is necessary to achieve compliance with the conditions of the Permit.

(G) ADDITIONAL PRETREATMENT MEASURES

1. Whenever deemed necessary, the General Manager may require Industrial Users to restrict their discharge during peak flow periods, designate that certain Wastewater be discharged only into specific sewers, relocate and/or consolidate points of discharge, separate sewage wastestreams from industrial wastestreams, and such other conditions as may be necessary to protect the Regional Sewerage System and determine the Industrial User's compliance with the requirements of this Ordinance.

2. The General Manager may require any Person discharging into the Regional Sewerage System to install and maintain, on their property and at their expense, a suitable storage and flow-control facility to ensure equalization of flow. An Industrial Wastewater Discharge Permit may be issued solely for flow equalization.

3. Grease and oil interceptors shall be provided when, in the opinion of the General Manager, they are appropriate for the proper handling of Wastewater containing excessive amounts of grease and oil, or sand; except that such interceptors shall not be required for residential Users. All interceptor units shall be of type and capacity approved by the General Manager and shall be so located to be easily accessible for cleaning and inspection. Such interceptors shall be inspected, cleaned, and repaired regularly, as needed, by the User at their expense.

4. Users with the potential to discharge flammable substances may be required to install and maintain an approved combustible gas detection meter.

(H) ACCIDENTAL DISCHARGE PREVENTION AND SLUG LOAD CONTROL PLANS - All Industrial Users shall provide protection from the accidental discharge of prohibited materials or other substances regulated by this Ordinance. When required by the District, the Industrial User shall develop an accidental discharge prevention plan to be approved by the General Manager. Facilities required to prevent accidental discharges shall be provided and maintained at the Industrial User's own expense. The General Manager may require any Industrial User to develop, submit for approval, and implement such a plan. Alternatively, the General Manager may develop such a plan for any Industrial User. An accidental discharge/slug control plan shall address, at a minimum, the following:

1. Description of discharge practices, including non-routine batch discharges;

2. Description of stored chemicals;

3. Procedures for immediately notifying the General Manager of any accidental or slug discharge, as required by Section 4.2(L) of this Ordinance; and

4. Procedures to prevent adverse impact from any accidental or slug discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic Pollutants including solvents, or equipment for emergency response.

(I) MONITORING FACILITIES

1. Any Industrial User may be required by the General Manager to provide, at his own expense, sampling and flow measurement of its wastewater discharge. The Industrial User shall obtain the General Manager's approval of the monitoring facility.

2. There shall be ample room in or near a monitoring facility to allow accurate sampling and preparation of samples for analysis. All plans and construction of a monitoring facility shall be submitted to the District for approval. Access to monitoring facilities not owned by the District shall be granted immediately upon request during any time the Industrial User's business is open, any time Wastewater is being discharged and at any other reasonable time.

3. Industrial Users whose security procedures or plant configurations restrict or delay access shall provide an approved secured monitoring facility which is directly accessible to District's personnel without having to pass through other secured property of the Industrial User. The costs of providing facilities with such access shall be borne by the Industrial User.

(J) COMPLIANCE SCHEDULES - If the General Manager determines that additional operations and maintenance (O&M) or Pretreatment of Non-Domestic Wastewater is required for an Industrial User to comply with applicable Federal Categorical Pretreatment Standards other federal discharge requirements, State of California limitations, local limitations, or Permit requirements, the General Manager may issue a schedule by which the Industrial User shall provide such O&M or Pretreatment. In no instance shall the compliance schedule supersede any compliance date established for an applicable federal categorical pretreatment standard, nor shall it waive the District's right to take timely enforcement action for non-compliance with a Federal Categorical Pretreatment Standard.

(K) MONITORING REPORTS AND RECORD KEEPING - All Significant Industrial Users, as defined by 40 CFR 403.3(t), shall be required to submit to the District, in a manner described in the Permit application and/or the Permit, all reports required by the Federal Regulations in 40 CFR 403.12 including baseline monitoring, compliance schedule progress, final compliance, periodic reports on continued compliance and any other reports as required in the Permit. The General Manager may require other Industrial Users to submit any or all of the above reports or other reports. The General Manager may require any Industrial User to submit reports related to the discharge quality or quantity, or reports as needed to correct discharge violations or other discharge related issues. All reports or information submitted to the General Manager shall be signed and certified pursuant to Section 4.1(M) herein.

If an Industrial User monitors any Pollutant more frequently than required by an Industrial Wastewater Discharge Permit, the results of the monitoring shall be included in the applicable periodic monitoring report.

Record keeping for each compliance sample taken shall, at a minimum, include the type of container used, sample preservation used, test method used, results of test analysis, name of the Person taking the sample, name of technician performing the analysis and signature of the Director or duly authorized representative of a state certified laboratory.

All Industrial Users shall be required to retain records with respect to quantity and quality of flow and other data as indicated in the Permit for at least three (3) years following sampling and analysis or other data generation.

(L) NOTIFICATION OF ACCIDENTAL DISCHARGE, SLUG LOADING OR OTHER NON-COMPLIANCE -In the event of an accidental discharge, Slug Loading, or any other non-compliance, an Industrial User shall follow the following notification procedures:

1. Immediate Notification. In the event of Upset, accidental discharge, spill, or Slug Load which may endanger health, the environment, or the Regional Sewerage System, the Industrial User shall notify the District by telephone immediately upon discovery of the occurrence. The notification shall include location of discharge, type of waste, concentration, volume, and corrective actions both performed and planned.

2. Twenty-four Hour Notification. The Industrial User shall notify the District of the circumstances surrounding any discharge which exceeds any maximum discharge limitation for any of the Pollutants listed in the Waste Permit or Ordinance within 24 hours following discovery of the discharge.

Follow-up. Within five (5) days following notification pursuant to Sections 4.2(L)1 and/or 4.2(L)2, the Industrial User shall submit to the General Manager a detailed written report containing information describing the cause of the discharge and measures to be taken by the Industrial User to prevent similar future occurrences. Such notification shall not relieve the Industrial User of liability for any expense, loss, damage, fines, civil penalties or other liability which may be incurred as a result of damage to the Regional Sewerage System or any other liability which may be imposed pursuant to this Ordinance or other applicable law.

(M) ANALYSIS TO DEMONSTRATE CONTINUED COMPLIANCE - Should testing and analysis of a sample obtained by a Significant Industrial User subject to Federal Categorical Pretreatment Standards indicate a discharge violation, the Industrial User shall repeat the sampling and analysis and submit the results to the District within 30 days following discovery of the violation. The General Manager may require Significant Industrial Users that are not subject to Federal Categorical Pretreatment Standards to comply with this subsection.

(N) BYPASS

1. Bypassing is prohibited and the District may take enforcement action against an Industrial User, unless:

   (a) Bypass was unavoidable to prevent loss of life, personal injury, or Severe Property Damage;

   (b) There were no feasible alternatives to the Bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a Bypass which occurred during normal periods of equipment down time or preventative maintenance; and

   (c) The Industrial User submitted notice as required in Section 4.2(N)2.

2. If an Industrial User knows in advance of the need for a Bypass, the Industrial User shall submit prior notice to the District at least ten (10) days before the date of the Bypass.

3. The District may approve an anticipated Bypass, after considering its adverse effects, if the District determines that it will meet the conditions listed in Section 4.2(N)(1).

4. An Industrial User shall orally notify the District of an unanticipated Bypass within 24 hours from the time the Industrial User becomes aware of the Bypass. The Industrial User shall

submit a written report to the District within five (5) days of the time the Industrial User becomes aware of the Bypass. The written report shall contain a description of the Bypass and its cause, the duration of the Bypass including exact dates and times, and if the Bypass has not been corrected, an estimate of the anticipated time the Bypass is expected to continue and the steps planned to reduce, eliminate, and prevent reoccurrence of the Bypass.

5. Notification provided pursuant to Section 4.2(N) shall not relieve the Industrial User of liability for any expense, loss, damage, or other liability which may be incurred as a result of damage or loss to the District or any other damage or loss to Person or property; nor shall such notification relieve the Industrial User of any fines, penalties, or other liability which may be imposed under this Ordinance or other applicable law.

(O) REMOVED SUBSTANCES - Regulated wastes or other Pollutants removed in the course of Pretreatment or control of Wastewaters shall be properly disposed of in a manner such as to prevent any Pollutant from such materials from entering the Regional Sewerage System.

(P) INDUSTRIAL WASTEWATER DISCHARGE PERMIT DURATION AND DUTY TO REAPPLY - Industrial Wastewater Discharge Permits shall be issued for a specified time period, not to exceed five years. The Industrial User shall submit a new Industrial Wastewater Discharge Permit application with appropriate fees at least 30 days before the existing Industrial Wastewater Discharge Permit expires.

(Q) NOTIFICATION OF HAZARDOUS WASTES IN THE NON-DOMESTIC WASTE DISCHARGE - Any Industrial User shall notify the District in writing of any discharge into the Regional Sewerage System of a substance which, if otherwise disposed of, would be a Hazardous Waste under 40 CFR Part 261. Such notification shall include the name of the Hazardous Waste as set forth in 40 CFR Part 261, the EPA Hazardous Waste number, and the type of discharge (continuous, batch, or other). If the Industrial User discharges more than 100 kilograms of such waste per calendar month to the Regional Sewerage System, the notification shall also contain the following information to the extent such information is known and readily available to the Industrial User: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month, and an estimation of the mass of constituents in the wastestream expected to be discharged during the following twelve months. Industrial Users who commence discharging after the effective date of this section shall provide the notification no later than 180 days after the discharge of the listed or characteristic Hazardous Waste. Any notification under this paragraph need be submitted only once for each Hazardous Waste discharged. However, notifications of changed discharges must be submitted to the District under 40 CFR 403.12(j). The notification requirement in this section does not apply to Pollutants already reported under the self-monitoring requirements of 40 CFR 403.12(b), (d), and (e).

Industrial Users are exempt from the requirements of this section during a calendar month in which they discharge no more than fifteen kilograms of Hazardous Wastes, unless the wastes are acute Hazardous Wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than fifteen kilograms of non-acute Hazardous Wastes in a calendar month, or of any quantity of acute Hazardous Wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one-time notification.

Subsequent months during which the Industrial User discharges more than such quantities of any Hazardous Waste do not require additional notification.

In the case of any new regulations under Section 3001 of RCRA identifying additional characteristics of Hazardous Waste or listing any additional substance as a Hazardous Waste, the Industrial User must notify the District of the discharge of such substance within 90 days of the effective date of such regulations.

In the case of any notification made under this section, the Industrial User shall certify that it has a program in place to reduce the volume and toxicity of Hazardous Wastes generated to the degree it has determined to be economically practical.

(R) NOTIFICATION OF CHANGED DISCHARGE - All Industrial Users shall promptly notify the District in advance of any substantial change in the volume or character of Pollutants in their discharge, including listed or characteristic Hazardous Wastes for which the Industrial User has submitted notification under Section 4.2(Q) of this Ordinance.

4.3 DOMESTIC WASTE HAULER PERMITS AND CONDITIONS

(A) PERMIT REQUIRED TO DISCHARGE SANITARY WASTES - No Person shall discharge or cause discharge of Sanitary Wastes as defined herein to the Regional Sewerage System without a Domestic Waste Hauler Permit from the District and any required permit or license from the San Bernardino County Department of Environmental Health Services. Domestic Waste Hauler Permits shall be expressly subject to all provisions of the Ordinance and all other regulations, charges for use and fees established by the District. The conditions of Domestic Waste Hauler Permits will be enforced by the District in accordance with this Ordinance and applicable state and federal regulations.

(B) DOMESTIC WASTE HAULER PERMIT APPLICATIONS - Persons seeking a Domestic Waste Hauler Permit shall complete and file with the District, an application on the form prescribed by the District. The Person shall be required to submit the following information:

1. Name, address, and telephone number of the Person applying for a Permit.

2. Name of Authorized Representative of the Person (as defined) applying for a Permit.

3. The specific types of Sanitary Wastes to which the application pertains.

4. The names and material safety data sheets for all Chemical Substances (as defined) which will be added to the Sanitary Wastes.

5. The California Department of Motor Vehicle license number for all vehicles used to transport Sanitary Wastes to the Regional Sewerage System.

6. Copies of all Permits issued by the San Bernardino County Department of Environmental Health Services.

7. The holding capacity of each vehicle specified in 5 above.

8. The signature of an Authorized Representative of the Person (as defined) applying for a Permit. The signature must include the following certification statement:

I have personally examined and am familiar with the information submitted in the attached document, and I hereby certify under penalty of law that this information was obtained in accordance with the requirements of the Regional Wastewater Ordinance. Moreover, based upon my inquiry of those individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment.

(C) INSPECTION AND ENTRY - The District shall be authorized to inspect the vehicles used to transport Sanitary Wastes to the Regional Sewerage System, take photographs and/or take samples of the wastes discharged to the Regional Sewerage System. Such inspection shall also include the right

to inspect and copy records required to be maintained by the hauler under federal, State of California, or local requirements.

The District shall be authorized to inspect the Premises of any Person where the Sanitary Waste(s) originates. The Domestic Waste Hauler shall, prior to removing the Sanitary Wastes from the Premises, have the Person give written consent of inspection by the District in order to verify compliance with the provisions of this Ordinance. An inspection may include every facility that is directly or indirectly involved with the generation and/or discharge of wastes to the Sanitary Waste collection device(s).

Adequate identification will be provided to all inspectors, monitoring personnel, and other authorized personnel, and these Persons shall make themselves known when entering any property for inspection or sampling purposes.

Inadequate proof of consent to inspection may be cause for refusal by the District to allow discharge of Sanitary Wastes into the Regional Sewerage System or other enforcement actions.

(D) DOMESTIC WASTE HAULER RECORD KEEPING - Domestic Waste Haulers shall maintain records, indicating the number of loads, the source of the loads, the volume of the loads and the type of Sanitary Waste discharged into the Regional Sewerage System. A Domestic Waste Hauler shall retain all records and transport manifests for at least three years.

(E) DOMESTIC WASTE HAULER PERMIT DURATION AND DUTY TO REAPPLY - Domestic Waste Hauler Permits shall be issued for a specified time period, not to exceed one year. The Domestic Waste Hauler shall submit a new application with appropriate fees no later than 45 days before the existing Permit expires.

(F) SANITARY WASTE DISPOSAL LOCATION(S) - The General Manager shall designate locations and times acceptable for the discharge of Sanitary Waste by a Domestic Waste Hauler. Domestic Waste Haulers shall be notified of any change in the locations. It shall be the responsibility and liability of the Domestic Waste Hauler to discharge in such a manner as to keep the area clean and free from spills or other debris. The discharge of Sanitary Waste to any point in the Regional Sewerage System other than a designated location is prohibited.

(G) SANITARY WASTE TRANSPORT MANIFESTS - A manifest of a type prescribed by the District, shall be used to track the Sanitary Waste from its originating point to the disposal location. The manifest shall contain the address and telephone number of the originating location and shall provide the Sanitary Waste generator a place to give written consent of inspection by the District. The manifest shall accompany the Sanitary Waste while it is on the transport vehicle until the Sanitary Waste is discharged at the disposal location. A Domestic Waste Hauler shall retain a copy of the manifest upon discharge.

(H) SANITARY WASTE TESTING - The District reserves the right to perform testing of any and all Sanitary Waste to determine its acceptability for discharge into the Regional Sewerage System. The District may require a Domestic Waste Hauler to have chemical analysis performed, by an independent certified laboratory, of the Sanitary Waste to be discharged. The cost of the analysis shall be paid by the Domestic Waste Hauler.

SECTION 5 - ADMINISTRATIVE ENFORCEMENT REMEDIES

5.1 - NOTIFICATION OF VIOLATION

When the General Manager finds that any Significant Industrial User, or any other User whose discharge has the potential, alone or in conjunction with other discharges, to adversely affect the Regional Sewerage System, has violated, or continues to violate, any provision of this Ordinance, any provisions of a wastewater discharge ordinance enacted by a Contracting Agency as part of its pretreatment program, a Permit hereunder, or any other Pretreatment Standard or Requirement, the General Manager may serve upon that User a Notice of Violation. Nothing in this section shall limit the authority of the General Manager to take any action, including emergency actions or any other enforcement action, without first issuing a Notice of Violation.

5.2 - ADMINISTRATIVE ORDERS

The General Manager may require compliance with this Ordinance, Permit conditions or limitations by issuing Administrative Orders including but not limited to the following types of Administrative Orders:

(A) CORRECTIVE ACTION ORDERS - Corrective Action Orders may contain requirements to address noncompliance, including but not limited to investigation of noncompliance, submission of an explanation of the violation and a plan for the satisfactory correction and prevention thereof, additional self-monitoring and management practices designed to minimize the amount of Pollutants discharged to the Regional Sewerage System, the preparation of reports, and the submittal of additional information related to the discharge of Wastewater.

(B) COMPLIANCE ORDERS - Compliance Orders may direct a User to achieve or restore compliance by a specific date. If the User fails to achieve compliance within the time provided, sewer service may be discontinued in accordance with Section 5.3, 5.4 or 5.5. Compliance orders may also contain the requirements listed in 5.2(A).

(C) SHOW CAUSE ORDERS - Show Cause Orders may require a User to appear at the District office at a certain date and time to show cause to the District as to why a proposed enforcement action(s) should not be taken.

(D) CONSENT ORDERS - Consent Orders shall establish an agreement with any User responsible for noncompliance. Such orders may include specific actions to be taken by the User to correct the noncompliance within a time period specified by the order. Such orders shall have the same force and effect as the administrative orders issued pursuant to Sections 5.2(B) and 5.2(E) of the Ordinance.

(E) CEASE AND DESIST ORDERS - Cease and Desist Orders shall direct a User to cease and desist all discharge violations, to comply immediately with all discharge requirements and to take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened discharge violation, including halting operations and/or terminating the discharge.

The issuance of any administrative order pursuant to this section shall not be a bar against, or prerequisite for, taking any other action against the User.

5.3 - EMERGENCY ACTION

(A) If the General Manager determines that a violation constitutes a serious threat, of an immediate or emergency nature, to the health and welfare of the community or to the environment, or may cause Interference or Pass Through, or may cause the District to violate any State of California or federal law, regulation or permit requirement, the General Manager may order an immediate cessation of

the discharge and suspend the User's permission to discharge into the Regional Sewerage System. If the User does not cease discharging at once, the General Manager may disconnect the User from the Regional Sewerage System.

(B) As soon as reasonably practicable following the issuance of a cessation order and/or suspension order, but in no event more than seven (7) days following the issuance of such order, the General Manager shall hold a hearing to provide the User an opportunity to present information in opposition to the issuance of the cessation or suspension order. The hearing shall be conducted in accordance with procedures established by the General Manager. The General Manager shall issue a written decision and order within seven (7) days following the hearing to the User or its legal counsel/representative at the User's business address. Any cessation or suspension order included within the General Manager's written statement shall be deemed final upon delivery to the User.

5.4 - PERMIT SUSPENSION

(A) GROUNDS - The General Manager may suspend any Permit when it is determined that a User meets any of the following conditions:

1. Fails to comply with the terms and conditions of an administrative order.

2. Knowingly provides a false statement, representation, record, report, or other document to the District.

3. Refuses to provide records, reports, plans, or other documents required by the District to determine Permit terms, conditions, limitations, discharge compliance, or compliance with this Ordinance.

4. Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or sample collection method.

5. Fails to report significant changes in operations or Wastewater constituents and characteristics.

6. Refuses reasonable access to the permittee's Premises for the purpose of inspection and monitoring.

7. Does not make timely payment of all amounts owed to the District for User charges, non-compliance fees, or any other fees.

8. Discharges Slug Load(s) to the Regional Sewerage System.

9. Makes a material or substantial alteration or addition to the operational process, discharge volume, or discharge character which is not covered in the effective Permit.

10. Violates any condition or limitation of its Permit or any provision of the District's Ordinance.

(B) NOTICE/HEARING - When the General Manager has reason to believe that grounds exist for Permit suspension, he shall give written notice thereof to the permittee setting forth a statement of the facts and grounds deemed to exist, together with the time and place where the charges shall be heard by the General Manager's designee. The hearing date shall be not less than fifteen (15) calendar days and not more than forty-five (45) calendar days after the mailing of such notice.

1. At the suspension hearing, the permittee shall have an opportunity to respond to the allegations set forth in the notice by presenting written or oral evidence. The hearing shall

be conducted in accordance with procedures established by the General Manager and approved by the District's General Counsel.

2. After the conclusion of the hearing, the General Manager's designee shall submit a written report to the General Manager setting forth a brief statement of facts found to be true, a determination of the issues presented, conclusions, and a recommendation.

Upon receipt of the written report, the General Manager shall make his determination and should he find that grounds exist for suspension of the Permit, he shall issue his decision and order in writing within thirty (30) calendar days after the conclusion of the hearing by his designee. The written decision and order of the General Manager shall be sent to the permittee or its legal counsel/representative at the permittee's business address.

(C) EFFECT

1. Upon an order of suspension by the General Manager becoming final, the permittee shall have no right to discharge any Non-Domestic Wastewater or Sanitary Wastes (which ever applies) directly or indirectly to the Regional Sewerage System for the duration of the suspension. All costs for physically terminating and reinstating service shall be paid by the permittee.

2. Any owner or responsible management employee of the permittee shall be bound by the order of suspension.

3. An order of Permit suspension issued by the General Manager shall be deemed final in all respects sixteen (16) days after it is mailed to the applicant or User unless a request for hearing is filed with the Board of Directors pursuant to Section 5.6(B), within fifteen (15) days after mailing to the applicant or User.

5.5 - PERMIT REVOCATION

(A) GROUNDS - The General Manager may revoke any Permit when it is determined that a User meets any of the following conditions:

1. Knowingly provides a false statement, representation, record, report, or other document to the District.

2. Refuses to provide records, reports, plans, or other documents required by the District to determine waste Permit terms, conditions, or limitations, discharge compliance, or compliance with this Ordinance.

3. Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or sample collection method.

4. Fails to report significant changes in operations or Wastewater constituents and characteristics.

5. Fails to comply with the terms and conditions of an enforcement or Permit suspension order.

6. Discharges effluent to the Regional Sewerage System while its Permit is suspended.

7. Refuses reasonable access to the permittee's Premises for the purpose of inspection and monitoring.

8. Does not make timely payment of all amounts owed to the District for User charge non-compliance fees, or any other fees.

9. Discharges a Slug Load to the Regional Sewerage System.

10. Discharges effluent that causes Pass Through or Interference with the District's collection, treatment, or Regional Sewerage System.

11. Fails to submit oral notice or written report of Bypass occurrence.

12. Makes a material or substantial alteration or addition to the operational processes, discharge volume, or discharge character which was not covered in the effective Permit.

13. A change in any condition that requires an elimination of the authorized discharge.

14. Ceases operation and discharge of the permitted Wastewaters as a result of a closure of business.

15. Violates any condition or limitation of its Permit or any provision of the District's Ordinance.

(B) NOTICE/HEARING - When the General Manager has reason to believe that grounds exist for the revocation of a Permit, he shall give written notice thereof to the permittee setting forth a statement of the facts and grounds deemed to exist together with the time and place where the charges shall be heard by the General Manager's designee. The hearing date shall be not less than fifteen (15) calendar days nor more than forty-five (45) calendar days after the mailing of such notice.

1. At the hearing, the permittee shall have an opportunity to respond to the allegations set forth in the notice by presenting written or oral evidence. The revocation hearing shall be conducted in accordance with the procedures established by the General Manager and approved by the District's General Counsel.

2. After the conclusion of the hearing, the General Manager's designee shall submit a written report to the General Manager setting forth a brief statement of facts found to be true, a determination of the issues presented, conclusions, and a recommendation.

Upon receipt of the written report, the General Manager shall make his determination and should he find that grounds exist for permanent revocation of the Permit, he shall issue his decision and order in writing within thirty (30) calendar days after the conclusion of the hearing by his designee. The written decision and order of the General Manager shall be sent to the permittee or its legal counsel/representative at the permittee's business address.

In the event the General Manager determines to not revoke the Permit, he may order other enforcement actions, including, but not limited to, a temporary suspension of the Permit, under terms and conditions that he deems appropriate.

(C) EFFECT

1. Upon an order of revocation by the General Manager becoming final, the permittee shall permanently lose all rights to discharge any Non-Domestic Wastewater or Sanitary Wastes (which ever applies) directly or indirectly to the District's system. All costs for physical termination shall be paid by the permittee.

2. Any owner or responsible management employee of the permittee shall be bound by the order of revocation.

3. Any future application for a Permit at any location within the District by any Person subject to an order of revocation will be considered by the District after fully reviewing the records of the revoked Permit, which records may be the basis for denial of a new Permit.

4. An order of Permit revocation issued by the General Manager shall be deemed final upon delivery to the permittee, unless appealed to the Board of Directors pursuant to Section 5.6(B), within fifteen days after mailing to the permittee.

5.6 - APPEALS

(A) ADMINISTRATIVE HEARINGS BEFORE THE GENERAL MANAGER

1. General - Any Permit applicant, or User affected by any decision, action or determination made by the General Manager's staff may file with the General Manager a written request for an administrative hearing regarding such action. The request shall be made within fifteen (15) days of mailing of the staff's original decision. The request for hearing shall set forth in detail all facts supporting the request.

2. Notice - The General Manager shall, within fifteen (15) days of receiving the request for hearing, designate himself or another Person to hear the matter and provide written notice to the applicant or User of the hearing date, time and place. The hearing date shall not be more than thirty (30) days from the mailing of such notice to the applicant or User unless a later date is agreed to by the applicant or User. If the hearing is not held within said time, due to actions or inactions of the applicant or User, then the staff decision shall be deemed final.

3. Hearing - At the hearing, the applicant or User shall have the opportunity to present information supporting its position concerning the staff's original decision, action or determination. The hearing shall be conducted in accordance with procedures established by the General Manager and approved by the District's General Counsel.

4. Written Determination - After the conclusion of the hearing, the General Manager's designee shall submit a written report to the General Manager setting forth a brief statement of facts found to be true, a determination of the issues presented, conclusions, and a recommendation whether to uphold, modify or reverse the staff's original decision, action or determination. Upon receipt of the written report, the General Manager shall make his determination and shall issue his decision and order within thirty (30) calendar days of the hearing by his designee. The written decision and order of the General Manager shall be sent to the applicant or User or its legal counsel/representative, at the applicant's or User's business address.

The order of the General Manager shall be final in all respects sixteen (16) days after it is mailed to the applicant or User unless a request for hearing is filed with the Board of Directors pursuant to Section 5.6(B), within fifteen (15) days after mailing to the applicant or User.

(B) APPEALS TO THE BOARD OF DIRECTORS

1. General - If the General Manager's order is adverse to the Permit applicant or User, it may, prior to the date that the General Manager's order becomes final, file a written request for hearing to the Board of Directors. The request for hearing shall set forth in detail all the issues in dispute for which the appellant seeks determination and all facts supporting appellant's request.

No later than sixty (60) days after receipt of the request for hearing, the Board of Directors shall either set the matter for a hearing, or deny the request for a hearing.

The Board of Directors shall grant all requests for a hearing on appeals concerning Permit suspension or revocation. Whether to grant or deny the request for a hearing on appeals of other decisions of the General Manager shall be within the sole discretion of the Board.

A hearing shall be held by the Board within sixty-five (65) days from the date of determination granting a hearing, unless a later date is agreed to by the User or Permit applicant and the Board. If the matter is not heard within the required time, due to actions or inactions of the appellant, the General Manager's order shall be deemed final.

2. Notice - The Board Secretary shall, within fifteen (15) days of the Board of Directors' determination, provide written notice to the appellant of the denial or acceptance of a hearing. If a hearing is accepted then a hearing date, time, and place will be indicated. If a hearing is denied, the General Manager's decision shall be final fifteen (15) days after the date such notice is mailed.

3. Hearing - At the hearing, the appellant shall have the opportunity to present written or oral evidence supporting its position concerning the original decision, action or determination, in accordance with procedures established by the Board.

4. Written Determination - After the hearing, the Board shall make a determination whether to uphold, modify, or reverse the staff's original decision, action, or determination as ordered by the General Manager.

The decision of the Board shall be set forth in writing within sixty-five (65) days after the close of the hearing and shall contain a finding of the facts found to be true, the determination of issues presented, and the conclusions. The written decision and order of the Board shall be sent to the appellant or its legal counsel/representative at the appellant's business address.

The order of the Board shall be final upon its adoption. In the event the Board fails to reverse or modify the General Manager's order, it shall be deemed affirmed.

The District's determination may also include issuance of an order to a User responsible for violations, directing that following a specified period of time, sewer service be discontinued unless adequate Pretreatment facilities, devices or other related appurtenances have been installed and are properly operated. Such an order shall not relieve the violator of other penalties assessed for the period of violation. Further orders and directives as necessary and appropriate may be used. The District may seek injunctive relief in order to require compliance with all provisions of this Ordinance.

5.7 - ADMINISTRATIVE CIVIL PENALTIES

1. Pursuant to the authority of California Government Code Sections 54740.5 and 54740.6, the District may issue an administrative complaint to any Person who violates (a) any provision of this Ordinance; (b) any Permit condition, prohibition or effluent limit; or (c) any Permit suspension or revocation order.

2. The administrative complaint shall be served by personal delivery or certified mail on the Person subject to the provisions of Section 5.7 and shall inform the Person that a hearing will be conducted on a date which shall be within sixty (60) days following service. The administrative complaint will allege the act or failure to act that constitutes the violation of the District's requirements, the provisions of law authorizing civil liability to be imposed and the proposed civil penalty. The matter shall be heard by the General Manager or his

designee. The Person to whom an administrative complaint has been issued may waive the right to a hearing, in which case a hearing will not be conducted.

3. At the hearing, the Person shall have an opportunity to respond to the allegations set forth in the administrative complaint by presenting written or oral evidence. The hearing shall be conducted in accordance with the procedures established by the General Manager and approved by the District's General Counsel.

4. After the conclusion of the hearing, the General Manager's designee shall submit a written report to the General Manager setting forth a brief statement of the facts found to be true, a determination of the issues presented, conclusions, and a recommendation.

5. Upon receipt of the written report, the General Manager shall make his determination. Should he find that grounds exist for assessment of a civil penalty against the Person, he shall issue his decision and order in writing within thirty (30) calendar days after the conclusion of the hearing by his designee.

6. If after the hearing, or appeal, if any, it is found that the Person has violated reporting or discharge requirements, the General Manager or Board may assess a civil penalty against that Person. In determining the amount of the civil penalty, the General Manager or Board of Directors may take into consideration all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the economic benefit derived through any non-compliance, the nature and persistence of the violation, the length of time over which the violation occurs and corrective action, if any, attempted or taken by the Person involved.

7. Civil penalties may be assessed as follows:

   (a) In an amount which shall not exceed two thousand dollars ($2,000) for each day for failing or refusing to furnish technical or monitoring reports;

   (b) In an amount which shall not exceed three thousand dollars ($3,000) for each day for failing or refusing to timely comply with any compliance schedules established by the District;

   (c) In an amount which shall not exceed five thousand dollars ($5,000) per violation for each day of discharge in violation of any waste discharge limit, Permit condition, or requirement issued, reissued or adopted by the District;

   (d) In any amount which does not exceed ten dollars ($10) per gallon for discharges in violation of any Permit suspension, Permit revocation, cease and desist order or other orders, or prohibition issued, reissued or adopted by the District.

8. An order assessing administrative civil penalties issued by the General Manager shall be final in all respects on the thirty-first (31st) day after it is served on the Person unless an appeal and request for hearing is filed with the Board pursuant to Section 5.6(B) no later than the thirtieth (30th) day following such mailing. An order assessing administrative civil penalties issued by the Board shall be final upon issuance.

9. Copies of the administrative order shall be served on the party served with the administrative complaint, either by Personal service or by registered mail to the Person at his business or residence address, and upon other Persons who appeared at the hearing and requested a copy of the order.

10. Any Person aggrieved by a final order issued by the Board, after granting review of the order of the General Manager, may obtain review of the final order of the Board in the superior court, pursuant to Government Code Section 54740.6, by filing in the court a petition for writ of mandate within thirty (30) days following the service of a copy of the decision or order issued by the Board.

11. Payment on any order setting administrative civil penalties shall be made within 30 days after the date the order becomes final. The amount of any administrative civil penalties imposed which have remained delinquent for a period of sixty (60) days shall constitute a lien against the real property of the User from which the discharge resulting in the imposition of the civil penalty originated. The lien shall have no effect until recorded with the county recorder. The District may record the lien for any unpaid administrative civil penalties on the ninety-first (91st) day following the date the order becomes final.

12. No administrative civil penalties shall be recoverable under Section 5.7 for any violation for which the District has recovered civil penalties through a judicial proceeding filed pursuant to Government Code Section 54740.

5.8 - NON-COMPLIANCE COSTS

The District may recover its costs incurred in processing notices of violation and in performing sampling, monitoring, or laboratory analysis related to any violations of the Ordinance or Permit by any User.

Non-compliance costs shall be in addition to and not in lieu of any civil or criminal liability specified in this Ordinance.

5.9 - RECOVERY OF COSTS FOR DAMAGE

In the event that a User causes any damage pursuant to Section 1.8, the User shall be liable for all costs, including administrative and legal costs, incurred by the District.

5.10 - PUBLICATION OF NAMES OF INDUSTRIAL USERS IN SIGNIFICANT NON-COMPLIANCE

As required by federal law, the General Manager shall, at least annually, provide public notice in a local newspaper of the identity of those Industrial Users who are deemed, under federal regulation, to be in Significant Non-Compliance with the provisions of this Ordinance which implements the federal industrial waste Pretreatment program.

5.11 - SEPARATE ACTIONS

Any administrative proceeding initiated because of a violation of any section of this Ordinance shall not exempt a User from any administrative proceedings initiated because of a violation of any other provision of the Ordinance or because of any separate violation of the same provision of the Ordinance.

SECTION 6 - JUDICIAL ENFORCEMENT REMEDIES

6.1 - INJUNCTION

Whenever a User is in violation of or may potentially violate the provisions of this Ordinance, the User's Permit conditions, or any Pretreatment Standards or Requirements for Industrial Users, as set forth in 40 CFR Part 403, or fails to submit required reports or refuses to allow the District's entry to inspect the Premises, the District may petition the Superior Court for the issuance of a preliminary or permanent injunction, or both, as may be appropriate to restrain the continued violation, order corrective action and/or to prevent discharge violations by the User.

6.2 - CIVIL PENALTIES

(A) AUTHORITY - All Users of the Regional Sewerage System are subject to enforcement actions administratively or judicially by the District, U.S. EPA, State of California Water Resources or Regional Water Quality Control Boards, or the County of San Bernardino District Attorney. Said actions may be taken pursuant to the authority provisions of several laws, including but not limited to: (1) Federal Water Pollution Control Act, commonly known as the Clean Water Act (33 U.S.C. Section 1251 et seq.), (2) California Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.), and (3) The California Government Code Section 54725 et seq.

(B) RECOVERY OF FINES OR PENALTIES - In the event District is subject to the payment of fines, penalties or damages pursuant to the legal authority and actions of other regulatory or enforcement agencies based on a violation of law or regulation or its Permits, and said violation can be established by District as caused by the discharge of any User of the Regional Sewerage System which is in violation of any provision of the District's Ordinance, the User's Permit or any other applicable law or regulation relating to the discharge of Non-Domestic Wastewater, District shall be entitled to recover from the User all costs and expenses, including, but not limited to, the full amount of said fines, penalties, or damages to which it has been subjected.

(C) ORDINANCE - Pursuant to the authority of California Government Code Section 54739 et seq., any Person who violates any provision of this Ordinance, any Permit condition, prohibition or effluent limitation, or any suspension or revocation order shall be liable civilly for a penalty not to exceed $25,000 for each day in which such violation occurs. The General Counsel of the District, upon order of the General Manager, shall petition the Superior Court to impose, assess, and recover such penalties.

6.3 - CRIMINAL PENALTIES

Any Person who violates any provision of this Ordinance is guilty of a misdemeanor, which upon conviction is punishable by a fine not to exceed $1,000, or imprisonment for not more than thirty (30) days, or both. Each day in which a violation occurs shall constitute a new and separate violation of this Ordinance and shall be subject to the penalties contained herein.

6.4 - SEPARATE ACTIONS

Any judicial proceeding initiated because of a violation of any section of this Ordinance shall not exempt a User from any judicial proceedings initiated because of a violation of any other provision of the Ordinance or because of any separate violation of the same provision of the Ordinance.

SECTION 7 - RATES

7.1 - DOMESTIC WASTE HAULER RATES

(A) DOMESTIC WASTE HAULER APPLICATION AND RENEWAL FEES - Application and renewal fees shall be established from time to time by Resolution of the Board. Failure to pay the Permit renewal fee prior to the Permit expiration shall be cause for termination of service.

(B) DOMESTIC WASTE HAULER DISPOSAL FEES - Disposal fees shall be established from time to time by Resolution of the Board.

7.2 - OTHER PERMIT APPLICATION FEES

Other Permit application fees shall be established from time to time by Resolution of the Board. The application fees shall be based upon the estimated cost of processing the Permit application.

7.3 - BILLING AND PAYMENT

All fees and charges imposed under the provisions of this Ordinance are due and payable upon serving an invoice. An invoice shall by served by first-class mail or such other procedure as will reasonably assure receipt. Unpaid fees or charges shall become delinquent 30 days after postmark date or the date the invoice is personally served. The date a payment is postmarked by the United States Postal Service will be considered the date of receipt by the District unless payment is personally made to the District.

A penalty of 10 percent of the original unpaid invoice amount shall be added to any fee or charge that becomes delinquent. Interest at the maximum rate provided by law shall accrue on the total of all delinquent fees or charges including the penalty.

SECTION 8 - ADOPTION

ADOPTED THIS 19 day of October 1994.

Bill Hedge
President of Chino Basin
Municipal Water District and
the Board of Directors thereof

ATTESTED:

John L. Anderson
Secretary of the Chino Basin
Municipal Water District and
the Board of Directors thereof

STATE OF CALIFORNIA)
)SS
COUNTY OF)
SAN BERNARDINO)

I, John L. Anderson, Secretary of the Chino Basin Municipal Water District, DO HEREBY CERTIFY that the foregoing Ordinance being No. 57, was adopted at a regular meeting on October 19, 1994 of said district by the following vote:

AYES: Borba, Troxel, Dunihue, Hill

NOYES: None

ABSTAIN: None

ABSENT: Anderson.

John L. Anderson
Secretary

(SEAL)

IEUA RESOLUTION NO. 99 - 6 – 1

WATER QUALITY LIMITATIONS

Applicable to IEUA Contracting Agencies

RESOLUTION NO. 99 - 6 -1

RESOLUTION OF THE BOARD OF DIRECTORS OF THE INLAND EMPIRE UTILITIES AGENCY*, SAN BERNARDINO COUNTY, CALIFORNIA, PURSUANT TO THE REGIONAL WASTEWATER ORDINANCE, ESTABLISHING LOCAL LIMITS APPLICABLE TO THE REGIONAL CONTRACTING AGENCIES

WHEREAS, the Board of Directors of the Inland Empire Utilities Agency*, pursuant to Section 2.2 of the Inland Empire Utilities Agency* (IEUA) Regional Wastewater Ordinance (Ordinance No. 57), may adopt a resolution establishing local limits applicable to Contracting Agencies of the Regional Sewage Service Contract.

NOW, THEREFORE, The Board of Directors hereby RESOLVES, DETERMINES, AND ORDERS that the Local Limits applicable to Contracting Agencies pursuant to the Regional Wastewater Ordinance shall be as follows:

I. SPECIFIC RESTRICTIONS AND DISCHARGE LIMITS

Except as may be specifically provided on a temporary basis, no contracting agency shall discharge or cause to be discharged into the Regional Sewerage System any waste which exceeds the following qualities, or which will result in the inability of the wastewater treatment plant effluent to meet the wastewater discharge requirements presently established by any State or Federal regulatory agency, or which may be adopted in the future. Modification of these limits may be necessary to insure compliance with the effluent wastewater discharge requirements for discharges to the Santa Ana River, for basin groundwater recharge, for direct reuse of the effluent for irrigation and industrial requirement, or for sludge reclamation and disposal standards.

A. The wastewater discharged into the Regional Sewerage System shall not contain, at any time, constituents, based on the flow weighted average of samples taken at the mutually agreed upon sample locations, which exceed the following discharge limits:

Constituents	Limit (mg/l)
Arsenic, Total	0.060
Barium, Total	3.00
Boron	0.75
Cadmium, Total	0.015
Chromium, Total	0.350
Cobalt, Total	0.600
Copper, Total	0.1 †
Cyanide, Total	0.100
Fluoride	1.00
Lead, Total	0.070

Manganese, Total	0.150
Mercury, Total	0.010
Nickel, Total	0.035
Selenium, Total	0.015
Silver, Total	0.250
Zinc, Total	0.365
Sulfide, Dissolved	0.050
Sulfide, Total	2.0
Oil and Grease, Total	100
Biochemical Oxygen Demand (5 day)	300 ‡
Total Suspended Solids	300 ‡
Methylene Blue Active Substances (MBAS)	110

† The discharge limit for copper is an interim limit and shall be in effect until December 2, 2000.

‡ Values in excess of this amount shall be subject to a surcharge as determined by Section 19 of the Regional Sewage Service Contract.

B. Specific Restrictions for Minerals and Salts

The wastewater shall not contain, based on a running 12-month average, constituents which, based on the flow weighted average of samples taken at the mutually agreed upon sample locations, exceed the average annual concentration of the constituent in the water supply to the sewered area by more than the following increments:

Constituent	Increment (mg/l)
TDS	230
Total Hardness	35
Sodium	75
Chloride	75
Sulfate	40

No wastewater from a Contracting Agency, alone, or in conjunction with wastewater from other contracting agencies shall cause IEUA to violate its NPDES permit limits for TDS, total hardness, sodium, chloride or sulfate.

C. pH Limitations

A Regional Contracting Agency may discharge wastewater:

1. that is not greater than 10.5 pH units or less than 5.0 pH units at any delivery point to the Regional Sewerage System;
2. that does not, in quantities or concentrations, alone or in conjunction with discharge or discharges from other sources cause the pH of the wastewater entering the headworks of any Regional Treatment Plant to decrease below 6.5 pH units for longer than 60 minutes; and
3. that does not, in quantities or concentrations, alone or in conjunction with a discharge or discharges from other sources cause the pH of the wastewater entering the headworks of any Regional Treatment Plant to decrease below 6.0 pH units at any time.

D. The wastewater discharged into the Regional Sewerage System, alone or in conjunction with other discharges, shall not cause an increase in the temperature of a Regional Treatment Plant's receiving water above 90 degrees Fahrenheit, which normally occurs during the period of June through October, nor above 78 degrees Fahrenheit during the rest of the year.

E. IEUA Resolution No. 94-10-2, adopted on October 19, 1994, is hereby rescinded in its entirety.

ADOPTED this 2nd day of June, 1999.

John L. Anderson
President of the Inland Empire Utilities Agency* and the Board of Directors thereof

ATTESTED:

Anne Dunihue
Secretary/Treasurer of the Inland Empire Utilities Agency* and the Board of Directors thereof

* A Municipal Water District

STATE OF CALIFORNIA)
)SS
COUNTY OF)
SAN BERNARDINO)

I, Anne Dunihue, Secretary of the Inland Empire Utilities Agency*, DO HEREBY CERTIFY that the foregoing Resolution being No. 99-6-1, was adopted at a regular Board Meeting on June 2, 1999, of said Agency by the following vote:

AYES: Dunihue, Troxel, Catlin, Koopman, Anderson

NOES: None

ABSTAIN: None

ABSENT: None.

Anne Dunihue
Secretary

*A Municipal Water District

City of Upland Sewer Service Agreements

AGREEMENT

THIS AGREEMENT is made and entered into this 6th day of October, 1986, between the CITY OF MONTCLAIR, an incorporated City located in San Bernardino County, California, herein called "Montclair" and the CITY OF UPLAND, an incorporated City located in San Bernardino County, California, herein called "Upland."

WITNESSETH:

WHEREAS, Upland desires to dispose of additional sewage generally originating in an area located west of Benson Avenue, and south of Arrow Route, through trunk sewers owned and operated by Montclair, and it is therefore necessary that the Agreement, dated September 4, 1984, between Montclair and Upland be amended to provide for the additional sewage; and,

WHEREAS, Montclair currently has excess capacity in its sewer collection system; and,

WHEREAS, Upland has funds reserved in its sewer extension fund to provide additional sewer facilities when needed to provide additional trunk sewer capacity; and,

WHEREAS, Montclair and Upland are each contracting parties to the Regional Sewerage Program operated by Chino Basin Municipal Water District;

NOW, THEREFORE, Montclair and Upland do hereby covenant and agree to an amendment to the Agreement, dated September 4, 1984, between Montclair and Upland as follows:

1. Upland agrees to construct at no cost to Montclair, all facilities necessary to convey sewage from lands bounded by Arrow Route, Benson Avenue, the Southern Pacific Railroad tracks and the San Bernardino/ Los Angeles County line, to Montclair's sewer collection system located in the vicinity of Central Avenue and the Southern Pacific Railroad tracks.

2. Montclair agrees to accept and deliver to the Regional Waste Water Treatment Plant sewage generated from said area described in paragraph one (1) above. Total sewage generated by Upland and delivered to Montclair shall not exceed 80,000 gallons per day.

3. Upland agrees to pay Montclair, bi-monthly, all sewer service charges required by Montclair for said area. Said charges shall be paid at the rate of $5.13 per equivalent dwelling unit (E.D.U.) per month, or at such rate per E.D.U. per month as may be established by the City Council of the City of Montclair for sewer services.

E.D.U. and sewerage flow shall be as follows:

Single Family	= 1 E.D.U. - 270 gallons per day
Multi-Family	= 1 E.D.U. - 200 gallons per day
Commercial and Industrial	= E.D.U. shall be calculated in accordance with Exhibit J of the Chino Basin Regional Sewage Service contract dated October 24, 1985.

4. Upland agrees to enforce Montclair's quality standards for sewage discharged into the sewer system from all units.

5. Upland agrees that if, at some future date, the portion of the Montclair sewer collection system which carries the flow from the above described areas must be expanded in capacity due to overloading, Upland shall pay its proportionate share of the increased capacity, determined by dividing the flow from the above described areas by the total additional flow capacity required.

6. Upland agrees that when the Upland Interceptor has been constructed to serve the upland area located generally north of the City Limits of the City of Montclair and west of Benson Avenue, all temporary connections by Upland shall then be serviced by said Interceptor, and at such time, this Agreement shall be null and void. Upland further agrees that in the event the formal arrangements for ultimate connection to a regional interceptor or other sewage collection and disposal system are not concluded within 24 months of the date of this Agreement, Upland will pay to Montclair a sewer connection annexation fee of $370 per acre for each property having a sewer connection.

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the day and year first above written.

CITY OF MONTCLAIR

MAYOR

ATTEST:

CITY CLERK

CITY OF UPLAND

MAYOR

ATTEST:

CITY CLERK

AGREEMENT

THIS AGREEMENT is made and entered into this 1st day of April, 1985, between the CITY OF MONTCLAIR, an incorporated City located in San Bernardino County, California, herein called "Montclair," and the CITY OF UPLAND, an incorporated City located in San Bernardino County, California, herein called "Upland."

WITNESSETH:

WHEREAS: Upland desires to dispose of additional sewage generally originating in an area located on the east side of Central Avenue immediately south of the Southern Pacific Railway Company tracks through trunk sewers owned and operated by Montclair; and it is there necessary that the Agreement, dated September 4, 1984, between Montclair and Upland be amended to provide for the additional sewage; and,

WHEREAS, Montclair currently has excess capacity in its sewer collection system; and,

WHEREAS, Upland has funds reserved in its sewer extension fund to provide additional sewer facilities when needed to provide additional trunk sewer capacity; and,

WHEREAS, Montclair and Upland are each contracting parties to the Regional Sewerage Program operated by Chino Basin Municipal Water District, and each utilize Regional Plant #1 for treatment of sewage collected within the two cities;

NOW, THEREFORE, Montclair and Upland do hereby convenant and agree to an amendment to the Agreement, dated September 5, 1984, between Montclair and Upland as follows:

1. Upland agrees to construct at no cost to Montclair, all facilities necessary to convey sewage from approximately 1.57 acres of land being developed entirely as retail with no restaurants on the east side of Central Avenue immediately south of the Southern Pacific Railway Company tracks, described as Parcel 1 of Parcel Map 6974, recorded in Book 85, page 58 and 59 of records, San Bernardino

County for sewer facilities owned and operated by the City of Montclair in the vicinity of Richton Avenue and Central Avenue.

2. Montclair agrees to accept and deliver to the Regional Waste Water Treatment Plant all sewage generated from said retail development.

3. Upland agrees to pay Montclair, bi-monthly, all sewer service charges required by Montclair for said retail development. Said charges shall be the sum of $30.78 per month, or as such additional charges or sums as may be established by the City Council of the City of Montclair for sewer services to retail developments within the City of Montclair.

4. Upland agrees to enforce Montclair's quality standards for sewage discharged into the sewer system from the said retail development.

5. Upland agrees that in the event at some future date the portion of the Montclair sewer collection system which carries the flow from said retail development must be expanded in capacity due to overloading, Upland shall pay its proportionate share of the increased capacity, determined by dividing the flow from said retail development by the total additional flow capacity required.

6. Upland agrees that should a regional interceptor or other sewer collection or disposal system be constructed to serve the Upland area located generally north of the City limits of the City of Montclair west of Benson Avenue, said retail development shall then be serviced by said interceptor or other sewage collection and disposal systems, and at such time this agreement will be null and void. Upland further agrees that in the event the formal arrangements for ultimate connection to a regional interceptor or other sewage collection and disposal system are not concluded within 24 months of the date of this agreement, Upland will pay

to Montclair a sewer connection annexation fee of $370.00 per acre, (1.57 acres x $370.00 = $580.90).

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

CITY OF MONTCLAIR

MAYOR

ATTEST:

CITY CLERK

CITY OF UPLAND

MAYOR

ATTEST:

CITY CLERK

AGREEMENT

THIS AGREEMENT is made this 4th day of September , 1984, by the CITY OF MONTCLAIR, an incorporated city located in San Bernardino County, California, herein called "Montclair", and the CITY OF UPLAND, an incorporated city located in San Bernardino County, California, herein called "Upland."

WITNESSETH:

WHEREAS, Upland desires to dispose of a portion of its sewage generally originating in an area located between Central Avenue and Benson Avenue on the south side of Arrow Route north of the Southern Pacific Railway Company track through trunk sewers owned and operated by Montclair; and,

WHEREAS, Montclair currently has excess capacity in its sewer collection system; and,

WHEREAS, Upland has funds reserved in its sewer extension fund to provide additional sewer facilities when needed to provide additional trunk sewer capacity; and,

WHEREAS, Montclair and Upland are each contracting parties to the Regional Sewerage Program operated by Chino Basin Municipal Water District, and each utilize Regional Plant #1 for treatment of sewage collected within the two cities;

NOW, THEREFORE, Montclair and Upland do hereby covenant and agree as follows:

1. Upland agrees to construct at no cost to Montclair, all facilities necessary to convey sewage from approximately 7 acres of land being developed by Northwoods Construction Company, Inc., said development to include approximately 149 apartment units, (2 BR, 1½ bath, or less), situated on Lot 68 and a portion of Lot 67, College Heights Tract, to sewer facilities owned and operated by the City of Montclair in the vicinity of Richton Avenue and Central Avenue.

2. Montclair agrees to accept and deliver to the Regional Waste Water Treatment Plant all sewage generated from said 149 apartment unit project.

3. Upland agrees to pay Montclair, bi-monthly, all sewer service charges required by Montclair for said 149 apartment units. Said charges shall be the sum of $5.13 per apartment unit per month, or as such additional charges or sums as may be established by the City Council of the City of Montclair for sewer services to apartment units within the City of Montclair.

4. Upland agrees to enforce Montclair's quality standards for sewage discharged into the sewer system from the said 149 apartment units.

5. Upland agrees that in the event at some future date the portion of the Montclair sewer collection system which carries the flow from said 149 apartment units must be expanded in capacity due to overloading, Upland shall pay its proportionate share of the increased capacity, determined by dividing the flow from said 149 apartment units by the total additonal flow capacity required.

6. Upland agrees that should a regional interceptor or other sewer collection or disposal system be constructed to serve the Upland area located generally north of the city limits of the City of Montclair west of Benson Avenue, said 149 apartment units shall then be serviced by said interceptor or other sewage collection and disposal systems, and at such time this agreement will be null and void. Upland further agrees that in the event the formal arrangements for ultimate connection to a regional interceptor or other sewage collection and disposal system are not concluded within 24 months of the date of this agreement, Upland will pay to Montclair a sewer connection annexation fee of $330.00 per acre, (7.19 acres x $330.00 = $2,339.70).

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

CITY OF MONTCLAIR

Harold M. Hayes

MAYOR

ATTEST:

Deputy City Clerk

CITY OF UPLAND

MAYOR

ATTEST:

CITY CLERK

INTERJURISDICTIONAL PRETREATMENT AGREEMENT

between

THE CITY OF MONTCLAIR AND THE CITY OF UPLAND

GOVERNING THE COLLECTION, CONVEYANCE

AND DISPOSAL OF WASTEWATER

AGREEMENT

This Agreement is made and entered into this 11th day of April, 1989, by and between the CITY OF MONTCLAIR, as the publicly owned treatment works (POTW), hereinafter referred to as "Montclair" and the CITY OF UPLAND, as the contributing jurisdiction, hereinafter referred to as "Upland," both parties being municipal corporations located in the County of San Bernardino.

RECITALS

WHEREAS, the City of Montclair operates and owns a sewerage and wastewater collection and conveyance system; and

WHEREAS, the City of Upland currently utilizes this wastewater collection and conveyance system for the disposal of a portion of its sewage generally originating in the area bounded by Arrow Highway on the north, Benson Avenue on the east, Ninth Street on the south, and Central Avenue to the west, pursuant to a Sewer Agreement between the City of Montclair and the City of Upland dated October 6, 1986; and

WHEREAS, the City of Montclair must develop and implement an industrial pretreatment program pursuant to the conditions of the

Regional Sewage Service Contract with the Chino Basin Municipal Water District and existing federal and state water quality control regulations; and

WHEREAS, the City of Montclair and the City of Upland wish to amend and update the current interjurisdictional sewer agreement dated October 6, 1986, in order to comply with the Federal Clean Water Act regulations; and

WHEREAS, the City of Montclair has passed and adopted Ordinance No. 89-461, dated January 17, 1989, regulating the discharges of wastes into the wastewater system of the City of Montclair; and

WHEREAS, the City of Upland desires to continue to utilize the wastewater collection and conveyance system of the City of Montclair and recognizes its industrial waste control obligations under 40 CFR Part 403.

In consideration of the promises and mutual covenants herein contained, the parties hereto agree as follows:

1. CONDITIONS FOR DISCHARGE

   A. Upland shall certify and document the nondomestic users, as defined by Montclair, connected to Montclair's sewerage system. This certification and documentation shall be based upon a nondomestic waste survey performed by Upland according to procedures established from time to time by Montclair.

   B. Upland shall designate an appropriate official or employee to review, on a quarterly basis, all pertinent records (e.g., connection permits, business licenses, water consumption records) to determine whether an industrial user will be locating within the area serviced by the Montclair sewer system.

If a prospective industrial user is identified, Upland shall report this fact to Montclair. Upland shall provide access to these records for independent verification by Montclair.

C. Montclair may permit wastewater originating from Upland, within the boundaries defined in the October 6, 1968, agreement, to be discharged by way of the sewerage system owned by Montclair provided that all the provisions of the Agreement are upheld by the parties hereto.

D. All sewer connections to be made to the Montclair sewerage facilities shall be approved in writing by Montclair's City Engineer prior to connection.

E. Upland must submit to Montclair a written request for each interagency connection point which shall include the following: a plot map of the area to be served including the distance to the proposed connection point; the current zoning and acreage of each of the zoned regions of the area; the percentage of existing development in each zoned region; the current average and peak flow and wastewater quality from the total proposed area; and the projected maximum peak and average flows from the total area at build out.

F. Montclair shall have the right to deny a request for connection to Montclair's sewer system for any reason.

G. Upland or other parties desiring to connect to Montclair's sewerage system must construct, at no expense to Montclair, all sewer facilities necessary to convey the sewage from the Upland area to Montclair's sewerage system. All construction plans must be approved by Upland's city engineer, and in the case

where the improvements will be constructed within Montclair's city limits, the Montclair city engineer shall review and approve the plans as well. Final construction will be inspected and approved by the City of Upland (where the improvements are constructed within Upland's city limits) and the City of Montclair (where the improvements are located within Montclair's city limits). In any event, all improvements constructed to provide for wastewater monitoring (e.g., monitoring manhole) shall be inspected and accepted by both entities prior to discharge of wastewater into Montclair's community sewer system.

H. All nondomestic wastewater dischargers wishing to discharge to the community sewer system shall conform to, and shall be bound by, all of the requirements contained in the Montclair Municipal Code relating to restrictions on the use of the community sewer system and including payment of all applicable fees. Said wastewater dischargers shall further be bound by all provisions of the Montclair Municipal Code, the California State and Federal laws, and all rules and regulations enacted in pursuance thereto governing said wastewater dischargers. No person shall discharge nondomestic wastewater into the Montclair community sewer system unless such person holds a valid wastewater discharge permit issued by the city engineer of Montclair.

I. Upland shall allow any authorized officer or employee of Montclair to enter and inspect at any reasonable time any part of the sewer system in the area bounded by Arrow Highway on the

north, Benson Avenue on the east, Ninth Street on the south, and Central Avenue to the west. The right of entry and inspection shall extend to public streets, easements, and property within which the above mentioned system is located. Additionally, Montclair shall be permitted, as appropriate, to enter onto private property to inspect nondomestic waste dischargers.

J. Upland shall, at their own expense, submit to Montclair, no later than 45 days from the date of this agreement, a 24 hour flow weighted composite analysis on the effluent entering the Montclair system at the connection point on Ricton Avenue west of Central Avenue for all parameters and constituents listed in the Chino Basin Municipal Water District Regional Contract, Exhibit H, and shall agree to submit to Montclair a similar analysis every six (6) months in May and November of each year.

K. The water laboratory used by Upland for the monitoring and analysis work will be preapproved by Montclair on an annual basis, and a copy of all intercity connection point monitorings shall be sent to Montclair directly from the laboratory, and the laboratory must comply with Environmental Protection Agency (EPA) standards for chemical analysis.

L. If the connection point is to be eliminated, Upland shall be required to abandon the intercity connectio to current Montclair standards, on the Upland side of the city boundary lines at no expense to Montclair.

M. In accordance with the October 6, 1986, Agreement, Upland shall collect all sewer fees and transfer the corresponding user fees

at the rates established by Montclair, the remittance to be forwarded bimonthly.

N. Upland shall notify Montclair of any growth in the sewered area and agree to let Montclair enforce their Pretreatment Program in the sewer area tributary to the Montclair system, 40 CFR 403.8(f)(2)(i).

O. After Montclair has given its approval for any industrial user within Upland's jurisdiction to connect, Upland shall not authorize such industrial user to commence discharge until provision has been made between Upland and Montclair to oversee the industrial user's compliance with all applicable federal, state, and local pretreatment requirements.

P. Montclair agrees to accept and deliver to the Regional Wastewater Treatment Plant, or to an approved regional sewage system collection point, all sewage discharged through this interagency connection point provided all predetermined flow and water quality criteria are being met.

Q. Montclair shall have the right to stop the sewer flow or eliminate the intercity connection point if any of the above criteria are violated, but Montclair must notify Upland in writing of the intent to abolish the connection point and establish a date and time for terminating the connection.

R. Upland shall be responsible for submitting an executed copy of the interagency agreement to Montclair and Chino Basin Municipal Water District.

2. INDEMNIFICATION

Montclair agrees to indemnify Upland from any negligent act of

commission or omission committed by Montclair in the performance of its covenants as contained in this Agreement, and in pursuance to the placement and use of the wastewater facilities in Upland, Upland, likewise, agrees to indemnify Montclair for any negligent acts of commission or omission committed by Upland in the performance of its covenants as set forth in this Agreement, and in pursuance to the placement and use of the wastewater facilities in Montclair. Thus indemnification for each party shall extend to any reasonable attorney fees expended by one of the parties in defense of said acts committed by the other.

Upland agrees to cooperate in the enforcement of all federal, state and city laws and rules and regulations adopted and applicable to the discharge of wastewater into the City of Montclair's sewer system. Cooperation shall include and shall not be limited to discontinuing the service of any discharger who violates the above mentioned laws and/or rules and regulations applicable to his discharge.

3. GENERAL PROVISIONS

Nothing contained in this Agreement shall vest in Upland any ownership or right, title, or interest in or to any of Montclair's facilities other than the contractual right for Upland to discharge

wastewater to Montclair's facilities. This Agreement supplements the October 6, 1986, Agreement and shall be binding upon the heirs, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, said parties have caused this instrument to be officially executed and attested by their duly constituted officers.

CITY OF MONTCLAIR

Attest: Margaret A. Crawford
City Clerk

Mayor

CITY OF UPLAND

Attest:
City Clerk

Robert R. Nolan
Mayor

APPROVED BY: Attorney
City Attorney

Date: 4/21/89

agrmt. 03-101

COOPERATIVE AGREEMENT

BETWEEN THE CITIES OF

ONTARIO, UPLAND, AND MONTCLAIR

FOR THE CONSTRUCTION OF

THE BENSON AVENUE SEWER DIVERSION PROJECT

COPY

This agreement ("Agreement") is made and entered into this 8th day of September, 2003, by and between the CITY OF ONTARIO, the CITY OF UPLAND, and the CITY OF MONTCLAIR, all municipal corporations, hereinafter designated as "Ontario," "Upland," and "Montclair," respectively, sometimes individually referred to as "Party" and collectively designated as "Parties," for the construction of a sewer diversion line, hereinafter referred to as "Project."

RECITALS

WHEREAS, Upland currently owns and operates an 8" sewer line in Benson Avenue between 7th Street in Upland and 6th Street in Ontario; and

WHEREAS, the Upland sewer line discharges to an Ontario sewer manhole located at the intersection of Benson Avenue and 6th Street in the City of Ontario; and

WHEREAS, the Ontario sewer line in Benson Avenue has a shortage of capacity at various points downstream of the Upland connection to the system; and

WHEREAS, Montclair has a sewer line located in Deodar Street north of the intersection of 6th Street (also known as San Jose Street in Montclair) and Benson Avenue; and

WHEREAS, the Montclair-owned sewer in Deodar Street and all sewer lines downstream of this line have sufficient capacity to convey the Upland sewage flows presently discharging to Ontario; and

WHEREAS, Parties desire to cooperate and jointly participate in a project to divert the Upland sewer line in Benson Avenue to the Deodar Street sewer line (hereinafter referred to as "Project"); and

WHEREAS, Parties desire to set forth responsibilities and obligations of each as pertains to such participation and to the design, construction, construction management and funding of the Project.

NOW, THEREFORE, IT IS AGREED by and between Parties as follows:

1.0 CITY OF ONTARIO AGREES TO:

1.1 Provide design for the Project ("Project Design") approved by all Parties. (The Parties hereto acknowledge that the engineering firm of Associated Engineers is preparing the Project design.)

1.2 Provide required funding ("Funding") for the construction of the Project in an amount estimated at less than sixty thousand dollars ($60,000.00). Such Funding shall include, but not be limited to, Project Design costs, all necessary permits, environmental clearances, and construction management costs. Ontario reserves the right to terminate the Agreement in the event that the estimated costs of Funding exceed sixty thousand dollars ($60,000).

1.3 Award and administer Project pursuant to all legal requirements.

1.4 Require its contractors to maintain a program of Workers' Compensation Insurance or a state-approved Self-Insurance Program in an amount and form to meet all applicable requirements of the Labor Code of the State of California, including Employer's Liability with $250,000 limits, covering all persons providing services on behalf of the Contractor and all risks to such persons under this Agreement and Comprehensive and Automobile Liability Insurance to include contractual coverage and automobile liability coverage for owned, hired and non-owned vehicles. The policy shall provide protection of at least one million dollars ($1,000,000) for bodily injury or death to any one person, and three million dollars ($3,000,000) for any one accident or occurrence, and at least one million dollars ($1,000,000) for property damage. The policies shall name Ontario, Upland and Montclair as additional insureds and duplicate policies reflecting the same shall be delivered to Ontario, Upland and Montclair prior to the commencement of construction of the Project within each city.

1.5 Provide proper inspection as necessary of all items of work performed under construction contract and maintain adequate records of inspection and materials testing for review by Upland and Montclair.

1.6 Issue a construction permit for work within Ontario's right-of-way.

1.7 Receive and promptly respond to all Upland and/or Montclair requests for warranty repair during the warranty period and ensure all repair is completed in timely and proper manner.

1.8 Upon completion of Project, rescind cooperative agreements with the City of Upland dated February 15, 1972, and July 18, 1989. Both agreements provide for the connection of Upland's Benson Avenue sewer line to the City of Ontario sewer system.

2.0 CITY OF UPLAND AGREES TO:

2.1 Issue no-fee construction permits for work associated with Project done within its jurisdictional boundaries and to its facilities.

2.2 Provide inspection as necessary for the Project segment within Upland in conjunction with Ontario. Within Upland the requirements or directions from Upland's inspectors shall supersede those of any other inspector.

2.3 After completion of the Project, own, operate, and maintain the sewer diversion line up to the point of connection to the Montclair sewer line in Deodar Street in a manner consistent with its routine operation and maintenance of its other sewer lines.

2.4 Allow the connection of a sewer lateral serving the development located at the southwest corner of Moreno Street and Benson Avenue (Assessor's Parcel No. 1008-211-04) to the Upland-owned sewer line in Benson Avenue.

2.5 Report sewer usage of the Benson Avenue sewer line in accordance with Inland Empire Utilities Agency's ("IEUA") reporting requirements and pay treatment fees as routinely required by IEUA.

2.6 Submit to Montclair on a bimonthly basis a statement of the sewer usage of the Benson Avenue sewer line measured in equivalent dwelling units ("EDU"), and upon receipt of an invoice from Montclair, pay to Montclair the difference between the IEUA EDU rate and the Montclair EDU rate. Payment shall be made with within thirty (30) days of receipt of invoice. It is understood that the rates of both agencies are subject to change and that changes in rates by either agency will not void this Agreement or require that this Agreement be amended.

2.7 Not allow any further connections to the Benson Avenue sewer line or its tributaries without approval by Montclair, which approval shall not be unreasonably withheld.

2.8 Upon completion of Project, rescind cooperative agreements with the City of Ontario dated February 15, 1972, and July 18, 1989.

Both agreements provide for the connection of Upland's Benson Avenue sewer line to the City of Ontario sewer system.

3.0 CITY OF MONTCLAIR AGREES TO:

3.1 Issue no-fee construction permits for Project work within its jurisdictional boundaries and to its facilities.

3.2 Provide inspection as necessary for the Project segment within Montclair in conjunction with Ontario. Within Montclair the requirements or directions from Montclair's inspectors shall supersede those of any other inspector.

3.3 After completion of Project, continue to own, operate, and maintain the Deodar sewer line from the point of connection of the sewer diversion line in Deodar Street downstream.

3.4 Accept the sewer flows from the Upland-owned Benson Avenue sewer line and sewer diversion line.

3.5 On a bimonthly basis, after receipt of sewer usage statement from Upland, submit to Upland an invoice in accordance with 2.6 above.

4.0 IT IS MUTUALLY AGREED:

4.1 Ontario agrees to indemnify and hold harmless Upland and Montclair, its officers, employees, agents, and volunteers from any and all liabilities for injury to persons and damage to property arising out of any act or omission of Ontario, its officers, employees, agents or volunteers in connection with Ontario's performance of its obligation under this Agreement.

4.2 Upland agrees to indemnify and hold harmless Ontario and Montclair, its officers, employees, agents, and volunteers from any and all liabilities for injury to persons and damage to property arising out of any act or omission of Upland, its officers, employees, agents or volunteers in connection with Upland's performance of its obligation under this Agreement.

4.3 Montclair agrees to indemnify and hold harmless Ontario and Upland, its officers, employees, agents, and volunteers from any and all liabilities for injury to persons and damage to property arising out of any act or omission of Montclair, its officers, employees, agents or volunteers in connection with Montclair's performance of its obligation under this Agreement.

4.4 In the event any Party to this Agreement is found to be comparatively at fault for any claim, action, loss or damage which results from their respective obligations under the Agreement, each Party shall indemnify the others to the extent of its comparative fault.

5.0 <u>INDEMNIFICATION BY ONTARIO'S CONTRACTOR (CONTRACTOR):</u>

CONTRACTOR shall defend, indemnify, and hold harmless ONTARIO, UPLAND, AND MONTCLAIR, their elected and appointed officials, officers, consultants, agents, and employees, from all liability from loss, damage, or injury to persons or property, including the payment by CONTRACTOR of any and all legal costs and attorney's fees, in any

manner arising out of the acts and/or omissions of CONTRACTOR pursuant to this Agreement, including, but not limited to, all consequential damages, to the maximum extent permitted by law. The Parties hereto agree that CONTRACTOR and its employees, officers, and agents are independent contractors under this Agreement and shall not be construed for any purpose to be employees of ONTARIO, UPLAND, and/or MONTCLAIR.

6.0 ASSIGNMENT:

No assignment of this Agreement or of any part or obligation of performance hereunder shall be made, either in whole or in part, without the prior written consent of all Parties to this Agreement.

7.0 GOVERNING LAW:

This Agreement shall be governed by and construed in accordance with the laws of the state of California.

8.0 ATTORNEYS' FEES:

In the event any legal proceeding is instituted to enforce any term of provision of the Agreement, the prevailing party in said legal proceeding shall be entitled to recover attorneys' fees and costs from the opposing party in an amount determined by the court to be reasonable.

9.0 ENTIRE AGREEMENT:

Except as expressly provided for in Sections 1.8 and 2.8, this Agreement supersedes any and all other agreements, either oral or in writing, between the Parties with respect to the subject matter herein. Each Party to this Agreement acknowledges that no representation by any Party which is not embodied herein nor any other agreement, statement, or promise not contained in this Agreement shall be valid and binding. Any modification of this Agreement shall be effective only if it is in writing signed by all Parties.

THIS AGREEMENT shall inure to the benefit of and be binding upon the successors and assigns of all Parties.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officials thereunto duly authorized.

CITY OF ONTARIO

By: _____
City Manager

Attest:

By: _____
City Clerk

Approved as to form:

By: _____
City Attorney

CITY OF UPLAND

By: _____
Mayor

Attest:

By: _____
City Clerk

Approved as to form:

By: _____
City Attorney

CITY OF MONTCLAIR

By: _____
Mayor

Attest:

By: _____
City Clerk

Approved as to form:

By: _____
City Attorney

SECTION 3

- Sanitary Sewer Mainline Routine Maintenance Program
- Sanitary Sewer Mainline Roach Maintenance Program
- Sewer Master Plan - Existing Sewer Facilities
- Sewer Hotspot Maintenance Program
- Sewer Atlas Mapbook
- Inventory of Sewer Parts
- Condition Assessment Criteria for Pipelines and Manholes

SANITARY SEWER MAINTENANCE

Sanitary Sewer Mainline Routine Maintenance Program

Routine maintenance of the sewer system is completed on a daily basis depending on time and staffing levels. There are approximately 87 miles of sewer line. The equipment used solely for hydro jetting the sewer mains are Unit 313 and Unit 315. Below are dates and sections where sewer line jetting was completed. The Sanitary Sewer Mainline Routine Maintenance Program is ongoing.

2023

Section 1 - 01/23/23 to 03/7/23

Section 2 - 03/08/23 to 04/25/23

Section 3 - 05/08/23 to 08/23/23

Section 4 - 08/24/23 to 10/26/23

2024

Section 1 - 01/10/24 to 02/26/24

Section 2 - 03/14/24 to 05/13/24

Section 3 - 06/10/24 to Present

Sanitary Sewer Mainline Roach Maintenance Program

As of 2023, Sewer crew began spraying for roaches using a chemical called "CYPER WSP INSECTICIDE" EPA Registration # 53883-340. This insecticide comes in water-soluble packets and is applied directly to the manhole ring and cover, cone, walls and porch.

2023

A total of 10 applications were completed on the dates listed below:

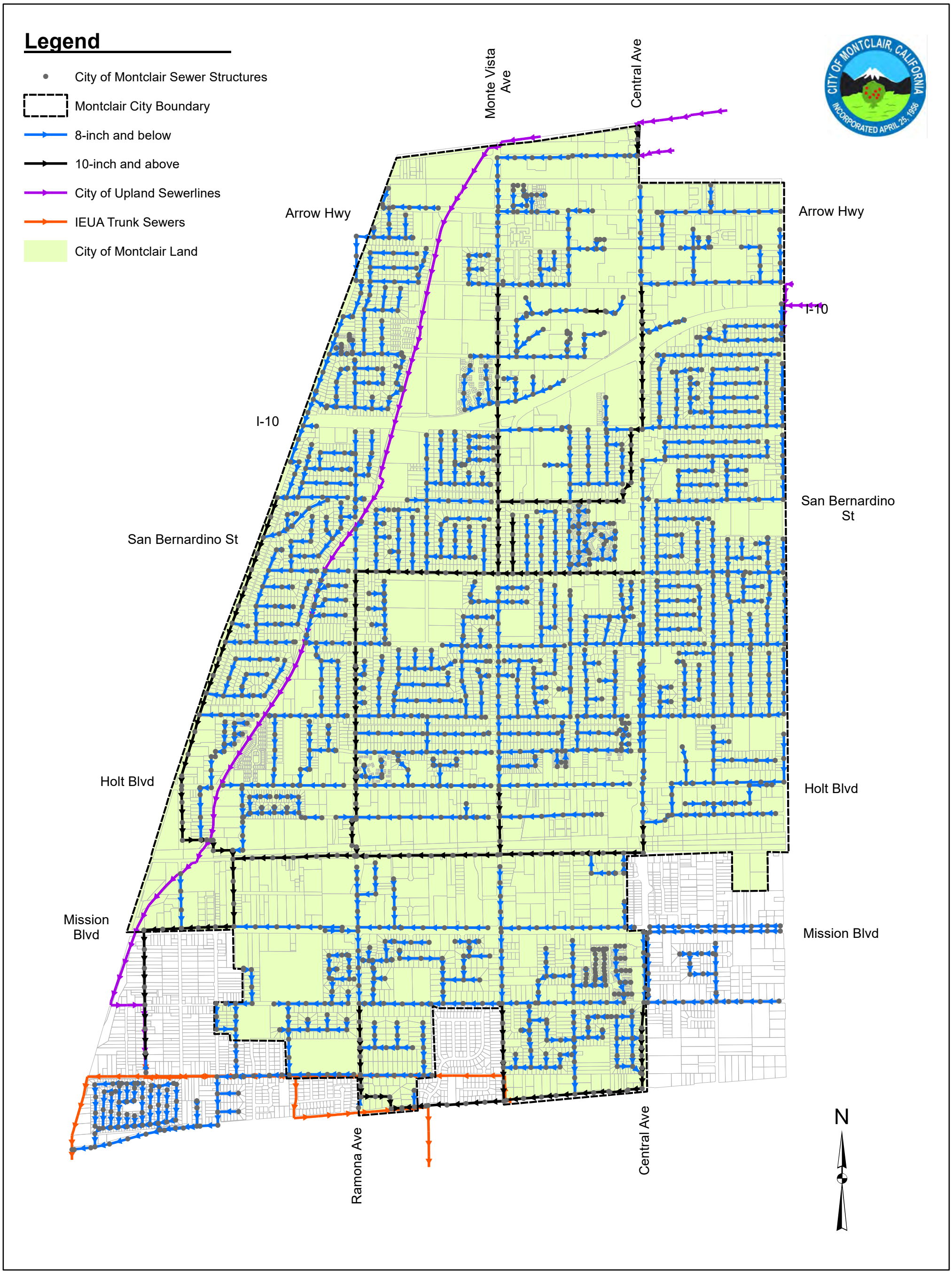
- May 18, 2023
- May 25, 2023
- July 18, 2023
- August 22, 2023

2024

One (1) application has been completed in 2024 on the date listed below:

- June 6, 2024

Sewer Master Plan - Existing Sewer Facilities



DEPARTMENT OF PUBLIC WORKS
SEWER DIVISION

SEWER HOTSPOT MAINTENANCE PROGRAM

LOCATION	SEC#	MH#	COMP BY.	COMMENTS
1. 5300 Arrow Hwy	One	A-3		
2 5362 Palo Verde	One	A-45		
3. 9500 Central	One	A-44		
4. 5626 Moreno	One	A-20		
5. 5440 Moreno	One	A-23		
6. 5510 Kingsley	One	D-22		
7. 5358 Kingsley	One	D-5		
8. 10400 Central	One	L-20		
9. 10385 Central	One	D-43		
10. 5640 Holt Blvd	One	D-72		
11. 5462 Holt Blvd	One	D-70		
12. Montclair Plaza East	One	A-38		
13. Montclair Plaza East	One	A-37		
14. Montclair Plaza East	One	A-36		
15. Montclair Plaza East	One	A-35		
16. Montclair Plaza North	Two	E-44		
17. Montclair Plaza North	Two	E-43		
18. Montclair Plaza North	Two	E-42		
19. Montclair Plaza North	Two	E-37		
20. Montclair Plaza North	Two	E-36		
21. Montclair Plaza South	Two	E-61		
22. Montclair Plaza South	Two	E-60		
23. Montclair Plaza South	Two	E-59		
24. Montclair Plaza South	Two	E-58		
25. Montclair Plaza South	Two	E-57-5		
26. Montclair Plaza South	Two	E-57		
27. Montclair Plaza South	Two	E-56		
28. Montclair Plaza South	Two	E-55		
29. Montclair Plaza South	Two	E-54		
30. Montclair Plaza South	Two	E-53		
31. Montclair Plaza South	Two	E-52		

32. Montclair Plaza South	Two	E-49		
33. Montclair Plaza South	Two	E-51		
34. Montclair Plaza South	Two	E-50		
35. Montclair Plaza South	Two	E-68		
36. Montclair Plaza South	Two	E-67		
37. Montclair Plaza South	Two	E-66-5		
38. Montclair Plaza South	Two	E-66		
39. Montclair Plaza South	Two	E-65		
40. Montclair Plaza South	Two	E-84		
41. Montclair Plaza South	Two	E-83		
42. Montclair Plaza South	Two	E-82		
43. Montclair Plaza South	Two	E-81		
44. Montclair Plaza South	Two	E-64-5		
45. Montclair Plaza South	Two	E-64		
46. Montclair Plaza South	Two	E-63		
47. Montclair Plaza South	Two	E-62		
48. Montclair Plaza South	Two	E-48		
49. Montclair Plaza South	Two	E-80-5		
50. Montclair Plaza South	Two	E-80		
51. Montclair Plaza South	Two	E-78		
52. Montclair Plaza South	Two	E-79		
53. Montclair Plaza South	Two	E-75		
54. Montclair Plaza South	Two	E-74		
55. Montclair Plaza South	Two	E-73		
56. Montclair Plaza South	Two	E-72		
57. Montclair Plaza South	Two	E-47		
58. Montclair Plaza South	Two	E-71		
59. 9643 Fremont	Two	G-14		
60. 10352 Marion	Two	L-13		
61. 5119 Bandera	Two	L-12		
62. 5088 Bandera	Three	L-9		
63. 4500 San Jose	Three	M-37		
64. 4400 Bonnie Brae	Three	M-54		
65. 9400 Mills	Three	M-52		
66. 4303 San Bernardino	Three	N-8		
67. 4350 San Bernardino	Three	N-9		
68. 4702 Canoga	Three	J-10		
69. 4697 Bandera	Three	J-9		
70. 10295 Mills	Three	0-16		
71. 10300 Pradera	Three	0-35		

72. 4370 Holt	Three	H-39		
73. 4250 Holt	Three	H-33		
74. 10642 Oak Glen	Three	0-28		
75. 4311 Howard	Three	R-42		
76. 4244 Grand	Three	R-17		
77. 4240 Grand		R-19-5		
78. 4400 San Bernardino		N-68		
79. 10300 Monte Vista		L-5		
80. MP North	Two	E-43		
81. MP North	Two	E42-5		
82. MP North	Two	E37-5		
83. MP South	Two	E59-5		
84. MP South	Two	E54-5		
85. MP South	Two	E53-5		
86. MP South	Two	E70		
87. 4412 Fauna	Two	H-20		
88. 9531 Tudor	Two	F8		
89. 9585 Tudor	Two	F9		
90.				
91.				
92.				
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99.				
100.				

City of Montclair

MONTCLAIR

Sewer Atlas Mapbook

Scale of Maps: 1" = 200'

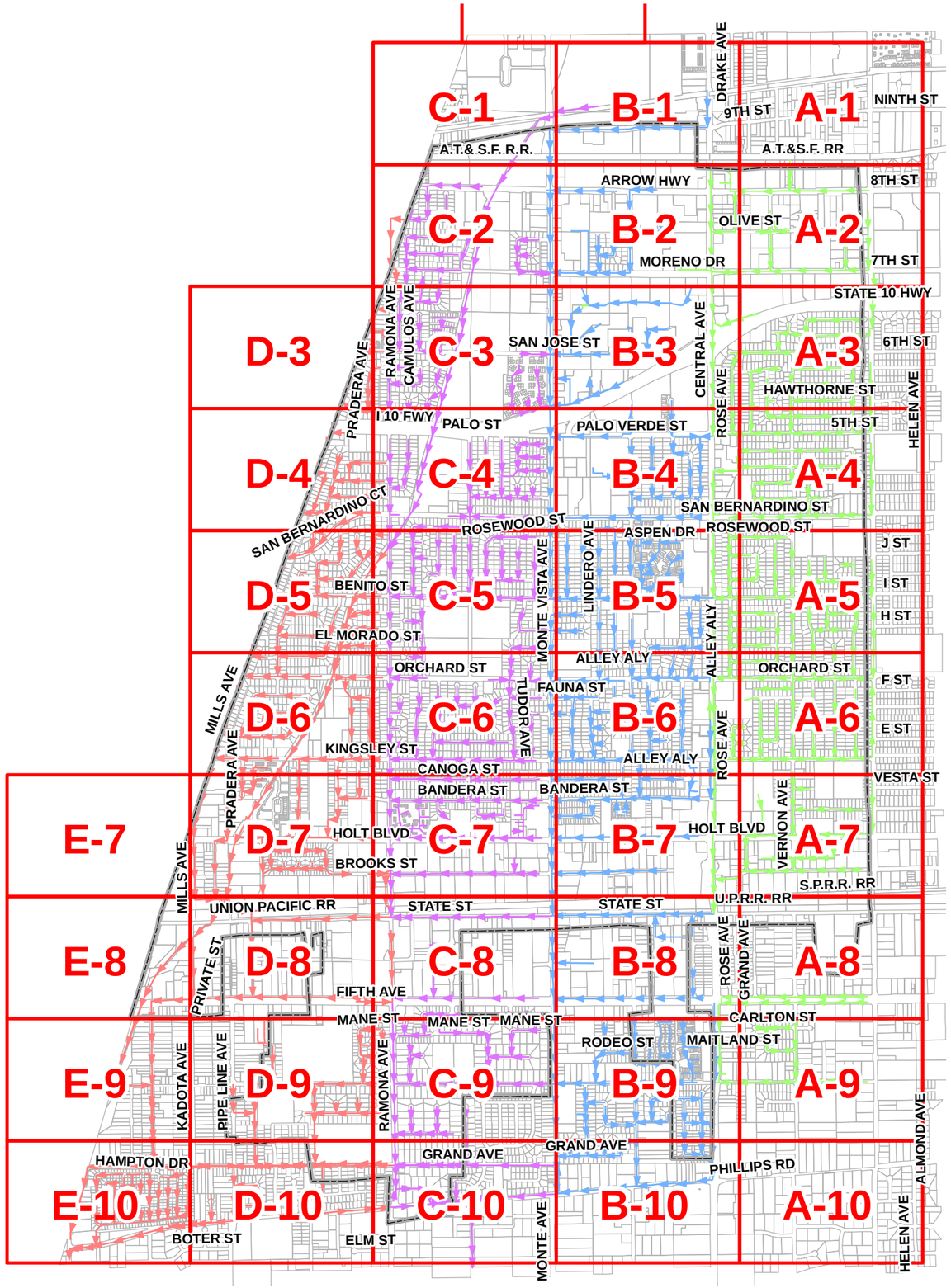
Prepared by: D&W Consulting

Blank Page

Legend

- Manhole
- Junction Structure
- Cap
- Plug
- Grade Break
- Clean Out
- Collar
- Other

- Sewer Main Line - Private
- Sewer Main Line - Zone 1
- Sewer Main Line - Zone 2
- Sewer Main Line - Zone 3
- Sewer Main Line - Zone 4
- Sewer Lateral Line
- Sewer Easement
- Grid
- Parcel
- City Boundary



Information for this map was compiled and created from existing data sources. Features on this map were digitized from aerial photographs and existing digital basemap. Care and accurate attention to detail was exercised in the preparation of this map, however, no guarantee is given as to the complete representation of map features, however errors or omissions may exist.

MONTCLAIR

City of Montclair
Sewer Atlas Index

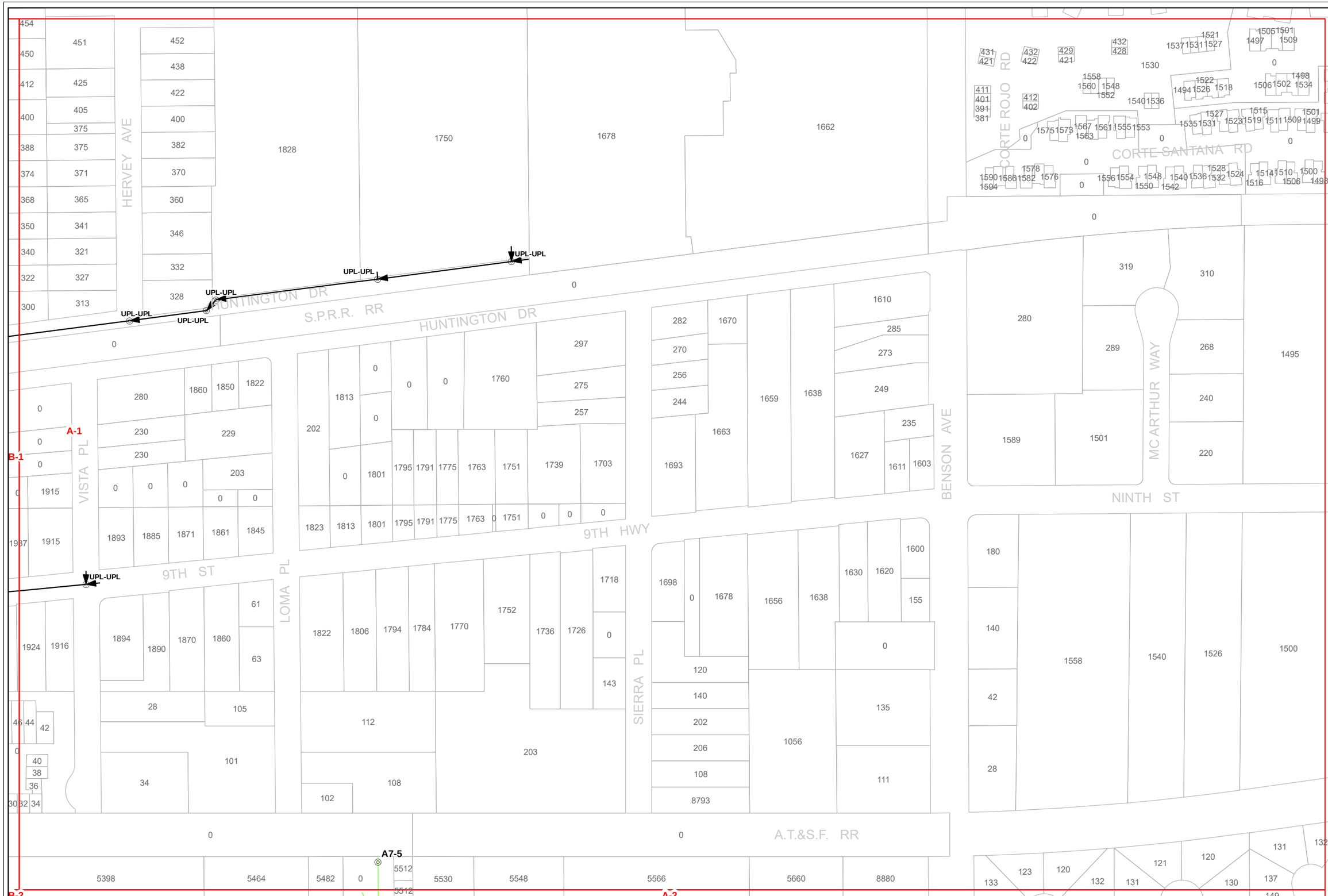
Scale of Maps: 1" = 200'

Data as of:
February 2010

Prepared by:
D&W Consulting

SEWER LINE													
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
65	NOMHID	NOMHID	7/26/2007	8	1	VCP	0.00		0.00	PM 18494_SwPP01.TIF	1	A-1	VCP	11.60
5281	NOMHID	NOMHID	9/12/1984	8	1	VCP	-9.00	-9	-9.00	OTHERS_005.tif	UPL	A-1	VCP	34.82
5284	NOMHID	NOMHID	9/12/1984	8	1	VCP	0.01	-9	173.95	OTHERS_005.tif	UPL	A-1	VCP	177.78
5285	NOMHID	NOMHID	9/12/1984	8	1	VCP	0.03	-9	37.11	OTHERS_005.tif	UPL	A-1	VCP	33.57
5286	NOMHID	NOMHID	9/12/1984	8	1	VCP	-9.00	-9	-9.00	OTHERS_005.tif	UPL	A-1	VCP	17.38
5287	NOMHID	NOMHID	9/12/1984	8	1	VCP	0.01	-9	308.23	OTHERS_005.tif	UPL	A-1	VCP	310.11
5288	NOMHID	NOMHID	9/12/1984	-9	1	UNK	0.01	-9	-9.00	OTHERS_005.tif	UPL	A-1	UNK	39.66
5291	NOMHID	NOMHID	9/12/1984	8	1	VCP	0.01	-9	373.79	OTHERS_004.tif	UPL	A-1	VCP	378.75
6267	NOMHID	NOMHID	9/12/1984	8	1	VCP	0.01	-9	373.45	OTHERS_005.tif	UPL	A-1	VCP	374.28
11083	NOMHID	NOMHID		6	1	VCP	0.01		30.00	sheet_file SHEET2 (1).pdf	UPL	A-1	VCP	31.63
11084	NOMHID	NOMHID		6	1	VCP	0.02		0.00	sheet_file SHEET2 (1).pdf	UPL	A-1	VCP	31.48
11071	NOMHID	NOMHID		6	1	VCP	0.01		207.99	sheet_file SHEET2 (1).pdf	UPL	A-1	VCP	211.84

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
18	4		sheet_file SHEET2 (1).pdf	2	A-1
957	73	9/12/1984	OTHERS_004.tif	2	A-1
962	78	9/12/1984	OTHERS_005.tif	2	A-1
963	79	9/12/1984	OTHERS_005.tif	2	A-1
965	81	9/12/1984	OTHERS_005.tif	2	A-1
966	82	9/12/1984	OTHERS_005.tif	2	A-1
119	A7-5	7/26/2007	PM 18494_SwPP01.TIF	1	A-1



City of Montclair
Sewer Atlas Map

Scale: 1" = 200'

Tile: A-1

Data as of: February 2010

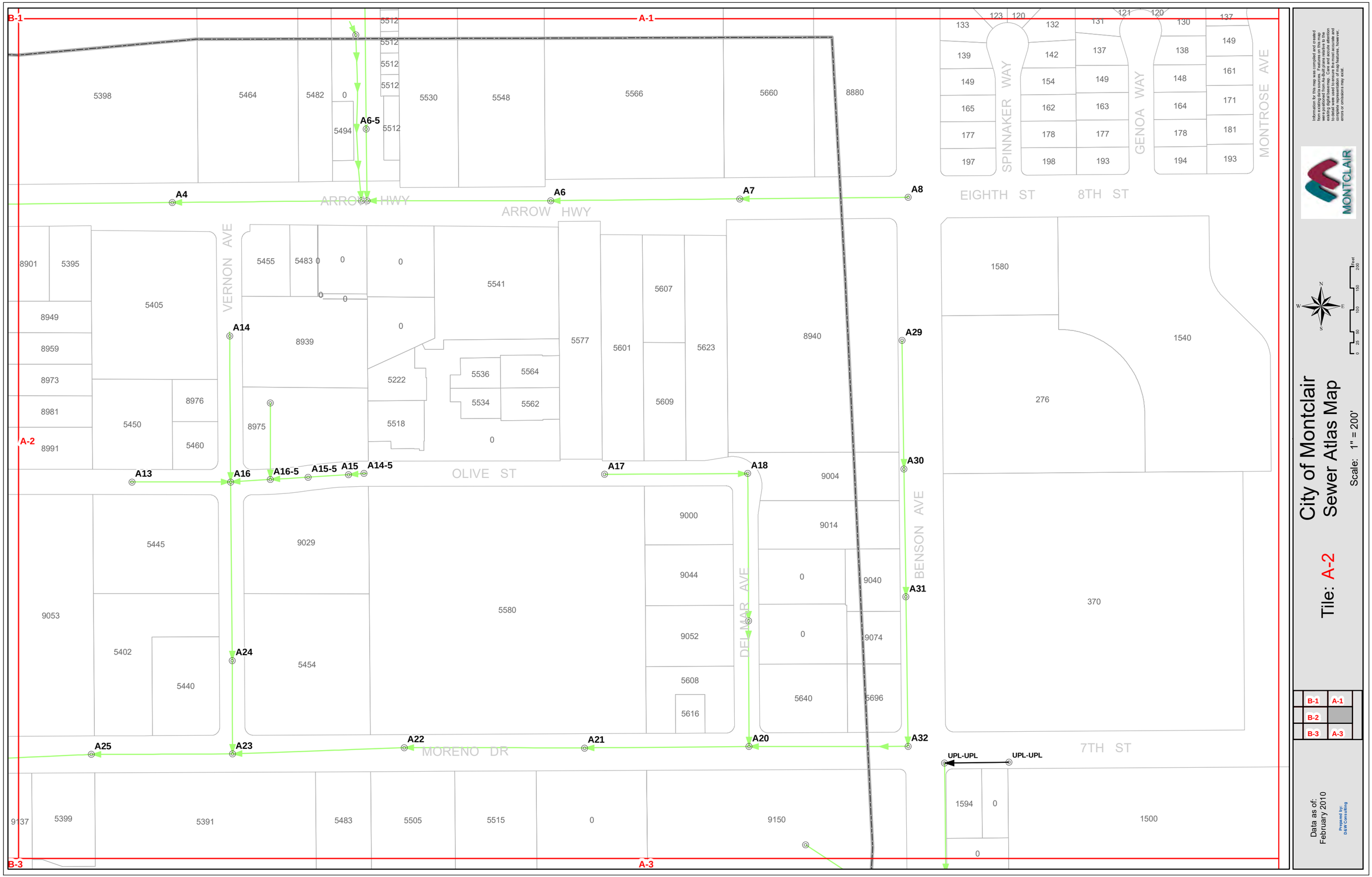
Prepared by: D&W Consulting

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9664	A13	A16	10/23/1968	8	1	VCP	0.00	-9	230.00	009_2309.tif	1	A-2	VCP	234.89
9711	A14	A16	7/14/1965	8	1	VCP	0.03	-9	359.55	018_2218.tif	1	A-2	VCP	347.98
694	A15	A15		8	1	VCP	-9.00	-9	-9.00	044_2445.tif	1	A-2	VCP	7.31
75	A16	A15	12/16/1989	8	1	VCP	0.00	-9	-9.00	044_2445.tif	1	A-2	VCP	94.69
76	A16	A15	12/16/1989	8	1	VCP	0.00	-9	-9.00	044_2445.tif	1	A-2	VCP	36.66
4821	A16	A15	12/16/1989	8	1	VCP	0.00	-9	-9.00	044_2445.tif	1	A-2	VCP	186.82
9712	A16	A24	7/14/1965	8	1	VCP	0.03	-9	417.62	018_2218.tif	1	A-2	VCP	424.93
9667	A17	A18	9/11/1981	8	1	VCP	0.00	-9	336.00	010_2310.tif	1	A-2	VCP	340.89
9702	A18	A19	2/16/1978	8	1	VCP	0.02	-9	346.88	017_2417.tif	1	A-2	VCP	350.18
4734	A19	NOMHID	2/16/1978	8	1	VCP	0.03	-9	45.30	017_2417.tif	1	A-2	VCP	46.84
9686	A20	A21	7/20/1966	8	1	VCP	0.00	-9	386.79	017_2217.tif	1	A-2	VCP	391.32
9687	A21	A22	7/20/1966	8	1	VCP	0.00	-9	421.00	017_2217.tif	1	A-2	VCP	429.39
9004	A22	A23		8	1	VCP	0.00	-9	410.62	016_2216.tif	1	A-2	VCP	409.00
9005	A23	A25		8	1	VCP	0.00	-9	331.38	016_2216.tif	1	A-2	VCP	335.89
9713	A24	A23	7/14/1965	8	1	VCP	0.03	-9	221.00	018_2218.tif	1	A-2	VCP	222.36
9763	A29	A30	7/3/1973	8	1	VCP	0.03	-9	286.00	022_2422.tif	1	A-2	VCP	305.22
9764	A30	A31	7/3/1973	8	1	VCP	0.03	-9	296.00	022_2422.tif	1	A-2	VCP	304.79
9765	A31	A32	7/3/1973	8	1	VCP	0.03	-9	386.00	022_2422.tif	1	A-2	VCP	355.87
6513	A32	NOMHID	7/20/1966	8	1	UNK	0.00	-9	84.00	017_2217.tif	1	A-2	UNK	70.00
9750	A5	A4	2/20/1966	8	1	VCP	0.00	-9	446.00	021_2221.tif	1	A-2	VCP	450.27
64	A6	A5	7/20/1966	8	1	VCP	0.00	-9	446.00	022_2222.tif	1	A-2	VCP	13.35
9760	A6	A5	7/20/1966	8	1	VCP	0.00	-9	446.00	022_2222.tif	1	A-2	VCP	436.94
9761	A7	A6	7/20/1966	8	1	VCP	0.00	-9	446.00	022_2222.tif	1	A-2	VCP	449.86
9762	A8	A7	7/20/1966	8	1	VCP	0.00	-9	396.16	022_2222.tif	1	A-2	VCP	400.83
66	NOMHID	NOMHID	7/26/2007	8	1	VCP	0.01		321.52	PM 18494_SwPP01.TIF	1	A-2	VCP	325.12
67	NOMHID	NOMHID	7/26/2007	8	1	VCP	0.05		167.21	PM 18494_SwPP01.TIF	1	A-2	VCP	171.32
77	NOMHID	NOMHID	7/26/2007	8	1	VCP	0.05		179.00	PM 18681_SwPP01.TIF	1	A-2	VCP	183.28
4244	NOMHID	A14	7/14/1965	8	1	VCP	-9.00	-9	-9.00	018_2218.tif	1	A-2	VCP	10.57
6045	NOMHID	A8	7/20/1966	8	1	VCP	-9.00	-9	-9.00	022_2222.tif	1	A-2	VCP	4.93
6268	NOMHID	NOMHID	11/23/1973	8	1	VCP	0.01	-9	270.50	OTHERS_006.tif	1	A-2	VCP	262.38
6270	NOMHID	NOMHID	11/23/1973	8	1	VCP	0.00	-9	150.00	OTHERS_006.tif	UPL	A-2	VCP	153.54
6600	NOMHID	A13	10/23/1968	8	1	UNK	-9.00	-9	-9.00	009_2309.tif	1	A-2	UNK	5.43
6788	NOMHID	A5	12/31/1992	6	1	VCP	0.11	-9	-9.00	200056.tif	1	A-2	VCP	72.47
8400	NOMHID	NOMHID	12/31/1992	2	1	UNK	-9.00	-9	-9.00	200056.tif	1	A-2	UNK	36.42
9172	NOMHID	NOMHID	12/31/1992	6	1	VCP	0.05	-9	-9.00	200056.tif	1	A-2	VCP	64.62
9173	NOMHID	NOMHID	12/31/1992	6	1	VCP	0.05	-9	-9.00	200056.tif	1	A-2	VCP	72.99
9174	NOMHID	NOMHID	12/31/1992	6	1	VCP	0.01	-9	-9.00	200056.tif	1	A-2	VCP	97.28
9175	NOMHID	NOMHID	12/31/1992	6	1	VCP	0.01	-9	-9.00	200056.tif	1	A-2	VCP	87.68
9685	NOMHID	A20	7/20/1966	8	1	VCP	0.00	-9	296.98	017_2217.tif	1	A-2	VCP	308.65
9703	NOMHID	A20	2/16/1978	8	1	VCP	0.03	-9	-9.00	017_2417.tif	1	A-2	VCP	252.82

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
967	83	11/23/1973	OTHERS_006.tif	1	A-2
969	85	11/23/1973	OTHERS_006A.tif	1	A-2
775	A13	10/23/1968	009_2309.tif	1	A-2
848	A14	7/20/1966	018_2218.tif	1	A-2
596	A14-5	12/16/1989	044_2445.tif	1	A-2
124	A15	7/26/2007	PM 18681_SwPP01.TIF	1	A-2
2130	A15-5			1	A-2
849	A16	7/20/1966	018_2218.tif	1	A-2
123	A16-5	7/26/2007	PM 18681_SwPP01.TIF	1	A-2
778	A17	9/11/1981	010_2310.tif	1	A-2
836	A18	2/16/1978	017_2417.tif	1	A-2
835	A19	2/16/1978	017_2417.tif	1	A-2
794	A20	7/20/1966	017_2217.tif	1	A-2
829	A21	7/20/1966	017_2217.tif	1	A-2
185	A22		016_2216.tif	1	A-2
184	A23		016_2216.tif	1	A-2
850	A24	7/20/1966	018_2218.tif	1	A-2
183	A25		016_2216.tif	1	A-2
885	A29	7/3/1973	022_2422A.tif	1	A-2
881	A30	7/3/1973	022_2422A.tif	1	A-2
880	A31	7/3/1973	022_2422A.tif	1	A-2
888	A32	7/20/1966	023_2223.tif	1	A-2
868	A4	2/20/1966	021_2221.tif	1	A-2
867	A5	2/20/1966	021_2221.tif	1	A-2
121	A5-5	7/26/2007	PM 18494_SwPP01.TIF	1	A-2
878	A6	7/20/1966	022_2222.tif	1	A-2
120	A6-5	7/26/2007	PM 18494_SwPP01.TIF	1	A-2
877	A7	7/20/1966	022_2222.tif	1	A-2
876	A8	7/20/1966	022_2222.tif	1	A-2
122	PRI	7/26/2007	PM 18681_SwPP01.TIF	1	A-2
271	PRI	12/31/1992	200056.tif	1	A-2
988	PRI	11/1/2002	2003107.tif	1	A-2



City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: A-2
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
B-1
A-1
B-2
B-3
A-3
A-2
ARROW HWY
VERNON AVE
OLIVE ST
MORENO DR
DEL MAR AVE
BENSON AVE
EIGHTH ST
8TH ST
7TH ST
SPINNAKER WAY
GENOA WAY
MONTROSE AVE
UPL-UPL
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9029
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9000
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9052
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5391
5483
5505
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9150
1594
1500

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9757	A37	A36		8	1	VCP	0.02	-9	299.57	021_2421.tif	1	A-3	VCP	299.13
9759	A38	NOMHID		8	1	VCP	0.02	-9	101.39	021_2421.tif	1	A-3	VCP	107.91
8972	A52	A51	4/15/1966	8	1	VCP	-9.00	-9	-9.00	035_1434.tif	1	A-3	VCP	337.26
8971	A53	A52	4/15/1966	8	1	VCP	-9.00	-9	-9.00	035_1434.tif	1	A-3	VCP	337.91
9225	A54	A53	7/21/1964	8	1	VCP	0.02	-9	256.08	005_2405.tif	1	A-3	VCP	265.28
9227	A55	A54	7/21/1964	8	1	VCP	0.02	-9	210.43	005_2405.tif	1	A-3	VCP	206.58
9221	A56	A57	7/21/1964	8	1	VCP	0.18	-9	259.00	003_2403.tif	1	A-3	VCP	263.87
9360	A67	A64		8	1	VCP	0.02	-9	258.44	002_2402.tif	1	A-3	VCP	262.88
9054	A68	A67	4/16/1966	8	1	VCP	0.01	-9	406.00	046_1445.tif	1	A-3	VCP	412.22
9055	A69	A68	4/16/1966	8	1	VCP	0.01	-9	418.00	046_1445.tif	1	A-3	VCP	421.04
9359	A70	A67		8	1	VCP	0.02	-9	258.47	002_2402.tif	1	A-3	VCP	261.50
9062	A71	A70	4/12/1966	8	1	VCP	0.01	-9	432.00	047_1446.tif	1	A-3	VCP	441.16
9063	A72	A71	4/12/1966	8	1	VCP	0.01	-9	438.00	047_1446.tif	1	A-3	VCP	438.44
6767	A73	NOMHID		8	1	VCP	-9.00	-9	-9.00	002_2402.tif	1	A-3	VCP	64.40
9075	A74	A73	4/15/1966	8	1	VCP	0.01	-9	446.00	048_1447.tif	1	A-3	VCP	449.17
9074	A75	A74	4/15/1966	8	1	VCP	0.01	-9	352.68	048_1477.tif	1	A-3	VCP	362.60
9267	A78	A77	4/15/1966	8	1	VCP	0.02	-9	436.90	044_1443.tif	1	A-3	VCP	439.45
9266	A79	A78	4/15/1966	8	1	VCP	0.02	-9	399.05	044_1443.tif	1	A-3	VCP	406.20
9263	A82	A81	4/15/1966	8	1	VCP	0.03	-9	446.00	043_1442.tif	1	A-3	VCP	429.35
9262	A83	A82	4/15/1966	8	1	VCP	0.02	-9	447.00	043_1442.tif	1	A-3	VCP	467.64
9278	A84	A85	4/15/1966	8	1	VCP	0.01	-9	350.00	051_1450.tif	1	A-3	VCP	349.90
9279	A85	A86	4/15/1966	8	1	VCP	0.01	-9	371.00	051_1450.tif	1	A-3	VCP	374.64
9280	A86	A87	4/15/1966	8	1	VCP	0.01	-9	355.00	051_1450.tif	1	A-3	VCP	356.27
4816	A87	A88	4/15/1966	8	1	VCP	0.01	-9	358.38	050_1449.tif	1	A-3	VCP	365.71
4817	A88	A89	4/15/1966	8	1	VCP	0.01	-9	324.62	050_1449.tif	1	A-3	VCP	328.16
4818	A89	A49	4/15/1966	8	1	VCP	0.01	-9	341.55	050_1449.tif	1	A-3	VCP	346.76
7848	A90	A88	4/15/1966	8	1	VCP	0.01	-9	325.00	052_1451.tif	1	A-3	VCP	328.39
9295	A91	A90	4/15/1966	8	1	VCP	0.01	-9	167.92	053_1452.tif	1	A-3	VCP	171.71
9287	A92	A91	4/15/1966	8	1	VCP	0.04	-9	153.00	052_1451.tif	1	A-3	VCP	157.68
9294	A93	A91	4/15/1966	8	1	VCP	0.01	-9	288.56	053_1452.tif	1	A-3	VCP	291.19
9300	A94	A93	4/15/1966	8	1	VCP	0.02	-9	259.00	054_1453.tif	1	A-3	VCP	261.92
9299	A95	A94	4/15/1966	8	1	VCP	0.01	-9	377.00	054_1453.tif	1	A-3	VCP	383.60
9298	A96	A95	4/15/1966	8	1	VCP	0.01	-9	346.00	054_1453.tif	1	A-3	VCP	348.27
9297	A97	A96	4/15/1966	8	1	VCP	0.01	-9	220.32	054_1453.tif	1	A-3	VCP	228.69
9293	A98	A93	4/15/1966	8	1	VCP	0.01	-9	406.52	053_1452.tif	1	A-3	VCP	411.59
9292	A99	A98	4/15/1966	8	1	VCP	0.01	-9	321.00	053_1452.tif	1	A-3	VCP	324.58
9291	AA1	A99	4/15/1966	8	1	VCP	0.01	-9	215.88	053_1452.tif	1	A-3	VCP	219.02
5270	NOMHID	NOMHID	1/14/1972	8	1	VCP	0.00	-9	281.00	OTHER_008.tif	UPL	A-3	VCP	191.18
5271	NOMHID	NOMHID	1/14/1972	8	1	VCP	0.00	-9	259.20	OTHER_008.tif	UPL	A-3	VCP	179.95
5272	NOMHID	NOMHID	1/14/1972	8	1	VCP	0.00	-9	281.00	OTHER_008.tif	UPL	A-3	VCP	180.76
5273	NOMHID	NOMHID	1/14/1972	8	1	VCP	0.00	-9	259.20	OTHER_008.tif	UPL	A-3	VCP	165.86
5274	NOMHID	UPL	4/4/1972	8	1	VCP	0.02	-9	-9.00	OTHERS_007.tif	1	A-3	VCP	221.88
5275	NOMHID	NOMHID	4/4/1972	8	1	VCP	0.02	-9	298.00	OTHERS_007.tif	1	A-3	VCP	302.81
5948	NOMHID	NOMHID	11/1/2002	4	1	VCP	0.03	-9	150.00	2003107.tif	1	A-3	VCP	130.00
5949	NOMHID	NOMHID	11/1/2002	4	1	VCP	0.03	-9	150.00	2003107.tif	1	A-3	VCP	154.22
6269	NOMHID	NOMHID	11/23/1973	8	1	VCP	0.02	-9	130.00	OTHERS_006.tif	1	A-3	VCP	132.78
6278	NOMHID	NOMHID	11/1/2002	-9	1	UNK	-9.00	-9	-9.00	2003107.tif	1	A-3	UNK	84.23
7771	NOMHID	A97	4/15/1966	8	1	VCP	-9.00	-9	-9.00	054_1453.tif	1	A-3	VCP	11.66
8970	NOMHID	A53	4/15/1966	-9	1	UNK	-9.00	-9	-9.00	035_1434.tif	1	A-3	UNK	77.74
8995	NOMHID	A56	7/21/1964	8	1	VCP	0.01	-9	132.32	005_2405.tif	1	A-3	VCP	134.21
8997	NOMHID	A57	7/21/1964	8	1	VCP	0.01	-9	132.32	005_2405.tif	1	A-3	VCP	135.96
9224	NOMHID	A56	7/21/1964	8	1	VCP	0.02	-9	-9.00	003_2403.tif	1	A-3	VCP	113.25
9226	NOMHID	A55	7/21/1964	-9	1	UNK	-9.00	-9	-9.00	005_2405.tif	1	A-3	UNK	17.21
9296	NOMHID	A90	4/15/1966	8	1	VCP	0.02	-9	65.00	053_1452.tif	1	A-3	VCP	63.89
9358	NOMHID	A70		8	1	VCP	0.02	-9	199.30	002_2402.tif	1	A-3	VCP	199.24
9756	NOMHID	A37		8	1	VCP	0.01	-9	58.06	021_2421.tif	1	A-3	VCP	61.13
5300	UPL	UPL	4/8/2004	8	1	UNK	0.00	-9	43.52	200486.tif	1	A-3	UNK	45.78
5301	UPL	UPL	4/8/2004	8	1	UNK	0.00	-9	107.32	200486.tif	1	A-3	UNK	111.20
5302	UPL	AA1	4/8/2004	8	1	UNK	0.00	-9	81.68	200486.tif	1	A-3	UNK	87.53

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
949	65	4/8/2004	200486.tif	1	A-3
950	66	4/8/2004	200486.tif	1	A-3
951	67	4/8/2004	200486.tif	1	A-3
968	84	11/23/1973	OTHERS_006.tif	1	A-3
970	86	4/4/1972	OTHERS_007.tif	1	A-3
971	87	4/4/1972	OTHERS_007.tif	1	A-3
972	88	1/14/1972	OTHER_008.tif	1	A-3
973	89	1/14/1972	OTHER_008.tif	1	A-3
974	90	1/14/1972	OTHER_008.tif	1	A-3
872	A37		021_2421.tif	1	A-3
873	A37-5		021_2421.tif	1	A-3
874	A38		021_2421.tif	1	A-3
159	A52	4/15/1966	035_1434.tif	1	A-3
349	A53	7/21/1964	004_2404.tif	1	A-3
337	A54	7/21/1964	005_2405_B.tif	1	A-3
336	A55	7/21/1964	005_2405_B.tif	1	A-3
174	A56	7/21/1964	005_2405.tif	1	A-3
176	A57	7/21/1964	005_2405.tif	1	A-3
448	A67		002_2402.tif	1	A-3
224	A68	4/16/1966	046_1445.tif	1	A-3
223	A69	4/16/1966	046_1445.tif	1	A-3
447	A70		002_2402.tif	1	A-3
233	A71	4/12/1966	047_1446.tif	1	A-3
234	A72	4/12/1966	047_1446.tif	1	A-3
251	A73	4/15/1966	048_1447.tif	1	A-3
250	A74	4/15/1966	048_1447.tif	1	A-3
249	A75	4/15/1966	048_1447.tif	1	A-3
383	A78	4/15/1966	044_1443.tif	1	A-3
382	A79	4/15/1966	044_1443.tif	1	A-3
379	A82	4/15/1966	043_1442.tif	1	A-3
378	A83	4/15/1966	043_1442.tif	1	A-3
392	A84	4/15/1966	051_1450.tif	1	A-3
393	A85	4/15/1966	051_1450.tif	1	A-3
394	A86	4/15/1966	051_1450.tif	1	A-3
395	A87	4/15/1966	051_1450.tif	1	A-3
556	A88	4/15/1966	050_1449.tif	1	A-3
557	A89	4/15/1966	050_1449.tif	1	A-3
408	A90	4/15/1966	053_1452.tif	1	A-3
407	A91	4/15/1966	053_1452.tif	1	A-3
399	A92	4/15/1966	052_1451.tif	1	A-3
406	A93	4/15/1966	053_1452.tif	1	A-3
413	A94	4/15/1966	054_1453.tif	1	A-3
412	A95	4/15/1966	054_1453.tif	1	A-3
411	A96	4/15/1966	054_1453.tif	1	A-3
410	A97	4/15/1966	054_1453.tif	1	A-3
405	A98	4/15/1966	053_1452.tif	1	A-3
404	A99	4/15/1966	053_1452.tif	1	A-3
403	AA1	4/15/1966	053_1452.tif	1	A-3
175	NOMHID	7/21/1964	005_2405.tif	1	A-3
177	NOMHID	7/21/1964	005_2405.tif	1	A-3
335	NOMHID	7/21/1964	003_2403.tif	1	A-3
409	NOMHID	4/15/1966	053_1452.tif	1	A-3
529	NOMHID	4/15/1966	035_1434.tif	1	A-3
989	PRI	11/1/2002	2003107.tif	1	A-3
990	PRI	11/1/2002	2003107.tif	1	A-3



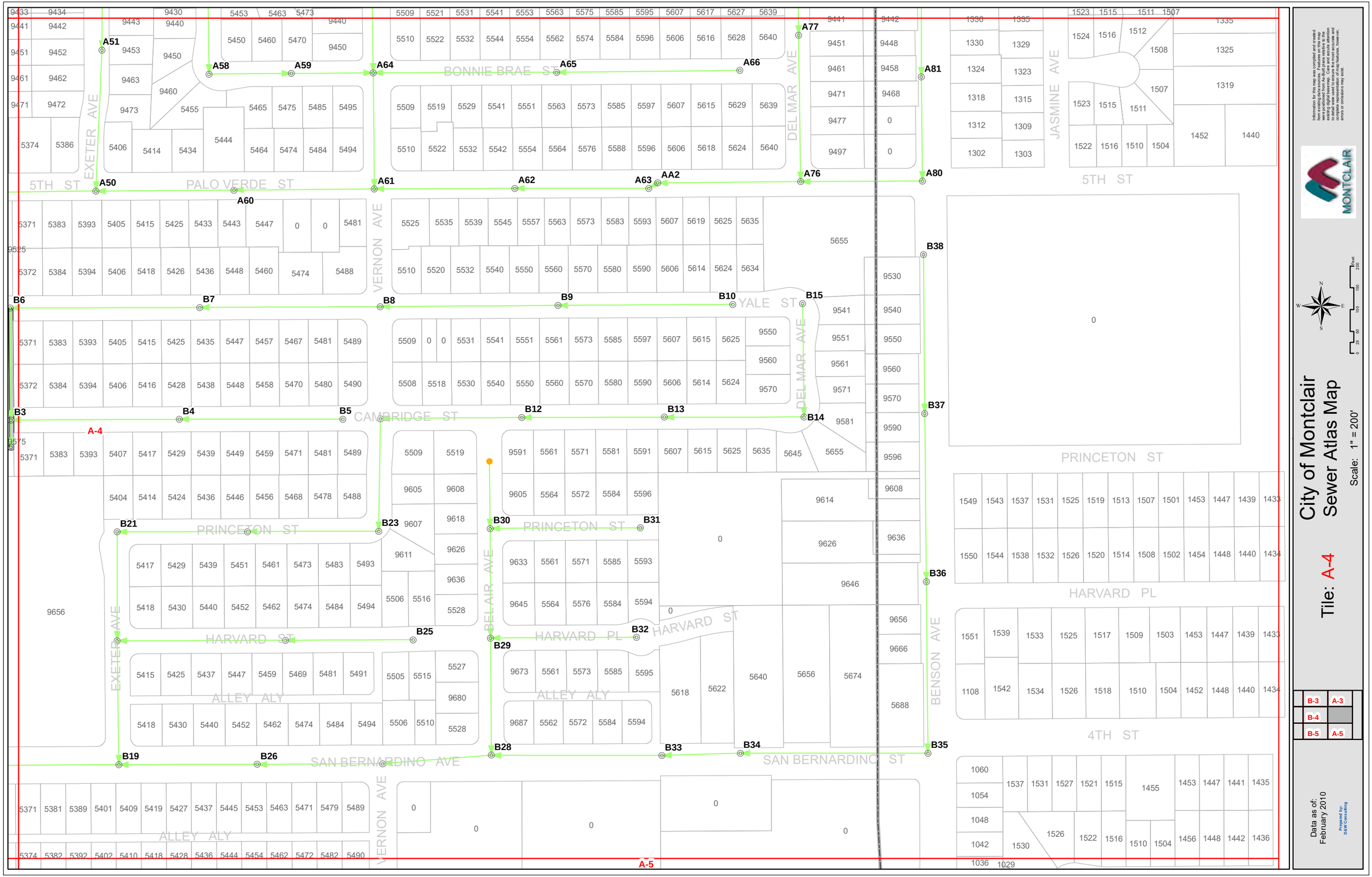
City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: A-3
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
STATE 10 HWY
CAROLINE ST
SAN JOSE ST
LA DENEY ST
ARMSLEY ST
HAWTHORNE ST
DEODAR ST
6TH ST
ARMSLEY SQ
LA DENEY DR
VERNON AVE
BEL AIR AVE
COLUMBINE AVE
DEL MAR AVE
BENSON AVE
JASMINE CT
IRIS CT
HELEN CT
EXETER AVE
ALLEY ALY
UPL-UPL
A-2
A-3
B-2
B-3
B-4
A-4

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9427	A50	A45	4/15/1966	8	1	VCP	-9.00	-9	-9.00	035_1434.tif	1	A-4	VCP	299.49
8973	A51	A50	4/15/1966	8	1	VCP	-9.00	-9	-9.00	035_1434.tif	1	A-4	VCP	335.79
9223	A57	A58	7/21/1964	8	1	VCP	0.01	-9	257.50	003_2403.tif	1	A-4	VCP	259.04
9222	A58	A59	7/21/1964	8	1	VCP	0.01	-9	187.23	003_2403.tif	1	A-4	VCP	195.79
9557	A59	A64	7/21/1964	8	1	VCP	0.01	-9	196.00	003_2403.tif	1	A-4	VCP	195.01
9426	A60	A50	4/15/1966	8	1	VCP	-9.00	-9	-9.00	035_1434.tif	1	A-4	VCP	328.30
9425	A61	A60	4/15/1966	8	1	VCP	-9.00	-9	-9.00	035_1434.tif	1	A-4	VCP	334.27
9206	A62	A61	4/15/1966	8	1	VCP	0.01	-9	343.20	042_1441.tif	1	A-4	VCP	334.72
9205	A63	A62	4/15/1966	8	1	VCP	0.01	-9	314.03	042_1441.tif	1	A-4	VCP	318.69
9361	A64	A61		8	1	VCP	0.01	-9	271.94	002_2402.tif	1	A-4	VCP	276.05
9039	A65	A64	4/12/1966	8	1	VCP	0.01	-9	431.00	045_1444.tif	1	A-4	VCP	436.28
9040	A66	A65	4/12/1966	8	1	VCP	0.01	-9	436.00	045_1444.tif	1	A-4	VCP	436.42
9204	A76	AA2	4/15/1966	8	1	VCP	0.01	-9	333.00	042_1441.tif	1	A-4	VCP	339.89
9268	A77	A76	4/15/1966	8	1	VCP	0.01	-9	344.00	044_1443.tif	1	A-4	VCP	348.92
9269	A80	A76	4/15/1966	21	1	RCP	-9.00	-9	-9.00	044_1443.tif	1	A-4	RCP	290.16
9264	A81	A80	4/15/1966	8	1	VCP	0.01	-9	244.00	043_1442.tif	1	A-4	VCP	247.80
8239	AA2	A63	4/15/1966	8	1	VCP	0.01	-9	12.97	042_1441.tif	1	A-4	VCP	24.89
7135	B10	B9	4/12/1966	8	1	VCP	0.01	-9	411.00	041_1440.tif	1	A-4	VCP	416.40
8987	B11	B23	4/15/1966	8	1	VCP	0.00	-9	263.56	035_1434.tif	1	A-4	VCP	268.17
9015	B12	B11	4/12/1966	8	1	VCP	0.01	-9	331.00	036_1435.tif	1	A-4	VCP	336.86
9014	B13	B12	4/12/1966	8	1	VCP	0.01	-9	331.00	036_1435.tif	1	A-4	VCP	339.31
9013	B14	B13	4/12/1966	8	1	VCP	0.01	-9	331.90	036_1435.tif	1	A-4	VCP	332.32
9016	B15	B14	4/12/1966	8	1	VCP	0.01	-9	261.85	036_1435.tif	1	A-4	VCP	269.90
9448	B19	B18	2/9/1965	8	1	VCP	0.01	-9	403.04	014_1414.tif	1	A-4	VCP	408.34
9453	B20	B19	4/12/1966	8	1	VCP	0.02	-9	290.00	034_1433.tif	1	A-4	VCP	294.11
9452	B21	B20	4/12/1966	8	1	VCP	0.02	-9	256.00	034_1433.tif	1	A-4	VCP	259.31
9455	B22	B21	4/12/1966	8	1	VCP	0.01	-9	307.00	034_1433.tif	1	A-4	VCP	310.03
9454	B23	B22	4/12/1966	8	1	VCP	0.01	-9	306.65	034_1433.tif	1	A-4	VCP	312.75
9516	B24	B20	4/15/1966	8	1	VCP	0.01	-9	396.00	033_1432.tif	1	A-4	VCP	400.29
9515	B25	B24	4/15/1966	8	1	VCP	0.01	-9	301.00	033_1432.tif	1	A-4	VCP	304.00
9447	B26	B19	2/9/1965	8	1	VCP	0.01	-9	326.42	014_1414.tif	1	A-4	VCP	329.56
9446	B27	B26	2/9/1965	8	1	VCP	0.01	-9	296.00	014_1414.tif	1	A-4	VCP	298.43
9465	B28	B27	4/12/1966	8	1	VCP	-9.00	-9	-9.00	030_1430.tif	1	A-4	VCP	259.31
9511	B29	B28	4/16/1966	8	1	VCP	0.02	-9	275.00	032_1431_B.tif	1	A-4	VCP	279.24
9510	B30	B29	4/16/1966	8	1	VCP	0.01	-9	257.13	032_1431_B.tif	1	A-4	VCP	260.26
9512	B31	B30		-9	1	UNK	-9.00	-9	-9.00	032_1431_B.tif	1	A-4	UNK	357.36
9514	B32	B29	4/15/1966	8	1	VCP	0.01	-9	343.00	033_1432.tif	1	A-4	VCP	347.17
9464	B33	B28	4/12/1966	8	1	VCP	0.01	-9	397.86	030_1430.tif	1	A-4	VCP	405.89
9463	B34	B33	4/12/1966	8	1	VCP	0.01	-9	182.54	030_1430.tif	1	A-4	VCP	186.95
4833	B35	B34	4/12/1966	8	1	VCP	0.01	-9	446.00	030_1430.tif	1	A-4	VCP	446.37
9353	B36	B35	4/15/1966	8	1	VCP	0.02	-9	391.00	031_1431.tif	1	A-4	VCP	408.12
9352	B37	B36	4/15/1966	8	1	VCP	0.02	-9	396.00	031_1431.tif	1	A-4	VCP	400.22
9351	B38	B37	4/15/1966	8	1	VCP	0.02	-9	374.32	031_1431.tif	1	A-4	VCP	378.05
9253	B4	B3	4/15/1966	8	1	VCP	0.01	-9	-9.00	039_1438.tif	1	A-4	VCP	401.07
9254	B5	B4	4/15/1966	8	1	VCP	0.01	-9	377.00	039_1438.tif	1	A-4	VCP	389.00
8993	B7	B6	4/15/1966	8	1	VCP	0.01	-9	446.00	140_1439.tif	1	A-4	VCP	451.46
8994	B8	B7	4/15/1966	8	1	VCP	0.01	-9	425.70	140_1439.tif	1	A-4	VCP	429.27
7134	B9	B8	4/12/1966	8	1	VCP	0.01	-9	421.00	041_1440.tif	1	A-4	VCP	423.36
692	NOMHID	B31		-9	1	UNK	-9.00	-9	-9.00	032_1431_B.tif	1	A-4	UNK	6.22
7530	NOMHID	B38	4/15/1966	8	1	VCP	-9.00	-9	-9.00	031_1431.tif	1	A-4	VCP	5.22
5674	NOMHID	A61	4/15/1966	8	1	VCP	-9.00	-9	-9.00	042_1441.tif	1	A-4	VCP	5.87
9509	NOMHID	B30	4/16/1966	8	1	VCP	0.03	-9	161.00	032_1431_B.tif	1	A-4	VCP	160.48

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
527	A50	4/15/1966	035_1434.tif	1	A-4
163	A51	4/15/1966	035_1434.tif	1	A-4
334	A58	7/21/1964	003_2403.tif	1	A-4
1163	A59	7/21/1964	003_2403.tif	1	A-4
526	A60	4/15/1966	035_1434.tif	1	A-4
310	A61	4/15/1966	042_1441.tif	1	A-4
309	A62	4/15/1966	042_1441.tif	1	A-4
308	A63	4/15/1966	042_1441.tif	1	A-4
452	A64		002_2402.tif	1	A-4
212	A65	4/15/1966	045_1444.tif	1	A-4
211	A66	4/15/1966	045_1444.tif	1	A-4
306	A76	4/15/1966	042_1441.tif	1	A-4
384	A77	4/15/1966	044_1443.tif	1	A-4
381	A80	4/15/1966	043_1442.tif	1	A-4
380	A81	4/15/1966	043_1442.tif	1	A-4
307	AA2	4/15/1966	042_1441.tif	1	A-4
294	B10	4/12/1966	041_1440.tif	1	A-4
197	B11	4/12/1966	036_1435.tif	1	A-4
198	B12	4/12/1966	036_1435.tif	1	A-4
196	B13	4/12/1966	036_1435.tif	1	A-4
195	B14	4/12/1966	036_1435.tif	1	A-4
199	B15	4/12/1966	036_1435.tif	1	A-4
537	B19	2/9/1965	014_1414.tif	1	A-4
545	B20	4/12/1966	034_1433.tif	1	A-4
544	B21	4/12/1966	034_1433.tif	1	A-4
547	B22	4/12/1966	034_1433.tif	1	A-4
546	B23	4/12/1966	034_1433.tif	1	A-4
646	B24	4/15/1966	033_1432.tif	1	A-4
645	B25	4/15/1966	033_1432.tif	1	A-4
538	B26	2/9/1965	014_1414.tif	1	A-4
536	B27	2/9/1965	014_1414.tif	1	A-4
624	B28	4/12/1966	030_1430.tif	1	A-4
642	B29	4/16/1966	032_1431_B.tif	1	A-4
641	B30	4/16/1966	032_1431_B.tif	1	A-4
144	B31	4/16/1966	032_1431_B.tif	1	A-4
644	B32	4/15/1966	033_1432.tif	1	A-4
625	B33	4/12/1966	030_1430.tif	1	A-4
626	B34	4/12/1966	030_1430.tif	1	A-4
627	B35	4/12/1966	030_1430.tif	1	A-4
438	B36	4/15/1966	031_1431.tif	1	A-4
439	B37	4/15/1966	031_1431.tif	1	A-4
440	B38	4/15/1966	031_1431.tif	1	A-4
366	B4	4/15/1966	039_1438.tif	1	A-4
367	B5	4/15/1966	039_1438.tif	1	A-4
172	B7	4/15/1966	140_1439.tif	1	A-4
171	B8	4/15/1966	140_1439.tif	1	A-4
295	B9	4/12/1966	041_1440.tif	1	A-4
640	NOMHID	4/16/1966	032_1431_B.tif	1	A-4



City of Montclair
Sewer Atlas Map

Scale: 1" = 200'

Tile: A-4

B-3	A-3
B-4	
B-5	A-5

Data as of: February 2010

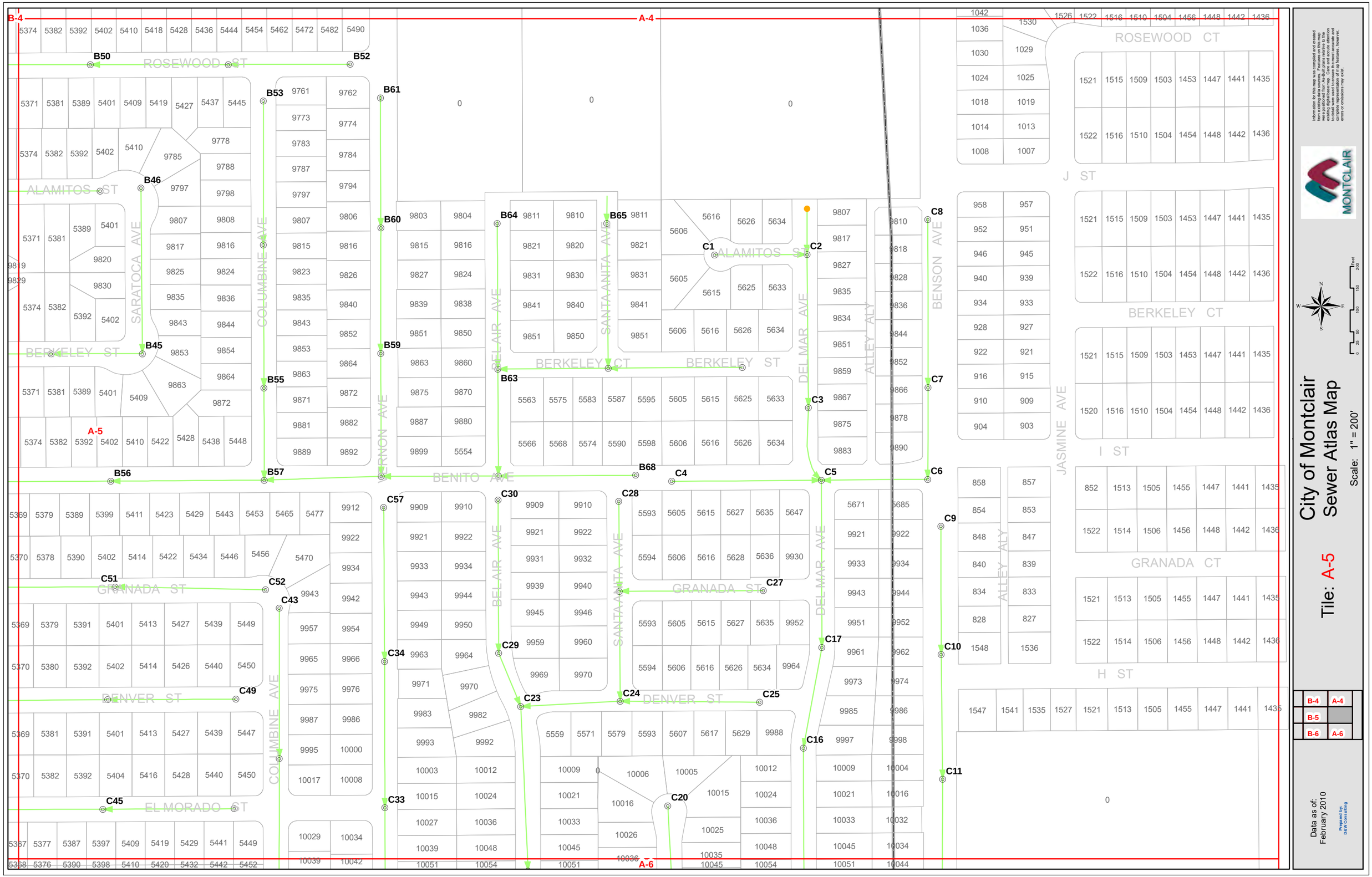
Prepared by: D&W Consulting

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9307	B45	B44-5	2/9/1965	8	1	VCP	0.01	-9	211.80	015_1415.tif	1	A-5	VCP	217.26
9311	B46	B45	2/9/1965	8	1	VCP	0.01	-9	391.02	015_1415.tif	1	A-5	VCP	393.67
9312	B48	B47	2/9/1965	8	1	VCP	0.01	-9	358.00	016_1416.tif	1	A-5	VCP	361.16
7140	B50	B49	2/9/1965	8	1	VCP	0.01	-9	336.00	017_1417.tif	1	A-5	VCP	340.00
7139	B51	B50	2/9/1965	8	1	VCP	0.01	-9	324.00	017_1417.tif	1	A-5	VCP	328.32
7138	B52	B51	2/9/1965	8	1	VCP	0.01	-9	287.00	017_1417.tif	1	A-5	VCP	290.01
9079	B53	B54	2/9/1965	8	1	VCP	0.02	-9	338.00	018_1418.tif	1	A-5	VCP	342.53
9078	B54	B55	2/9/1965	8	1	VCP	0.02	-9	336.00	018_1418.tif	1	A-5	VCP	340.02
9077	B55	B57	2/9/1965	8	1	VCP	0.03	-9	216.00	018_1418.tif	1	A-5	VCP	219.84
9442	B56	B43	2/8/1965	8	1	VCP	0.01	-9	374.00	009_1409.tif	1	A-5	VCP	379.19
9443	B57	B56	2/8/1965	8	1	VCP	0.01	-9	362.11	009_1409.tif	1	A-5	VCP	365.22
9444	B58	B57	2/8/1965	8	1	VCP	0.01	-9	275.09	009_1409.tif	1	A-5	VCP	278.98
9372	B59	B58		8	1	VCP	0.02	-9	289.00	019_1419.tif	1	A-5	VCP	292.74
9371	B60	B59		8	1	VCP	0.02	-9	296.00	019_1419.tif	1	A-5	VCP	299.43
9370	B61	B60		8	1	VCP	0.02	-9	305.00	019_1419.tif	1	A-5	VCP	308.76
9231	B62	B58	2/9/1965	8	1	VCP	0.01	-9	274.00	010_1410.tif	1	A-5	VCP	278.69
9104	B63	B62		8	1	VCP	0.01	-9	251.00	020_1420.tif	1	A-5	VCP	254.75
9103	B64	B63		8	1	VCP	0.02	-9	345.00	020_1420.tif	1	A-5	VCP	346.74
9167	B65	B66		8	1	VCP	0.02	-9	341.00	021_1421.tif	1	A-5	VCP	344.45
9166	B66	B63		8	1	VCP	0.01	-9	257.00	021_1421.tif	1	A-5	VCP	262.60
9165	B67	B66		8	1	VCP	0.01	-9	318.00	021_1421.tif	1	A-5	VCP	319.64
9230	B68	B62	2/9/1965	8	1	VCP	0.01	-9	323.80	010_1410.tif	1	A-5	VCP	326.90
9365	C1	C2		8	1	VCP	0.01	-9	218.00	011_1411.tif	1	A-5	VCP	219.50
6405	C10	C11	7/21/1964	8	1	VCP	0.02	-9	296.00	041_1340.tif	1	A-5	VCP	297.17
6406	C11	C12	7/21/1964	8	1	VCP	0.02	-9	296.00	041_1340.tif	1	A-5	VCP	302.30
6401	C16	C15	7/15/1964	8	1	VCP	0.02	-9	335.11	040_1339.tif	1	A-5	VCP	338.00
6402	C17	C16	7/15/1964	8	1	VCP	0.01	-9	240.63	040_1339.tif	1	A-5	VCP	243.63
9101	C2	C3		8	1	VCP	0.02	-9	362.37	020_1420.tif	1	A-5	VCP	365.11
6446	C23	C22	7/15/1964	8	1	VCP	0.01	-9	388.85	037_1336.tif	1	A-5	VCP	392.87
4216	C24	C23	7/15/1964	8	1	UNK	-9.00	-9	-9.00	037_1336.tif	1	A-5	UNK	236.91
11023	C25	C24	7/14/1964	8	1	VCP	0.01	-9	343.93	038_1337.tif	1	A-5	VCP	332.05
5788	C26	C24	7/14/1964	8	1	VCP	0.01	-9	258.76	038_1337.tif	1	A-5	VCP	261.80
6397	C27	C26	7/14/1964	8	1	VCP	0.01	-9	336.00	038_1337.tif	1	A-5	VCP	342.47
5238	C28	C26	2/9/1965	-9	1	UNK	-9.00	-9	-9.00	010_1410.tif	1	A-5	UNK	213.54
6447	C29	C23	7/15/1964	8	1	VCP	0.02	-9	131.09	037_1336.tif	1	A-5	VCP	136.73
9102	C3	C5		8	1	VCP	0.04	-9	175.00	020_1420.tif	1	A-5	VCP	181.86
6448	C30	C29	7/15/1964	8	1	VCP	0.02	-9	354.06	037_1336.tif	1	A-5	VCP	365.59
9824	C34	C33	7/14/1964	8	1	VCP	0.02	-9	344.00	035_1334.tif	1	A-5	VCP	348.53
9229	C4	C5	2/9/1965	8	1	VCP	0.01	-9	351.00	010_1410.tif	1	A-5	VCP	355.78
9805	C42	C41	2/9/1965	8	1	VCP	0.02	-9	381.00	005_1405.tif	1	A-5	VCP	384.78
9804	C43	C42	2/9/1965	8	1	VCP	0.02	-9	352.00	005_1405.tif	1	A-5	VCP	357.90
6347	C45	C44	2/9/1965	8	1	VCP	0.01	-9	356.00	006_1406.tif	1	A-5	VCP	361.25
6346	C46	C45	2/9/1965	8	1	VCP	0.01	-9	308.00	006_1406.tif	1	A-5	VCP	312.27
6431	C48	C47	2/9/1965	8	1	VCP	0.01	-9	355.00	007_1407.tif	1	A-5	VCP	372.39
6432	C49	C48	2/9/1965	8	1	VCP	0.01	-9	312.00	007_1407.tif	1	A-5	VCP	305.61
6403	C5	C17	7/15/1964	8	1	VCP	0.02	-9	392.36	040_1339.tif	1	A-5	VCP	397.86
9821	C51	C50	2/9/1965	8	1	VCP	0.01	-9	384.00	008_1408.tif	1	A-5	VCP	389.67
9820	C52	C51	2/9/1965	8	1	VCP	0.01	-9	351.00	008_1408.tif	1	A-5	VCP	358.02
9825	C57	C34	7/14/1964	8	1	VCP	0.02	-9	359.00	035_1334.tif	1	A-5	VCP	366.07
9228	C6	C5	2/9/1965	8	1	VCP	0.02	-9	243.00	010_1410.tif	1	A-5	VCP	253.19
9364	C7	C6		8	1	VCP	0.01	-9	216.00	011_1411.tif	1	A-5	VCP	218.39
9363	C8	C7		8	1	VCP	0.02	-9	395.00	011_1411.tif	1	A-5	VCP	399.78
6404	C9	C10	7/21/1964	8	1	VCP	0.02	-9	298.00	041_1340.tif	1	A-5	VCP	305.06
6702	NOMHID	B61		8	1	UNK	-9.00	-9	-9.00	019_1419.tif	1	A-5	UNK	5.51
6739	NOMHID	C8		8	1	UNK	-9.00	-9	-9.00	011_1411.tif	1	A-5	UNK	4.70
7425	NOMHID	B64		8	1	VCP	-9.00	-9	-9.00	020_1420.tif	1	A-5	VCP	5.35
8443	NOMHID	B65		8	1	VCP	0.02	-9	63.00	021_1421.tif	1	A-5	VCP	66.56
9397	NOMHID	C2		8	1	VCP	0.05	-9	108.63	020_1420.tif	1	A-5	VCP	109.37

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
420	B44-5	2/9/1965	015_1415.tif	1	A-5
419	B45	2/9/1965	015_1415.tif	1	A-5
423	B46	2/9/1965	015_1415.tif	1	A-5
424	B48	2/9/1965	016_1416.tif	1	A-5
299	B50	2/9/1965	017_1417.tif	1	A-5
298	B51	2/9/1965	017_1417.tif	1	A-5
297	B52	2/9/1965	017_1417.tif	1	A-5
254	B53	2/9/1965	018_1418.tif	1	A-5
253	B54	2/9/1965	018_1418.tif	1	A-5
252	B55	2/9/1965	018_1418.tif	1	A-5
532	B56	2/8/1965	009_1409.tif	1	A-5
533	B57	2/8/1965	009_1409.tif	1	A-5
342	B58	2/9/1965	010_1410.tif	1	A-5
464	B59		019_1419.tif	1	A-5
463	B60		019_1419.tif	1	A-5
462	B61		019_1419.tif	1	A-5
341	B62	2/9/1965	010_1410.tif	1	A-5
473	B63		020_1420.tif	1	A-5
474	B64		020_1420.tif	1	A-5
261	B65		021_1421.tif	1	A-5
259	B66		021_1421.tif	1	A-5
260	B67		021_1421.tif	1	A-5
340	B68	2/9/1965	010_1410.tif	1	A-5
457	C1		011_1411.tif	1	A-5
1038	C10	7/21/1964	041_1340.tif	1	A-5
1039	C11	7/21/1964	041_1340.tif	1	A-5
1035	C16	7/15/1964	040_1339.tif	1	A-5
1034	C17	7/15/1964	040_1339.tif	1	A-5
469	C2		020_1420.tif	1	A-5
1033	C20	7/15/1964	039_1338.tif	1	A-5
1077	C23	7/15/1964	037_1336.tif	1	A-5
2123	C24	7/15/1964	037_1336.tif	1	A-5
1906	C25	7/15/1964	037_1336.tif	1	A-5
1030	C26	7/14/1964	038_1337.tif	1	A-5
1029	C27	7/14/1964	038_1337.tif	1	A-5
1059	C28	2/9/1965	010_1410.tif	1	A-5
1076	C29	7/15/1964	037_1336.tif	1	A-5
470	C3		020_1420.tif	1	A-5
1075	C30	7/15/1964	037_1336.tif	1	A-5
1115	C33	7/14/1964	035_1334.tif	1	A-5
1114	C34	7/14/1964	035_1334.tif	1	A-5
339	C4	2/9/1965	010_1410.tif	1	A-5
1096	C42	2/9/1965	005_1405.tif	1	A-5
1097	C43	2/9/1965	005_1405.tif	1	A-5
1051	C45	2/9/1965	006_1406.tif	1	A-5
1050	C46	2/9/1965	006_1406.tif	1	A-5
1054	C48	2/9/1965	007_1407.tif	1	A-5
1053	C49	2/9/1965	007_1407.tif	1	A-5
471	C5		020_1420.tif	1	A-5
1111	C51	2/9/1965	008_1408.tif	1	A-5
1112	C52	2/9/1965	008_1408.tif	1	A-5
1113	C57	7/14/1964	035_1334.tif	1	A-5
338	C6	2/9/1965	010_1410.tif	1	A-5
454	C7		011_1411.tif	1	A-5
455	C8		011_1411.tif	1	A-5
1037	C9	7/21/1964	041_1340.tif	1	A-5
472	NOMHID		020_1420.tif	1	A-5



City of Montclair
Sewer Atlas Map
Tile: A-5
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
ROSEWOOD ST
ALAMITOS ST
BERKELEY ST
GRANADA ST
DENVER ST
EL MORADO ST
SARATOCA AVE
COLUMBINE AVE
VERNON AVE
BELAIR AVE
SANTA ANITA AVE
DEL MAR AVE
ALLEY ALY
BENSON AVE
JASMINE AVE
ROSEWOOD CT
J ST
BERKELEY CT
I ST
GRANADA CT
H ST
A-4
A-5
A-6
B-4
B-5
B-6

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
6407	C12	C13	7/21/1964	8	1	VCP	0.01	-9	311.00	041_1340.tif	1	A-6	VCP	308.77
6351	C13	C14	7/14/1964	8	1	VCP	0.01	-9	313.15	036_1335.tif	1	A-6	VCP	317.39
6352	C14	C18	7/14/1964	8	1	VCP	0.01	-9	296.00	036_1335.tif	1	A-6	VCP	300.85
6400	C15	C14	7/15/1964	8	1	VCP	0.01	-9	351.00	040_1339.tif	1	A-6	VCP	350.20
6353	C18	C21	7/14/1964	8	1	VCP	0.01	-9	352.61	036_1335.tif	1	A-6	VCP	356.87
6399	C19	C18	7/15/1964	8	1	VCP	0.02	-9	265.77	039_1338.tif	1	A-6	VCP	263.31
6398	C20	C19	7/15/1964	8	1	VCP	0.02	-9	286.36	039_1338.tif	1	A-6	VCP	289.52
6354	C21	C31	7/14/1964	8	1	VCP	0.01	-9	336.00	036_1335.tif	1	A-6	VCP	339.10
6445	C22	C21	7/15/1964	8	1	VCP	0.02	-9	401.00	037_1336.tif	1	A-6	VCP	398.95
5929	C31	NOMHID	7/14/1964	-9	1	UNK	-9.00	-9	-9.00	036_1335.tif	1	A-6	UNK	15.30
6915	C31	D25	7/14/1964	8	1	VCP	0.02	-9	151.00	029_1328.tif	1	A-6	VCP	159.84
9822	C32	NOMHID	7/14/1964	8	1	VCP	0.03	-9	231.00	035_1334.tif	1	A-6	VCP	214.10
9823	C33	C32	7/14/1964	8	1	VCP	0.02	-9	318.00	035_1334.tif	1	A-6	VCP	322.53
6434	C35	C37	1/13/1998	8	1	VCP	0.04	-9	346.00	008_6308.tif	1	A-6	VCP	354.29
6435	C37	NOMHID	1/13/1998	8	1	VCP	0.04	-9	346.00	008_6308.tif	1	A-6	VCP	357.12
9802	C40	C39	2/8/1965	8	1	VCP	0.01	-9	386.00	004_1404.tif	1	A-6	VCP	387.80
9801	C41	C40	2/8/1965	8	1	VCP	0.01	-9	386.00	004_1404.tif	1	A-6	VCP	389.85
10777	D10	D5	7/14/1964	8	1	VCP	0.01	-9	222.88	024_1323.tif	1	A-6	VCP	226.25
10776	D11	D10	7/14/1964	8	1	VCP	0.01	-9	222.25	024_1323.tif	1	A-6	VCP	227.06
10806	D12	D11	7/14/1964	8	1	VCP	2.20	-9	298.96	027_1326.tif	1	A-6	VCP	303.35
10805	D13	D12	7/14/1964	8	1	VCP	0.02	-9	283.04	027_1326.tif	1	A-6	VCP	286.79
10804	D14	D13	7/14/1964	8	1	VCP	0.02	-9	341.00	027_1326.tif	1	A-6	VCP	346.31
2014	D15	D14	7/28/1966	8	1	VCP	-9.00	-9	-9.00	049_2251.tif	1	A-6	VCP	68.77
10253	D16	D17	7/14/1964	8	1	VCP	0.00	-9	309.00	030_1329.tif	1	A-6	VCP	313.35
10252	D17	D25	7/14/1964	8	1	VCP	0.00	-9	311.00	030_1329.tif	1	A-6	VCP	315.51
10947	D18	D19	7/14/1964	8	1	VCP	0.01	-9	276.00	028_1327.tif	1	A-6	VCP	278.81
10948	D19	D20	7/14/1964	8	1	VCP	0.01	-9	345.80	028_1327.tif	1	A-6	VCP	349.33
10945	D20	D12	7/14/1964	8	1	VCP	0.01	-9	261.20	028_1327.tif	1	A-6	VCP	265.17
10775	D21	D11	7/14/1964	8	1	VCP	0.01	-9	258.75	024_1323.tif	1	A-6	VCP	263.83
10774	D22	D21	7/14/1964	8	1	VCP	0.01	-9	263.50	024_1323.tif	1	A-6	VCP	266.87
6912	D23	D22	7/14/1964	8	1	VCP	0.02	-9	380.00	029_1328.tif	1	A-6	VCP	389.12
6913	D24	D23	7/14/1964	8	1	VCP	0.02	-9	380.00	029_1328.tif	1	A-6	VCP	379.14
6914	D25	D24	7/14/1964	8	1	VCP	0.01	-9	381.30	029_1328.tif	1	A-6	VCP	385.98
10879	D26	D22	7/14/1964	8	1	VCP	0.01	-9	339.20	025_1324.tif	1	A-6	VCP	343.93
10257	D27	D26	7/14/1964	8	1	VCP	0.01	-9	371.00	031_1330.tif	1	A-6	VCP	375.73
10256	D28	D27	7/14/1964	8	1	VCP	0.02	-9	371.00	031_1330.tif	1	A-6	VCP	375.76
10255	D29	D28	7/14/1964	8	1	VCP	0.02	-9	376.00	031_1330.tif	1	A-6	VCP	379.11
10878	D30	D26	7/14/1964	8	1	VCP	0.01	-9	339.20	025_1324.tif	1	A-6	VCP	343.20
10266	D31	D30	2/21/1964	8	1	VCP	0.01	-9	371.00	032_1331.tif	1	A-6	VCP	378.50
10265	D32	D31	2/21/1964	8	1	VCP	0.02	-9	371.00	032_1331.tif	1	A-6	VCP	372.15
10264	D33	D32	2/21/1964	8	1	VCP	0.02	-9	386.00	032_1331.tif	1	A-6	VCP	389.22
10877	D34	D30	7/14/1964	8	1	VCP	0.01	-9	337.39	025_1324.tif	1	A-6	VCP	340.84
10933	D35	D34	7/14/1964	8	1	VCP	0.01	-9	371.00	033_1332.tif	1	A-6	VCP	375.54
10932	D36	D35	7/14/1964	8	1	VCP	0.02	-9	371.00	033_1332.tif	1	A-6	VCP	374.71
10931	D37	D36	7/14/1964	8	1	VCP	0.02	-9	386.00	033_1332.tif	1	A-6	VCP	390.51
10880	D38	D34	7/14/1964	8	1	VCP	0.01	-9	270.73	025_1324.tif	1	A-6	VCP	274.35
79	D39	D38	7/14/1964	8	1	VCP	0.01		378.00	034_1333.tif	1	A-6		382.00
424	D40	D39	7/14/1964	8	1	VCP	0.02		387.00	034_1333.tif	1	A-6		392.00
425	D41	D40	7/14/1964	8	1	VCP	0.02		414.00	034_1333.tif	1	A-6		418.00
1356	NOMHID	D20	7/14/1964	8	1	UNK	-9.00	-9	-9.00	028_1327.tif	1	A-6	UNK	6.60
2012	NOMHID	NOMHID	7/28/1966	-9	1	UNK	0.01	-9	-9.00	049_2251.tif	1	A-6	UNK	6.77
2013	NOMHID	NOMHID	7/28/1966	-9	1	UNK	0.01	-9	-9.00	049_2251.tif	1	A-6	UNK	66.15
2015	NOMHID	D15	7/28/1966	4	1	VCP	0.02	-9	104.03	049_2251.tif	1	A-6	VCP	103.97
6433	NOMHID	C35	1/13/1998	8	1	VCP	0.04	-9	262.84	008_6308.tif	1	A-6	VCP	249.02
10254	NOMHID	D16	7/14/1964	-9	1	UNK	-9.00	-9	-9.00	030_1329.tif	1	A-6	UNK	5.22
10258	NOMHID	D29	7/14/1964	8	1	VCP	-9.00	-9	-9.00	031_1330.tif	1	A-6	VCP	7.21
10263	NOMHID	D33	2/21/1964	8	1	VCP	-9.00	-9	-9.00	032_1331.tif	1	A-6	VCP	100.07
10827	NOMHID	NOMHID	7/28/1966	-9	1	UNK	0.01	-9	-9.00	049_2251.tif	1	A-6	UNK	74.49
10934	NOMHID	D37	7/14/1964	-9	1	UNK	-9.00	-9	-9.00	033_1332.tif	1	A-6	UNK	6.69

SEWER STRUCTURE					
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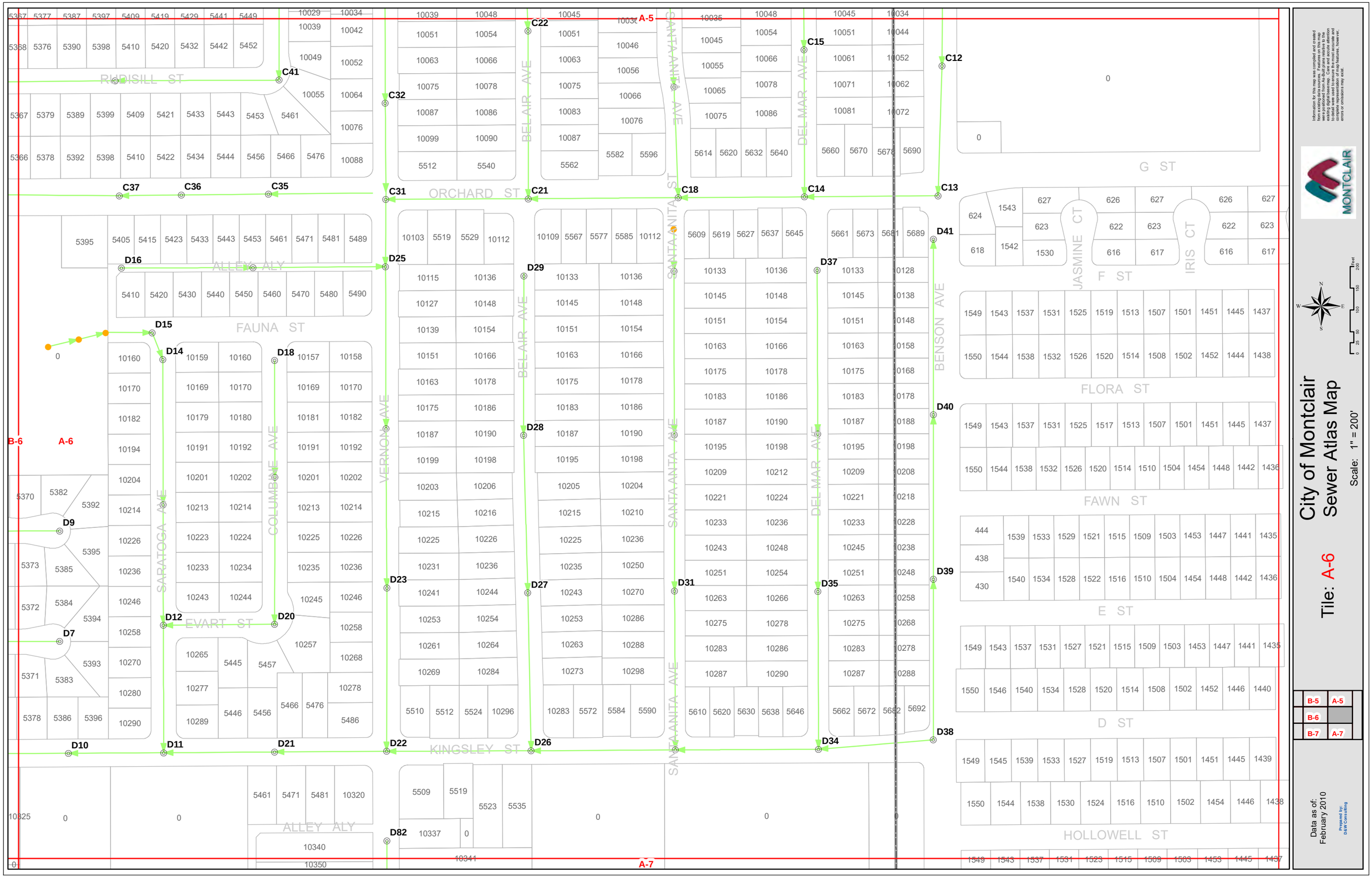
1040	C12	7/21/1964	041_1340.tif	1	A-6
1041	C13	7/21/1964	041_1340.tif	1	A-6
1012	C14	7/14/1964	036_1335.tif	1	A-6
1036	C15	7/15/1964	040_1339.tif	1	A-6
1031	C18	7/15/1964	039_1338.tif	1	A-6
1032	C19	7/15/1964	039_1338.tif	1	A-6
1079	C21	7/15/1964	037_1336.tif	1	A-6
1078	C22	7/15/1964	037_1336.tif	1	A-6
1080	C31	7/14/1964	029_1328.tif	1	A-6
1116	C32	7/14/1964	035_1334.tif	1	A-6
1056	C35	1/13/1998	008_6308.tif	1	A-6
883	C36			1	A-6
1057	C37	1/13/1998	008_6308.tif	1	A-6
1094	C40	2/8/1965	004_1404.tif	1	A-6
1095	C41	2/8/1965	004_1404.tif	1	A-6
1737	D10	7/14/1964	024_1323.tif	1	A-6
1738	D11	7/14/1964	024_1323.tif	1	A-6
1794	D12	7/14/1964	027_1326.tif	1	A-6
1795	D13	7/14/1964	027_1326.tif	1	A-6
1796	D14	7/14/1964	027_1326.tif	1	A-6
1812	D15	7/28/1966	049_2251.tif	1	A-6
1993	D16	7/14/1964	030_1329.tif	1	A-6
1992	D17	7/14/1964	030_1329.tif	1	A-6
1292	D18	7/14/1964	028_1327A.tif	1	A-6
1293	D19	7/14/1964	028_1327A.tif	1	A-6
1291	D20	7/14/1964	028_1327.tif	1	A-6
1739	D21	7/14/1964	024_1323.tif	1	A-6
1740	D22	7/14/1964	024_1323.tif	1	A-6
1655	D23	7/14/1964	029_1328.tif	1	A-6
1654	D24	7/14/1964	029_1328.tif	1	A-6
1653	D25	7/14/1964	029_1328.tif	1	A-6
1888	D26	7/14/1964	025_1324.tif	1	A-6
1995	D27	7/14/1964	031_1330.tif	1	A-6
1996	D28	7/14/1964	031_1330.tif	1	A-6
1267	D29	7/14/1964	031_1330.tif	1	A-6
1887	D30	7/14/1964	025_1324.tif	1	A-6
1271	D31	2/21/1964	032_1331.tif	1	A-6
1272	D32	2/21/1964	032_1331.tif	1	A-6
1273	D33	2/21/1964	032_1331.tif	1	A-6
1886	D34	7/14/1964	025_1324.tif	1	A-6
1279	D35	7/14/1964	033_1332.tif	1	A-6
1280	D36	7/14/1964	033_1332.tif	1	A-6
1281	D37	7/14/1964	033_1332.tif	1	A-6
1885	D38	7/14/1964	025_1324.tif	1	A-6
147	D39	7/14/1964	034_1333.tif	1	A-6
148	D40	7/14/1964	034_1333.tif	1	A-6
149	D41	7/14/1964	034_1333.tif	1	A-6
1769	D7	7/14/1964	026_1325.tif	1	A-6
1797	D82	4/15/1966	028_1428.tif	1	A-6
1772	D9	7/14/1964	026_1325.tif	1	A-6
1274	NOMHID	2/21/1964	032_1331.tif	1	A-6
1813	PRI	7/28/1966	049_2251.tif	1	A-6
1814	PRI	7/28/1966	049_2251.tif	1	A-6
1815	PRI	7/28/1966	049_2251.tif	1	A-6



City of Montclair
Sewer Atlas Map
Tile: A-6
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
RUDISILL ST
ORCHARD ST
FAUNA ST
EVART ST
KINGSLEY ST
ALLEY ALY
G ST
F ST
FLORA ST
FAWN ST
E ST
D ST
HOLLOWELL ST
JASMINE CT
IRIS CT
BENSON AVE
DEL MAR AVE
SANTA ANITA AVE
BELAIR AVE
VERNON AVE
COLUMBINE AVE
SARATOGA AVE
A-5
A-6
A-7
B-5
B-6
B-7

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
5372	Cleanout	D69	3/10/1986	8	1	VCP	0.00		100.00	007_7107.tif	1	A-7		100.00
10497	D50	D49	4/15/1966	8	1	VCP	0.01	-9	103.47	023_1423.tif	1	A-7	VCP	108.16
2130	D51	D50	4/15/1966	-9	1	UNK	-9.00	-9	-9.00	024-1424.tif	1	A-7	UNK	71.39
9610	D52	D51	9/14/1981	8	1	VCP	0.00	-9	260.00	012_2312.tif	1	A-7	VCP	262.87
9609	D53	D52	9/14/1981	8	1	VCP	0.00	-9	252.00	012_2312.tif	1	A-7	VCP	253.56
9608	D54	D53	9/14/1981	8	1	VCP	0.00	-9	257.00	012_2312.tif	1	A-7	VCP	255.89
10820	D55	NOMHID		8	1	VCP	0.00	-9	320.28	013_2313.tif	1	A-7	VCP	323.67
10819	D56	D55		8	1	VCP	0.00	-9	216.00	013_2313.tif	1	A-7	VCP	198.25
995	D56-5	D56	9/11/1981	-9	1	UNK	-9.00	-9	-9.00	026_2326.tif	1	A-7	UNK	40.59
10834	D57	D56-5	9/11/1981	8	1	VCP	0.00	-9	-9.00	026_2326.tif	1	A-7	VCP	238.05
59	D58	D59	8/6/1979	6	1	VCP	0.01		332.00	015_2315.tif	1	A-7	VCP	337.11
60	D59	D60	8/6/1979	6	1	VCP	0.02		182.00	015_2315.tif	1	A-7	VCP	184.87
2429	D60	D54	4/14/1981	8	1	VCP	0.01	-9	198.00	013_2313.tif	1	A-7	VCP	202.32
10923	D61	NOMHID	8/6/1979	8	1	VCP	0.02	-9	194.00	014_2314.tif	1	A-7	VCP	202.10
10921	D62	D61	8/6/1979	8	1	VCP	0.02	-9	260.28	014_2314.tif	1	A-7	VCP	262.34
10924	D63	D62	8/6/1979	8	1	VCP	0.01	-9	333.40	014_2314.tif	1	A-7	VCP	329.31
10796	D65	D51	4/15/1966	8	1	VCP	0.02	-9	371.00	024-1424.tif	1	A-7	VCP	376.45
10795	D66	D65	4/15/1966	8	1	VCP	0.00	-9	205.02	024-1424.tif	1	A-7	VCP	207.34
3192	D67	NOMHID	3/1/1985	8	1	UNK	-9.00	-9	-9.00	048_2449.tif	1	A-7	UNK	8.88
3252	D68	D67	9/30/1989	8	1	VCP	-9.00	-9	-9.00	048_2449.tif	1	A-7	VCP	409.63
5371	D69	D63	3/10/1986	8	1	PL	0.00		314.10	007_7107.tif	1	A-7		318.10
10883	D69	D67	4/15/1966	8	1	VCP	0.00	-9	-9.00	025_1425.tif	1	A-7	VCP	133.63
10882	D70	D69	4/15/1966	8	1	VCP	0.00	-9	369.15	025_1425.tif	1	A-7	VCP	373.73
10937	D71	D70	4/15/1966	8	1	VCP	0.00	-9	422.85	026_1426.tif	1	A-7	VCP	427.08
10936	D72	D71	4/15/1966	8	1	VCP	0.01	-9	446.00	026_1426.tif	1	A-7	VCP	448.97
10935	D73	D72	4/15/1966	8	1	VCP	0.01	-9	418.76	026_1426.tif	1	A-7	VCP	423.68
10809	D74	D70	4/15/1966	8	1	VCP	0.01	-9	413.26	028_1428.tif	1	A-7	VCP	420.33
6910	D75	D74	9/12/1966	8	1	VCP	0.01	-9	339.58	029_1429.tif	1	A-7	VCP	340.25
6909	D76	D75	9/12/1966	8	1	VCP	0.01	-9	443.30	029_1429.tif	1	A-7	VCP	449.73
6908	D77	D76	9/12/1966	8	1	VCP	0.01	-9	343.28	029_1429.tif	1	A-7	VCP	345.72
10944	D78	D73	4/15/1966	8	1	VCP	0.01	-9	432.00	027_1427.tif	1	A-7	VCP	436.27
10943	D79	D78	4/15/1966	8	1	VCP	0.02	-9	443.00	027_1427.tif	1	A-7	VCP	448.04
10808	D80	D74	4/15/1966	8	1	VCP	0.02	-9	333.12	028_1428.tif	1	A-7	VCP	336.72
10793	D81	D80	4/15/1966	8	1	VCP	0.01	-9	268.00	024_1424.tif	1	A-7	VCP	285.14
10807	D82	D80	4/15/1966	8	1	VCP	0.02	-9	274.62	028_1428.tif	1	A-7	VCP	277.53
502	NOMHID	NOMHID	9/30/1989	8	1	VCP	-9.00	-9	-9.00	035_7135.tif	1	A-7	VCP	7.65
697	NOMHID	D68	9/30/1989	8	1	VCP	0.03	-9	-9.00	035_7135.tif	1	A-7	VCP	269.43
1787	NOMHID	D66	4/15/1966	8	1	UNK	-9.00	-9	-9.00	025_1425.tif	1	A-7	UNK	7.46
3251	NOMHID	NOMHID	9/30/1989	8	1	VCP	0.03	-9	-9.00	035_7135.tif	1	A-7	VCP	5.00
9607	NOMHID	D54	9/14/1981	8	1	VCP	0.00	-9	336.00	012_2312.tif	1	A-7	VCP	340.65
10794	NOMHID	D81	4/15/1966	8	1	VCP	-9.00	-9	-9.00	024_1424.tif	1	A-7	VCP	9.38
10884	NOMHID	D66	4/15/1966	8	1	VCP	0.00	-9	-9.00	025_1425.tif	1	A-7	VCP	257.38
10922	NOMHID	D60	8/6/1979	8	1	VCP	0.00	-9	196.44	014_2314.tif	1	A-7	VCP	200.28

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1748	D50	4/15/1966	024_1424.tif	1	A-7
1746	D51	4/15/1966	024_1424.tif	1	A-7
1684	D52	9/14/1981	012_2312.tif	1	A-7
1685	D53	9/14/1981	012_2312.tif	1	A-7
1686	D54	9/14/1981	012_2312.tif	1	A-7
1687	D55	9/14/1981	012_2312.tif	1	A-7
1807	D56		013_2313.tif	1	A-7
1835	D56-5	9/11/1981	026_2326.tif	1	A-7
1834	D57	9/11/1981	026_2326.tif	1	A-7
89	D58	8/6/1979	015_2315.tif	1	A-7
90	D59	8/6/1979	015_2315.tif	1	A-7
1960	D60	8/6/1979	014_2314.tif	1	A-7
1959	D61	8/6/1979	014_2314.tif	1	A-7
1958	D61-5	8/6/1979	014_2314.tif	1	A-7
1957	D62	8/6/1979	014_2314.tif	1	A-7
1961	D63	8/6/1979	014_2314.tif	1	A-7
1747	D65	4/15/1966	024_1424.tif	1	A-7
1889	D66	4/15/1966	025_1425.tif	1	A-7
1509	D67	9/30/1989	035_7135.tif	1	A-7
1508	D68	9/30/1989	035_7135.tif	1	A-7
1890	D69	4/15/1966	025_1425.tif	1	A-7
2180	D69	3/10/1986	007_7107.tif	1	A-7
1891	D70	4/15/1966	025_1425.tif	1	A-7
1285	D71	4/15/1966	026_1426.tif	1	A-7
1284	D72	4/15/1966	026_1426.tif	1	A-7
1283	D73	4/15/1966	026_1426.tif	1	A-7
1650	D74	9/12/1966	029_1429.tif	1	A-7
1649	D75	9/12/1966	029_1429.tif	1	A-7
1648	D76	9/12/1966	029_1429.tif	1	A-7
1647	D77	9/12/1966	029_1429.tif	1	A-7
1289	D78	4/15/1966	027_1427.tif	1	A-7
1290	D79	4/15/1966	027_1427.tif	1	A-7
1798	D80	4/15/1966	028_1428.tif	1	A-7
1745	D81	4/15/1966	024_1424.tif	1	A-7
1511	NOMHID	9/30/1989	035_7135.tif	1	A-7
2181	UNK-26	3/10/1986	007_7107.tif	1	A-7

A-6
B-7 A-7
B-8
A-8
ALLEY ALY
ROSE AVE
VERNON AVE
BENSON AVE
BANDERA ST
HOLT BLVD
VESTA ST
STONERIDGE CT
BROOKS ST
S.P.R.R. RR
D49 D50 D51 D52 D53 D54 D55 D56 D56-5 D57 D58 D59 D60 D61 D61-5 D62 D63 D65 D66 D67 D68 D69 D70 D71 D72 D73 D74 D75 D76 D77 D78 D79 D80 D81
10325 10340 10341 10350 10360 10361 10370 10380 10385 10390 10395 10398 10402 10407 10412 10417 10422 10431 10433 10441 10448 10458 10475 10562 10580 10598
0 5334 5361 5365 5369 5373 5377 5391 5399 5407 5420 5430 5431 5436 5438 5460 5461 5462 5467 5470 5490 5499 5507 5510 5514 5515 5520 5521 5525 5530 5533 5540 5549 5550 5555 5560 5566 5569 5577 5585 5587 5589 5610 5615 5630 5639 5640 5650 5657 5660 5688 5695
5515 5525 5533 5541 5526 5538 5554 5536 5548 5554 5562 5570 5578 5588 5598 5612 5624 5636 5648 5654 5666 5678 5686 5533 5555 5567 5577 5587 5597 5609 5621 5633 5645 5651 5663 5675 5683 10358 10368 10376 10386
1549 1543 1537 1531 1523 1515 1509 1503 1453 1445 1437 1550 1544 1538 1530 1524 1516 1510 1502 1450 1444 1436
1549 1543 1535 1529 1521 1515 1505 1455 1449 1441 260 1554 1546 1536 1530 1522 1516 1508 1454 1448 1444
120 1535 1527 1521 1513 1505 1455 1445 1433 0 1542 1538 1528 1520 1512 1512 1502 1448 1442
0 1511 1515 1524 1454 1440
0 1541 1525 1445 1445 1445

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
3791	NOMHID	T7		6	1	UNK	-9.00	-9	-9.00	011_6311.tif	1	A-8	UNK	8.46
3792	NOMHID	T5		6	1	UNK	-9.00	-9	-9.00	011_6311.tif	1	A-8	UNK	8.14
10076	T1	T2	5/8/1996	8	1	VCP	0.04	-9	296.00	012_6312.tif	1	A-8	VCP	239.83
10080	T10	T11	5/8/1996	8	1	VCP	0.04	-9	-9.00	012_6312.tif	1	A-8	VCP	241.47
10081	T11	T12	5/8/1996	8	1	VCP	0.04	-9	-9.00	012_6312.tif	1	A-8	VCP	302.24
10082	T12	T13	5/8/1996	8	1	VCP	-9.00	-9	-9.00	012_6312.tif	1	A-8	VCP	329.38
10083	T13	T14	5/8/1996	8	1	VCP	-9.00	-9	-9.00	012_6312.tif	1	A-8	VCP	326.35
9139	T14	T15		8	1	VCP	0.00	-9	251.19	011_6311.tif	1	A-8	VCP	255.11
9140	T15	T16		8	1	VCP	0.00	-9	346.00	011_6311.tif	1	A-8	VCP	350.84
10148	T16	T17		8	1	VCP	0.00	-9	336.00	011_6311.tif	1	A-8	VCP	339.71
10077	T2	T3	5/8/1996	8	1	VCP	0.04	-9	290.00	012_6312.tif	1	A-8	VCP	292.94
10078	T3	T4	5/8/1996	8	1	VCP	0.04	-9	396.00	012_6312.tif	1	A-8	VCP	341.32
10079	T4	T5	5/8/1996	8	1	VCP	0.04	-9	396.00	012_6312.tif	1	A-8	VCP	328.20
9135	T5	T6		8	1	VCP	0.00	-9	319.20	011_6311.tif	1	A-8	VCP	321.73
9136	T6	T7		8	1	VCP	0.00	-9	336.00	011_6311.tif	1	A-8	VCP	343.02
9137	T7	T8		8	1	VCP	0.00	-9	290.00	011_6311.tif	1	A-8	VCP	291.06

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
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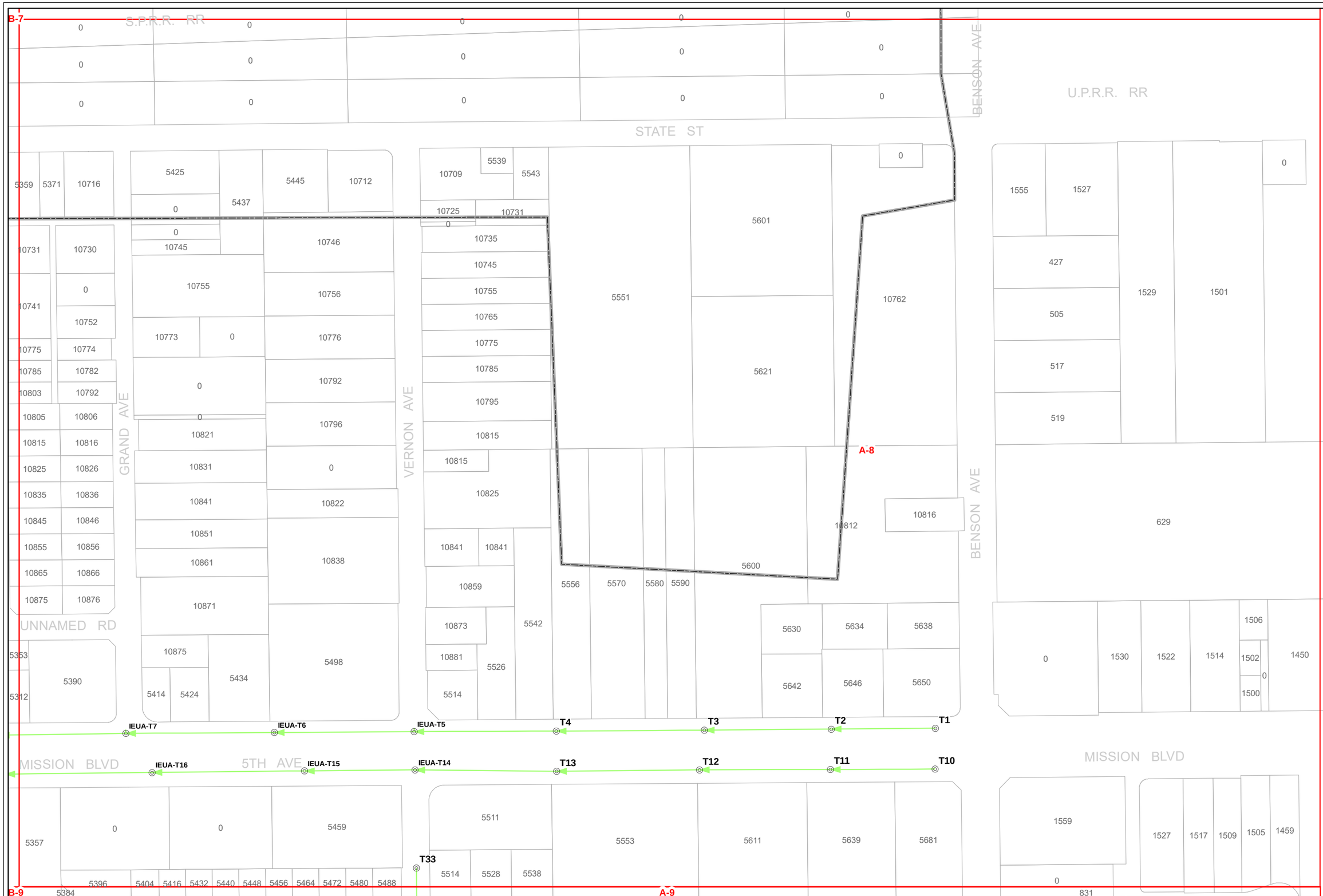
1188	T10	5/8/1986	012_6312.tif	1	A-8
1187	T11	5/8/1986	012_6312.tif	1	A-8
1186	T12	5/8/1986	012_6312.tif	1	A-8
1185	T13	5/8/1986	012_6312.tif	1	A-8
1357	T14		011_6311.tif	1	A-8
1358	T15		011_6311.tif	1	A-8
1360	T16		011_6311.tif	1	A-8
1191	T2	5/8/1986	012_6312.tif	1	A-8
1190	T3	5/8/1986	012_6312.tif	1	A-8
1255	T33	8/30/2002	200232.tif	1	A-8
1189	T4	5/8/1986	012_6312.tif	1	A-8
1356	T5		011_6311.tif	1	A-8
1359	T6		011_6311.tif	1	A-8
1361	T7		011_6311.tif	1	A-8



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MONTCLAIR

City of Montclair
Sewer Atlas Map

Scale: 1" = 200'

Tile: A-8

B-7	A-7
B-8	
B-9	A-9

Data as of: February 2010

Prepared by: D&W Consulting

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
514	NOMHID	T30	1/15/1998	8	1	UNK	-9.00	-9	-9.00	009_6309.tif	1	A-9	UNK	8.11
3	T26	T25	5/8/1996	8	1	VCP	0.04		346.00	008_6308.TIF	1	A-9	VCP	347.83
2	T27	T26	5/8/1996	8	1	VCP	0.04		346.00	008_6308.TIF	1	A-9	VCP	349.04
1	T28	T27	5/8/1996	8	1	VCP	0.04		261.04	008_6308.TIF	1	A-9	VCP	262.71
10178	T29	T28	1/15/1998	8	1	VCP	0.00	-9	-9.00	009_6309.tif	1	A-9	VCP	227.47
10177	T30	T29	1/15/1998	8	1	VCP	0.00	-9	346.00	009_6309.tif	1	A-9	VCP	231.57
10176	T31	T30	1/15/1998	8	1	VCP	0.00	-9	346.00	009_6309.tif	1	A-9	VCP	350.79
10175	T32	T31	1/15/1998	8	1	VCP	0.00	-9	346.00	009_6309.tif	1	A-9	VCP	349.98
3389	T33	T34	3/31/2006	8	1	VCP	0.01	-9	195.85	200232.tif	1	A-9	VCP	207.06
3388	T34	T42	3/31/2006	8	1	VCP	0.01	-9	356.76	200232.tif	1	A-9	VCP	354.14
10380	T35	T36	3/31/2006	8	1	VCP	0.00	-9	206.00	200233.tif	1	A-9	VCP	210.02
10381	T36	T37	3/31/2006	8	1	VCP	0.00	-9	212.65	200233.tif	1	A-9	VCP	216.37
10354	T37	T39	8/30/2002	8	1	VCP	0.00	-9	172.51	200235.tif	1	A-9	VCP	175.83
10382	T38	T37	3/31/2006	8	1	VCP	0.00	-9	180.26	200233.tif	1	A-9	VCP	185.13
10355	T39	T40	8/30/2002	8	1	VCP	0.00	-9	196.00	200235.tif	1	A-9	VCP	200.12
10341	T40	T41	3/31/2006	8	1	VCP	0.00	-9	234.32	200234.tif	1	A-9	VCP	238.50
10340	T41	T42	3/31/2006	8	1	VCP	0.00	-9	234.33	200234.tif	1	A-9	VCP	238.48
3387	T42	T43	3/31/2006	8	1	VCP	0.01	-9	341.00	200232.tif	1	A-9	VCP	350.66
3386	T43	T28	3/31/2006	8	1	VCP	0.01	-9	166.27	200232.tif	1	A-9	VCP	165.06

SEWER STRUCTURE					
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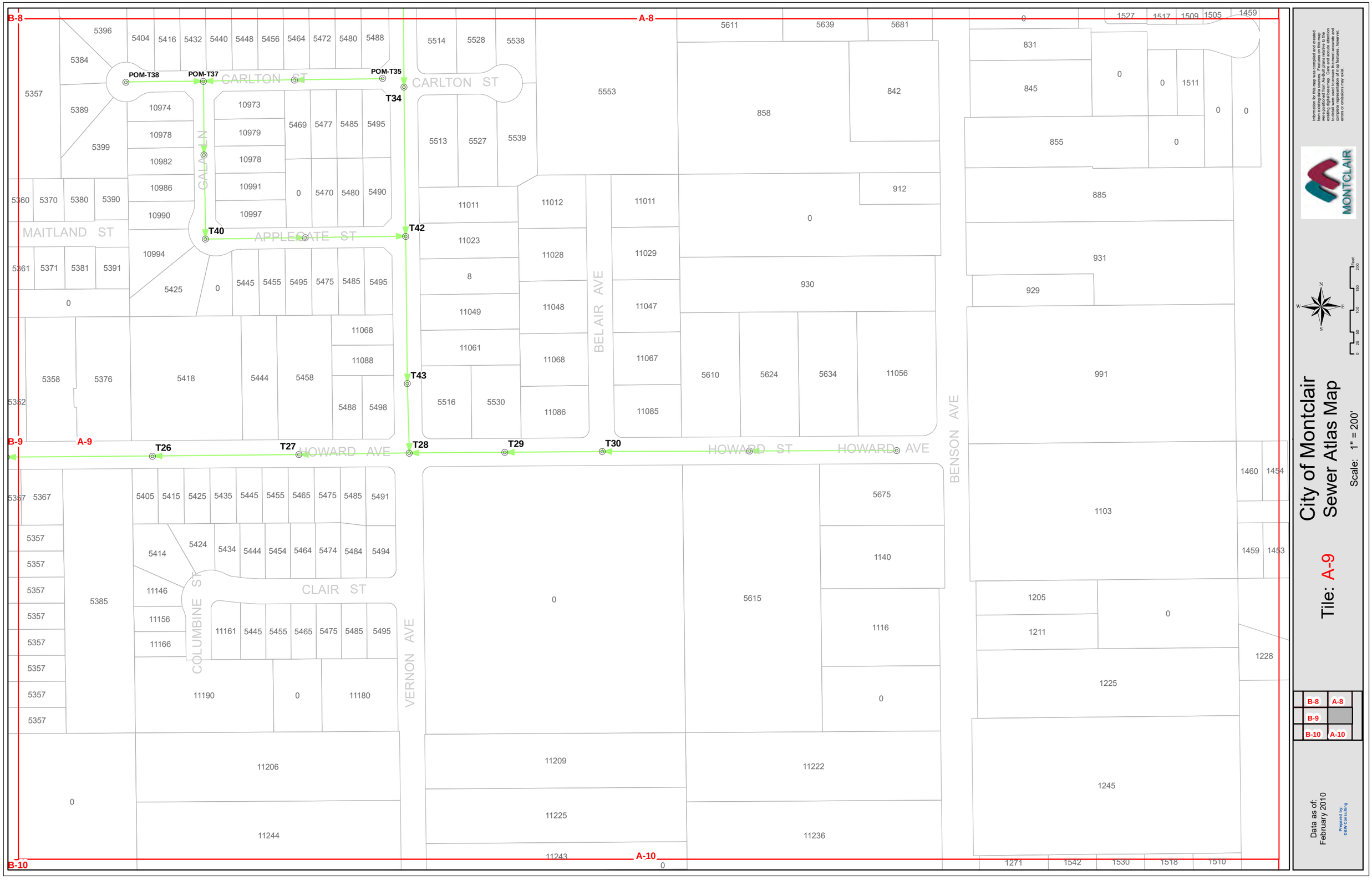
84	T26	5/8/1996	008_6308.tif	1	A-9
83	T27	5/8/1996	008_6308.tif	1	A-9
1394	T28	1/15/1998	009_6309.tif	1	A-9
1393	T29	1/15/1998	009_6309.tif	1	A-9
1392	T30	1/15/1998	009_6309.tif	1	A-9
1391	T31	1/15/1998	009_6309.tif	1	A-9
1390	T32	1/15/1998	009_6309.tif	1	A-9
1254	T34	3/31/2006	200232.tif	1	A-9
1257	T35	3/31/2006	200233.tif	1	A-9
1258	T36	3/31/2006	200233.tif	1	A-9
1259	T37	3/31/2006	200233.tif	1	A-9
1260	T38	3/31/2006	200233.tif	1	A-9
1263	T39	8/30/2002	200235.tif	1	A-9
1261	T40	3/31/2006	200234.tif	1	A-9
1262	T41	3/31/2006	200234.tif	1	A-9
1253	T42	3/31/2006	200232.tif	1	A-9
1252	T43	8/30/2002	200232.tif	1	A-9



City of Montclair
Sewer Atlas Map
Tile: A-9
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
B-8
A-8
B-9
B-10
A-10
CARLTON ST
MAITLAND ST
APPLEGATE ST
GALA LN
BELAIR AVE
HOWARD AVE
HOWARD ST
BENSON AVE
CLAIR ST
COLUMBINE ST
VERNON AVE
POM-T38
POM-T37
POM-T35
T34
T40
T42
T43
T26
T27
T28
T29
T30

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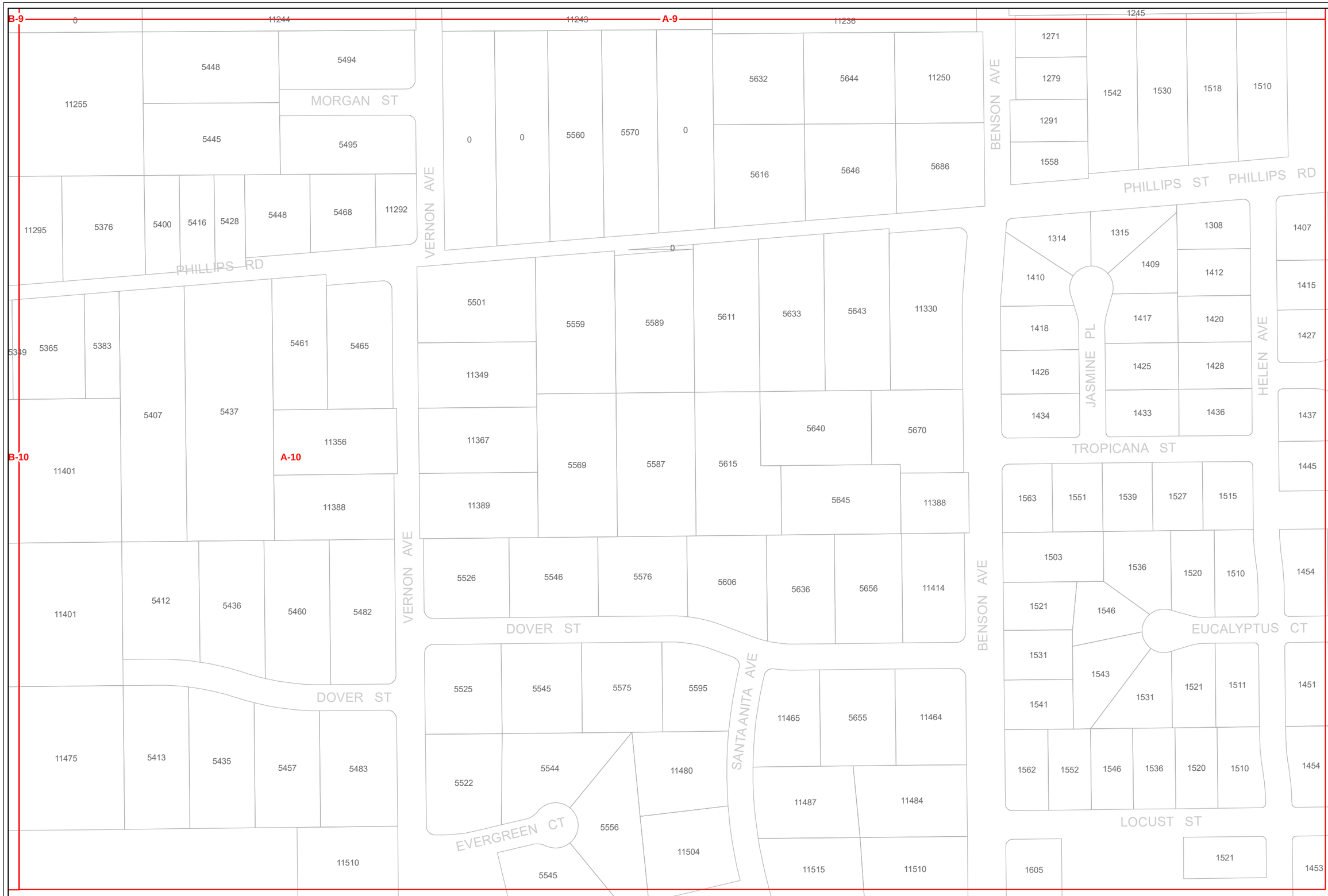

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MONTCLAIR

City of Montclair
Sewer Atlas Map

Scale: 1" = 200'

Tile: A-10

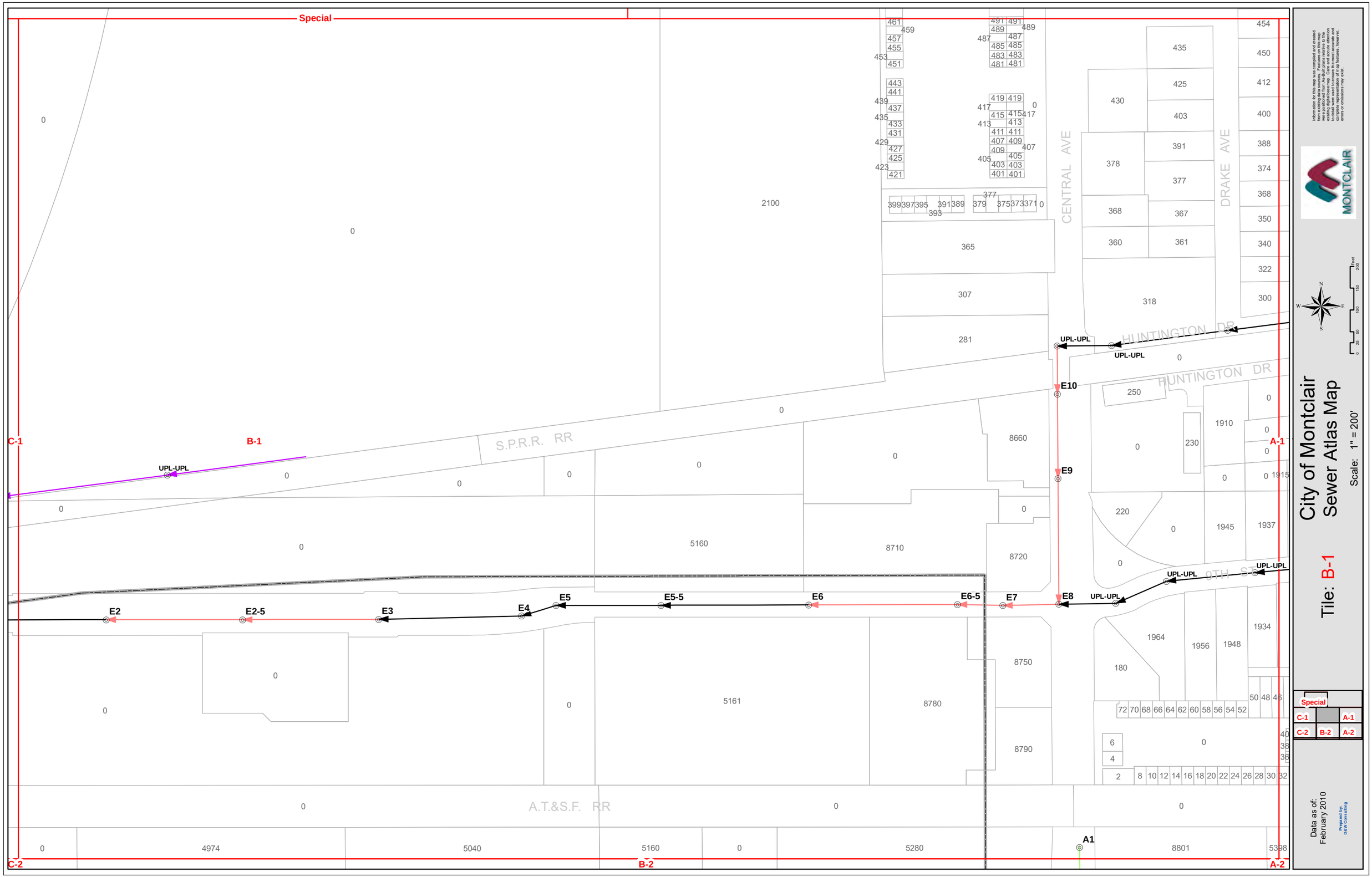
B-9	A-9
B-10	

Data as of: February 2010

Prepared by: D&W Consulting

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
6265	E10	E9	9/12/1984	10	1	VCP	0.02	-9	318.71	OTHERS_003.tif	2	B-1	VCP	201.78
10975	E2	E1	6/22/1994	8	1	VCP	0.02	-9	-9.00	200012.tif	2	B-1	VCP	320.05
10987	E2-5	E2	6/22/1994	8	1	VCP	0.00	-9	321.00	200012.tif	2	B-1	VCP	324.58
10988	E3	E2-5	11/21/1995	8	1	VCP	0.00	-9	-9.00	200008.tif	2	B-1	VCP	324.15
10989	E4	E3	11/21/1995	8	1	VCP	0.01	-9	335.47	200009.tif	2	B-1	VCP	340.23
7169	E5	E4	3/6/1979	8	1	VCP	-9.00	-9	-9.00	036_2336.tif	2	B-1	VCP	85.88
629	E5-5	E5	3/6/1979	8	1	VCP	0.00	-9	247.06	036_2336.tif	2	B-1	VCP	249.86
7170	E6	E5-5	3/6/1979	8	1	VCP	0.00	-9	346.00	037_2337.tif	2	B-1	VCP	351.48
7171	E6-5	E6	3/6/1979	8	1	VCP	0.00	-9	346.00	037_2337.tif	2	B-1	VCP	353.99
6263	E7	E6-5	9/12/1984	8	1	VCP	0.13	-9	104.00	OTHERS_003.tif	2	B-1	VCP	108.03
6262	E8	E7	9/12/1984	8	1	VCP	0.01	-9	133.48	OTHERS_003.tif	2	B-1	VCP	133.49
5296	E9	E8	9/12/1984	10	1	VCP	0.01	-9	296.00	OTHERS_003.tif	2	B-1	VCP	299.00
5289	NOMHID	NOMHID	9/12/1984	8	1	VCP	0.00	-9	125.88	OTHERS_004.tif	UPL	B-1	VCP	129.09
5290	NOMHID	NOMHID	9/12/1984	8	1	VCP	0.01	-9	376.28	OTHERS_004.tif	UPL	B-1	VCP	279.15
6016	NOMHID	A1	7/20/1966	8	1	VCP	-9.00	-9	-9.00	023_2223.tif	1	B-1	VCP	4.56
6264	NOMHID	E10	9/12/1984	10	1	VCP	0.01	-9	313.71	OTHERS_003.tif	2	B-1	VCP	113.71
7088	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0001.tif	3	B-1	VCP	399.74
7089	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0001.tif	3	B-1	VCP	334.12
11072	NOMHID	NOMHID		6	1	VCP	0.01		208.00	sheet_file SHEET2 (1).pdf	UPL	B-1	VCP	211.64
11073	NOMHID	NOMHID		6	1	VCP	0.01		127.76	sheet_file SHEET2 (1).pdf	UPL	B-1	VCP	131.54
11074	NOMHID	E8		6	1	VCP	0.01		129.47	sheet_file SHEET2 (1).pdf	UPL	B-1	VCP	135.43

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
15	1		sheet_file SHEET2 (1).pdf	2	B-1
16	2		sheet_file SHEET2 (1).pdf	2	B-1
17	3		sheet_file SHEET2 (1).pdf	2	B-1
605	61	7/3/1989	MORENO & MILLS_0001.tif	3	B-1
958	74	9/12/1984	OTHERS_004.tif	2	B-1
959	75	9/12/1984	OTHERS_004.tif	2	B-1
960	76	9/12/1984	OTHERS_004.tif	2	B-1
889	A1	7/20/1966	023_2223.tif	1	B-1
955	E10	9/12/1984	OTHERS_003.tif	2	B-1
2032	E2	6/22/1994	200012.tif	2	B-1
2031	E2-5	6/22/1994	200012.tif	2	B-1
2030	E3	11/21/1995	200009.tif	2	B-1
2029	E4	11/21/1995	200009.tif	2	B-1
2069	E5	3/6/1979	036_2336.tif	2	B-1
2068	E5-5	3/6/1979	037_2337.tif	2	B-1
2067	E6	3/6/1979	037_2337.tif	2	B-1
952	E6-5	9/12/1984	OTHERS_003.tif	2	B-1
953	E7	9/12/1984	OTHERS_003.tif	2	B-1
954	E8	9/12/1984	OTHERS_003.tif	2	B-1
956	E9	9/12/1984	OTHERS_003.tif	2	B-1



City of Montclair
Sewer Atlas Map

Scale: 1" = 200'

Tile: B-1

Data as of: February 2010

Prepared by: D&W Consulting

Information for this map was compiled and created from existing data sources. Features on this map were positioned from As-Built plans relative to the existing digital basemap. Care and accurate attention to detail were used to ensure the most accurate and complete representation of map features, however, errors or omissions may exist.

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9774	A1	A2	7/20/1966	8	1	VCP	0.02	-9	446.00	023_2223.tif	1	B-2	VCP	446.46
7174	A10	A27	7/20/1966	8	1	VCP	0.02	-9	423.70	019_2219.tif	1	B-2	VCP	424.91
6125	A11	NOMHID	12/16/1965	8	1	VCP	-9.00	-9	-9.00	020_2220.tif	1	B-2	VCP	5.39
11019	A11	A10	12/16/1965	8	1	VCP	0.01	-9	391.01	020_2220.tif	1	B-2	VCP	395.69
9749	A12	A11	12/16/1965	8	1	VCP	0.03	-9	421.00	020_2220.tif	1	B-2	VCP	424.68
7176	A2	A9	7/20/1966	8	1	VCP	0.03	-9	396.00	019_2219.tif	1	B-2	VCP	400.37
9006	A25	A26		8	1	VCP	0.00	-9	321.00	016_2216.tif	1	B-2	VCP	325.03
9007	A26	NOMHID		8	1	VCP	0.01	-9	181.00	016_2216.tif	1	B-2	VCP	184.17
7173	A27	A28	7/20/1966	8	1	VCP	0.04	-9	219.50	019_2219.tif	1	B-2	VCP	229.98
8962	A28	A33	10/16/1963	10	1	VCP	0.02	-9	392.23	030_1130.tif	1	B-2	VCP	393.34
9748	A3	A12	12/16/1965	8	1	VCP	0.02	-9	232.27	020_2220.tif	1	B-2	VCP	236.27
9751	A4	A3	2/20/1966	8	1	VCP	0.00	-9	436.00	021_2221.tif	1	B-2	VCP	438.16
7175	A9	A10	7/20/1966	8	1	VCP	0.03	-9	278.95	019_2219.tif	1	B-2	VCP	281.68
10983	E15	E14	4/22/1968	8	1	VCP	0.02	-9	361.00	037_2237.tif	2	B-2	VCP	360.42
10984	E16	E15	4/22/1968	8	1	VCP	0.01	-9	361.00	037_2237.tif	2	B-2	VCP	365.63
10985	E17	E16	4/22/1968	8	1	VCP	0.01	-9	361.00	037_2237.tif	2	B-2	VCP	365.25
7164	E28	E21	4/22/1968	4	1	VCP	0.01	-9	394.50	032_2232.tif	2	B-2	VCP	399.20
634	E29	NOMHID	4/22/1968	8	1	VCP	0.01	-9	-9.00	032_2232.tif	2	B-2	VCP	219.08
7167	E30	E29	4/22/1968	8	1	VCP	0.02	-9	281.41	033_2233.tif	2	B-2	VCP	286.40
7168	E31	E30	4/22/1968	8	1	VCP	0.03	-9	315.59	033_2233.tif	2	B-2	VCP	318.86
7180	E32	E30	4/22/1968	8	1	VCP	0.01	-9	256.02	034_2234.tif	2	B-2	VCP	259.23
7181	E33	E32	4/22/1968	8	1	VCP	0.03	-9	310.98	034_2234.tif	2	B-2	VCP	314.46
7165	E34	E29	4/22/1968	8	1	VCP	0.01	-9	247.66	032_2232.tif	2	B-2	VCP	251.69
7166	E35	E34	4/22/1968	8	1	VCP	0.01	-9	238.63	032_2232.tif	2	B-2	VCP	241.24
10980	E36	E35	4/22/1968	8	1	VCP	0.02	-9	346.00	035_2235.tif	2	B-2	VCP	352.13
7182	E37	E36	4/22/1968	8	1	VCP	0.03	-9	308.29	035_2235.tif	2	B-2	VCP	310.45
10979	E37-5	NOMHID	4/22/1968	8	1	VCP	0.00	-9	-9.00	036_2236.tif	2	B-2	VCP	180.92
7183	E38	E37	4/22/1968	8	1	VCP	0.03	-9	353.71	035_2235.tif	2	B-2	VCP	359.28
7184	E39	E38	4/22/1968	8	1	VCP	0.03	-9	340.98	035_2235.tif	2	B-2	VCP	345.96
885	E40	E39	4/22/1968	8	1	VCP	0.00	-9	211.00	038_2238.tif	2	B-2	VCP	216.53
10986	E41	E40	4/22/1968	8	1	VCP	0.00	-9	220.00	038_2238.tif	2	B-2	VCP	228.97
7185	E42	E42-5	4/22/1968	8	1	VCP	0.00	-9	324.00	036_2236.tif	2	B-2	VCP	142.01
11018	E42-5	E37-5	4/22/1968	8	1	VCP	0.00	-9	-9.00	036_2236.tif	2	B-2	VCP	166.37
5951	E43	E43-5	2/21/2003	8	1	VCP	0.06	-9	66.00	200127.tif	2	B-2	VCP	64.89
5950	E43-5	E42-5	2/21/2003	8	1	CDI	0.01	-9	173.00	200127.tif	2	B-2	CDI	170.00
616	NOMHID	A2	7/20/1966	8	1	VCP	-9.00	-9	-9.00	019_2219.tif	1	B-2	VCP	6.08
617	NOMHID	A2	7/20/1966	8	1	VCP	-9.00	-9	-9.00	019_2219.tif	1	B-2	VCP	7.04
618	NOMHID	A9	7/20/1966	8	1	VCP	-9.00	-9	-9.00	019_2219.tif	1	B-2	VCP	6.17
619	NOMHID	A10	7/20/1966	8	1	VCP	-9.00	-9	-9.00	019_2219.tif	1	B-2	VCP	5.54
620	NOMHID	A27	7/20/1966	8	1	VCP	-9.00	-9	-9.00	019_2219.tif	1	B-2	VCP	4.32
621	NOMHID	NOMHID	2/29/1968	6	1	VCP	0.01	-9	-9.00	008_2408.tif	1	B-2	VCP	100.44
622	NOMHID	NOMHID	2/29/1968	6	1	VCP	0.01	-9	-9.00	008_2408.tif	1	B-2	VCP	101.30
623	NOMHID	NOMHID	2/29/1968	6	1	VCP	0.01	-9	-9.00	008_2408.tif	1	B-2	VCP	100.45
624	NOMHID	NOMHID	2/29/1968	6	1	VCP	-9.00	-9	-9.00	008_2408.tif	1	B-2	VCP	4.79
630	NOMHID	E31	4/22/1968	8	1	VCP	-9.00	-9	-9.00	033_2233.tif	2	B-2	VCP	8.00
633	NOMHID	E35	4/22/1968	8	1	VCP	-9.00	-9	-9.00	032_2232.tif	2	B-2	VCP	5.41
821	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.08	-9	-9.00	021_7121.tif	2	B-2	VCP	63.96
822	NOMHID	NOMHID	12/31/1989	8	1	VCP	-9.00	-9	-9.00	021_7121.tif	2	B-2	VCP	7.64
823	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.01	-9	-9.00	021_7121.tif	2	B-2	VCP	99.66
880	NOMHID	E41	4/22/1968	8	1	VCP	-9.00	-9	-9.00	038_2238.tif	2	B-2	VCP	7.54
881	NOMHID	E41	4/22/1968	8	1	VCP	-9.00	-9	-9.00	038_2238.tif	2	B-2	VCP	6.01
882	NOMHID	E40	4/22/1968	8	1	VCP	-9.00	-9	-9.00	038_2238.tif	2	B-2	VCP	6.91
886	NOMHID	E39	4/22/1968	8	1	VCP	-9.00	-9	-9.00	038_2238.tif	2	B-2	VCP	6.77
888	NOMHID	E17	4/22/1968	8	1	VCP	-9.00	-9	-9.00	037_2237.tif	2	B-2	VCP	6.80
889	NOMHID	E42	4/22/1968	8	1	VCP	-9.00	-9	-9.00	036_2236.tif	2	B-2	VCP	5.50
890	NOMHID	E42	4/22/1968	6	1	VCP	-9.00	-9	-9.00	036_2236.tif	2	B-2	VCP	5.54
891	NOMHID	E37-5	4/22/1968	8	1	VCP	-9.00	-9	-9.00	036_2236.tif	2	B-2	VCP	5.93
4822	NOMHID	NOMHID	1/3/1994	6	1	VCP	0.02	-9	-9.00	049_2450.tif	1	B-2	VCP	94.18
4823	NOMHID	NOMHID	1/3/1994	6	1	VCP	-9.00	-9	-9.00	049_2450.tif	1	B-2	VCP	43.00
4824	NOMHID	NOMHID	1/3/1994	6	1	VCP	0.04	-9	-9.00	049_2450.tif	1	B-2	VCP	85.77
4825	NOMHID	NOMHID	1/3/1994	6	1	VCP	0.02	-9	-9.00	049_2450.tif	1	B-2	VCP	87.91
4826	NOMHID	NOMHID	1/3/1994	6	1	VCP	-9.00	-9	-9.00	049_2450.tif	1	B-2	VCP	98.77
8871	NOMHID	A28		8	1	VCP	0.01	-9	122.00	016_2216.tif	1	B-2	VCP	122.72
7090	NOMHID	NOMHID	1/3/1994	4	1	VCP	0.02	-9	-9.00	049_2450.tif	1	B-2	VCP	99.25
7091	NOMHID	NOMHID	1/3/1994	4	1	VCP	0.02	-9	-9.00	049_2450.tif	1	B-2	VCP	81.97
7092	NOMHID	NOMHID	1/3/1994	6	1	VCP	0.04	-9	-9.00	049_2450.tif	1	B-2	VCP	55.38
7163	NOMHID	A28	2/29/1968	6	1	VCP	0.01	-9	-9.00	008_2408.tif	1	B-2	VCP	160.61
7172	NOMHID	NOMHID	2/29/1968	6	1	VCP	0.01	-9	-9.00	008_2408.tif	1	B-2	VCP	100.44
9752	NOMHID	NOMHID	2/20/1966	8	1	VCP	0.01	-9	-9.00	021_2221.tif	1	B-2	VCP	17.65
10995	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.01	-9	-9.00	021_7121.tif	2	B-2	VCP	90.21
10996	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.01	-9	-9.00	021_7121.tif	2	B-2	VCP	99.27
10997	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.01	-9	-9.00	021_7121.tif	2	B-2	VCP	104.96
10998	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.01	-9	-9.00	021_7121.tif	2	B-2	VCP	107.80

SEWER STRUCTURE					
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866	A11	12/16/1965	020_2220.tif	1	B-2
865	A12	12/16/1965	020_2220.tif	1	B-2
2056	A2	7/20/1966	019_2219.tif	1	B-2
182	A26		016_2216.tif	1	B-2
2059	A27	7/20/1966	019_2219.tif	1	B-2
2060	A28	7/20/1966	019_2219.tif	1	B-2
864	A3	12/16/1965	020_2220.tif	1	B-2
2057	A9	7/20/1966	019_2219.tif	1	B-2
2039	E15	4/22/1968	037_2237.tif	2	B-2
2038	E16	4/22/1968	037_2237.tif	2	B-2
2037	E17	4/22/1968	037_2237.tif	2	B-2
2081	E28	4/22/1968	032_2232.tif	2	B-2
2080	E29	4/22/1968	032_2232.tif	2	B-2
2051	E30	4/22/1968	034_2234.tif	2	B-2
2070	E31	4/22/1968	033_2233.tif	2	B-2
2050	E32	4/22/1968	034_2234.tif	2	B-2
2049	E33	4/22/1968	034_2234.tif	2	B-2
2072	E34	4/22/1968	032_2232.tif	2	B-2
2071	E35	4/22/1968	032_2232.tif	2	B-2
2048	E36	4/22/1968	035_2235.tif	2	B-2
2047	E37	4/22/1968	035_2235.tif	2	B-2
2042	E37-5	4/22/1968	036_2236.tif	2	B-2
2046	E38	4/22/1968	035_2235.tif	2	B-2
2036	E39	4/22/1968	038_2238.tif	2	B-2
2035	E40	4/22/1968	038_2238.tif	2	B-2
2034	E41	4/22/1968	038_2238.tif	2	B-2
2041	E42	4/22/1968	036_2236.tif	2	B-2
2111	E42-5	2/21/2003	200127.tif	2	B-2
987	E43	2/21/2003	200127.tif	2	B-2
986	E43-5	2/21/2003	200127.tif	2	B-2
2184	E44			2	B-2
604	NOMHID	1/3/1994	049_2450.tif	1	B-2
869	NOMHID	2/20/1966	021_2221.tif	1	B-2
2061	NOMHID	2/29/1968	008_2408.tif	1	B-2
2062	NOMHID	2/29/1968	008_2408.tif	1	B-2
2063	NOMHID	2/29/1968	008_2408.tif	1	B-2
2064	NOMHID	2/29/1968	008_2408.tif	1	B-2
2065	NOMHID	2/29/1968	008_2408.tif	1	B-2
2066	NOMHID	2/29/1968	008_2408.tif	1	B-2
2086	NOMHID	12/31/1989	021_7121.tif	2	B-2
2087	NOMHID	12/31/1989	021_7121.tif	2	B-2
2088	NOMHID	12/31/1989	021_7121.tif	2	B-2
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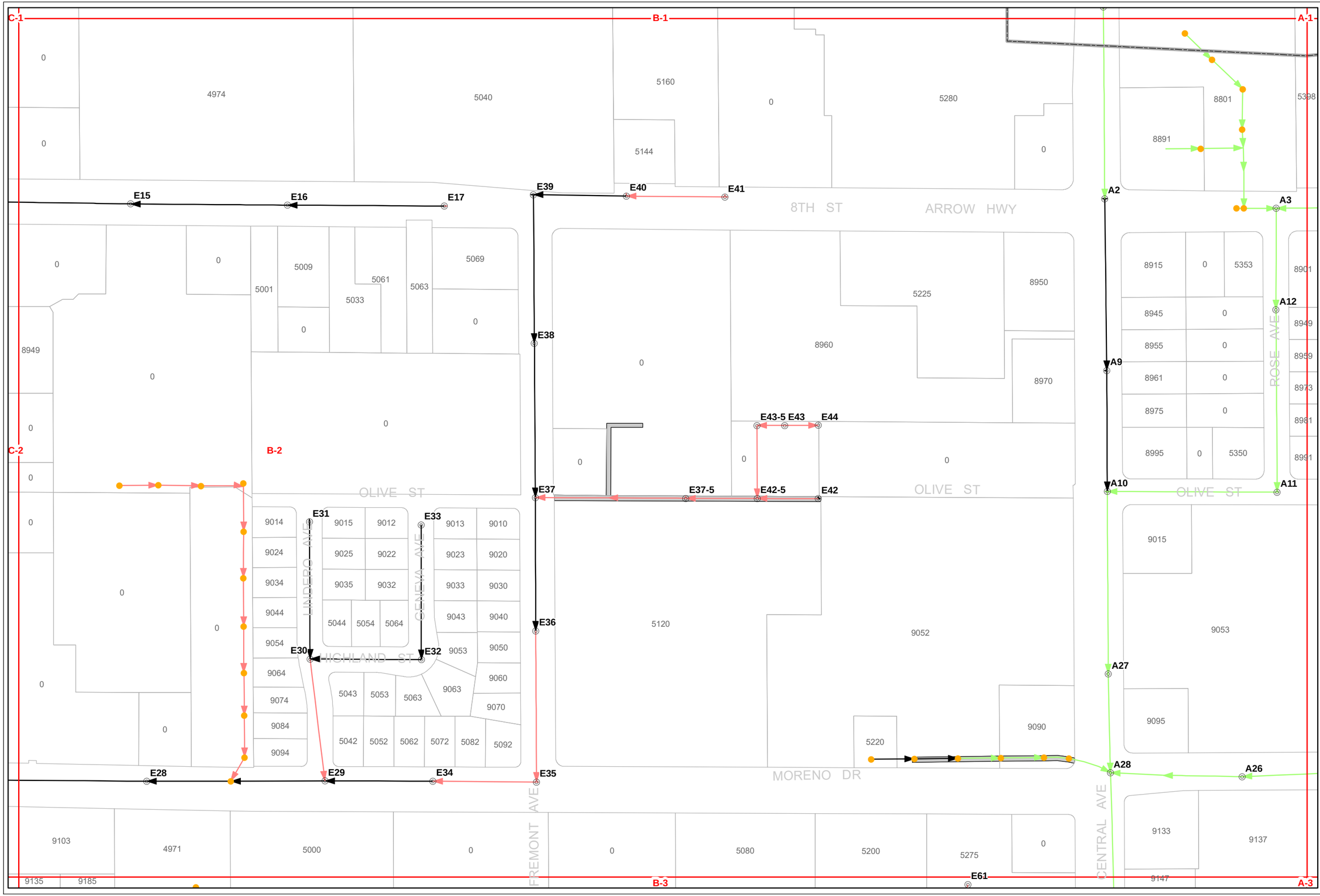
597	PRI	1/3/1994	049_2450.tif	1	B-2
598	PRI	1/3/1994	049_2450.tif	1	B-2
599	PRI	1/3/1994	049_2450.tif	1	B-2
601	PRI	1/3/1994	049_2450.tif	1	B-2
603	PRI	1/3/1994	049_2450.tif	1	B-2


City of Montclair
Sewer Atlas Map
Tile: B-2
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
8TH ST
ARROW HWY
OLIVE ST
HIGHLAND ST
MORENO DR
LINDERO AVE
GENEVA AVE
FREMONT AVE
CENTRAL AVE
ROSE AVE
C-1
B-1
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C-2
B-2
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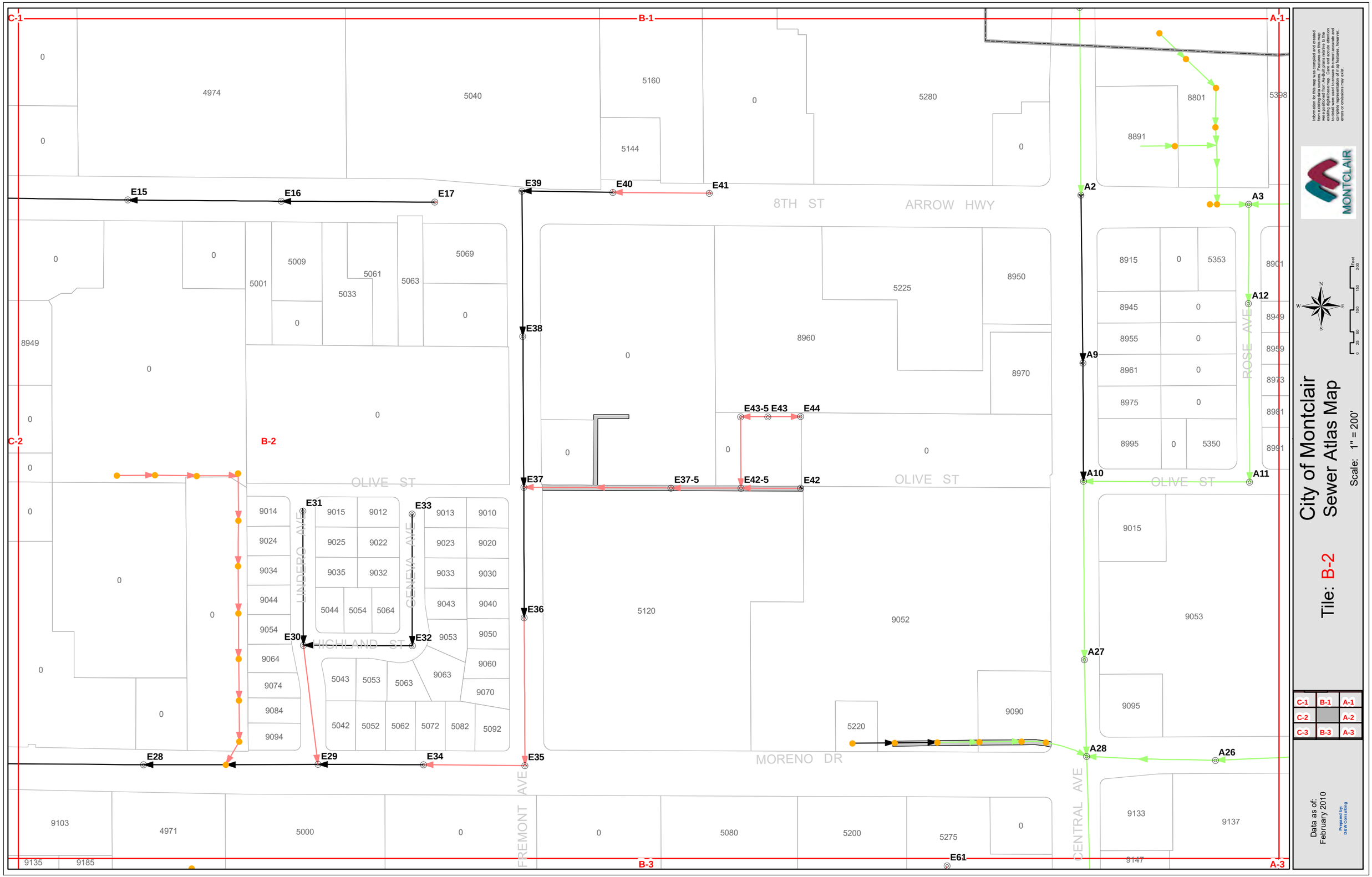
SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
10999	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.01	-9	-9.00	021_7121.tif	2	B-2	VCP	112.44
11000	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.00	-9	-9.00	021_7121.tif	2	B-2	VCP	109.01
11001	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.04	-9	-9.00	021_7121.tif	2	B-2	VCP	99.41
11002	NOMHID	NOMHID	12/31/1989	8	1	VCP	0.04	-9	-9.00	021_7121.tif	2	B-2	VCP	96.96
11003	NOMHID	E28	4/22/1968	8	1	VCP	0.01	-9	-9.00	032_2232.tif	2	B-2	VCP	195.92
11020	NOMHID	A3	2/20/1966	8	1	VCP	0.01	-9	90.00	021_2221.tif	1	B-2	VCP	75.16
11022	NOMHID	E37	4/22/1968	8	1	VCP	0.00	-9	-9.00	036_2236.tif	2	B-2	VCP	169.59
6083				8	1	VCP	0.00		0.00		2	B-2		77.54

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID


City of Montclair
Sewer Atlas Map
Tile: B-2
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
8TH ST
ARROW HWY
OLIVE ST
HIGHLAND ST
MORENO DR
LINDERO AVE
GENEVA AVE
FREMONT AVE
CENTRAL AVE
ROSE AVE
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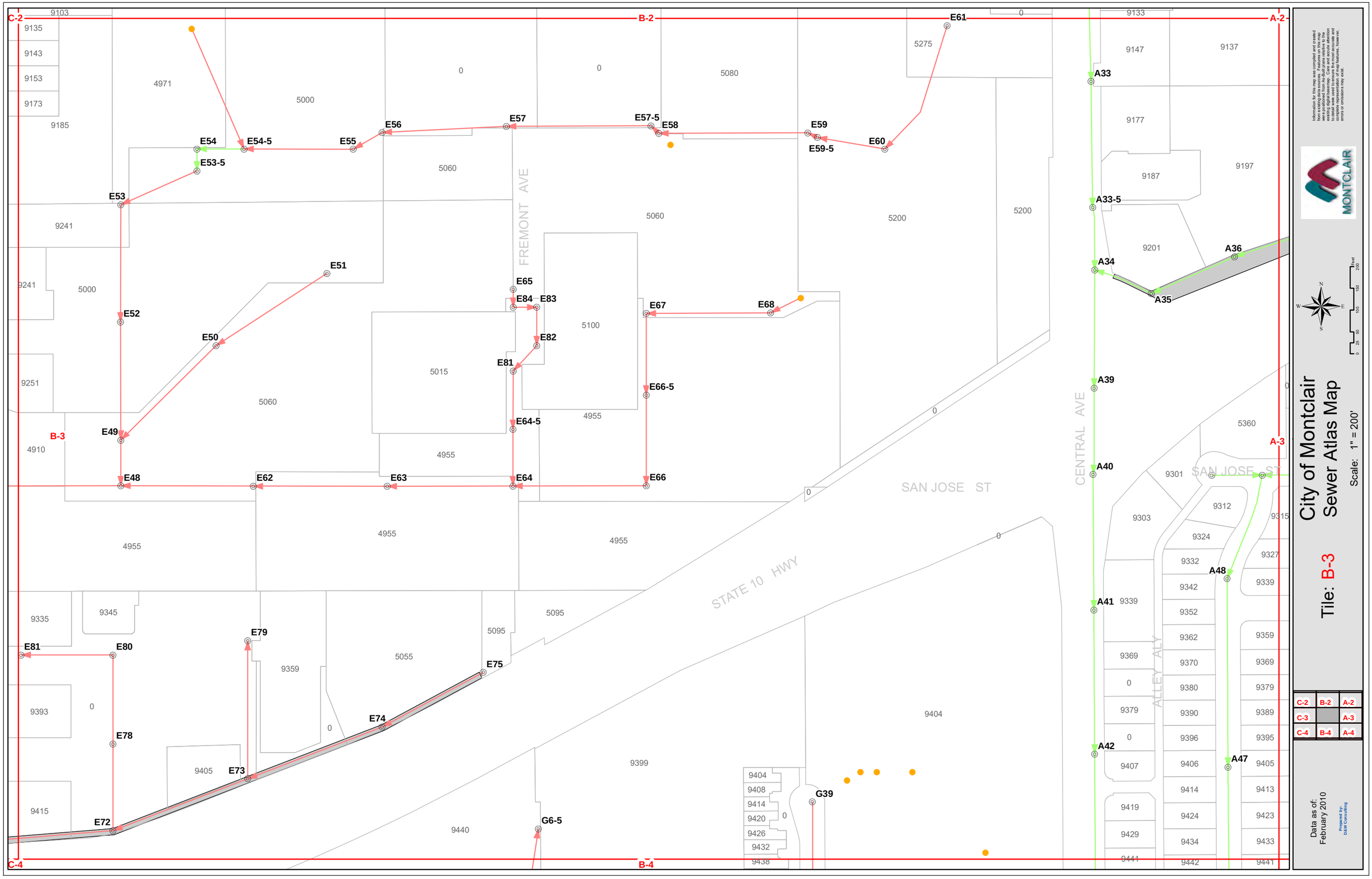
SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
8961	A33	A33-5	10/16/1963	10	1	VCP	0.02	-9	297.15	030_1130.tif	1	B-3	VCP	299.99
9628	A33-5	A34	7/22/1997	10	1	VCP	0.06	-9	143.50	002_6302.tif	1	B-3	VCP	148.84
6958	A34	A39	7/22/1997	10	1	VCP	0.01	-9	279.00	002_6302.tif	1	B-3	VCP	280.93
9755	A35	A34		8	1	VCP	0.00	-9	181.44	021_2421.tif	1	B-3	VCP	146.53
9758	A36	A35		8	1	VCP	0.02	-9	205.45	021_2421.tif	1	B-3	VCP	216.47
9629	A39	A40	7/22/1997	10	1	VCP	0.01	-9	196.00	002_6302.tif	1	B-3	VCP	206.25
9787	A40	A41		10	1	VCP	0.03	-9	318.06	029_1129.tif	1	B-3	VCP	322.01
6258	A41	A42		10	1	VCP	0.02	-9	346.00	029_1129.tif	1	B-3	VCP	343.36
9788	A42	A43		10	1	VCP	0.02	-9	346.00	029_1129.tif	1	B-3	VCP	351.70
9348	A48	A47	9/1/1965	8	1	VCP	0.02	-9	442.50	049_1448.tif	1	B-3	VCP	448.26
9347	A49	A48	9/1/1965	8	1	VCP	0.02	-9	255.36	049_1448.tif	1	B-3	VCP	261.15
11069	E48	E47	3/30/1967	8	1	VCP	0.01		334.42	Plaza Utility 1.tif	2	B-3	VCP	343.64
11068	E49	E48	3/30/1967	8	1	VCP	0.02		106.00	Plaza Utility 1.tif	2	B-3	VCP	108.89
11066	E50	E49	3/30/1967	8	1	VCP	0.06		311.94	Plaza Utility 1.tif	2	B-3	VCP	319.29
11065	E51	E50	3/30/1967	8	1	VCP	0.06		307.88	Plaza Utility 1.tif	2	B-3	VCP	315.20
11059	E53	E52	3/30/1967	8	1	VCP	0.06		277.12	Plaza Utility 5.tif	2	B-3	VCP	278.63
11058	E53-5	E53	3/30/1967	8	1	VCP	0.01		0.00	Plaza Utility 5.tif	2	B-3	VCP	198.83
412	E54	E53-5	3/19/1997	8	1	VCP	0.01		47.74	013_6318.tif	1	B-3	VCP	51.84
411	E54-5	E54	3/19/1997	8	1	VCP	0.01		108.13	013_6318.tif	1	B-3	VCP	111.82
11057	E55	E54-5	3/30/1967	8	1	VCP	0.06		270.00	Plaza Utility 5.tif	2	B-3	VCP	260.22
11056	E56	E55	3/30/1967	8	1	VCP	0.06		82.49	Plaza Utility 5.tif	2	B-3	VCP	79.23
11055	E57	E56	3/30/1967	8	1	VCP	0.06		291.27	Plaza Utility 2.tif	2	B-3	VCP	296.27
568	E57-5	E57	3/30/1967	8	1	VCP	0.06		337.00	Plaza Utility 2.tif	2	B-3	VCP	344.62
565	E58	E57-5	3/27/1986	8	1	VCP	0.00		19.80	016_7116.tif	2	B-3	VCP	25.51
413	E59	NOMHID	3/27/1986	8	1	VCP	0.01		21.25	016_7116.tif	2	B-3	VCP	25.51
11128	E62	E48	3/30/1967	8	1	VCP	0.02		308.52	Plaza Utility 1.tif	2	B-3	VCP	315.79
11070	E63	E62	3/30/1967	8	1	VCP	0.06		308.52	Plaza Utility 1.tif	2	B-3	VCP	318.62
11064	E64	E63	3/30/1967	8	1	VCP	0.06		308.53	Plaza Utility 6.tif	2	B-3	VCP	298.92
11063	E66	E64	3/30/1967	8	1	VCP	0.06		333.00	Plaza Utility 6.tif	2	B-3	VCP	317.66
11061	E66-5	E66	3/30/1967	8	1	VCP	0.03		222.00	Plaza Utility 6.tif	2	B-3	VCP	215.67
11053	E67	E66-5	3/30/1967	8	1	VCP	0.02		204.00	Plaza Utility 6.tif	2	B-3	VCP	194.03
580	E68	E67	3/30/1967	8	1	VCP	0.06		310.00	Plaza Utility 6.tif	2	B-3	VCP	295.74
9261	E72	E70	4/5/1977	8	1	VCP	0.02	-9	321.97	030_2330.tif	2	B-3	VCP	332.69
9260	E73	E72	4/5/1977	8	1	VCP	0.01	-9	338.91	030_2330.tif	2	B-3	VCP	343.36
9259	E74	E73	4/5/1977	8	1	VCP	0.01	-9	339.41	030_2330.tif	2	B-3	VCP	343.00
9258	E75	E74	4/5/1977	8	1	VCP	0.01	-9	268.77	030_2330.tif	2	B-3	VCP	273.54
11062	E81	E64	3/30/1967	8	1	VCP	0.04		188.00	Plaza Utility 6.tif	2	B-3	VCP	134.38
414	NOMHID	E58	3/27/1986	10	1	CDI	0.01		355.13	016_7116.tif	2	B-3	CDI	354.86
571	NOMHID	NOMHID	3/30/1967	8	1	VCP	0.03		345.75	Plaza Utility 2.tif	2	B-3	VCP	337.48
573	NOMHID	NOMHID	3/30/1967	8	1	VCP	0.00		0.00	Plaza Utility 2.tif	2	B-3	VCP	162.68
574	NOMHID	NOMHID	12/3/1984	8	1	VCP	0.02		0.00	015_7115.tif	2	B-3	VCP	42.72
575	NOMHID	NOMHID	12/3/1984	8	1	VCP	0.01		42.93	015_7115.tif	2	B-3	VCP	56.28
576	NOMHID	NOMHID	12/3/1984	8	1	VCP	0.01		73.00	015_7115.tif	2	B-3	VCP	91.54
577	NOMHID	NOMHID	12/3/1984	8	1	VCP	0.01		62.36	015_7115.tif	2	B-3	VCP	82.52
578	NOMHID	NOMHID	12/3/1984	8	1	VCP	0.02		0.00	015_7115.tif	2	B-3	VCP	139.01
579	NOMHID	E68	3/30/1967	8	1	VCP	0.06		82.30	Plaza Utility 6.tif	2	B-3	VCP	80.30
6082	NOMHID	A36		8	1	VCP	-9.00	-9	-9.00	021_2421.tif	1	B-3	VCP	4.73
4819	NOMHID	A49	4/15/1966	6	1	VCP	0.08	-9	42.00	050_1449.tif	1	B-3	VCP	120.26
11060	NOMHID	E54-5	3/30/1967	8	1	VCP	0.02		321.86	Plaza Utility 5.tif	2	B-3	VCP	312.52
11067	NOMHID	E49	3/30/1967	8	1	VCP	0.03		277.00	Plaza Utility 1.tif	2	B-3	VCP	281.29
6084					1		0.00		0.00		2	B-3		329.02
6085					1		0.00		0.00		2	B-3		636.96
6086					1		0.00		0.00		2	B-3		126.98

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
153	A33	10/16/1963	030_1130.tif	1	B-3
747	A33-5	7/22/1997	002_6302.tif	1	B-3
748	A34	7/22/1997	002_6302.tif	1	B-3
871	A35		021_2421.tif	1	B-3
870	A36		021_2421.tif	1	B-3
749	A39	7/22/1997	002_6302.tif	1	B-3
934	A40		029_1129.tif	1	B-3
935	A41		029_1129.tif	1	B-3
936	A42		029_1129.tif	1	B-3
436	A47	9/1/1965	049_1448.tif	1	B-3
435	A48	9/1/1965	049_1448.tif	1	B-3
559	A49	4/15/1966	050_1449.tif	1	B-3
558	A49-5	6/12/2007	San Jose St.01.TIF	1	B-3
27	E48	3/30/1967	Plaza Utility 1.tif	2	B-3
28	E49	3/30/1967	Plaza Utility 1.tif	2	B-3
31	E50	3/30/1967	Plaza Utility 1.tif	2	B-3
30	E51	3/30/1967	Plaza Utility 1.tif	2	B-3
29	E52	3/30/1967	Plaza Utility 1.tif	2	B-3
8	E53	3/30/1967	Plaza Utility 5.tif	2	B-3
93	E53-5	3/19/1997	013_6318.tif	2	B-3
92	E54	3/19/1997	013_6318.tif	2	B-3
91	E54-5	3/19/1997	013_6318.tif	2	B-3
7	E55	3/30/1967	Plaza Utility 5.tif	2	B-3
6	E56	3/30/1967	Plaza Utility 5.tif	2	B-3
161	E57	3/30/1967	Plaza Utility 4.tif	2	B-3
94	E57-5	3/27/1986	016_7116.tif	2	B-3
95	E58	3/27/1986	016_7116.tif	2	B-3
96	E59	3/27/1986	016_7116.tif	2	B-3
97	E59-5	3/27/1986	016_7116.tif	2	B-3
162	E60	3/30/1967	Plaza Utility 2.tif	2	B-3
5	E61	3/30/1967	Plaza Utility 2.tif	2	B-3
33	E62	3/30/1967	Plaza Utility 1.tif	2	B-3
32	E63	3/30/1967	Plaza Utility 1.tif	2	B-3
12	E64	3/30/1967	Plaza Utility 6.tif	2	B-3
1	E64-5	12/3/1984	015_7115.tif	2	B-3
1926	E65	12/3/1984	015_7115.tif	2	B-3
11	E66	3/30/1967	Plaza Utility 6.tif	2	B-3
4	E66-5	3/30/1967	Plaza Utility 6.tif	2	B-3
2	E67	3/30/1967	Plaza Utility 6.tif	2	B-3
3	E68	3/30/1967	Plaza Utility 6.tif	2	B-3
374	E72	4/5/1977	030_2330.tif	2	B-3
375	E73	4/5/1977	030_2330.tif	2	B-3
376	E74	4/5/1977	030_2330.tif	2	B-3
377	E75	4/5/1977	030_2330.tif	2	B-3
2185	E78			2	B-3
2188	E79			2	B-3
2186	E80			2	B-3
132	E81	12/3/1984	015_7115.tif	2	B-3
2187	E81			2	B-3
1946	E82	12/3/1984	015_7115.tif	2	B-3
1945	E83	12/3/1984	015_7115.tif	2	B-3
1927	E84	12/3/1984	015_7115.tif	2	B-3
458	G39		011_2311.tif	2	B-3
2191	G6-5			2	B-3
9	NOMHID	3/30/1967	Plaza Utility 5.tif	2	B-3
10	NOMHID	3/30/1967	Plaza Utility 6.tif	2	B-3
160	NOMHID	3/27/1986	016_7116.tif	2	B-3
98	UNK-1		costco.tif	2	B-3
1329	UNK-14		costco.tif	2	B-3
1330	UNK-15		costco.tif	2	B-3
99	UNK-2		costco.tif	2	B-3
100	UNK-3		costco.tif	2	B-3


City of Montclair
Sewer Atlas Map
Tile: B-3
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
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CENTRAL AVE
SAN JOSE ST
STATE 10 HWY
ALLEY ALY
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SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9789	A43	A43-5		10	1	VCP	0.01	-9	336.29	029_1129.tif	1	B-4	VCP	343.05
5346	A43-5	A44		10	1	VCP	0.35	-9	9.00	029_1129.tif	1	B-4	VCP	10.09
9420	A44	G36	10/16/1963	10	1	VCP	0.01	-9	207.00	028_1128.tif	2	B-4	VCP	210.91
9428	A45	A44	4/15/1966	8	1	VCP	-9.00	-9	-9.00	035_1434.tif	1	B-4	VCP	325.02
9350	A46	A45	9/1/1965	8	1	VCP	0.01	-9	181.00	049_1448.tif	1	B-4	VCP	186.18
9349	A47	A46	9/1/1965	8	1	UNK	0.02	-9	446.00	049_1448.tif	1	B-4	UNK	447.87
9241	B1	B16	4/15/1966	8	1	VCP	0.01	-9	-9.00	037_1436.tif	1	B-4	VCP	352.49
9240	B16	B17	4/15/1966	8	1	VCP	0.02	-9	353.50	037_1436.tif	1	B-4	VCP	357.02
9236	B17	B39	2/9/1965	8	1	VCP	0.02	-9	374.44	012_1412.tif	1	B-4	VCP	379.43
9303	B18	B49	2/9/1965	8	1	VCP	0.01	-9	330.00	013_1413.tif	1	B-4	VCP	329.67
9179	B2	B1	4/15/1966	8	1	VCP	0.01	-9	415.91	038_1437.tif	1	B-4	VCP	410.93
8013	B3	B2	4/15/1966	8	1	VCP	0.01	-9	60.30	038_1437.tif	1	B-4	VCP	64.66
9251	B6	B3	4/15/1966	8	1	VCP	0.01	-9	261.80	038_1437.tif	1	B-4	VCP	266.39
9318	G11	G10	1/17/1963	12	1	VCP	0.01	-9	446.00	025_1125.tif	2	B-4	VCP	450.87
9317	G12	G11	1/17/1963	12	1	VCP	0.01	-9	446.00	025_1125.tif	2	B-4	VCP	450.77
9316	G13	G12	1/17/1963	12	1	VCP	0.01	-9	416.86	025_1125.tif	2	B-4	VCP	424.44
9410	G14	G13	8/26/1964	8	1	VCP	0.02	-9	318.60	049_1348.tif	2	B-4	VCP	322.27
9409	G15	G14	8/26/1964	8	1	VCP	0.02	-9	331.00	049_1348.tif	2	B-4	VCP	339.61
9408	G16	G15	8/26/1964	8	1	VCP	0.02	-9	331.00	049_1348.tif	2	B-4	VCP	335.26
9407	G17	G16	8/26/1964	8	1	VCP	0.02	-9	286.90	049_1348.tif	2	B-4	VCP	291.53
4815	G18	G14	8/26/1964	8	1	VCP	0.01	-9	335.08	050_1349.tif	2	B-4	VCP	339.36
9277	G19	G18	8/26/1964	8	1	VCP	0.02	-9	331.00	051_1350.tif	2	B-4	VCP	336.97
9276	G20	G19	8/26/1964	8	1	VCP	0.02	-9	331.00	051_1350.tif	2	B-4	VCP	335.30
9275	G21	G20	8/26/1964	8	1	VCP	0.02	-9	326.80	051_1350.tif	2	B-4	VCP	329.97
9286	G22	G71	8/26/1964	8	1	VCP	0.02	-9	358.00	052_1351.tif	2	B-4	VCP	359.11
9285	G23	G22	8/26/1964	8	1	VCP	0.02	-9	358.00	052_1351.tif	2	B-4	VCP	365.43
9290	G24	G23	8/26/1964	8	1	VCP	0.01	-9	272.00	053_1352.tif	2	B-4	VCP	275.56
9282	G25	G23	8/26/1964	8	1	VCP	0.03	-9	214.00	052_1351.tif	2	B-4	VCP	218.31
9461	G26	G71	8/26/1964	8	1	VCP	0.01	-9	278.50	050_1349.tif	2	B-4	VCP	282.57
9289	G27	G26	8/26/1964	8	1	VCP	0.02	-9	304.31	053_1352.tif	2	B-4	VCP	309.11
9288	G28	G27	8/26/1964	8	1	VCP	0.02	-9	313.00	053_1352.tif	2	B-4	VCP	318.06
9332	G29	G13	10/16/1963	12	1	VCP	0.01	-9	350.14	026_1126.tif	2	B-4	VCP	350.26
9418	G3	G2	4/22/1968	8	1	VCP	0.01	-9	391.00	026_2226.tif	2	B-4	VCP	392.12
9331	G30	G29	10/16/1963	12	1	VCP	0.01	-9	332.97	026_1126.tif	2	B-4	VCP	336.93
9330	G31	G30	10/16/1963	12	1	VCP	0.01	-9	290.60	026_1126.tif	2	B-4	VCP	294.84
7656	G32	G31	10/16/1963	-9	1	UNK	-9.00	-9	-9.00	026_1126.tif	2	B-4	UNK	190.29
9521	G33	G32	10/16/1963	10	1	VCP	0.02	-9	213.20	027_1127.tif	2	B-4	VCP	215.37
9525	G34	G33	10/16/1963	10	1	VCP	1.80	-9	333.33	1127.tif	2	B-4	VCP	341.67
9524	G35	G34	10/16/1963	10	1	VCP	0.01	-9	346.00	1127.tif	2	B-4	VCP	352.55
9523	G36	G35	10/16/1963	10	1	VCP	0.01	-9	280.86	1127.tif	2	B-4	VCP	285.92
9492	G37	G36	10/17/1963	8	1	VCP	0.00	-9	456.84	031_2331.tif	2	B-4	VCP	461.43
9366	G38	G37		8	1	VCP	-9.00	-9	-9.00	011_2311.tif	2	B-4	VCP	199.05
9367	G39	G38		8	1	VCP	-9.00	-9	-9.00	011_2311.tif	2	B-4	VCP	394.57
9417	G4	G3	4/22/1968	8	1	VCP	0.01	-9	391.00	026_2226.tif	2	B-4	VCP	395.28
8912	G5	G73	9/27/1982	8	1	VCP	-9.00	-9	-9.00	035_2436.tif	2	B-4	VCP	39.35
8913	G6	G5	9/27/1982	8	1	VCP	-9.00	-9	130.74	035_2436.tif	2	B-4	VCP	138.74
8914	G6	NOMHID	9/27/1982	8	1	VCP	-9.00	-9	-9.00	035_2436.tif	2	B-4	VCP	361.15
9061	G60	G59	3/31/1964	8	1	VCP	0.01	-9	337.00	047_1346.tif	2	B-4	VCP	341.92
9462	G71	G18	8/26/1964	8	1	VCP	0.01	-9	340.11	050_1349.tif	2	B-4	VCP	343.21
9416	G73	G4	4/22/1968	8	1	VCP	0.01	-9	-9.00	026_2226.tif	2	B-4	VCP	392.77
4278	NOMHID	NOMHID	5/6/1985	-9	1	UNK	-9.00	-9	-9.00	020_7120.tif	2	B-4	UNK	54.92
4287	NOMHID	NOMHID	5/6/1985	-9	1	UNK	-9.00	-9	-9.00	020_7120.tif	2	B-4	UNK	16.09
4289	NOMHID	NOMHID	5/6/1985	-9	1	UNK	-9.00	-9	-9.00	020_7120.tif	2	B-4	UNK	60.51
4290	NOMHID	NOMHID	5/6/1985	-9	1	UNK	-9.00	-9	-9.00	020_7120.tif	2	B-4	UNK	66.87
5403	NOMHID	B17	2/9/1965	6	1	VCP	0.02	-9	108.00	014_1414.tif	1	B-4	VCP	109.87
5469	NOMHID	A44	10/16/1963	8	1	UNK	-9.00	-9	-9.00	028_1128.tif	1	B-4	UNK	9.82
5471	NOMHID	G4	4/22/1968	-9	1	UNK	-9.00	-9	-9.00	026_2226.tif	2	B-4	UNK	6.35
5472	NOMHID	G3	4/22/1968	-9	1	UNK	-9.00	-9	-9.00	026_2226.tif	2	B-4	UNK	6.91
7322	NOMHID	G17	8/26/1964	8	1	VCP	-9.00	-9	-9.00	049_1348.tif	2	B-4	VCP	4.74
7640	NOMHID	G30	10/16/1963	8	1	UNK	-9.00	-9	-9.00	026_1126.tif	2	B-4	UNK	4.01
8062	NOMHID	B1	4/15/1966	8	1	VCP	-9.00	-9	-9.00	037_1436.tif	1	B-4	VCP	6.62
8568	NOMHID	NOMHID	4/12/1965	-9	1	UNK	-9.00	-9	-9.00	047_2249.tif	2	B-4	UNK	8.01
8569	NOMHID	NOMHID	4/12/1965	8	1	VCP	0.00	-9	230.00	047_2249.tif	2	B-4	VCP	232.27
8570	NOMHID	NOMHID	4/12/1965	-9	1	UNK	-9.00	-9	-9.00	047_2249.tif	2	B-4	UNK	55.33
8571	NOMHID	NOMHID	4/12/1965	-9	1	UNK	-9.00	-9	-9.00	047_2249.tif	2	B-4	UNK	59.14
8572	NOMHID	NOMHID	4/12/1965	-9	1	UNK	-9.00	-9	-9.00	047_2249.tif	2	B-4	UNK	105.08
9066	NOMHID	NOMHID	4/12/1965	-9	1	UNK	-9.00	-9	-9.00	047_2249.tif	2	B-4	UNK	95.81
9067	NOMHID	G15	4/12/1965	8	1	VCP	0.00	-9	233.00	047_2249.tif	2	B-4	VCP	234.74
9110	NOMHID	NOMHID		8	1	VCP	0.08	-9	107.00	027_2327.tif	2	B-4	VCP	108.56
9111	NOMHID	NOMHID		8	1	VCP	0.00	-9	166.00	027_2327.tif	2	B-4	VCP	172.71
9329	NOMHID	G31	10/16/1963	8	1	UNK	-9.00	-9	-9.00	026_1126.tif	2	B-4	UNK	167.75
9449	NOMHID	B18	2/9/1965	8	1	UNK	-9.00	-9	-9.00	014_1414.tif	1	B-4	UNK	5.62

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
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528	A45	4/15/1966	035_1434.tif	1	B-4
437	A46	9/1/1965	049_1448.tif	1	B-4
352	B1	4/15/1966	037_1436.tif	1	B-4
351	B16	4/15/1966	037_1436.tif	1	B-4
350	B17	4/15/1966	037_1436.tif	1	B-4
416	B18	2/9/1965	013_1413.tif	1	B-4
364	B2	4/15/1966	038_1437.tif	1	B-4
363	B3	4/15/1966	038_1437.tif	1	B-4
173	B6	4/15/1966	140_1439.tif	1	B-4
429	G11	1/17/1963	025_1125.tif	2	B-4
430	G12	1/17/1963	025_1125.tif	2	B-4
431	G13	10/16/1963	026_1126.tif	2	B-4
509	G14	8/26/1964	049_1348.tif	2	B-4
508	G15	8/26/1964	049_1348.tif	2	B-4
507	G16	8/26/1964	049_1348.tif	2	B-4
506	G17	8/26/1964	049_1348.tif	2	B-4
555	G18	8/26/1964	050_1349.tif	2	B-4
391	G19	8/26/1964	051_1350.tif	2	B-4
390	G20	8/26/1964	051_1350.tif	2	B-4
389	G21	8/26/1964	051_1350.tif	2	B-4
398	G22	8/26/1964	052_1351.tif	2	B-4
397	G23	8/26/1964	052_1351.tif	2	B-4
402	G24	8/26/1964	053_1352.tif	2	B-4
396	G25	8/26/1964	052_1351.tif	2	B-4
553	G26	8/26/1964	050_1349.tif	2	B-4
400	G27	8/26/1964	053_1352.tif	2	B-4
401	G28	8/26/1964	053_1352.tif	2	B-4
432	G29	10/16/1963	026_1126.tif	2	B-4
516	G3	4/22/1968	026_2226.tif	2	B-4
433	G30	10/16/1963	026_1126.tif	2	B-4
434	G31	10/16/1963	026_1126.tif	2	B-4
649	G32	10/16/1963	027_1127.tif	2	B-4
652	G33	10/16/1963	1127.tif	2	B-4
651	G34	10/16/1963	1127.tif	2	B-4
650	G35	10/16/1963	1127.tif	2	B-4
634	G36	10/17/1963	031_2331.tif	2	B-4
633	G37	10/17/1963	031_2331.tif	2	B-4
459	G38		011_2311.tif	2	B-4
517	G4	4/22/1968	026_2226.tif	2	B-4
165	G5	9/27/1982	035_2436.tif	2	B-4
2190	G5-5			2	B-4
220	G59	8/26/1964	046_1345.tif	2	B-4
164	G6	9/27/1982	035_2436.tif	2	B-4
232	G60	3/31/1964	047_1346.tif	2	B-4
248	G65	8/26/1964	048_1347.tif	2	B-4
554	G71	8/26/1964	050_1349.tif	2	B-4
518	G73	4/22/1968	026_2226.tif	2	B-4
425	NOMHID		016_1416_A.tif	2	B-4
540	NOMHID	2/9/1965	014_1414.tif	1	B-4
236	PRI	4/12/1965	047_2249.tif	2	B-4
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239	PRI	4/12/1965	047_2249.tif	2	B-4
240	PRI	4/12/1965	047_2249.tif	2	B-4
241	PRI	4/12/1965	047_2249.tif	2	B-4
495	PRI		027_2327.tif	2	B-4
496	PRI		027_2327.tif	2	B-4
502	PRI		027_2327.tif	2	B-4
609	PRI	5/6/1985	020_7120.tif	2	B-4
610	PRI	5/6/1985	020_7120.tif	2	B-4
615	PRI	5/6/1985	020_7120.tif	2	B-4
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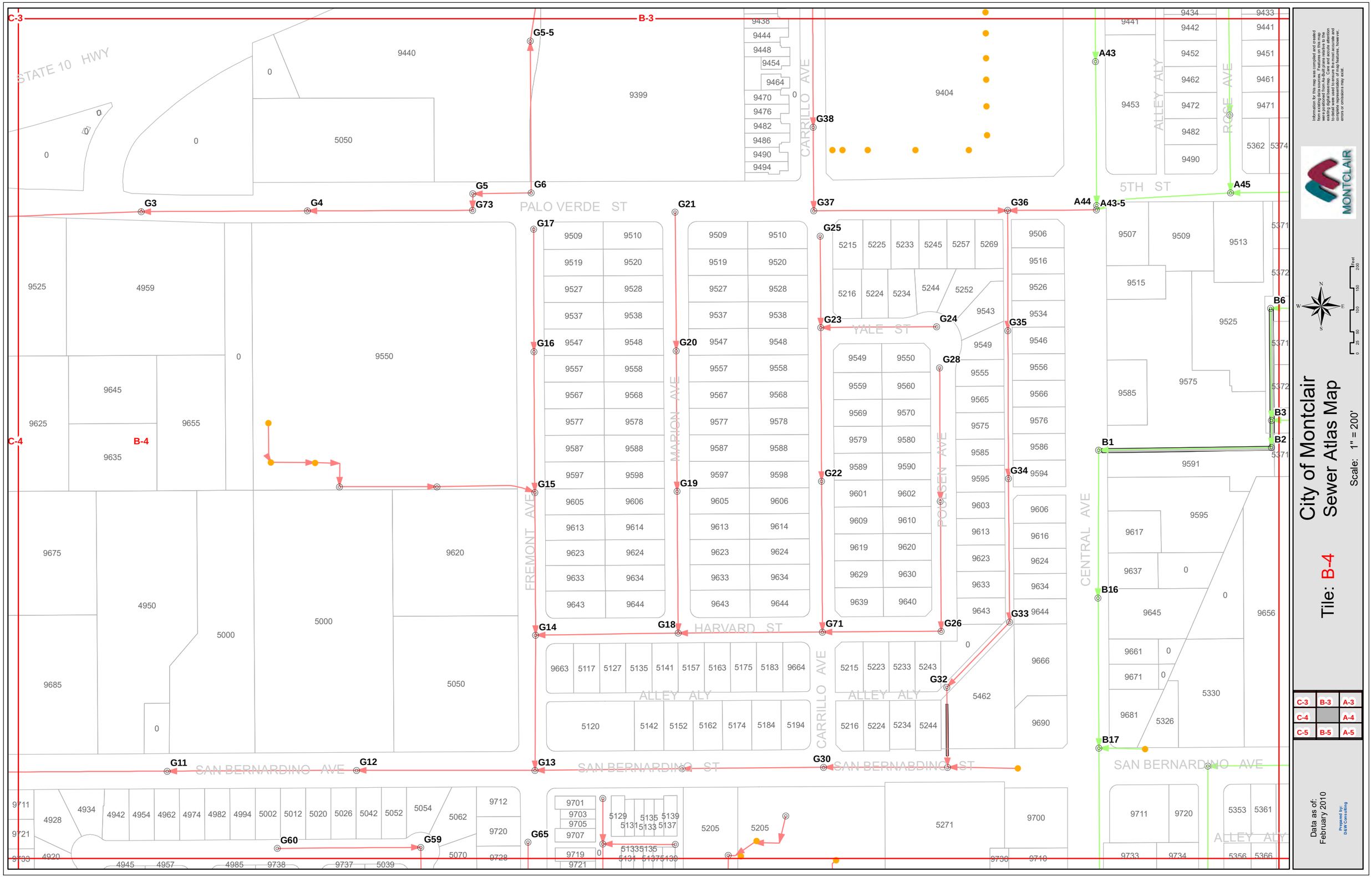
107	UNK-10		costco.tif	2	B-4
108	UNK-11		costco.tif	2	B-4
109	UNK-12		costco.tif	2	B-4
110	UNK-13		costco.tif	2	B-4
101	UNK-4		costco.tif	2	B-4
102	UNK-5		costco.tif	2	B-4
103	UNK-6		costco.tif	2	B-4
104	UNK-7		costco.tif	2	B-4
105	UNk-8		costco.tif	2	B-4


City of Montclair
Sewer Atlas Map
Tile: B-4
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
STATE 10 HWY
PALO VERDE ST
5TH ST
YALE ST
HARVARD ST
SAN BERNARDINO AVE
SAN BERNARDINO ST
FREMONT AVE
MARION AVE
CARRILLO AVE
POULSEN AVE
CENTRAL AVE
ALLEY ALY
ROSE AVE
C-3
B-3
C-4
B-4
C-5
B-5
A-3
A-4
A-5

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
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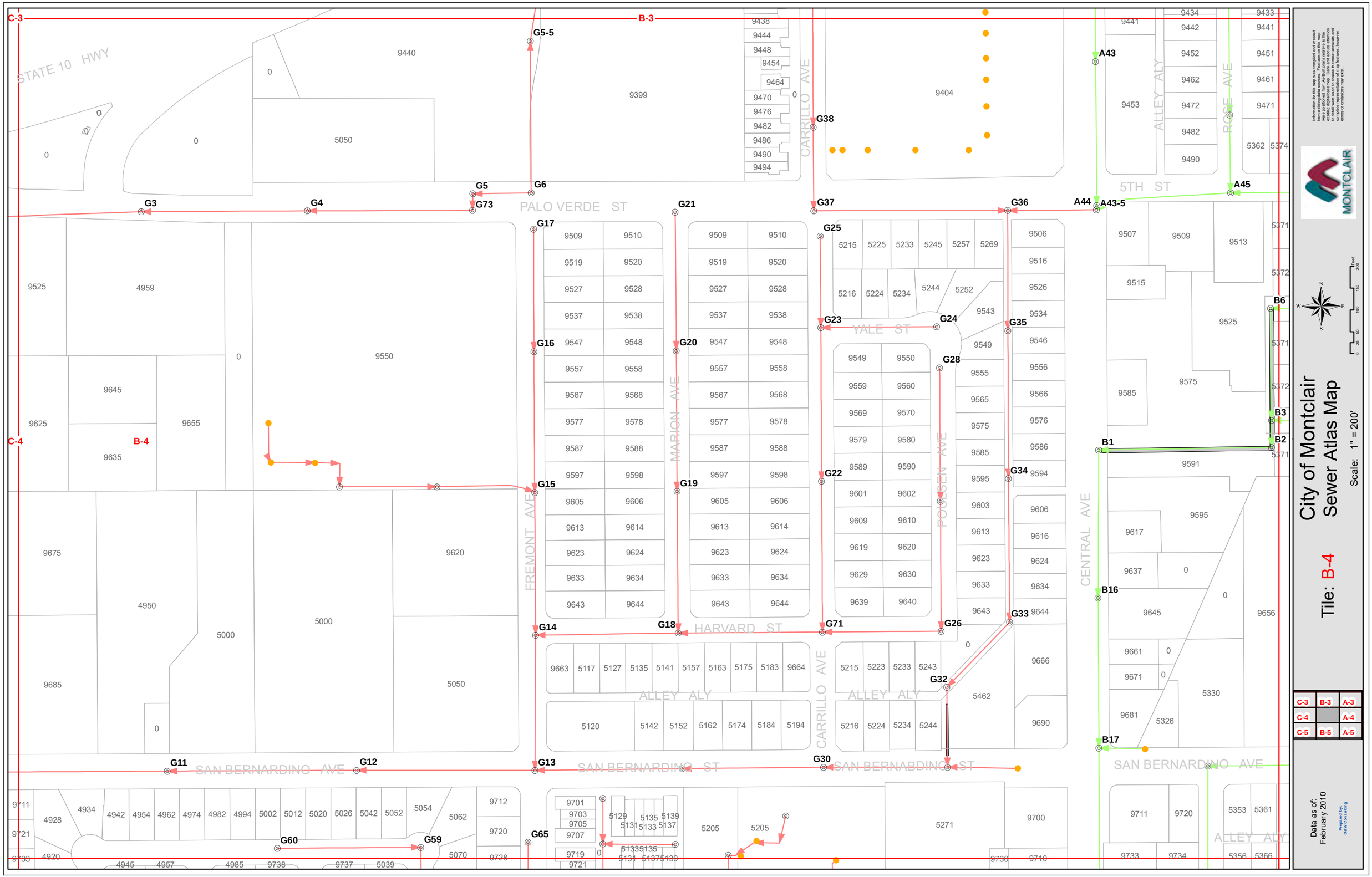
City of Montclair
Sewer Atlas Map
Tile: B-4
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MONTCLAIR
STATE 10 HWY
PALO VERDE ST
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FREMONT AVE
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CARRILLO AVE
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CENTRAL AVE
ALLEY ALY
ROSE AVE
C-3
B-3
C-4
B-4
C-5
B-5
A-3
A-4
A-5

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9237	B39	B40	2/9/1965	8	1	VCP	0.02	-9	366.00	012_1412.tif	1	B-5	VCP	370.19
9238	B40	B41	2/9/1965	8	1	VCP	0.02	-9	354.00	012_1412.tif	1	B-5	VCP	331.23
9239	B41	B42	2/9/1965	8	1	VCP	0.02	-9	254.50	012_1412.tif	1	B-5	VCP	286.21
9493	B42	G68	10/16/1963	10	1	VCP	0.01	-9	386.88	032_1132.tif	2	B-5	VCP	390.86
9441	B43	B42	2/8/1965	8	1	VCP	0.01	-9	261.50	009_1409.tif	1	B-5	VCP	265.51
9306	B44	B43	2/9/1965	8	1	VCP	0.02	-9	289.00	013_1413.tif	1	B-5	VCP	303.13
9308	B44-5	B44	2/9/1965	8	1	VCP	0.01	-9	240.00	015_1415.tif	1	B-5	VCP	244.83
9305	B47	B44	2/9/1965	8	1	VCP	0.02	-9	383.00	013_1413.tif	1	B-5	VCP	387.91
9304	B49	B47	2/9/1965	8	1	VCP	0.02	-9	296.00	013_1413.tif	1	B-5	VCP	302.66
9815	C47	C44		8	1	VCP	0.02	-9	256.00	003_1403.tif	1	B-5	VCP	258.81
9816	C50	C47		8	1	VCP	0.02	-9	256.00	003_1403.tif	1	B-5	VCP	270.53
9833	C55	C54	2/9/1965	8	1	VCP	0.02	-9	-9.00	002_1402.tif	1	B-5	VCP	399.73
9835	C56	C55	2/9/1965	8	1	VCP	0.02	-9	-9.00	002_1402.tif	1	B-5	VCP	400.33
9471	G44	G43	10/16/1963	10	1	VCP	0.01	-9	263.00	031_1131.tif	2	B-5	VCP	268.83
6798	G45	G44	8/26/1964	10	1	VCP	0.03	-9	354.00	043_1342.tif	2	B-5	VCP	361.29
6797	G46	G45	8/26/1964	10	1	VCP	0.02	-9	361.00	043_1342.tif	2	B-5	VCP	364.04
6796	G47	G46	8/26/1964	10	1	VCP	0.02	-9	353.00	043_1342.tif	2	B-5	VCP	352.04
9470	G48	G44	10/16/1963	10	1	VCP	0.01	-9	258.00	031_1131.tif	2	B-5	VCP	264.14
6275	G49	G48	8/26/1964	8	1	VCP	0.24	-9	324.50	044_1343.tif	2	B-5	VCP	330.92
6271	G50	G49	8/26/1964	8	1	VCP	0.02	-9	360.00	044_1343.tif	2	B-5	VCP	363.07
6272	G51	G50	8/26/1964	8	1	VCP	0.02	-9	355.00	044_1343.tif	2	B-5	VCP	356.24
9469	G52	G48	10/16/1963	10	1	VCP	0.01	-9	258.00	031_1131.tif	2	B-5	VCP	261.25
9036	G53	G52	8/26/1964	8	1	VCP	0.02	-9	324.50	045_1344.tif	2	B-5	VCP	329.07
9037	G54	G53	8/26/1964	8	1	VCP	0.02	-9	326.00	045_1344.tif	2	B-5	VCP	331.31
9038	G55	G54	8/26/1964	-9	1	VCP	0.02	-9	306.00	045_1344.tif	2	B-5	VCP	309.90
9468	G56	G52	10/16/1963	10	1	VCP	0.01	-9	258.00	031_1131.tif	2	B-5	VCP	261.70
9052	G57	G56	8/26/1964	8	1	VCP	0.02	-9	369.50	046_1345.tif	2	B-5	VCP	375.20
9051	G58	G57	8/26/1964	8	1	VCP	0.02	-9	376.00	046_1345.tif	2	B-5	VCP	379.68
9050	G59	G58	8/26/1964	8	1	VCP	0.01	-9	381.20	046_1345.tif	2	B-5	VCP	385.20
9467	G61	G56	10/16/1963	10	1	VCP	0.01	-9	263.00	031_1131.tif	2	B-5	VCP	266.04
6345	G62	G61	8/26/1964	8	1	VCP	0.02	-9	379.50	048_1347.tif	2	B-5	VCP	160.66
9071	G63	G62	8/26/1964	8	1	VCP	0.02	-9	379.50	048_1347.tif	2	B-5	VCP	220.65
9072	G64	G63	8/26/1964	8	1	VCP	0.02	-9	381.00	048_1347.tif	2	B-5	VCP	389.63
9073	G65	G64	8/26/1964	8	1	VCP	0.02	-9	376.00	048_1347.tif	2	B-5	VCP	380.24
9496	G66	G61	10/16/1963	10	1	VCP	0.01	-9	314.11	032_1132.tif	2	B-5	VCP	317.76
9495	G67	G66	10/16/1963	10	1	VCP	0.01	-9	316.00	032_1132.tif	2	B-5	VCP	320.81
9494	G68	G67	10/16/1963	10	1	VCP	0.01	-9	313.69	032_1132.tif	2	B-5	VCP	318.26
6410	K15	K14	4/5/1965	8	1	VCP	0.02	-9	445.76	023_1224.tif	2	B-5	VCP	448.10
6409	K16	K15	4/5/1965	8	1	VCP	0.02	-9	418.00	023_1224.tif	2	B-5	VCP	423.38
9796	K18	K17	4/5/1965	8	1	VCP	0.01	-9	396.03	024_1225.tif	2	B-5	VCP	397.79
6455	K19	K18	4/5/1965	8	1	VCP	0.02	-9	373.00	024_1225.tif	2	B-5	VCP	375.61
9829	K44	K43	4/5/1965	8	1	VCP	0.02	-9	444.00	025_1226.tif	2	B-5	VCP	446.71
9800	K48	K47	4/5/1965	8	1	VCP	0.01	-9	434.19	026_1227.tif	2	B-5	VCP	437.50
9837	K49	K48	4/5/1965	8	1	VCP	0.01	-9	251.57	027_1228.tif	2	B-5	VCP	255.50
4859	K49-5	K49	4/5/1965	8	1	VCP	0.01	-9	156.12	028_1229.tif	2	B-5	VCP	160.48
9852	K50	K49-5	4/5/1965	8	1	VCP	0.01	-9	245.92	028_1229.tif	2	B-5	VCP	250.24
9851	K51	K50	4/5/1965	8	1	VCP	0.02	-9	261.15	028_1229.tif	2	B-5	VCP	269.26
5236	K53	K49-5	4/5/1965	8	1	VCP	0.01	-9	138.06	029_1230.tif	2	B-5	VCP	142.30
6439	K54	K53	4/5/1965	8	1	VCP	0.01	-9	323.94	029_1230.tif	2	B-5	VCP	328.78
6394	K5-5	K5	4/5/1965	8	1	VCP	0.01	-9	256.00	022_1223.tif	2	B-5	VCP	260.72
6393	K6	K5-5	4/5/1965	8	1	VCP	0.01	-9	264.05	022_1223.tif	2	B-5	VCP	263.74
6396	K7-5	K7	4/5/1965	8	1	VCP	0.01	-9	256.00	022_1223.tif	2	B-5	VCP	259.82
6395	K8	K7-5	4/5/1965	8	1	VCP	0.01	-9	264.00	022_1223.tif	2	B-5	VCP	267.88
6438	NOMHID	K54	4/5/1965	8	1	VCP	0.03	-9	153.00	029_1230.tif	2	B-5	VCP	153.30
4285	NOMHID	NOMHID	5/6/1985	6	1	VCP	0.01	-9	-9.00	020_7120.tif	2	B-5	VCP	62.77
4286	NOMHID	NOMHID	5/6/1985	6	1	VCP	0.00	-9	-9.00	020_7120.tif	2	B-5	VCP	143.23
4831	NOMHID	NOMHID	5/6/1985	-9	1	UNK	-9.00	-9	-9.00	020_7120.tif	2	B-5	UNK	160.76
4832	NOMHID	NOMHID	5/6/1985	-9	1	UNK	-9.00	-9	-9.00	020_7120.tif	2	B-5	UNK	48.12
7419	NOMHID	NOMHID		8	1	VCP	0.00	-9	211.94	027_2327.tif	2	B-5	VCP	222.06
7420	NOMHID	NOMHID		8	1	VCP	0.00	-9	68.00	027_2327.tif	2	B-5	VCP	70.80
7421	NOMHID	NOMHID		8	1	VCP	0.01	-9	93.98	027_2327.tif	2	B-5	VCP	98.50
7422	NOMHID	NOMHID		8	1	VCP	0.03	-9	45.35	027_2327.tif	2	B-5	VCP	47.51
7423	NOMHID	NOMHID		8	1	VCP	0.03	-9	122.13	027_2327.tif	2	B-5	VCP	127.48
7424	NOMHID	G62		8	1	VCP	0.01	-9	34.27	027_2327.tif	2	B-5	VCP	33.33
8956	NOMHID	NOMHID		8	1	VCP	0.00	-9	338.00	027_2327.tif	2	B-5	VCP	64.88
9105	NOMHID	NOMHID		8	1	VCP	0.01	-9	133.00	027_2327.tif	2	B-5	VCP	140.91
9106	NOMHID	NOMHID		8	1	VCP	0.01	-9	192.00	027_2327.tif	2	B-5	VCP	194.58
9107	NOMHID	NOMHID		8	1	VCP	0.01	-9	223.35	027_2327.tif	2	B-5	VCP	227.39
9108	NOMHID	NOMHID		8	1	VCP	0.02	-9	343.65	027_2327.tif	2	B-5	VCP	346.67
9109	NOMHID	NOMHID		8	1	VCP	0.08	-9	231.06	027_2327.tif	2	B-5	VCP	236.43
9112	NOMHID	NOMHID		8	1	VCP	0.00	-9	173.00	027_2327.tif	2	B-5	VCP	176.48
9113	NOMHID	NOMHID		8	1	VCP	0.01	-9	171.18	027_2327.tif	2	B-5	VCP	175.43
9114	NOMHID	NOMHID		8	1	VCP	0.01	-9	234.16	027_2327.tif	2	B-5	VCP	238.44

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
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347	B40	2/9/1965	012_1412.tif	1	B-5
348	B41	2/9/1965	012_1412.tif	1	B-5
530	B42	2/8/1965	009_1409.tif	1	B-5
531	B43	2/8/1965	009_1409.tif	1	B-5
418	B44	2/9/1965	013_1413.tif	1	B-5
417	B47	2/9/1965	013_1413.tif	1	B-5
300	B49	2/9/1965	017_1417.tif	1	B-5
1052	C44	2/9/1965	006_1406.tif	1	B-5
1055	C47	2/9/1965	007_1407.tif	1	B-5
1108	C50		003_1403.tif	1	B-5
1128	C55	2/9/1965	002_1402.tif	1	B-5
1129	C56	2/9/1965	002_1402.tif	1	B-5
324	G44	8/26/1964	043_1342.tif	2	B-5
323	G45	8/26/1964	043_1342.tif	2	B-5
322	G46	8/26/1964	043_1342.tif	2	B-5
321	G47	8/26/1964	043_1342.tif	2	B-5
629	G48	10/16/1963	031_1131.tif	2	B-5
982	G49	8/27/1964	044_1343.tif	2	B-5
981	G50	8/27/1964	044_1343.tif	2	B-5
980	G51	8/27/1964	044_1343.tif	2	B-5
630	G52	10/16/1963	031_1131.tif	2	B-5
210	G53	8/26/1964	045_1344.tif	2	B-5
209	G54	8/26/1964	045_1344.tif	2	B-5
208	G55	8/26/1964	045_1344.tif	2	B-5
631	G56	10/16/1963	031_1131.tif	2	B-5
222	G57	8/26/1964	046_1345.tif	2	B-5
221	G58	8/26/1964	046_1345.tif	2	B-5
632	G61	10/16/1963	031_1131.tif	2	B-5
488	G62		027_2327.tif	2	B-5
246	G63	8/26/1964	048_1347.tif	2	B-5
247	G64	8/26/1964	048_1347.tif	2	B-5
637	G66	10/16/1963	032_1132.tif	2	B-5
635	G67	10/16/1963	032_1132.tif	2	B-5
636	G68	10/16/1963	032_1132.tif	2	B-5
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2179	G70			2	B-5
1044	K15	4/5/1965	023_1224.tif	2	B-5
1043	K16	4/5/1965	023_1224.tif	2	B-5
1089	K18	4/5/1965	024_1225.tif	2	B-5
1088	K19	4/5/1965	024_1225.tif	2	B-5
1120	K43	4/5/1965	025_1226.tif	2	B-5
1121	K44	4/5/1965	025_1226.tif	2	B-5
1092	K47	4/5/1965	026_1227.tif	2	B-5
1093	K48	4/5/1965	026_1227.tif	2	B-5
1132	K49	4/5/1965	027_1228.tif	2	B-5
1062	K49-5	4/5/1965	029_1230.tif	2	B-5
1154	K50	4/5/1965	028_1229_A.tif	2	B-5
1153	K51	4/5/1965	028_1229_A.tif	2	B-5
1063	K53	4/5/1965	029_1230.tif	2	B-5
1065	K54	4/5/1965	029_1230.tif	2	B-5
1024	K5-5	4/5/1965	022_1223.tif	2	B-5
1149	K56	4/5/1965	027_1228.tif	2	B-5
1151	K58	4/5/1965	028_1229.tif	2	B-5
1023	K6	4/5/1965	022_1223.tif	2	B-5
1027	K7-5	4/5/1965	022_1223_A.tif	2	B-5
1028	K8	4/5/1965	022_1223_A.tif	2	B-5
1064	NOMHID	4/5/1965	029_1230.tif	2	B-5
1107	NOMHID		003_1403.tif	1	B-5
476	PRI		027_2327.tif	2	B-5
477	PRI		027_2327.tif	2	B-5
478	PRI		027_2327.tif	2	B-5
479	PRI		027_2327.tif	2	B-5
480	PRI		027_2327.tif	2	B-5
481	PRI		027_2327.tif	2	B-5
482	PRI		027_2327.tif	2	B-5
483	PRI		027_2327.tif	2	B-5
484	PRI		027_2327.tif	2	B-5
485	PRI		027_2327.tif	2	B-5
486	PRI		027_2327.tif	2	B-5
487	PRI		027_2327.tif	2	B-5
489	PRI		027_2327.tif	2	B-5
490	PRI		027_2327.tif	2	B-5


City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: B-5
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
ROSEWOOD ST
ASPEN DR
VILLAGE DR
JUNE MOUNTAIN DR
BENITO AVE
BENITO ST
CAMARENA AVE
COALINGA AVE
LINDERO AVE
GENEVA AVE
SUNVALLEY DR
STEAMBOAT DR
MAMMOTH DR
CENTRAL AVE
ROSE AVE
GRANADA ST
DENVER ST
FREMONT AVE
POULSEN AVE
ALLEY ALY
EL MORADO ST
A-4
B-5
C-6
B-6
C-4
B-4
A-4
C-5
A-5
C-6
B-6
A-6

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9115	NOMHID	NOMHID		8	1	VCP	0.01	-9	277.79	027_2327.tif	2	B-5	VCP	282.20
9116	NOMHID	NOMHID		8	1	VCP	0.00	-9	143.00	027_2327.tif	2	B-5	VCP	146.13
9117	NOMHID	NOMHID		8	1	VCP	0.00	-9	179.92	027_2327.tif	2	B-5	VCP	184.27
9118	NOMHID	NOMHID		8	1	VCP	0.00	-9	143.00	027_2327.tif	2	B-5	VCP	137.23
9119	NOMHID	NOMHID		8	1	VCP	0.01	-9	231.41	027_2327.tif	2	B-5	VCP	236.14
9398	NOMHID	NOMHID		8	1	VCP	0.01	-9	55.65	027_2327.tif	2	B-5	VCP	58.68
9399	NOMHID	NOMHID		8	1	VCP	0.02	-9	161.50	027_2327.tif	2	B-5	VCP	165.29
9400	NOMHID	NOMHID		8	1	VCP	0.01	-9	274.00	027_2327.tif	2	B-5	VCP	277.83
9401	NOMHID	NOMHID		8	1	VCP	0.02	-9	123.12	027_2327.tif	2	B-5	VCP	128.85
9402	NOMHID	NOMHID		8	1	VCP	0.00	-9	338.00	027_2327.tif	2	B-5	VCP	276.90
9403	NOMHID	NOMHID		8	1	VCP	0.00	-9	107.00	027_2327.tif	2	B-5	VCP	107.64
9817	NOMHID	C50		8	1	VCP	0.03	-9	114.00	003_1403.tif	1	B-5	VCP	102.07
9836	NOMHID	K49	4/5/1965	8	1	VCP	0.01	-9	183.43	027_1228.tif	2	B-5	VCP	181.28
2507				8	1	VCP	0.00		0.00		2	B-5		62.06
11345			9/11/2009	8	1	VCP	0.02		79.78	Senior_Center02.tif	2	B-5		83.78

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
491	PRI		027_2327.tif	2	B-5
492	PRI		027_2327.tif	2	B-5
493	PRI		027_2327.tif	2	B-5
494	PRI		027_2327.tif	2	B-5
497	PRI		027_2327.tif	2	B-5
498	PRI		027_2327.tif	2	B-5
499	PRI		027_2327.tif	2	B-5
500	PRI		027_2327.tif	2	B-5
501	PRI		027_2327.tif	2	B-5
503	PRI		027_2327.tif	2	B-5
611	PRI	5/6/1985	020_7120.tif	2	B-5
612	PRI	5/6/1985	020_7120.tif	2	B-5
613	PRI	5/6/1985	020_7120.tif	2	B-5
614	PRI	5/6/1985	020_7120.tif	2	B-5
616	PRI	5/6/1985	020_7120.tif	2	B-5
620	PRI	5/6/1985	020_7120.tif	2	B-5
621	PRI	5/6/1985	020_7120.tif	2	B-5
2201	UNK-27	9/11/2009	Senior_Sewer02.tif	2	B-5
2202	UNK-28			2	B-5
2203	UNK-29			2	B-5
2204	UNK-30			2	B-5


City of Montclair
Sewer Atlas Map
Tile: B-5
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
ROSEWOOD ST
ASPEN DR
VILLAGE DR
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BENITO AVE
BENITO ST
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COALINGA AVE
LINDERO AVE
GENEVA AVE
SUNVALLEY DR
STEAMBOAT DR
MAMMOTH DR
CENTRAL AVE
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GRANADA ST
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FREMONT AVE
POULSEN AVE
ALLEY ALY
EL MORADO ST
A-4
B-5
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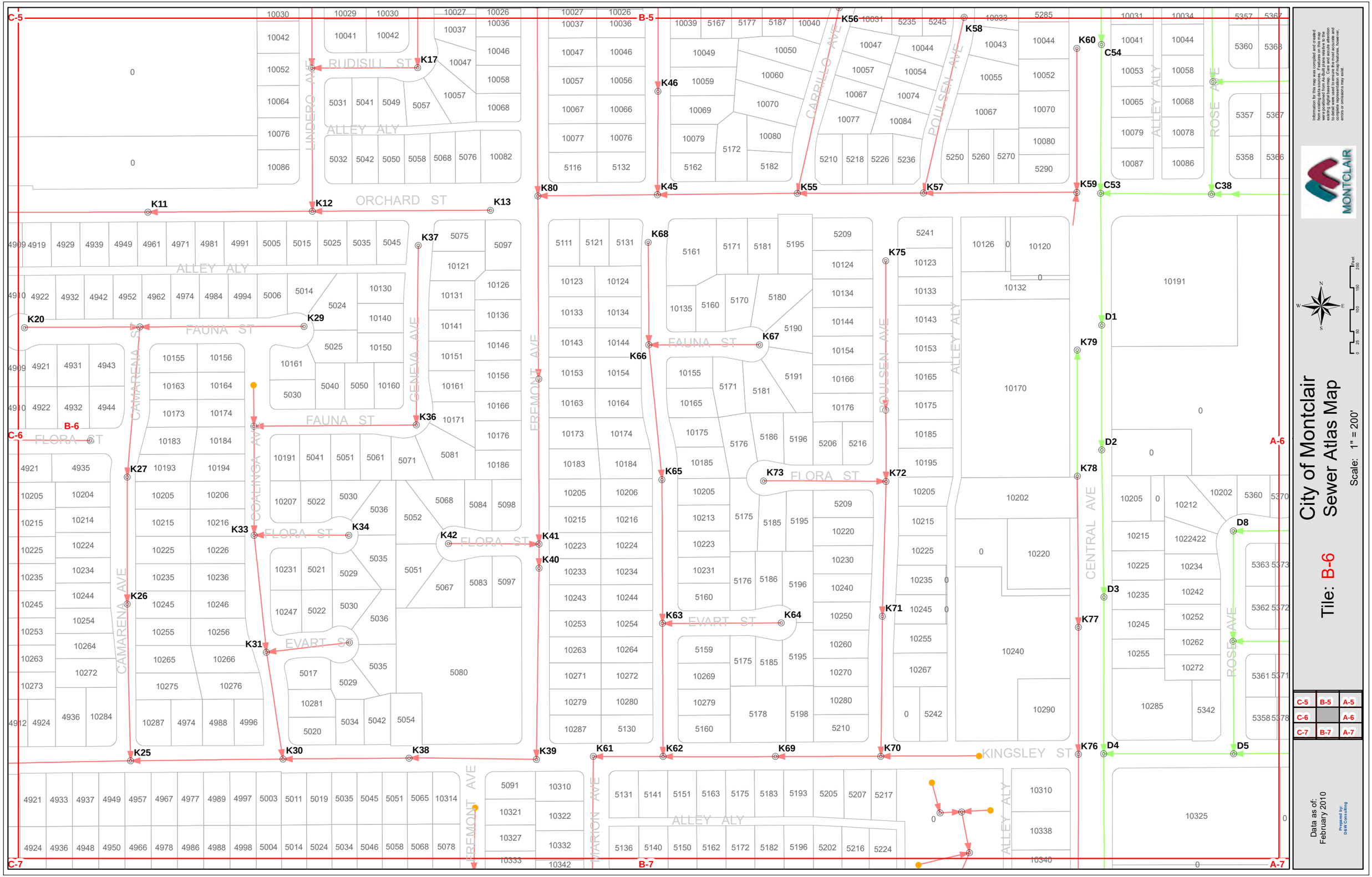
C-6
B-6
A-6

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9858	C38	C53	1/13/1998	8	1	VCP	0.04	-9	346.08	008_6308.tif	1	B-6	VCP	264.26
9819	C39	C38		8	1	VCP	0.02	-9	261.00	003_1403.tif	1	B-6	VCP	267.16
9818	C44	C39		8	1	VCP	0.02	-9	262.00	003_1403.tif	1	B-6	VCP	267.95
10469	C53	D1	7/14/1964	8	1	VCP	0.01	-9	304.89	022_1321.tif	1	B-6	VCP	313.40
9834	C54	C53	2/9/1965	8	1	VCP	0.03	-9	-9.00	002_1402.tif	1	B-6	VCP	354.49
10470	D1	D2	7/14/1964	8	1	VCP	0.02	-9	296.00	022_1321.tif	1	B-6	VCP	297.67
10471	D2	D3	7/14/1964	8	1	VCP	0.01	-9	346.00	022_1321.tif	1	B-6	VCP	349.21
10472	D3	D4	7/14/1964	8	1	VCP	0.03	-9	371.00	022_1321.tif	1	B-6	VCP	372.90
10459	D4	D42		8	1	VCP	0.01	-9	298.95	021_1320.tif	1	B-6	VCP	304.96
10778	D5	D4	7/14/1964	8	1	VCP	0.01	-9	304.12	024_1323.tif	1	B-6	VCP	309.34
10859	D6	D5	7/14/1964	8	1	VCP	0.01	-9	262.13	026_1325.tif	1	B-6	VCP	267.11
10802	D7	D6	7/14/1964	8	1	VCP	0.01	-9	202.13	026_1325.tif	1	B-6	VCP	207.39
10858	D8	D6	7/14/1964	8	1	VCP	0.01	-9	260.00	026_1325.tif	1	B-6	VCP	263.02
10860	D9	D8	7/14/1964	8	1	VCP	0.01	-9	202.13	026_1325.tif	1	B-6	VCP	206.39
6384	K11	K10	5/4/1965	8	1	VCP	0.01	-9	396.00	018_1219.tif	2	B-6	VCP	401.41
6383	K12	K11	5/4/1965	8	1	VCP	0.01	-9	387.33	018_1219.tif	2	B-6	VCP	391.20
6382	K13	K12	5/4/1965	8	1	VCP	0.01	-9	418.67	018_1219.tif	2	B-6	VCP	424.30
6411	K14	K12	4/5/1965	8	1	VCP	0.01	-9	335.24	023_1224.tif	2	B-6	VCP	340.55
9797	K17	K14	4/5/1965	8	1	VCP	0.01	-9	247.97	024_1225.tif	2	B-6	VCP	251.78
6903	K20	K28		8	1	VCP	0.01	-9	269.00	011_1212.tif	2	B-6	VCP	274.92
10424	K22	K21	4/5/1965	8	1	VCP	0.01	-9	259.00	010_1211.tif	2	B-6	VCP	263.02
10902	K25	K24		8	1	VCP	0.01	-9	351.63	007_1208.tif	2	B-6	VCP	357.72
6872	K26	K25	4/5/1965	8	1	VCP	0.02	-9	364.79	010_1211.tif	2	B-6	VCP	373.08
6871	K27	K26	4/5/1965	8	1	VCP	0.01	-9	299.06	010_1211.tif	2	B-6	VCP	301.62
6901	K28	K27		8	1	VCP	0.01	-9	355.04	011_1212.tif	2	B-6	VCP	358.81
6902	K29	K28		8	1	VCP	0.01	-9	390.00	011_1212.tif	2	B-6	VCP	390.58
10901	K30	K25		8	1	VCP	0.01	-9	360.00	007_1208.tif	2	B-6	VCP	362.38
6879	K31	K30	3/31/1965	8	1	VCP	0.01	-9	251.20	012_1213.tif	2	B-6	VCP	256.71
10400	K32	K31	3/31/1965	8	1	VCP	0.01	-9	198.00	012_1213.tif	2	B-6	VCP	198.49
6876	K33	K31	3/31/1965	8	1	VCP	0.01	-9	276.75	012_1213.tif	2	B-6	VCP	280.59
10690	K34	K33		8	1	VCP	0.01	-9	225.00	013_1214.tif	2	B-6	VCP	225.45
6877	K35	K33	3/31/1965	8	1	VCP	0.01	-9	256.00	012_1213.tif	2	B-6	VCP	258.87
10688	K36	K35		8	1	VCP	0.01	-9	383.01	013_1214.tif	2	B-6	VCP	386.12
10689	K37	K36		8	1	VCP	0.02	-9	425.99	013_1214.tif	2	B-6	VCP	427.17
10900	K38	K30		8	1	VCP	0.01	-9	296.37	007_1208.tif	2	B-6	VCP	300.34
10899	K39	K38		8	1	VCP	0.01	-9	306.56	007_1208.tif	2	B-6	VCP	303.02
10700	K40	K39	4/5/1965	8	1	VCP	0.01	-9	446.00	014_1215.tif	2	B-6	VCP	455.46
10724	K41	K40	4/5/1965	8	1	VCP	0.01	-9	-9.00	014_1215.tif	2	B-6	VCP	56.38
10725	K42	K41	12/6/1972	8	1	VCP	0.00	-9	208.88	016_2416.tif	2	B-6	VCP	215.41
9830	K43	K80	4/5/1965	8	1	VCP	0.02	-9	446.00	025_1226.tif	2	B-6	VCP	454.03
6388	K45	K80	4/2/1965	8	1	VCP	0.01	-9	281.00	019_1220.tif	2	B-6	VCP	285.12
9799	K46	K45	4/5/1965	8	1	VCP	0.02	-9	242.00	026_1227.tif	2	B-6	VCP	247.04
9798	K47	K46	4/5/1965	8	1	VCP	0.02	-9	255.95	026_1227.tif	2	B-6	VCP	259.35
6387	K55	K45	4/2/1965	8	1	VCP	0.01	-9	326.67	019_1220.tif	2	B-6	VCP	332.40
9849	K56	K55	4/5/1965	8	1	VCP	0.10	-9	449.51	027_1228.tif	2	B-6	VCP	452.66
6386	K57	K55	4/2/1965	8	1	VCP	0.01	-9	296.00	019_1220.tif	2	B-6	VCP	300.60
9850	K58	K57	4/5/1965	8	1	VCP	0.02	-9	424.30	028_1229.tif	2	B-6	VCP	429.13
6385	K59	K57	4/2/1965	8	1	VCP	0.01	-9	361.00	019_1220.tif	2	B-6	VCP	364.88
9838	K60	K59	4/5/1965	8	1	VCP	0.02	-9	339.58	030_1231.tif	2	B-6	VCP	342.53
10566	K61	L13	10/14/1964	8	1	VCP	0.13	-9	300.70	004_1205.tif	2	B-6	VCP	305.93
1997	K62	K61	3/31/1965	8	1	VCP	0.01	-9	162.19	008_1209.tif	2	B-6	VCP	165.83
10701	K63	K62	4/5/1965	8	1	VCP	0.02	-9	313.00	015_1216.tif	2	B-6	VCP	316.33
10716	K64	K63	4/5/1965	8	1	VCP	0.01	-9	279.00	016_1217.tif	2	B-6	VCP	282.49
10702	K65	K63	4/5/1965	8	1	VCP	0.02	-9	340.83	015_1216.tif	2	B-6	VCP	342.95
10703	K66	K65	4/5/1965	8	1	VCP	0.01	-9	316.31	015_1216.tif	2	B-6	VCP	321.33
10717	K67	K66	4/5/1965	8	1	VCP	0.02	-9	258.00	016_1217.tif	2	B-6	VCP	263.04
10704	K68	K66	4/5/1965	8	1	VCP	0.02	-9	241.24	015_1216.tif	2	B-6	VCP	244.32
10830	K69	K62	3/31/1965	8	1	VCP	0.01	-9	262.45	008_1209.tif	2	B-6	VCP	267.54
10829	K70	K69	3/31/1965	8	1	VCP	0.01	-9	250.17	008_1209.tif	2	B-6	VCP	250.82
10755	K71	K70	4/5/1965	8	1	VCP	0.02	-9	326.00	017_1218.tif	2	B-6	VCP	333.12
10754	K72	K71	4/5/1965	8	1	VCP	0.01	-9	318.01	017_1218.tif	2	B-6	VCP	321.18
10715	K73	K72	4/5/1965	8	1	VCP	0.01	-9	289.00	016_1217.tif	2	B-6	VCP	291.80
10753	K74	K72	4/5/1965	8	1	VCP	0.05	-9	163.99	017_1218.tif	2	B-6	VCP	169.47
10752	K75	K74	4/5/1965	8	1	VCP	0.01	-9	353.00	017_1218.tif	2	B-6	VCP	355.64
10463	K76	L21		8	1	VCP	0.02	-9	323.73	021_1320.tif	2	B-6	VCP	326.59
10474	K77	K76	7/14/1964	8	1	VCP	0.01	-9	296.22	022_1321.tif	2	B-6	VCP	302.13
10473	K78	K77	7/14/1964	8	1	VCP	0.01	-9	357.80	022_1321.tif	2	B-6	VCP	359.42
10698	K80	K81	4/5/1965	8	1	VCP	0.02	-9	433.66	014_1215.tif	2	B-6	VCP	434.73
10699	K81	K41	4/5/1965	8	1	VCP	0.01	-9	-9.00	014_1215.tif	2	B-6	VCP	393.59
3248	NOMHID	NOMHID	2/10/1980	8	1	VCP	0.02	-9	94.18	045_2446.tif	2	B-6	VCP	99.39
6436	NOMHID	C38	1/13/1998	8	1	VCP	0.04	-9	346.08	008_6308.tif	1	B-6	VCP	43.55
5541	NOMHID	K59	1/13/1998	10	1	VCP	-9.00	-9	-9.00	008_6308.tif	2	B-6	VCP	80.28
6878	NOMHID	K35	3/31/1965	8	1	VCP	0.10	-9	96.05	012_1213.tif	2	B-6	VCP	98.30

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1110	C38		003_1403.tif	1	B-6
1109	C39		003_1403.tif	1	B-6
1126	C53	2/9/1965	002_1402.tif	1	B-6
1127	C54	2/9/1965	002_1402.tif	1	B-6
1533	D1	7/14/1964	022_1321.tif	1	B-6
1534	D2	7/14/1964	022_1321.tif	1	B-6
1535	D3	7/14/1964	022_1321.tif	1	B-6
1867	D4		021_1320.tif	1	B-6
1736	D5	7/14/1964	024_1323.tif	1	B-6
1771	D6	7/14/1964	026_1325.tif	1	B-6
1770	D8	7/14/1964	026_1325.tif	1	B-6
1017	K11	5/4/1965	018_1219.tif	2	B-6
1016	K12	5/4/1965	018_1219.tif	2	B-6
1015	K13	5/4/1965	018_1219.tif	2	B-6
1045	K14	4/5/1965	023_1224.tif	2	B-6
1090	K17	4/5/1965	024_1225.tif	2	B-6
1643	K20		011_1212.tif	2	B-6
1482	K22	4/5/1965	010_1211.tif	2	B-6
1935	K25		007-1208.tif	2	B-6
1613	K26	4/5/1965	010_1211.tif	2	B-6
1642	K27		011_1212.tif	2	B-6
1641	K28		011_1212.tif	2	B-6
1644	K29		011_1212.tif	2	B-6
1936	K30		007_1208.tif	2	B-6
1618	K31	3/13/1965	012_1213.tif	2	B-6
1467	K32	3/31/1965	012_1213.tif	2	B-6
1619	K33	3/13/1965	012_1213.tif	2	B-6
1690	K34		013_1214.tif	2	B-6
1620	K35	3/13/1965	012_1213.tif	2	B-6
1688	K36		013_1214.tif	2	B-6
1689	K37		013_1214.tif	2	B-6
1937	K38		007-1208.tif	2	B-6
1826	K39	3/31/1965	008_1209.tif	2	B-6
1697	K40	4/5/1965	014_1215.tif	2	B-6
1719	K41	12/6/1972	016_2416.tif	2	B-6
1720	K42	12/6/1972	016_2416.tif	2	B-6
1018	K45	4/2/1965	019_1220.tif	2	B-6
1091	K46	4/5/1965	026_1227.tif	2	B-6
1150	K55	4/5/1965	027_1228.tif	2	B-6
1152	K57	4/5/1965	028_1229.tif	2	B-6
1134	K59	4/5/1965	030_1231.tif	2	B-6
1135	K60	4/5/1965	030_1231.tif	2	B-6
1827	K61	3/31/1965	008_1209.tif	2	B-6
1701	K62	4/5/1965	015_1216.tif	2	B-6
1700	K63	4/5/1965	015_1216.tif	2	B-6
1710	K64	4/5/1965	016_1217_A.tif	2	B-6
1699	K65	4/5/1965	015_1216.tif	2	B-6
1702	K66	4/5/1965	015_1216.tif	2	B-6
1711	K67	4/5/1965	016_1217_B.tif	2	B-6
1703	K68	4/5/1965	015_1216.tif	2	B-6
1828	K69	3/31/1965	008_1209.tif	2	B-6
1829	K70	3/31/1965	008_1209.tif	2	B-6
1727	K71	4/5/1965	017_1218.tif	2	B-6
1726	K72	4/5/1965	016_1217.tif	2	B-6
1709	K73	4/5/1965	016_1217.tif	2	B-6
1725	K74	4/5/1965	017_1218.tif	2	B-6
1724	K75	4/5/1965	017_1218.tif	2	B-6
1866	K76		021_1320.tif	2	B-6
1537	K77	7/14/1964	022_1321.tif	2	B-6
1536	K78	7/14/1964	022_1321.tif	2	B-6
884	K79			1	B-6
1084	K80	4/5/1965	014_1215.tif	2	B-6
1698	K81	4/5/1965	014_1215.tif	2	B-6
1587	NOMHID	10/14/1964	004_1205.tif	2	B-6
1621	NOMHID	3/13/1965	012_1213.tif	2	B-6
1830	NOMHID	3/31/1965	008_1209.tif	2	B-6
1522	PRI	2/10/1980	045_2446.tif	2	B-6
1523	PRI	2/10/1980	045_2446.tif	2	B-6
1843	PRI	2/10/1980	045_2446.tif	2	B-6
1846	PRI	2/10/1980	045_2446.tif	2	B-6
1847	PRI	2/10/1980	045_2446.tif	2	B-6


City of Montclair
Sewer Atlas Map
Tile: B-6
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
RUDISILL ST
ORCHARD ST
FAUNA ST
FLORA ST
EVART ST
KINGSLEY ST
LINDERO AVE
CAMARENA AVE
COALINGA AVE
GENEVA AVE
FREMONT AVE
MARION AVE
CARRILLO AVE
POULSEN AVE
CENTRAL AVE
ROSE AVE
ALLEY ALY
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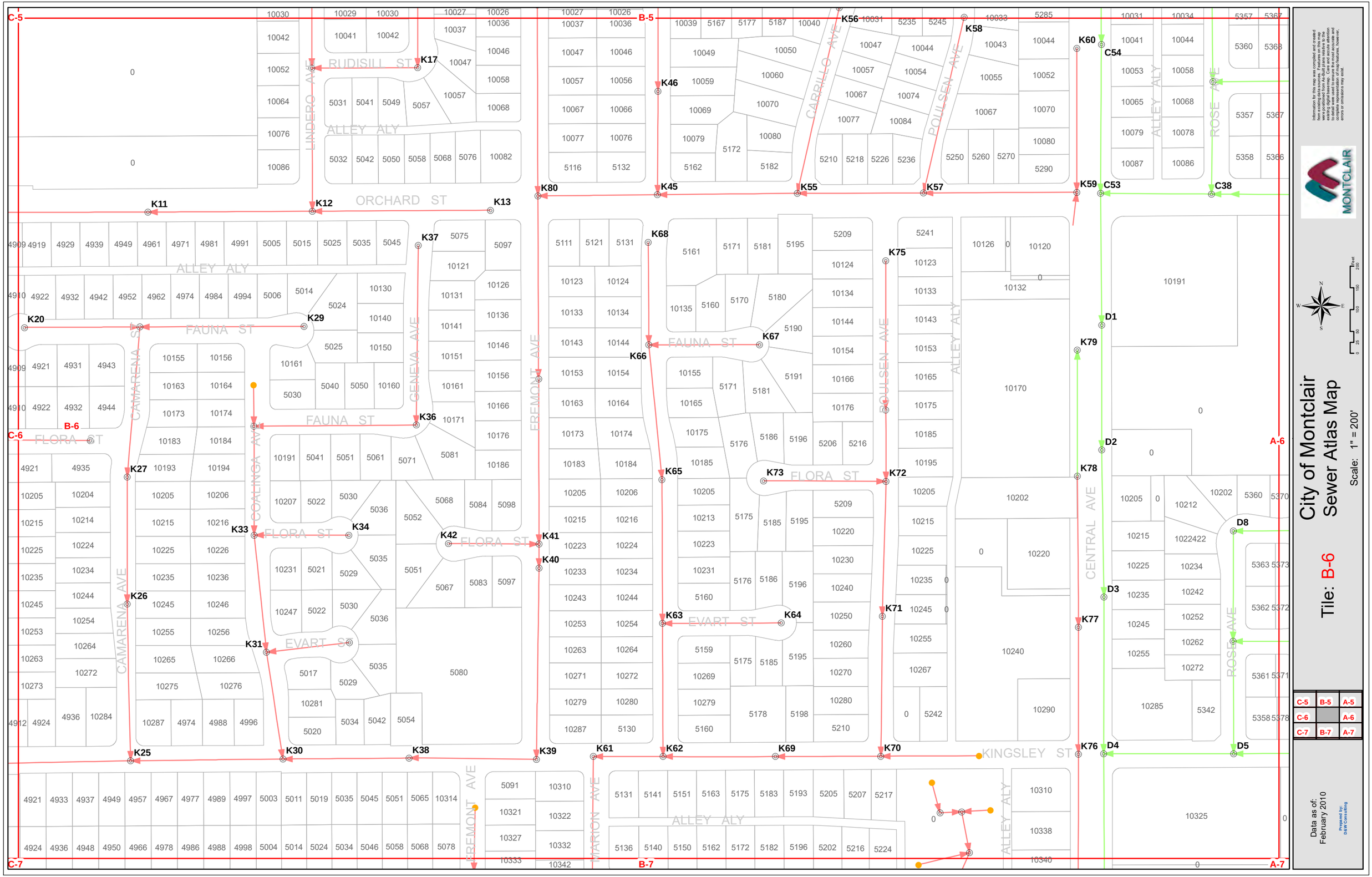
SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
10443	NOMHID	NOMHID	2/10/1980	8	1	VCP	0.01	-9	75.00	045_2446.tif	2	B-6	VCP	74.42
10444	NOMHID	NOMHID	2/10/1980	8	1	VCP	0.02	-9	55.05	045_2446.tif	2	B-6	VCP	51.82
10445	NOMHID	NOMHID	2/10/1980	8	1	VCP	0.01	-9	68.00	045_2446.tif	2	B-6	VCP	68.82
10446	NOMHID	NOMHID	2/10/1980	8	1	VCP	0.00	-9	118.00	045_2446.tif	2	B-6	VCP	124.84
10568	NOMHID	L10	10/14/1964	8	1	VCP	0.02	-9	145.00	004_1205.tif	2	B-6	VCP	154.41
10828	NOMHID	K70	3/31/1965	8	1	VCP	1.00	-9	-9.00	008_1209.tif	2	B-6	VCP	234.10
78					1		0.00		0.00		1	B-6		300.00

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID


City of Montclair
Sewer Atlas Map
Tile: B-6
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
RUDISILL ST
ORCHARD ST
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SEWER LINE														
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10460	D42	D43		8	1	VCP	0.01	-9	331.77	021_1320.tif	1	B-7	VCP	334.57
10461	D43	D44		8	1	VCP	0.01	-9	378.09	021_1320.tif	1	B-7	VCP	377.27
10462	D44	D45		8	1	VCP	0.02	-9	125.90	021_1320.tif	1	B-7	VCP	127.85
3167	D45	D46		8	1	VCP	0.02	-9	100.24	021_1320.tif	1	B-7	VCP	112.74
6916	D46	D47	10/16/1963	8	1	VCP	0.02	-9	372.85	038_1138.tif	1	B-7	VCP	375.48
6917	D47	D48	10/16/1963	8	1	VCP	0.02	-9	331.68	038_1138.tif	1	B-7	VCP	334.25
6918	D48	L52	10/16/1963	10	1	VCP	0.01	-9	250.32	038_1138.tif	1	B-7	VCP	256.94
10498	D49	D48	4/15/1966	8	1	UNK	0.01	-9	409.87	023_1423.tif	1	B-7	UNK	415.69
10567	L10	L9	10/14/1964	8	1	VCP	0.03	-9	368.00	004_1205.tif	2	B-7	VCP	365.69
10903	L11	L9	4/5/1965	8	1	VCP	0.01	-9	-9.00	002_1203.tif	2	B-7	VCP	61.93
10812	L12	L11		8	1	VCP	0.01	-9	336.00	003_1204.tif	2	B-7	VCP	218.31
10565	L13	L12	10/14/1964	8	1	VCP	0.26	-9	316.00	004_1205.tif	2	B-7	VCP	316.81
10835	L14	L13	4/5/1965	8	1	VCP	0.01	-9	386.00	005_1206.tif	2	B-7	VCP	393.38
10836	L15	L14	4/5/1965	8	1	VCP	0.01	-9	327.73	005_1206.tif	2	B-7	VCP	328.00
10811	L16	L12		8	1	VCP	0.01	-9	336.00	003_1204.tif	2	B-7	VCP	344.71
10810	L17	L16		8	1	VCP	0.01	-9	377.31	003_1204.tif	2	B-7	VCP	381.44
3194	L18	L17	12/16/1984	8	1	VCP	0.02	-9	94.96	046_2447.tif	2	B-7	VCP	85.37
10453	L19	L18	12/16/1984	8	1	VCP	0.02	-9	194.84	046_2447.tif	2	B-7	VCP	176.73
10569	L2	L1	4/5/1965	8	1	VCP	0.01	-9	356.00	006_1207.tif	2	B-7	VCP	362.52
3166	L20	D43		8	1	VCP	0.01	-9	56.00	021_1320.tif	2	B-7	VCP	60.91
10464	L21	L20		8	1	VCP	0.02	-9	306.99	021_1320.tif	2	B-7	VCP	311.13
6866	L23	L22	3/11/1986	8	1	VCP	0.01	-9	336.00	008_7108.tif	2	B-7	VCP	341.46
6865	L24	L23	3/11/1986	8	1	VCP	0.00	-9	328.07	008_7108.tif	2	B-7	VCP	331.79
6864	L25	L24	3/11/1986	8	1	VCP	0.02	-9	164.00	008_7108.tif	2	B-7	VCP	167.57
10759	L28	L27	6/8/1964	8	1	VCP	0.01	-9	338.00	017_1317.tif	2	B-7	VCP	342.22
10758	L29	L28	6/8/1964	8	1	VCP	0.01	-9	346.00	017_1317.tif	2	B-7	VCP	349.41
10570	L3	L2	4/5/1965	8	1	VCP	0.01	-9	356.00	006_1207.tif	2	B-7	VCP	359.70
10757	L31	L29	6/8/1964	8	1	VCP	0.01	-9	346.00	017_1317.tif	2	B-7	VCP	350.44
10756	L32	L31	6/8/1964	8	1	VCP	0.01	-9	346.00	017_1317.tif	2	B-7	VCP	349.79
10458	L33	L32	6/8/1964	8	1	VCP	0.01	-9	346.00	018_1318.tif	2	B-7	VCP	348.57
10456	L34	NOMHID	6/8/1964	8	1	VCP	0.01	-9	316.00	018_1318.tif	2	B-7	VCP	315.01
10417	L37	L36	1/31/1970	8	1	VCP	0.00	-9	373.00	040_2240.tif	2	B-7	VCP	380.83
10418	L38	L37	1/31/1970	8	1	VCP	0.00	-9	396.00	040_2240.tif	2	B-7	VCP	397.44
10542	L39	L38	7/30/1970	8	1	VCP	0.08	-9	393.96	041_2241.tif	2	B-7	VCP	396.70
6849	L4	L3	4/5/1965	8	1	VCP	0.01	-9	356.00	006_1207.tif	2	B-7	VCP	361.32
10541	L40	L39	7/30/1970	8	1	VCP	0.08	-9	375.05	041_2241.tif	2	B-7	VCP	378.83
10722	L41	NOMHID	8/11/1982	8	1	VCP	0.01	-9	-9.00	016_2316.tif	2	B-7	VCP	88.98
10906	L6	L5	4/5/1965	8	1	VCP	0.01	-9	-9.00	002_1203.tif	2	B-7	VCP	393.50
10905	L7	L6	4/5/1965	8	1	VCP	0.01	-9	-9.00	002_1203.tif	2	B-7	VCP	398.18
10967	L8	L7	4/5/1965	8	1	VCP	0.01	-9	-9.00	002_1203.tif	2	B-7	VCP	279.67
10904	L9	L8	4/5/1965	8	1	VCP	0.01	-9	-9.00	002_1203.tif	2	B-7	VCP	95.22
989	NOMHID	L15	4/5/1965	8	1	VCP	-9.00	-9	-9.00	005_1206.tif	2	B-7	VCP	2.23
1763	NOMHID	L8	2/1/1980	8	1	VCP	0.01	-9	-9.00	025_2325.tif	2	B-7	VCP	17.00
1764	NOMHID	L11	2/1/1980	-9	1	UNK	-9.00	-9	-9.00	025_2325.tif	2	B-7	UNK	20.59
2287	NOMHID	L41	8/11/1982	8	1	VCP	0.01	-9	-9.00	016_2316.tif	2	B-7	VCP	5.88
2517	NOMHID	D46	10/16/1963	8	1	UNK	-9.00	-9	-9.00	038_1138.tif	1	B-7	UNK	4.63
2518	NOMHID	L52	10/16/1963	8	1	UNK	-9.00	-9	-9.00	038_1138.tif	1	B-7	UNK	4.77
3141	NOMHID	L20		8	1	VCP	-9.00	-9	-9.00	021_1320.tif	2	B-7	VCP	8.59
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10449	NOMHID	NOMHID	2/10/1980	8	1	VCP	0.02	-9	167.13	045_2446.tif	2	B-7	VCP	171.07
10450	NOMHID	NOMHID	2/10/1980	8	1	VCP	0.01	-9	136.00	045_2446.tif	2	B-7	VCP	139.99
10451	NOMHID	NOMHID	2/10/1980	8	1	VCP	0.02	-9	84.33	045_2446.tif	2	B-7	VCP	87.77
10457	NOMHID	L33	6/8/1964	8	1	VCP	0.01	-9	346.00	018_1318.tif	2	B-7	VCP	357.07
10723	NOMHID	L40	8/11/1982	8	1	VCP	0.01	-9	346.00	016_2316.tif	2	B-7	VCP	240.19
10887	NOMHID	NOMHID	2/1/1980	-9	1	UNK	0.00	-9	71.19	025_2325.tif	2	B-7	UNK	76.53
10888	NOMHID	NOMHID	2/1/1980	8	1	VCP	0.00	-9	78.00	025_2325.tif	2	B-7	VCP	79.12
10889	NOMHID	NOMHID	2/1/1980	8	1	VCP	0.00	-9	-9.00	025_2325.tif	2	B-7	VCP	192.40
10890	NOMHID	NOMHID	2/1/1980	8	1	VCP	0.00	-9	287.00	025_2325.tif	2	B-7	VCP	272.55

SEWER STRUCTURE					
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1872	D44		021_1320.tif	1	B-7
1873	D45		021_1320.tif	1	B-7
1656	D46	10/16/1963	038_1138.tif	1	B-7
1657	D47	10/16/1963	038_1138.tif	1	B-7
1658	D48	10/16/1963	038_1138.tif	1	B-7
1549	D49	4/15/1966	023_1423.tif	1	B-7
1586	L10	10/14/1964	004_1205.tif	2	B-7
1899	L11	2/1/1980	025_2325.tif	2	B-7
1800	L12		003_1204.tif	2	B-7
1836	L13	4/5/1965	005_1206.tif	2	B-7
1837	L14	4/5/1965	005_1206.tif	2	B-7
1838	L15	4/5/1965	005_1206.tif	2	B-7
1799	L16		003_1204.tif	2	B-7
2192	L16-5			2	B-7
1859	L17	12/16/1984	046_2447.tif	2	B-7
1858	L18	12/16/1984	046_2447.tif	2	B-7
1857	L19	12/16/1984	046_2447.tif	2	B-7
1589	L2	4/5/1965	006_1207.tif	2	B-7
1871	L20		021_1320.tif	2	B-7
1869	L21		021_1320.tif	2	B-7
1607	L23	3/11/1986	008_7108.tif	2	B-7
1608	L24	3/11/1986	008_7108.tif	2	B-7
1609	L25	3/11/1986	008_7108.tif	2	B-7
1730	L28	6/8/1964	017_1317.tif	2	B-7
1729	L29	6/8/1964	017_1317.tif	2	B-7
1590	L3	4/5/1965	006_1207.tif	2	B-7
1728	L31	6/8/1964	017_1317.tif	2	B-7
1865	L32	6/8/1964	018_1318.tif	2	B-7
1864	L33	6/8/1964	018_1318.tif	2	B-7
1863	L33-5	6/8/1964	018_1318.tif	2	B-7
1579	L34	4/1/1970	020_2420.tif	2	B-7
1475	L37	1/31/1970	040_2240.tif	2	B-7
1476	L38	1/31/1970	040_2240.tif	2	B-7
1578	L39	7/30/1970	041_2241.tif	2	B-7
1591	L4	4/5/1965	006_1207.tif	2	B-7
1577	L40	7/30/1970	041_2241.tif	2	B-7
1717	L40-5	8/11/1982	016_2316.tif	2	B-7
1716	L41	8/11/1982	016_2316.tif	2	B-7
1659	L52	10/16/1963	038_1138.tif	1	B-7
1940	L6	4/5/1965	002_1203.tif	2	B-7
1938	L7	4/5/1965	002_1203.tif	2	B-7
1900	L8	2/1/1980	025_2325.tif	2	B-7
1939	L9	4/5/1965	002_1203.tif	2	B-7
1848	PRI	2/10/1980	045_2446.tif	2	B-7
1849	PRI	2/10/1980	045_2446.tif	2	B-7
1850	PRI	2/10/1980	045_2446.tif	2	B-7
1851	PRI	2/10/1980	045_2446.tif	2	B-7
1852	PRI	2/10/1980	045_2446.tif	2	B-7
1853	PRI	2/10/1980	045_2446.tif	2	B-7
1896	PRI	2/1/1980	025_2325.tif	2	B-7
1897	PRI	2/1/1980	025_2325.tif	2	B-7
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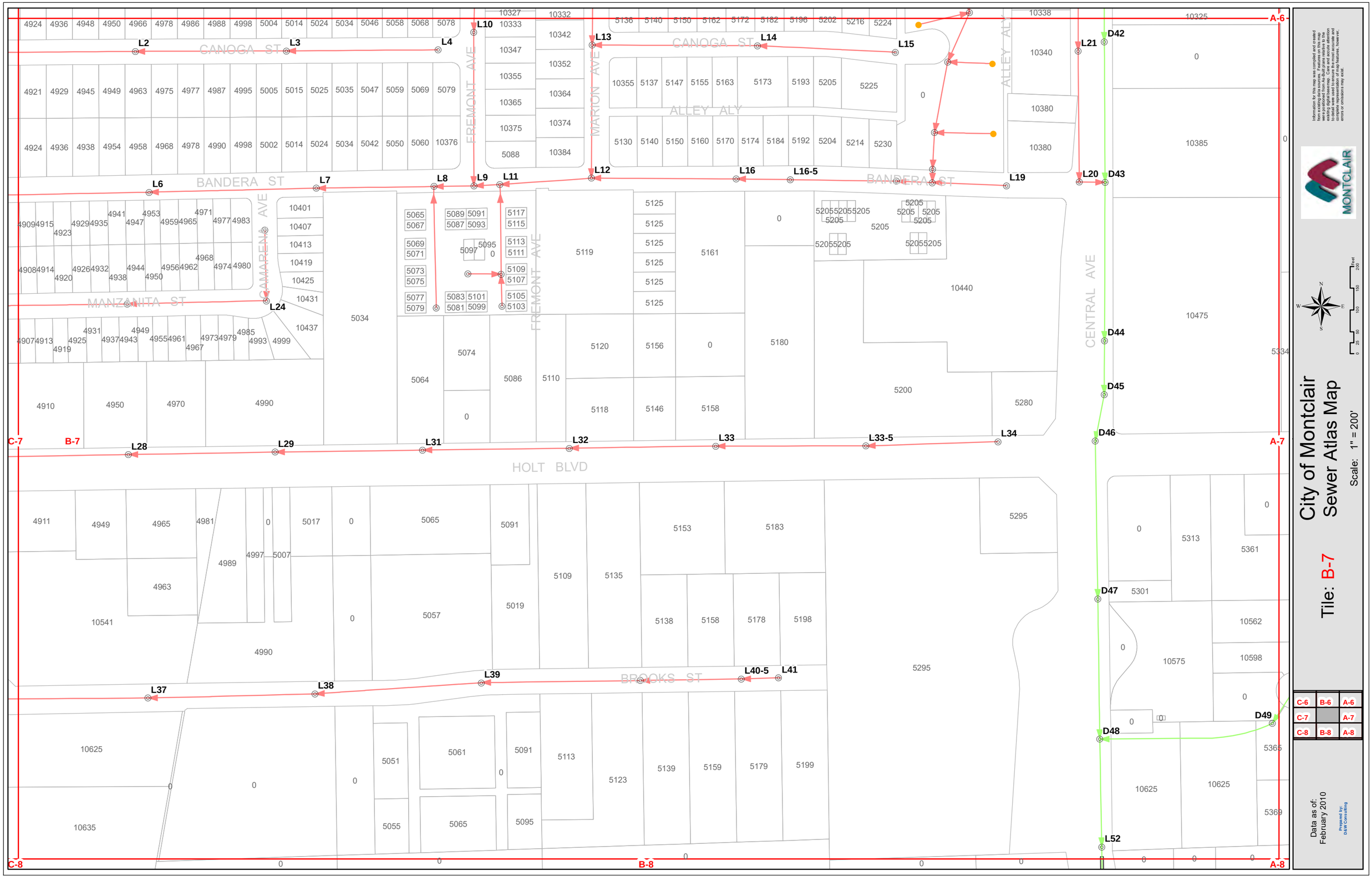
1901	PRI	2/1/1980	025_2325.tif	2	B-7



CANOGA ST
BANDERA ST
MANZANITA ST
HOLT BLVD
BROOKS ST
FREMONT AVE
MARION AVE
CAMARENA AVE
CENTRAL AVE
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City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: B-7
Data as of:
February 2010
Prepared by:
D&W Consulting
MONTCLAIR

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
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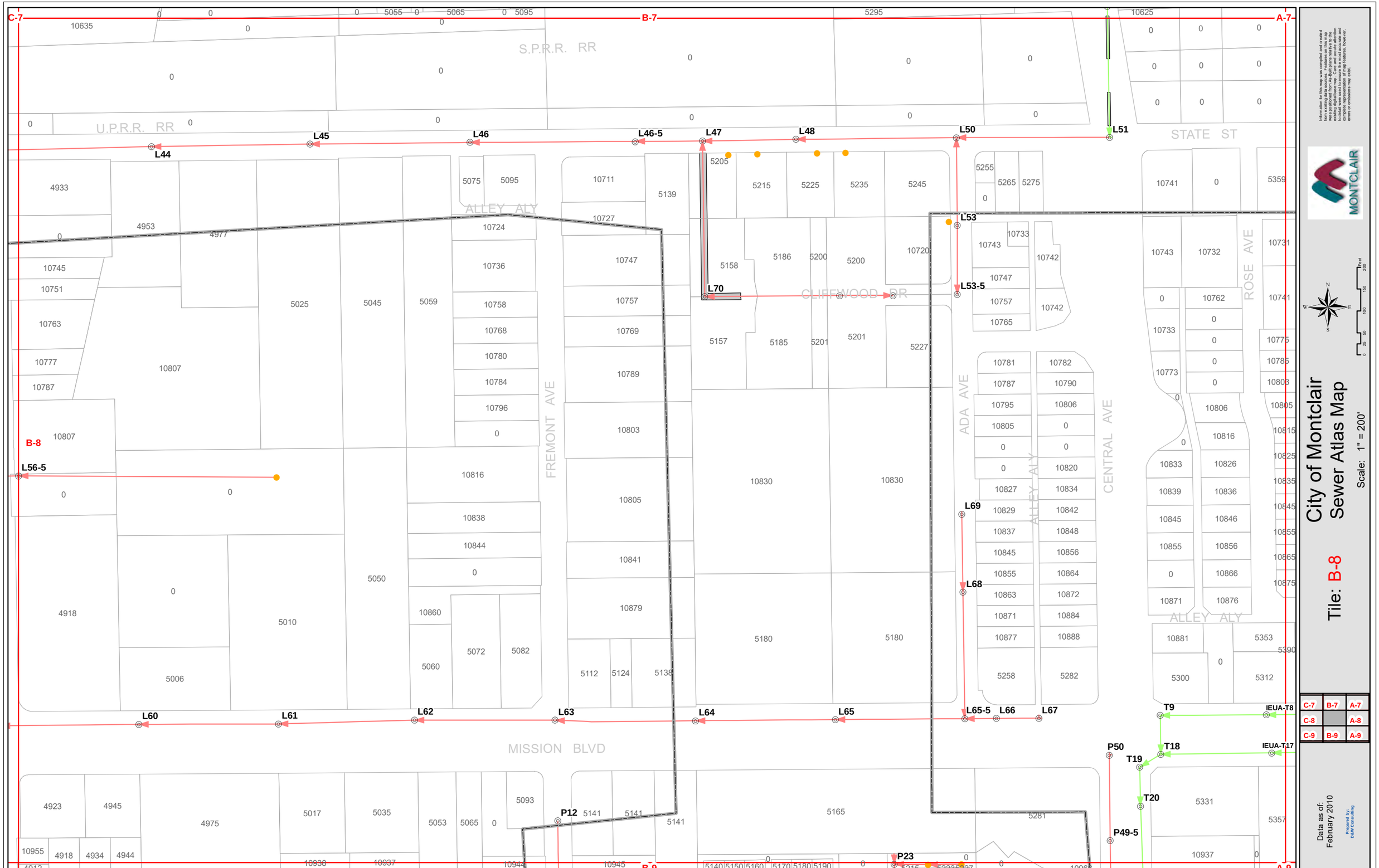
10896	L46	L45	10/16/1963	10	1	VCP	0.01	-9	376.00	035_1135.tif	2	B-8	VCP	378.20
10441	L47	NOMHID	5/19/1982	10	1	VCP	-9.00	-9	-9.00	036_2437.tif	2	B-8	VCP	159.58
10442	L48	L47	5/19/1982	10	1	VCP	0.01	-9	-9.00	036_2437.tif	2	B-8	VCP	220.98
10440	L50	L48	5/19/1982	10	1	VCP	0.01	-9	-9.00	036_2437.tif	2	B-8	VCP	380.15
10401	L51	L50	10/16/1963	10	1	VCP	0.00	-9	357.60	036_1136.tif	2	B-8	VCP	362.81
10571	L52	L51	10/16/1963	10	1	VCP	0.02	-9	306.00	038_1138.tif	1	B-8	VCP	310.38
11024	L53	L50	5/19/1982	8	1	VCP	0.00	-9	201.00	036_2437.tif	2	B-8	VCP	207.77
10008	L60	L59	9/30/1991	8	1	VCP	0.01	-9	324.50	043_7143.tif	2	B-8	VCP	327.85
10007	L61	L60	9/30/1991	8	1	VCP	0.01	-9	326.80	043_7143.tif	2	B-8	VCP	330.76
10006	L62	L61	9/30/1991	8	1	VCP	0.01	-9	326.00	043_7143.tif	2	B-8	VCP	321.99
10005	L63	L62	9/30/1991	8	1	VCP	0.00	-9	326.44	043_7143.tif	2	B-8	VCP	333.02
9571	L64	L63	10/30/1991	8	1	VCP	0.00	-9	325.36	044_7144.tif	2	B-8	VCP	332.53
9570	L65	L64	10/30/1991	8	1	VCP	0.00	-9	326.00	044_7144.tif	2	B-8	VCP	331.07
9569	L65-5	L65	10/30/1991	8	1	VCP	0.00	-9	316.65	044_7144.tif	2	B-8	VCP	306.54
682	L67	L67		8	1	VCP	-9.00	-9	5.00	044_7144.tif	2	B-8	VCP	8.45
683	L67	L67		8	1	VCP	-9.00	-9	5.00	044_7144.tif	2	B-8	VCP	7.98
9568	L67	L65-5	10/30/1991	8	1	VCP	0.00	-9	158.00	044_7144.tif	2	B-8	VCP	175.51
3436	L68	L65-5	2/18/2005	8	1	VCP	0.01	-9	296.00	200352.tif	2	B-8	VCP	299.67
3437	L69	L68	2/18/2005	8	1	VCP	0.01	-9	181.00	200352.tif	2	B-8	VCP	185.11
250	L70	L48	12/13/2001	8	1	VCP	0.04		365.94	200095.TIF	2	B-8	VCP	368.91
249	L71	L70	12/13/2001	8	1	VCP	0.04		310.75	200095.TIF	2	B-8	VCP	319.80
3372	NOMHID	L51	10/16/1963	8	1	VCP	-9.00	-9	-9.00	036_1136.tif	1	B-8	VCP	6.30
3438	NOMHID	L69	2/18/2005	8	1	VCP	-9.00	-9	-9.00	200352.tif	2	B-8	VCP	6.60
3647	NOMHID	NOMHID	3/3/1986	-9	1	UNK	-9.00	-9	-9.00	004_7104.tif	2	B-8	UNK	610.90
4138	NOMHID	P50	10/30/1991	8	1	UNK	-9.00	-9	-9.00	042_7142.tif	2	B-8	UNK	5.89
4139	NOMHID	P50	10/30/1991	8	1	UNK	-9.00	-9	-9.00	042_7142.tif	2	B-8	UNK	5.68
10895	NOMHID	L46	10/16/1963	10	1	VCP	0.01	-9	-9.00	035_1135.tif	2	B-8	VCP	391.33
4298	P24	P23	10/3/1983	8	1	VCP	0.01	-9	12.00	042_2443.tif	2	B-8	VCP	26.16
9970	P50	P49	10/30/1991	8	1	VCP	0.01	-9	379.61	042_7142.tif	2	B-8	VCP	381.02
10149	T17	T18		8	1	VCP	0.00	-9	258.00	011_6311.tif	1	B-8	VCP	262.58
3903	T18	T19	5/8/1996	-9	1	VCP	0.01	-9	56.81	010_6310.tif	1	B-8	VCP	58.47
3902	T19	T20	5/8/1996	8	1	VCP	0.00	-9	90.00	010_6310.tif	1	B-8	VCP	92.54
9138	T8	T9		8	1	VCP	0.00	-9	245.33	011_6311.tif	1	B-8	VCP	251.09
3904	T9	T18	5/8/1996	8	1	VCP	0.02	-9	89.00	010_6310.tif	1	B-8	VCP	91.89
6087					1		0.00		0.00		2	B-8		126.30
5962				8	1	VCP	0.00		0.00		2	B-8		163.06

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1934	L44	10/16/1963	035_1135.tif	2	B-8
1933	L45	10/16/1963	035_1135.tif	2	B-8
1932	L46	10/16/1963	035_1135.tif	2	B-8
1519	L46-5	5/19/1982	036_2437.tif	2	B-8
1518	L47	5/19/1982	036_2437.tif	2	B-8
1516	L48	5/19/1982	036_2437.tif	2	B-8
1512	L50	5/19/1982	036_2437.tif	2	B-8
1468	L51	10/16/1963	036_1136.tif	1	B-8
1513	L53	5/19/1982	036_2437.tif	2	B-8
151	L53-5			2	B-8
1403	L56-5	3/3/1986	004_7104.tif	2	B-8
826	L60	9/30/1991	043_7143.tif	2	B-8
825	L61	9/30/1991	043_7143.tif	2	B-8
824	L62	9/30/1991	043_7143.tif	2	B-8
823	L63	9/30/1991	043_7143.tif	2	B-8
681	L64	10/30/1991	044_7144.tif	2	B-8
680	L65	10/30/1991	044_7144.tif	2	B-8
1266	L65-5	2/18/2005	200352.tif	2	B-8
150	L66			2	B-8
679	L67	10/30/1991	044_7144.tif	2	B-8
1265	L68	2/18/2005	200352.tif	2	B-8
1264	L69	2/18/2005	200352.tif	2	B-8
82	L70	12/13/2001	200095.tif	3	B-8
81	L71	12/13/2001	200095.tif	3	B-8
2193	L71-5			2	B-8
1514	NOMHID	5/19/1982	036_2437.tif	2	B-8
1515	NOMHID	5/19/1982	036_2437.tif	2	B-8
1517	NOMHID	5/19/1982	036_2437.tif	2	B-8
1520	NOMHID	5/19/1982	036_2437.tif	2	B-8
1521	NOMHID	5/19/1982	036_2437.tif	2	B-8
1921	NOMHID	3/3/1986	004_7104.tif	2	B-8
717	P12	4/24/1986	018_7118.tif	2	B-8
152	P49-5			2	B-8
811	P50	10/30/1991	042_7142.tif	2	B-8
1362	T17		011_6311.tif	1	B-8
1307	T18	5/8/1996	010_6310.tif	1	B-8
1309	T19	5/8/1996	010_6310.tif	1	B-8
1310	T20	5/8/1996	010_6310.tif	1	B-8
1363	T8		011_6311.tif	1	B-8
1308	T9	5/8/1996	010_6310.tif	1	B-8



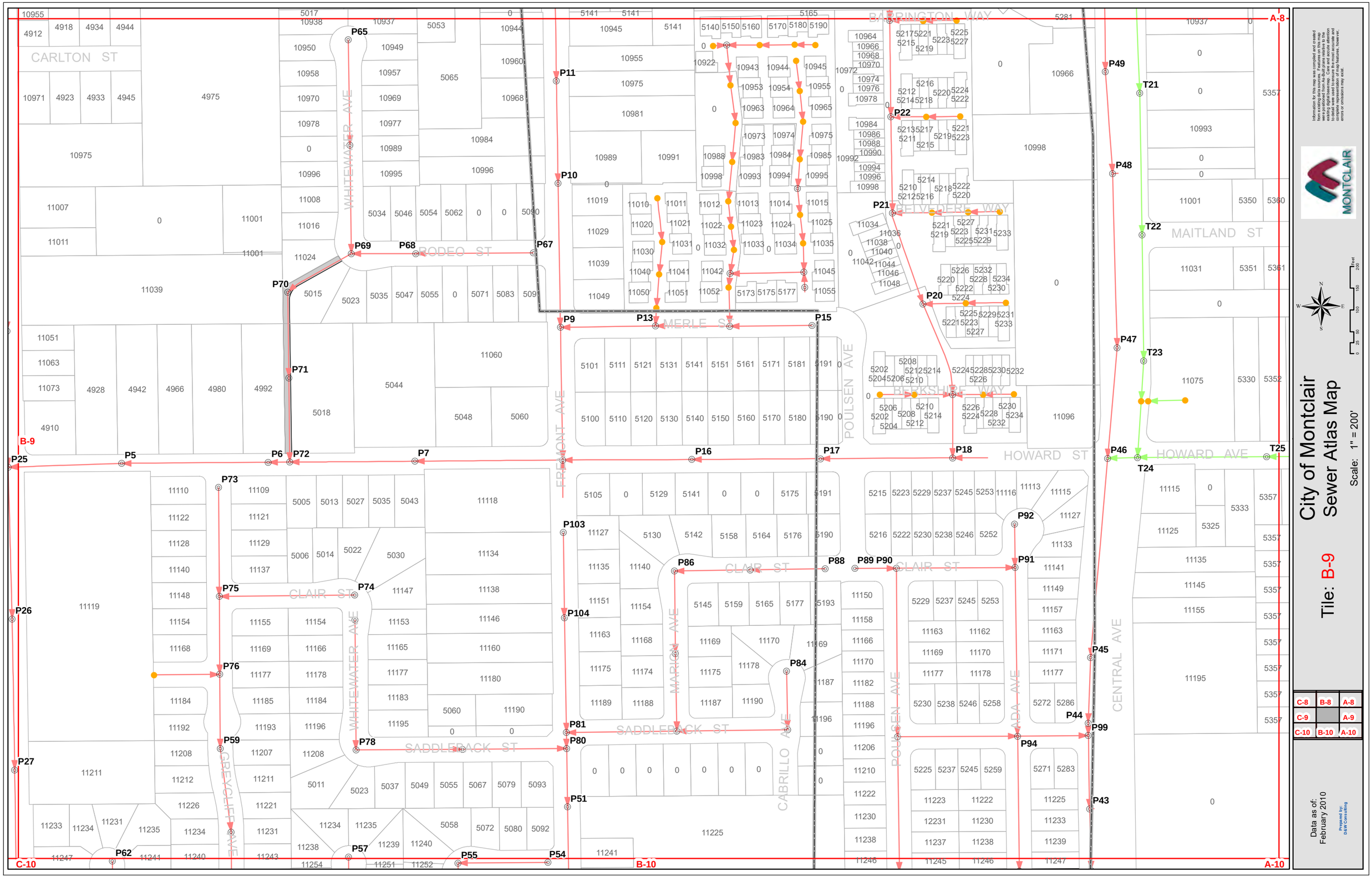
City of Montclair
Sewer Atlas Map
Tile: B-8
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
S.P.R.R. RR
U.P.R.R. RR
STATE ST
ALLEY ALY
CLIFFWOOD DR
FREMONT AVE
ADA AVE
CENTRAL AVE
ROSE AVE
MISSION BLVD
C-7
B-7
A-7
B-8
B-9
A-9
L44
L45
L46
L46-5
L47
L48
L50
L51
L53
L53-5
L56-5
L60
L61
L62
L63
L64
L65
L65-5
L66
L67
L68
L69
L70
P12
P23
P49-5
P50
T9
T18
T19
T20
IEUA-T8
IEUA-T17

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
170	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.02		199.00	Tract 17191 Sewer03.TIF	2	B-9	VCP	202.55
171	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.19		269.54	Tract 17191 Sewer03.TIF	2	B-9	VCP	273.59
172	NOMHID	NOMHID	2/27/2006	4	1	VCP	0.01		167.47	Tract 17191 Sewer03.TIF	2	B-9	VCP	139.10
199	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.01		259.54	Tract 17191 Sewer04.TIF	2	B-9	VCP	263.79
200	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.01		259.00	Tract 17191 Sewer04.TIF	2	B-9	VCP	262.79
201	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.01		175.00	Tract 17191 Sewer05.TIF	2	B-9	VCP	178.46
202	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.01		176.00	Tract 17191 Sewer05.TIF	2	B-9	VCP	179.78
214	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.09		192.72	Tract 17191 Sewer06.TIF	2	B-9	VCP	196.75
233	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.09		181.00	Tract 17191 Sewer06.TIF	2	B-9	VCP	184.90
242	NOMHID	NOMHID	2/27/2006	8	1	VCP	0.01		134.01	Tract 17191 Sewer06.TIF	2	B-9	VCP	139.00
3919	NOMHID	P13	7/14/1987	8	1	VCP	0.05	-9	44.94	012_7112.tif	2	B-9	VCP	43.66
3920	NOMHID	P14	7/14/1987	8	1	VCP	0.02	-9	91.00	012_7112.tif	2	B-9	VCP	92.24
3921	NOMHID	NOMHID	7/14/1987	8	1	VCP	0.01	-9	30.99	012_7112.tif	2	B-9	VCP	33.11
741	NOMHID	T24	5/8/1996	8	1	VCP	0.01	-9	-9.00	010_6310.tif	1	B-9	VCP	134.53
3876	NOMHID	NOMHID	7/10/1984	-9	1	UNK	-9.00	-9	-9.00	014_7114.tif	2	B-9	UNK	11.79
3949	NOMHID	NOMHID	8/6/1997	6	1	VCP	0.11	-9	-9.00	200064.tif	1	B-9	VCP	17.08
3950	NOMHID	NOMHID	8/6/1997	6	1	VCP	0.01	-9	-9.00	200064.tif	1	B-9	VCP	87.66
4097	NOMHID	P8	9/14/1986	8	1	UNK	-9.00	-9	-9.00	005_7105.tif	2	B-9	UNK	90.41
4323	NOMHID	P48	10/30/1991	8	1	UNK	-9.00	-9	-9.00	041_7141.tif	2	B-9	UNK	13.92
4554	NOMHID	P43	10/30/1991	8	1	UNK	-9.00	-9	-9.00	040_7140.tif	2	B-9	UNK	11.91
9155	NOMHID	NOMHID	1/25/2005	4	1	VCP	0.00		0.00	Tract 16884_StLgt&Sw01.TIF	2	B-9	VCP	401.25
9976	NOMHID	NOMHID	10/3/1983	8	1	VCP	0.01	-9	-9.00	043_2444.tif	2	B-9	VCP	73.28
9977	NOMHID	NOMHID	10/3/1983	8	1	VCP	0.02	-9	-9.00	043_2444.tif	2	B-9	VCP	81.77
9994	NOMHID	P19	10/3/1983	8	1	VCP	0.02	-9	-9.00	043_2444.tif	2	B-9	VCP	91.11
9995	NOMHID	P19	10/3/1983	8	1	VCP	0.01	-9	-9.00	043_2444.tif	2	B-9	VCP	72.89
11087	NOMHID	NOMHID	10/1/2003	8	1	VCP	0.08		240.00	Tract 163450002.TIF	2	B-9	VCP	250.96
11088	NOMHID	NOMHID	10/1/2003	8	1	VCP	0.08		254.40	Tract 163450002.TIF	2	B-9	VCP	258.67
11106	NOMHID	NOMHID	10/1/2003	8	1	VCP	0.01		276.00	Tract 163450002.TIF	2	B-9	VCP	280.21
11107	NOMHID	NOMHID	10/1/2003	8	1	VCP	0.01		149.21	Tract 163450002.TIF	2	B-9	VCP	152.95
10020	NOMHID	NOMHID	3/21/1989	8	1	VCP	0.01	-9	-9.00	011_7111.tif	2	B-9	VCP	79.53
10021	NOMHID	P23	3/21/1989	8	1	VCP	0.02	-9	-9.00	011_7111.tif	2	B-9	VCP	79.87
10022	NOMHID	NOMHID	3/21/1989	8	1	VCP	0.00	-9	-9.00	011_7111.tif	2	B-9	VCP	80.28
10023	NOMHID	P22	3/21/1989	8	1	VCP	0.00	-9	-9.00	011_7111.tif	2	B-9	VCP	84.79
10049	NOMHID	NOMHID		8	1	VCP	0.01	-9	-9.00	010_7110.tif	2	B-9	VCP	75.88
10050	NOMHID	NOMHID		8	1	VCP	0.01	-9	-9.00	010_7110.tif	2	B-9	VCP	85.80
10051	NOMHID	P21		8	1	VCP	0.01	-9	-9.00	010_7110.tif	2	B-9	VCP	93.92
10052	NOMHID	NOMHID		8	1	VCP	0.01	-9	-9.00	010_7110.tif	2	B-9	VCP	95.48
10053	NOMHID	P20		8	1	VCP	0.01	-9	-9.00	010_7110.tif	2	B-9	VCP	101.55
10084	NOMHID	NOMHID	7/10/1987	8	1	VCP	0.00	-9	-9.00	012_7112.tif	2	B-9	VCP	93.47
10085	NOMHID	NOMHID	7/10/1987	8	1	VCP	0.00	-9	191.77	012_7112.tif	2	B-9	VCP	94.61
10092	NOMHID	NOMHID	7/14/1987	8	1	VCP	0.01	-9	-9.00	012_7112.tif	2	B-9	VCP	60.37
10093	NOMHID	NOMHID	7/14/1987	8	1	VCP	0.01	-9	-9.00	012_7112.tif	2	B-9	VCP	55.81
10094	NOMHID	NOMHID	7/14/1987	8	1	VCP	0.02	-9	55.60	012_7112.tif	2	B-9	VCP	57.43
10095	NOMHID	NOMHID	7/14/1987	8	1	VCP	0.01	-9	104.91	012_7112.tif	2	B-9	VCP	104.75
10096	NOMHID	NOMHID	7/14/1987	8	1	VCP	0.02	-9	-9.00	012_7112.tif	2	B-9	VCP	78.02
10097	NOMHID	NOMHID	7/14/1987	8	1	VCP	0.02	-9	-9.00	012_7112.tif	2	B-9	VCP	79.88
10125	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	170.98	014_7114.tif	2	B-9	VCP	176.28
10126	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	127.49	014_7114.tif	2	B-9	VCP	62.95
10127	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	127.48	014_7114.tif	2	B-9	VCP	68.14
10128	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	70.38	014_7114.tif	2	B-9	VCP	69.37
10129	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	-9.00	014_7114.tif	2	B-9	VCP	35.72
10187	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	-9.00	013_7113.tif	2	B-9	VCP	49.19
10188	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	-9.00	013_7113.tif	2	B-9	VCP	83.34
10189	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	-9.00	013_7113.tif	2	B-9	VCP	78.77
10190	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.06	-9	26.61	013_7113.tif	2	B-9	VCP	32.20
10191	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	60.33	013_7113.tif	2	B-9	VCP	65.45
10192	NOMHID	NOMHID	7/10/1984	-9	1	UNK	-9.00	-9	-9.00	013_7113.tif	2	B-9	UNK	90.55
10193	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	-9.00	013_7113.tif	2	B-9	VCP	73.06
10194	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	-9.00	013_7113.tif	2	B-9	VCP	72.47
10195	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	-9.00	013_7113.tif	2	B-9	VCP	90.60
10196	NOMHID	NOMHID	7/10/1984	8	1	VCP	0.01	-9	-9.00	013_7113.tif	2	B-9	VCP	69.36
10218	NOMHID	NOMHID	7/10/1984	-9	1	UNK	-9.00	-9	-9.00	013_7113.tif	2	B-9	UNK	29.97
11262	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.05		281.00	Tract16960 & 16913 Sewer02.TIF	2	B-9	VCP	285.83
11265	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.05		165.00	Tract16960 & 16913 Sewer02.TIF	2	B-9	VCP	168.44
11280	NOMHID	NOMHID	1/25/2005	4	1	VCP	0.00		0.00	Tract 16884_StLgt&Sw01.TIF	2	B-9	VCP	98.85
11281	NOMHID	NOMHID	1/25/2005	4	1	VCP	0.00		0.00	Tract 16884_StLgt&Sw01.TIF	2	B-9	VCP	282.16
11123	NOMHID	NOMHID	10/1/2003	8	1	VCP	0.01		174.60	Tract 163450002.TIF	2	B-9	VCP	177.76
11124	NOMHID	NOMHID	10/1/2003	8	1	VCP	0.00		200.00	Tract 163450002.TIF	2	B-9	VCP	203.43
11125	NOMHID	NOMHID	10/1/2003	8	1	VCP	0.01		196.00	Tract 163450002.TIF	2	B-9	VCP	200.59
11148	NOMHID	NOMHID	3/10/2004	8	1	VCP	0.00		0.00	Tract 16484_PPsewer01.TIF	2	B-9	VCP	259.54
11149	NOMHID	NOMHID	3/10/2004	8	1	VCP	0.00		0.00	Tract 16484_PPsewer01.TIF	2	B-9	VCP	185.85
11150	NOMHID	NOMHID	3/10/2004	8	1	VCP	0.00		0.00	Tract 16484_PPsewer01.TIF	2	B-9	VCP	176.01
11151	NOMHID	NOMHID	3/10/2004	8	1	VCP	0.00		0.00	Tract 16484_PPsewer01.TIF	2	B-9	VCP	322.34

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
133	NOMHID	3/10/2004	Tract 16484_PPsewer01.TIF	2	B-9
1177	NOMHID	8/6/1997	200064.tif	1	B-9
1178	NOMHID	8/6/1997	200064.tif	1	B-9
2113	NOMHID	8/6/1997	200064.tif	1	B-9
899	P10		005_7105.tif	2	B-9
2151	P103	2/27/2006	Tract 17191 Sewer03.TIF	3	B-9
2152	P104	2/27/2006	Tract 17191 Sewer03.TIF	3	B-9
716	P11	4/24/1986	018_7118.tif	2	B-9
1379	P13	3/14/1986	006_7106.tif	2	B-9
1380	P14	3/14/1986	006_7106.tif	2	B-9
1381	P15	3/14/1986	006_7106.tif	2	B-9
1396	P16	10/8/1983	041_2442.tif	2	B-9
1397	P17	10/8/1983	041_2442.tif	2	B-9
1398	P18	10/8/1983	041_2442.tif	2	B-9
810	P19	10/3/1983	042_2443.tif	2	B-9
809	P20	10/3/1983	042_2443.tif	2	B-9
805	P21	10/3/1983	042_2443.tif	2	B-9
804	P22	10/3/1983	042_2443.tif	2	B-9
803	P23	10/3/1983	042_2443.tif	2	B-9
1170	P43	10/30/1991	040_7140.tif	2	B-9
1169	P44	10/30/1991	040_7140.tif	2	B-9
798	P45	10/30/1991	041_7141.tif	2	B-9
1399	P46	10/8/1983	041_2442.tif	2	B-9
797	P47	10/30/1991	041_7141.tif	2	B-9
796	P48	10/30/1991	041_7141.tif	2	B-9
812	P49	10/30/1991	042_7142.tif	2	B-9
731	P5	10/3/1983	040_2141.tif	2	B-9
76	P51	2/26/1997	037_123040.tif	3	B-9
73	P57	2/26/1997	036_123039.tif	2	B-9
70	P59	2/26/1997	035_123038.tif	2	B-9
732	P6	10/3/1983	040_2141.tif	2	B-9
71	P60	2/26/1997	035_123038.tif	2	B-9
21	P65	10/1/2003	Tract 163450002.TIF	2	B-9
22	P66	10/1/2003	Tract 163450002.TIF	2	B-9
24	P67	10/1/2003	Tract 163450002.TIF	2	B-9
25	P68	10/1/2003	Tract 163450002.TIF	2	B-9
23	P69	10/1/2003	Tract 163450002.TIF	2	B-9
733	P7	10/3/1983	040_2141.tif	2	B-9
26	P70	10/1/2003	Tract 163450002.TIF	2	B-9
45	P71	10/1/2003	Tract 163450002.TIF	2	B-9
46	P72	10/1/2003	Tract 163450002.TIF	2	B-9
47	P73	3/10/2004	Tract 16484_PPsewer01.TIF	2	B-9
2177	P74	3/24/2006	Tract 1747201.TIF	3	B-9
48	P75	3/10/2004	Tract 16484_PPsewer01.TIF	2	B-9
49	P76	3/10/2004	Tract 16484_PPsewer01.TIF	2	B-9
2176	P77	3/24/2006	Tract 1747201.TIF	3	B-9
134	P78	12/6/2005	Tract 16697_SSS01.TIF	3	B-9
135	P79	12/6/2005	Tract 16697_SSS01.TIF	3	B-9
795	P8	10/3/1983	040_2141.tif	2	B-9
136	P80	12/6/2005	Tract 16697_SSS01.TIF	3	B-9
2153	P81	2/27/2006	Tract 17191 Sewer03.TIF	3	B-9
2155	P82	2/27/2006	Tract 17191 Sewer04.TIF	3	B-9
2154	P83	2/27/2006	Tract 17191 Sewer04.TIF	3	B-9
80	P84	2/27/2006	Tract 17191 Sewer06.TIF	3	B-9
79	P85	2/27/2006	Tract 17191 Sewer06.TIF	3	B-9
2158	P86	2/27/2006	Tract 17191 Sewer05.TIF	3	B-9
2157	P87	2/27/2006	Tract 17191 Sewer05.TIF	3	B-9
2156	P88	2/27/2006	Tract 17191 Sewer05.TIF	3	B-9
139	P89	1/25/2005	Tract 16884_StLgt&Sw01.TIF	2	B-9
1378	P9	3/14/1986	006_7106.tif	2	B-9
140	P90	1/25/2005	Tract 16884_StLgt&Sw01.TIF	2	B-9
138	P91	1/25/2005	Tract 16884_StLgt&Sw01.TIF	2	B-9
137	P92	1/25/2005	Tract 16884_StLgt&Sw01.TIF	2	B-9
2141	P93	4/27/2005	Tract16960 & 16913 Sewer03.TIF	2	B-9
2139	P94	4/27/2005	Tract16960 & 16913 Sewer03.TIF	2	B-9
2143	P99	4/27/2005	Tract16960 & 16913 Sewer02.TIF	2	B-9
819	PRI	10/3/1983	043_2444.tif	2	B-9
820	PRI	10/3/1983	043_2444.tif	2	B-9
821	PRI	10/3/1983	043_2444.tif	2	B-9
822	PRI	10/3/1983	043_2444.tif	2	B-9
905	PRI	3/21/1989	011_7111.tif	2	B-9
906	PRI	3/21/1989	011_7111.tif	2	B-9
907	PRI	3/21/1989	011_7111.tif	2	B-9



City of Montclair
Sewer Atlas Map
Tile: B-9
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
CARLTON ST
WHITEWATER AVE
RODEO ST
MERLE ST
FREMONT AVE
POULSEN AVE
BARRINGTON WAY
BELVEDERE WAY
BERKSHIRE WAY
MAITLAND ST
HOWARD ST
HOWARD AVE
CLAIR ST
SADDLEBACK ST
MARION AVE
CABRILLO AVE
CENTRAL AVE
GREYCLIFF AVE
A-8
B-9
C-10
B-10
A-10

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
11152	NOMHID	NOMHID	3/10/2004	8	1	VCP	0.00		0.00	Tract 16484_PPsewer01.TIF	2	B-9	VCP	156.35
11171	NOMHID	NOMHID	2/27/2006	4	1	VCP	0.01		167.47	Tract 17191 Sewer03.TIF	2	B-9	VCP	37.59
11185	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.12		318.00	Tract16960 & 16913 Sewer03.TIF	2	B-9	VCP	320.93
11189	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.12		318.00	Tract16960 & 16913 Sewer03.TIF	2	B-9	VCP	321.08
11231	NOMHID	NOMHID	12/6/2005	4	1	VCP	0.00		0.00	Tract 16697_SSS01.TIF	2	B-9	VCP	253.62
11232	NOMHID	NOMHID	12/6/2005	4	1	VCP	0.00		0.00	Tract 16697_SSS01.TIF	2	B-9	VCP	247.78
11241	NOMHID	NOMHID	1/25/2005	4	1	VCP	0.00		0.00	Tract 16884_StLgt&Sw01.TIF	2	B-9	VCP	103.97
11242	NOMHID	NOMHID	1/25/2005	4	1	VCP	0.00		0.00	Tract 16884_StLgt&Sw01.TIF	2	B-9	VCP	401.32
11324	NOMHID	NOMHID	3/24/2006	4	1	VCP	0.00		0.00	Tract 1747201.TIF	2	B-9	VCP	309.89
10016	P10	P9		8	1	VCP	0.01	-9	339.54	005_7105.tif	2	B-9	VCP	343.37
9906	P11	P10	4/24/1986	8	1	VCP	0.02	-9	241.00	018_7118.tif	2	B-9	VCP	243.31
9905	P12	P11	4/24/1986	8	1	VCP	0.01	-9	241.00	018_7118.tif	2	B-9	VCP	247.50
10160	P13	P9	3/14/1986	8	1	VCP	0.00	-9	226.58	006_7106.tif	2	B-9	VCP	226.57
10159	P14	P13	3/14/1986	8	1	VCP	0.00	-9	168.39	006_7106.tif	2	B-9	VCP	176.31
10158	P15	P14	3/14/1986	8	1	VCP	0.00	-9	192.08	006_7106.tif	2	B-9	VCP	195.84
10181	P16	P8	10/8/1983	8	1	VCP	0.00	-9	304.93	041_2442.tif	2	B-9	VCP	307.30
10180	P17	P16	10/8/1983	8	1	VCP	0.00	-9	304.93	041_2442.tif	2	B-9	VCP	305.66
10179	P18	P17	10/8/1983	8	1	VCP	0.00	-9	304.92	041_2442.tif	2	B-9	VCP	314.61
4297	P19	P18	10/3/1983	8	1	VCP	0.01	-9	145.67	042_2443.tif	2	B-9	VCP	150.58
9946	P20	P19	10/3/1983	8	1	VCP	0.00	-9	224.52	042_2443.tif	2	B-9	VCP	228.41
9945	P21	P20	10/3/1983	8	1	VCP	0.00	-9	223.05	042_2443.tif	2	B-9	VCP	228.68
9944	P22	P21	10/3/1983	8	1	VCP	0.02	-9	224.67	042_2443.tif	2	B-9	VCP	229.46
9943	P23	P22	10/3/1983	8	1	VCP	0.02	-9	224.67	042_2443.tif	2	B-9	VCP	229.38
11266	P43	P42	10/30/1991	10	1	VCP	0.01	-9	391.80	040_7140.tif	2	B-9	VCP	147.16
9563	P44	P43	10/30/1991	10	1	VCP	0.01	-9	203.20	040_7140.tif	2	B-9	VCP	174.31
11260	P44	P43	10/30/1991	10	1	VCP	0.01	-9	203.20	040_7140.tif	2	B-9	VCP	30.07
9562	P45	P44	10/30/1991	10	1	VCP	0.01	-9	208.56	040_7140.tif	2	B-9	VCP	155.87
513	P46	P18	10/8/1983	8	1	UNK	0.00	-9	357.66	041_2442.tif	2	B-9	UNK	83.89
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9933	P47	P46	10/30/1991	8	1	VCP	0.02	-9	203.82	041_7141.tif	2	B-9	VCP	264.26
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9931	P49	P48	10/30/1991	8	1	VCP	0.01	-9	244.00	041_7141.tif	2	B-9	VCP	242.87
9930	P5	P25	10/8/1983	8	1	VCP	0.02	-9	268.42	040_2441.tif	2	B-9	VCP	270.18
181	P59	P60	2/26/1997	8	1	VCP	0.01		196.16	035_123038.tif	2	B-9	VCP	200.50
9929	P6	P5	10/8/1983	8	1	VCP	0.01	-9	346.00	040_2441.tif	2	B-9	VCP	348.97
9928	P7	P6	10/8/1983	8	1	VCP	0.01	-9	346.00	040_2441.tif	2	B-9	VCP	297.73
11122	P7	P6	10/8/1983	8	1	VCP	0.01	-9	346.00	040_2441.tif	2	B-9	VCP	51.43
9927	P8	P7	10/8/1983	8	1	VCP	0.00	-9	346.00	040_2441.tif	2	B-9	VCP	352.35
10015	P9	P8		8	1	VCP	0.01	-9	310.75	005_7105.tif	2	B-9	VCP	315.61
10119	T20	T21	5/8/1996	8	1	VCP	0.00	-9	296.00	010_6310.tif	1	B-9	VCP	310.04
10120	T21	T22	5/8/1996	8	1	VCP	0.01	-9	336.00	010_6310.tif	1	B-9	VCP	337.99
10121	T22	T23	5/8/1996	8	1	VCP	0.01	-9	296.00	010_6310.tif	1	B-9	VCP	299.51
3901	T23	NOMHID	5/8/1996	8	1	VCP	0.01	-9	-9.00	010_6310.tif	1	B-9	VCP	96.41
3900	T24	P46	5/8/1996	-9	1	UNK	-9.00	-9	-9.00	010_6310.tif	1	B-9	UNK	71.63
4	T25	T24	5/8/1996	6	1	VCP	0.04		346.00	008_6308.TIF	1	B-9	VCP	307.17

SEWER STRUCTURE					
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913	PRI		010_7110.tif	2	B-9
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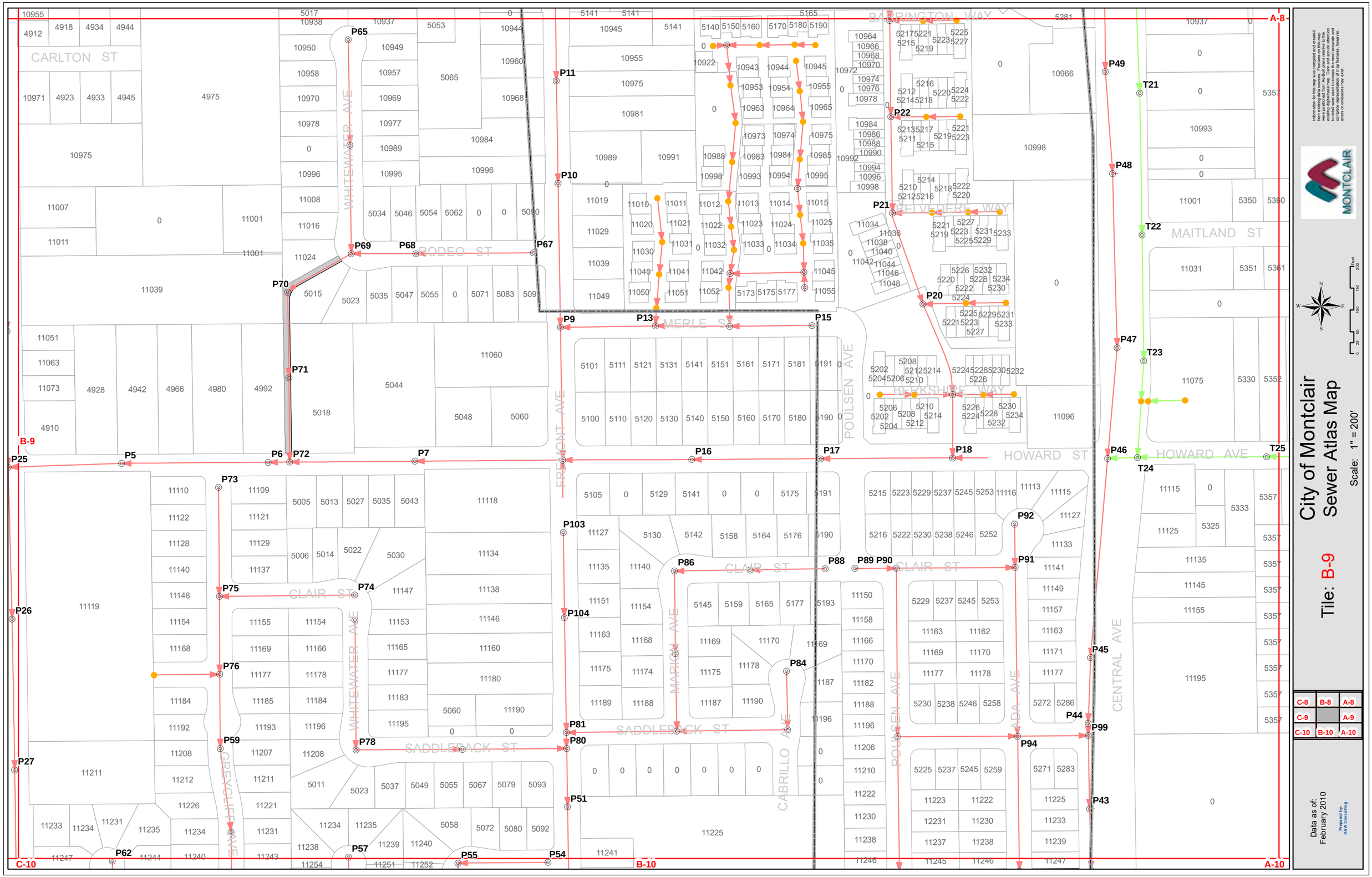
915	PRI		010_7110.tif	2	B-9
916	PRI		010_7110.tif	2	B-9
917	PRI		010_7110.tif	2	B-9
1193	PRI	7/10/1987	012_7112.tif	2	B-9
1194	PRI	7/10/1987	012_7112.tif	2	B-9
1195	PRI	7/10/1987	012_7112.tif	2	B-9
1196	PRI	7/14/1987	012_7112.tif	2	B-9
1197	PRI	7/14/1987	012_7112.tif	2	B-9
1198	PRI	7/14/1987	012_7112.tif	2	B-9
1199	PRI	7/14/1987	012_7112.tif	2	B-9
1200	PRI	7/14/1987	012_7112.tif	2	B-9
1201	PRI	7/14/1987	012_7112.tif	2	B-9
1202	PRI	7/14/1987	012_7112.tif	2	B-9
1299	PRI	7/14/1987	012_7112.tif	2	B-9
1319	PRI	7/10/1984	014_7114.tif	2	B-9
1320	PRI	7/10/1984	014_7114.tif	2	B-9
1321	PRI	7/10/1984	014_7114.tif	2	B-9
1322	PRI	7/10/1984	014_7114.tif	2	B-9
1323	PRI	7/10/1984	014_7114.tif	2	B-9
1409	PRI	7/10/1984	013_7113.tif	2	B-9
1410	PRI	7/10/1984	013_7113.tif	2	B-9
1411	PRI	7/10/1984	013_7113.tif	2	B-9
1412	PRI	7/10/1984	013_7113.tif	2	B-9
1413	PRI	7/10/1984	013_7113.tif	2	B-9
1414	PRI	7/10/1984	013_7113.tif	2	B-9
1415	PRI	7/10/1984	013_7113.tif	2	B-9
1416	PRI	7/10/1984	013_7113.tif	2	B-9
1417	PRI	7/10/1984	013_7113.tif	2	B-9
1418	PRI	7/10/1984	013_7113.tif	2	B-9
1311	T21	5/8/1996	010_6310.tif	1	B-9
1312	T22	5/8/1996	010_6310.tif	1	B-9
1313	T23	5/8/1996	010_6310.tif	1	B-9
1314	T24	5/8/1996	010_6310.tif	1	B-9
85	T25	5/8/1996	008_6308.tif	1	B-9


City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: B-9
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
CARLTON ST
WHITEWATER AVE
RODEO ST
MERLE ST
BARRINGTON WAY
BELVEDERE WAY
BERKSHIRE WAY
POULSEN AVE
MAITLAND ST
HOWARD ST
HOWARD AVE
FREMONT AVE
CLAIR ST
SADDLEBACK ST
MARION AVE
CABRILLO AVE
CENTRAL AVE
GREYCLIFF AVE
A-8
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A-10
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C-10
C-8
B-8
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C-10
B-10
A-10

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
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4412	NOMHID	NOMHID	10/5/1983	-9	1	UNK	-9.00	-9	-9.00	038_2439.tif	2	B-10	UNK	114.77
11042	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.01		281.42	Tract16960 Sewer0003.TIF	2	B-10	VCP	285.98
11180	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.01		25.74	Tract16960 Sewer0003.TIF	2	B-10	VCP	30.65
11182	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.01		190.02	Tract16960 Sewer0003.TIF	2	B-10	VCP	194.64
11201	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.20		192.56	Tract16960 & 16913 Sewer03.TIF	2	B-10	VCP	197.90
11217	NOMHID	NOMHID	4/27/2005	8	1	VCP	0.20		194.00	Tract16960 & 16913 Sewer03.TIF	2	B-10	VCP	198.06
9921	P29	P30	10/5/1983	10	1	VCP	0.01	-9	361.68	038_2439.tif	2	B-10	VCP	361.38
4013	P31	P30	5/3/1991	10	1	VCP	0.01	-9	47.93	038_7138.tif	2	B-10	VCP	51.40
10065	P32	P31	5/3/1991	10	1	VCP	0.01	-9	313.21	038_7138.tif	2	B-10	VCP	318.72
10066	P33	P32	5/3/1991	-9	1	VCP	0.00	-9	330.86	038_7138.tif	2	B-10	VCP	333.20
10067	P34	P33	5/3/1991	10	1	VCP	0.00	-9	264.61	038_7138.tif	2	B-10	VCP	272.49
10068	P35	P34	5/3/1991	10	1	VCP	0.00	-9	346.00	038_7138.tif	2	B-10	VCP	348.32
9561	P37	P35	10/20/1991	10	1	VCP	0.00	-9	346.00	039_7139.tif	2	B-10	VCP	345.16
4141	P38	P38	10/20/1991	10	1	VCP	0.00	-9	24.99	039_7139.tif	2	B-10	VCP	28.72
9560	P38	P37	10/20/1991	10	1	VCP	0.00	-9	271.00	039_7139.tif	2	B-10	VCP	279.50
9559	P39	P38	10/20/1991	10	1	VCP	0.00	-9	316.00	039_7139.tif	2	B-10	VCP	315.13
4142	P40	P39	10/20/1991	10	1	VCP	0.00	-9	24.99	039_7139.tif	2	B-10	VCP	29.62
9558	P41	P40	10/20/1991	10	1	VCP	0.00	-9	268.51	039_7139.tif	2	B-10	VCP	262.36
9565	P42	P41	10/30/1991	10	1	VCP	0.01	-9	392.26	040_7140.tif	2	B-10	VCP	274.12
11179	P42	P41	10/30/1991	10	1	VCP	0.01	-9	392.26	040_7140.tif	2	B-10	VCP	112.90
9564	P43	P42	10/30/1991	10	1	VCP	0.01	-9	391.80	040_7140.tif	2	B-10	VCP	225.09
269	P51	P52	2/26/1997	8	1	VCP	0.01		261.00	037_123040.tif	2	B-10	VCP	265.08
270	P52	P53	2/26/1997	8	1	VCP	0.01		296.00	037_123040.tif	2	B-10	VCP	300.29
36	P53	P35	2/26/1997	8	1	VCP	0.02		292.00	037_123040.tif	2	B-10	VCP	299.99
261	P54	P55	2/26/1997	8	1	VCP	0.02		209.71	036_123039.tif	2	B-10	VCP	213.84
255	P55	P56	2/26/1997	8	1	VCP	0.02		229.28	036_123039.tif	2	B-10	VCP	233.44
151	P56	P58	2/26/1997	8	1	VCP	0.01		256.00	034_123037.tif	2	B-10	VCP	259.56
225	P57	P58	2/26/1997	8	1	VCP	0.01		246.00	036_123039.tif	2	B-10	VCP	249.55
152	P58	P61	2/26/1997	8	1	VCP	0.01		275.00	034_123037.tif	2	B-10	VCP	278.70
182	P60	P61	2/26/1997	8	1	VCP	0.02		308.00	035_123038.tif	2	B-10	VCP	312.09
153	P61	P63	2/26/1997	8	1	VCP	0.00		280.00	034_123037.tif	2	B-10	VCP	284.25
215	P62	P63	2/26/1997	8	1	VCP	0.02		241.00	035_123038.tif	2	B-10	VCP	244.36
154	P63	P64	2/26/1997	8	1	VCP	0.00		224.01	034_123037.tif	2	B-10	VCP	226.83

SEWER STRUCTURE					
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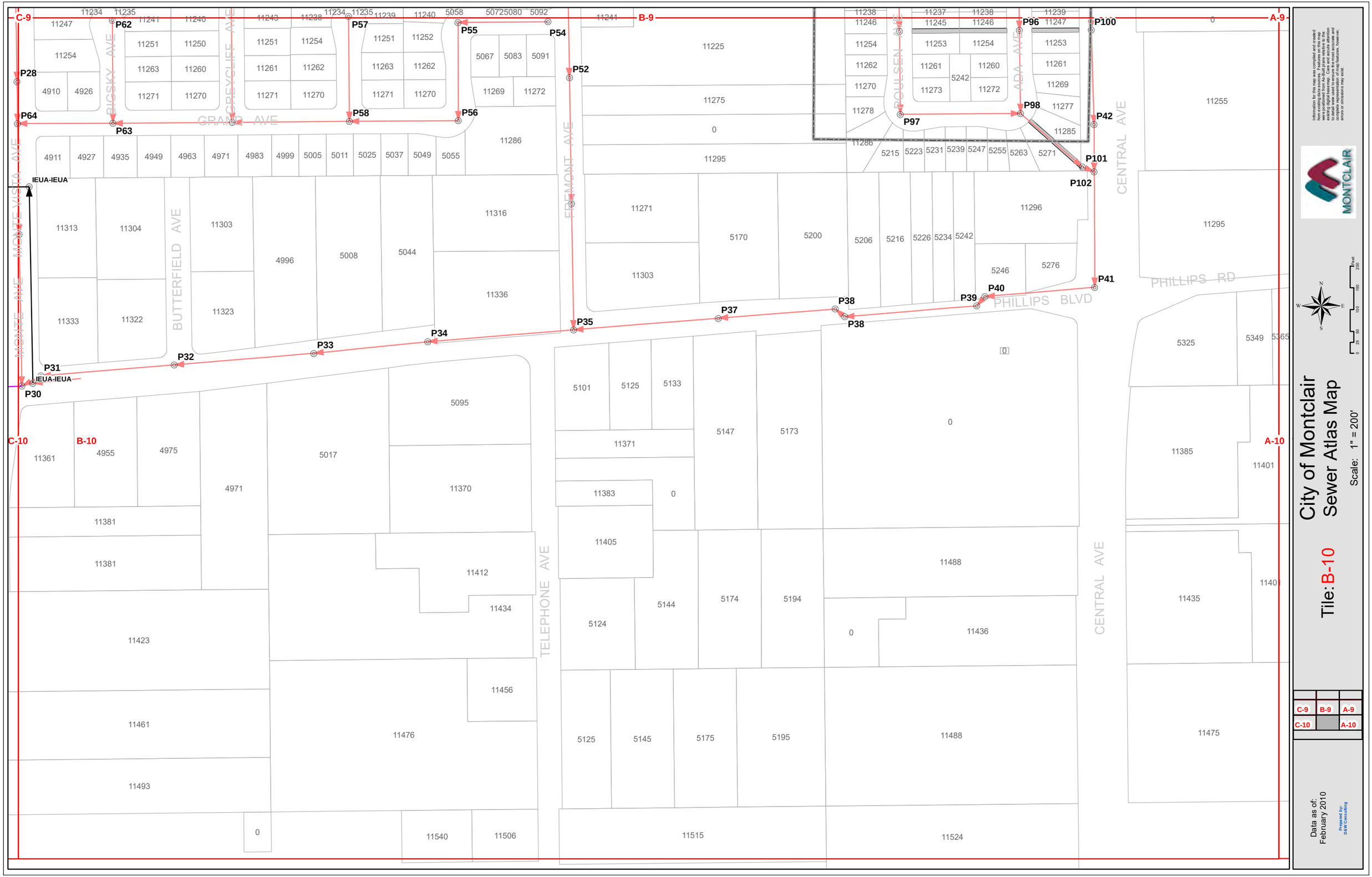
1233	IEUA	6/15/1967	NRWL_15_A.tif	2	B-10
1234	IEUA	6/15/1967	NRWL_15_B.tif	2	B-10
2144	P100	4/27/2005	Tract16960 & 16913 Sewer04.TIF	2	B-10
2137	P101	2/15/2006	16960Sewer0003.TIF	2	B-10
2138	P102	2/15/2006	16960 Sewer0003.TIF	2	B-10
730	P29	10/3/1985	039_2440.tif	2	B-10
919	P30	5/3/1991	038_7138.tif	2	B-10
920	P31	5/3/1991	038_7138.tif	2	B-10
921	P32	5/3/1991	038_7138.tif	2	B-10
922	P33	5/3/1991	038_7138.tif	2	B-10
923	P34	5/3/1991	038_7138.tif	2	B-10
924	P35	5/3/1991	038_7138.tif	2	B-10
1168	P37	10/20/1991	039_7139.tif	2	B-10
1166	P38	10/20/1991	039_7139.tif	2	B-10
1167	P38	10/20/1991	039_7139.tif	2	B-10
1165	P39	10/20/1991	039_7139.tif	2	B-10
1164	P40	10/20/1991	039_7139.tif	2	B-10
671	P41	10/30/1991	040_7140.tif	2	B-10
1171	P42	10/30/1991	040_7140.tif	2	B-10
77	P52	2/26/1997	037_123040.tif	3	B-10
78	P53	2/26/1997	037_123040.tif	3	B-10
75	P54	2/26/1997	036_123039.tif	2	B-10
74	P55	2/26/1997	036_123039.tif	2	B-10
65	P56	2/26/1997	034_123037.tif	2	B-10
66	P58	2/26/1997	034_123037.tif	2	B-10
67	P61	2/26/1997	034_123037.tif	2	B-10
72	P62	2/26/1997	035_123038.tif	2	B-10
68	P63	2/26/1997	034_123037.tif	2	B-10
2142	P95	4/27/2005	Tract16960 & 16913 Sewer03.TIF	2	B-10
2140	P96	4/27/2005	Tract16960 & 16913 Sewer03.TIF	2	B-10
2136	P97	4/27/2005	Tract16960 & 16913 Sewer03.TIF	2	B-10
2135	P98	4/27/2005	Tract16960 & 16913 Sewer03.TIF	2	B-10



City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: B-10
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
C-9
B-9
A-9
C-10
A-10
GRAND AVE
BIGSKY AVE
GREYCLIFF AVE
MONTE VISTA AVE
MONTE AVE
BUTTERFIELD AVE
FREMONT AVE
TELEPHONE AVE
POULSEN AVE
ADA AVE
CENTRAL AVE
PHILLIPS BLVD
PHILLIPS RD
IEUA-IEUA
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P30

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
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893	E11	E13	3/5/1978	8	1	VCP	0.03	-9	240.00	035_2335.tif	2	C-1	VCP	253.14
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4292	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0001.tif	3	C-1	VCP	228.36
5305	NOMHID	NOMHID	6/7/2004	8	1	VCP	0.03	-9	75.85	200452.tif	3	C-1	VCP	77.50
7087	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0001.tif	3	C-1	UNK	87.50
7100	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.03	-9	-9.00	MORENO & MILLS_0024.tif	3	C-1	UNK	80.52
7101	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.03	-9	-9.00	MORENO & MILLS_0024.tif	3	C-1	VCP	350.62

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
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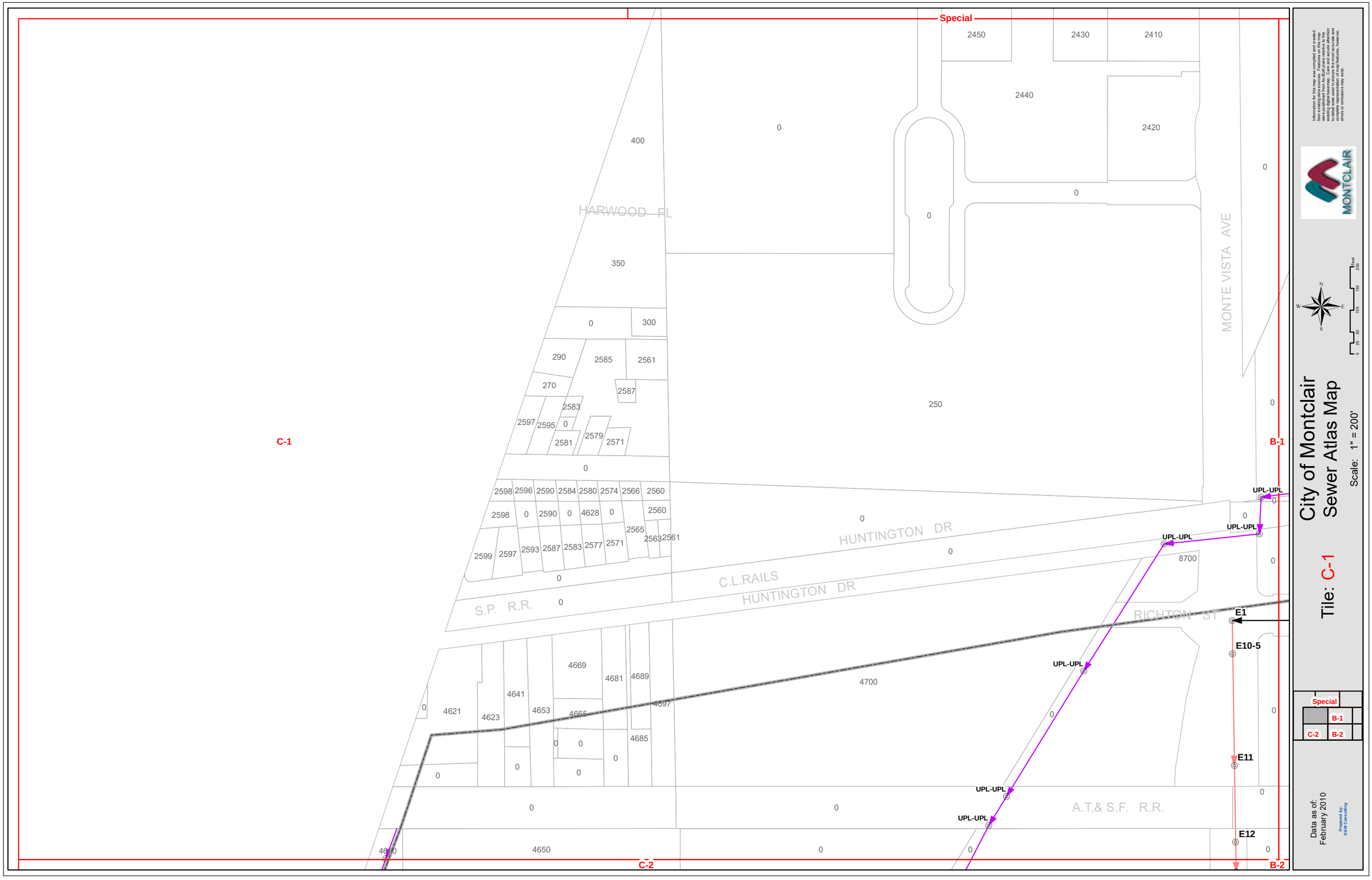
590	46	7/3/1989	MORENO & MILLS_0024.tif	3	C-1
591	47	7/3/1989	MORENO & MILLS_0024.tif	3	C-1
606	62	7/3/1989	MORENO & MILLS_0001.tif	3	C-1
607	63	7/3/1989	MORENO & MILLS_0001.tif	3	C-1
608	64	7/3/1989	MORENO & MILLS_0001.tif	3	C-1
2033	E1	3/5/1978	035_2335.tif	2	C-1
2182	E10-5			2	C-1
2043	E11	3/5/1978	035_2335.tif	2	C-1
2183	E12			2	C-1
947	PRI	6/7/2004	200452.tif	3	C-1



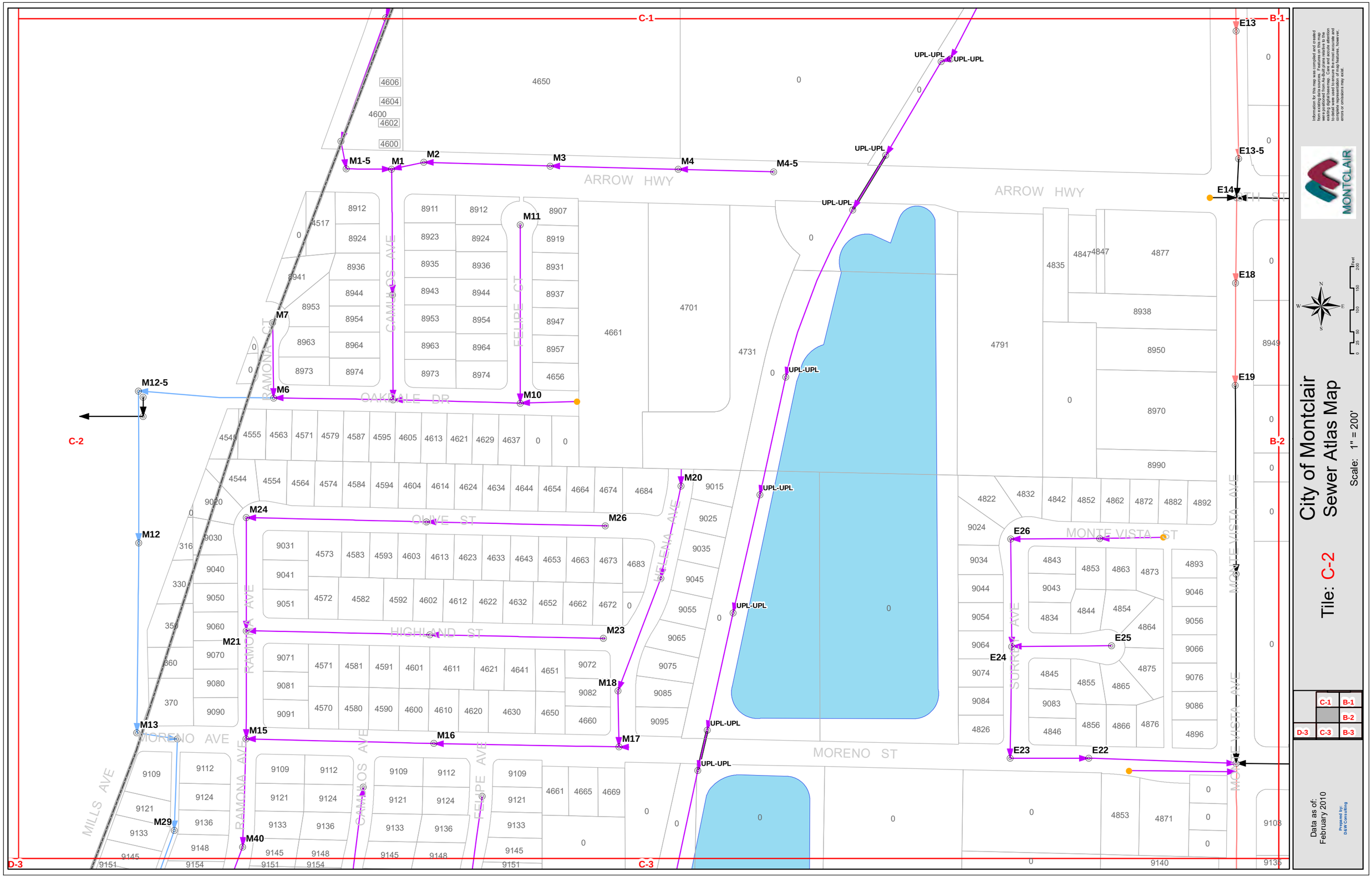
Special
C-1
B-1
C-2
B-2
HARWOOD PL
MONTE VISTA AVE
HUNTINGTON DR
C.L.RAILS
S.P. R.R.
RICHTON ST
A.T.& S.F. R.R.
UPL-UPL
E1
E10-5
E11
E12
City of Montclair
Sewer Atlas Map
Tile: C-1
Scale: 1" = 200'
Data as of:
February 2010
Prepared by:
D&W Consulting

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
894	E13	NOMHID	3/5/1978	8	1	VCP	0.04	-9	296.00	035_2335.tif	2	C-2	VCP	304.03
7179	E14	E18	4/22/1968	8	1	VCP	0.01	-9	195.36	031_2231.tif	2	C-2	VCP	202.84
7178	E18	E19	4/22/1968	8	1	AC	0.02	-9	-9.00	031_2231.tif	2	C-2	AC	243.53
7177	E19	E20	4/22/1968	6	1	VCP	-9.00	-9	-9.00	031_2231.tif	2	C-2	VCP	449.21
10981	E20	E21	4/22/1968	8	1	AC	-9.00	-9	-9.00	031_2231.tif	2	C-2	AC	451.01
5590	E21	NOMHID	4/22/1968	-9	1	UNK	-9.00	-9	-9.00	028_2228.tif	2	C-2	UNK	20.21
6260	E22	E21		8	1	VCP	0.00	-9	344.50	029_2229.tif	3	C-2	VCP	350.75
6261	E23	E22		8	1	VCP	0.00	-9	182.62	029_2229.tif	3	C-2	VCP	187.54
8967	E24	E23	4/15/1968	8	1	VCP	0.01	-9	265.60	030_2230.tif	3	C-2	VCP	266.03
6259	E25	E24		8	1	VCP	0.01	-9	237.50	029_2229.tif	3	C-2	VCP	237.50
8966	E26	E24	4/15/1968	8	1	VCP	0.02	-9	262.60	030_2230.tif	3	C-2	VCP	255.49
8958	E27	E26		8	1	VCP	0.01	-9	205.34	030_2230.tif	3	C-2	VCP	212.05
9744	M1	M9	12/29/1966	8	1	VCP	0.03	-9	295.68	019_2119.tif	3	C-2	VCP	298.58
9709	M10	M8	12/19/1966	8	1	VCP	0.01	-9	300.10	018_2118.tif	3	C-2	VCP	303.02
9746	M11	M10	12/29/1966	8	1	VCP	0.03	-9	423.00	019_2119.tif	3	C-2	VCP	425.12
9682	M12	M13	12/29/1966	8	1	VCP	0.02	-9	446.00	017_2117.tif	4	C-2	VCP	452.44
6536	M13	M14	12/29/1966	8	1	VCP	0.01	-9	96.33	017_2117.tif	4	C-2	VCP	97.25
9683	M14	M29	12/29/1966	8	1	VCP	0.02	-9	212.07	017_2117.tif	4	C-2	VCP	217.09
9232	M15	M40		8	1	VCP	0.02	-9	-9.00	010_2110.tif	3	C-2	VCP	257.03
9676	M16	M15	12/29/1966	8	1	VCP	0.01	-9	441.11	012_2112.tif	3	C-2	VCP	447.02
9675	M17	M16	12/29/1966	8	1	VCP	0.01	-9	435.67	012_2112.tif	3	C-2	VCP	440.63
9272	M18	M17	9/9/1971	8	1	UNK	0.03	-9	-9.00	048_2250.tif	3	C-2	UNK	133.52
9271	M19	M18	9/9/1971	8	1	VCP	0.02	-9	289.15	048_2250.tif	3	C-2	VCP	286.66
9315	M2	M1	3/20/1980	8	1	VCP	0.03	-9	72.00	024_2324.tif	3	C-2	VCP	77.90
9270	M20	M19	9/9/1971	8	1	VCP	-9.00	-9	221.07	048_2250.tif	3	C-2	VCP	224.72
9679	M21	M15	12/14/1966	8	1	VCP	0.00	-9	255.07	013_2113.tif	3	C-2	VCP	257.80
9451	M22	M21	12/29/1966	8	1	VCP	0.01	-9	431.00	014_2114.tif	3	C-2	VCP	436.87
9450	M23	M22	12/29/1966	8	1	VCP	0.01	-9	411.00	014_2114.tif	3	C-2	VCP	413.72
9680	M24	M21	12/14/1966	8	1	VCP	0.02	-9	264.58	013_2113.tif	3	C-2	VCP	269.36
9310	M25	M24	12/29/1966	8	1	VCP	0.01	-9	424.00	015_2115.tif	3	C-2	VCP	428.65
7696	M26	NOMHID	12/29/1966	8	1	VCP	-9.00	-9	-9.00	015_2115.tif	3	C-2	VCP	4.80
9309	M26	M25	12/29/1966	8	1	VCP	0.01	-9	423.00	015_2115.tif	3	C-2	VCP	426.48
9314	M3	M2	3/20/1980	8	1	VCP	0.01	-9	296.00	024_2324.tif	3	C-2	VCP	300.91
9313	M4	M3	3/20/1980	8	1	VCP	0.01	-9	302.20	024_2324.tif	3	C-2	VCP	304.73
9665	M4-5	M4	3/28/1986	8	1	VCP	0.00	-9	217.00	009_7109.tif	3	C-2	VCP	227.34
6517	M5	NOMHID	12/29/1966	-9	1	UNK	-9.00	-9	-9.00	017_2117.tif	CMT	C-2	UNK	45.64
9707	M6	M5	12/19/1966	8	1	VCP	0.01	-9	325.72	018_2118.tif	4	C-2	VCP	322.21
9678	M7	M6	12/14/1966	8	1	VCP	0.03	-9	173.00	013_2113.tif	3	C-2	VCP	178.41
9708	M8	M6	12/19/1966	8	1	VCP	0.01	-9	281.08	018_2118.tif	3	C-2	VCP	284.26
9743	M9	M8	12/29/1966	8	1	VCP	0.03	-9	246.00	019_2119.tif	3	C-2	VCP	250.10
286	NOMHID	E14	4/22/1968	8	1	VCP	-9.00	-9	-9.00	037_2237.tif	2	C-2	VCP	64.33
895	NOMHID	E14	3/5/1978	8	1	VCP	0.05	-9	96.00	035_2335.tif	2	C-2	VCP	93.00
4820	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.03	-9	-9.00	MORENO & MILLS_0023.tif	3	C-2	VCP	430.58
5303	NOMHID	NOMHID	6/7/2004	-9	1	UNK	0.02	-9	-9.00	200452.tif	3	C-2	UNK	66.49
5304	NOMHID	NOMHID	6/7/2004	8	1	VCP	0.03	-9	314.00	200452.tif	3	C-2	VCP	312.92
6677	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.03	-9	-9.00	MORENO & MILLS_0022.tif	3	C-2	VCP	354.22
6678	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0022.tif	3	C-2	UNK	97.92
6479	NOMHID	NOMHID	12/19/1966	8	1	VCP	0.01	-9	-9.00	018_2118.tif	3	C-2	VCP	6.66
6516	NOMHID	NOMHID	12/29/1966	8	1	VCP	-9.00	-9	-9.00	017_2117.tif	CMT	C-2	VCP	151.78
6672	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0023.tif	3	C-2	VCP	286.81
6673	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0023.tif	3	C-2	VCP	287.49
6674	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0023.tif	3	C-2	VCP	287.58
7096	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.03	-9	-9.00	MORENO & MILLS_0024.tif	3	C-2	UNK	151.08
7097	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.03	-9	-9.00	MORENO & MILLS_0024.tif	3	C-2	VCP	259.33
7098	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.03	-9	-9.00	MORENO & MILLS_0024.tif	3	C-2	VCP	23.65
7099	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.03	-9	-9.00	MORENO & MILLS_0024.tif	3	C-2	VCP	198.86
7289	NOMHID	M23	12/29/1966	8	1	UNK	-9.00	-9	-9.00	014_2114.tif	3	C-2	UNK	4.53
7950	NOMHID	M20	9/9/1971	-9	1	UNK	-9.00	-9	-9.00	048_2250.tif	3	C-2	UNK	39.68
8934	NOMHID	E27	4/22/1968	8	1	VCP	-9.00	-9	-9.00	030_2230.tif	3	C-2	VCP	9.50
8968	NOMHID	E27	4/22/1968	8	1	VCP	0.01	-9	151.66	030_2230.tif	3	C-2	VCP	151.25
9745	NOMHID	M1	12/29/1966	8	1	VCP	0.01	-9	100.00	019_2119.tif	3	C-2	VCP	108.34
9555	NOMHID	NOMHID	4/22/1968	6	1	VCP	0.01	-9	-9.00	028_2228.tif	3	C-2	VCP	256.25
9677	NOMHID	M17	12/29/1966	8	1	VCP	-9.00	-9	-9.00	012_2112.tif	3	C-2	VCP	24.11
9681	NOMHID	M12	12/29/1966	8	1	VCP	0.02	-9	352.96	017_2117.tif	4	C-2	VCP	361.84
9710	NOMHID	M10	12/19/1966	8	1	VCP	0.01	-9	-9.00	018_2118.tif	3	C-2	VCP	134.85
6088					1		0.00		0.00		3	C-2		264.38

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
581	37	7/3/1989	MORENO & MILLS_0022.tif	3	C-2
582	38	7/3/1989	MORENO & MILLS_0022.tif	3	C-2
586	42	7/3/1989	MORENO & MILLS_0023.tif	3	C-2
587	43	7/3/1989	MORENO & MILLS_0023.tif	3	C-2
588	44	7/3/1989	MORENO & MILLS_0023.tif	3	C-2
592	48	7/3/1989	MORENO & MILLS_0024.tif	3	C-2
593	49	7/3/1989	MORENO & MILLS_0024.tif	3	C-2
594	50	7/3/1989	MORENO & MILLS_0024.tif	3	C-2
595	51	7/3/1989	MORENO & MILLS_0024.tif	3	C-2
793	CMT	12/29/1966	017_2117.tif	4	C-2
837	CMT	12/19/1966	018_2118.tif	4	C-2
2044	E13	3/5/1978	035_2335.tif	2	C-2
2045	E13-5	3/5/1978	035_2335.tif	2	C-2
2040	E14	4/22/1968	037_2237.tif	2	C-2
2052	E18	4/22/1968	031_2231.tif	2	C-2
2053	E19	4/22/1968	031_2231.tif	2	C-2
2054	E20	4/22/1968	031_2231.tif	2	C-2
2055	E21	4/22/1968	031_2231.tif	2	C-2
944	E22		029_2229.tif	3	C-2
943	E23		029_2229.tif	3	C-2
154	E24	4/15/1968	030_2230.tif	3	C-2
942	E25		029_2229.tif	3	C-2
157	E26	4/22/1968	030_2230.tif	3	C-2
156	E27	4/22/1968	030_2230.tif	3	C-2
860	M1	12/29/1966	019_2119.tif	3	C-2
840	M10	12/19/1966	018_2118.tif	3	C-2
863	M11	12/29/1966	019_2119A.tif	3	C-2
790	M12	12/29/1966	017_2117.tif	4	C-2
789	M12-5	12/29/1966	017_2117.tif	4	C-2
791	M13	12/29/1966	017_2117.tif	4	C-2
792	M14	12/29/1966	017_2117.tif	4	C-2
343	M15		010_2110.tif	3	C-2
862	M1-5	12/29/1966	019_2119.tif	3	C-2
783	M16	12/29/1966	012_2112.tif	3	C-2
784	M17	12/29/1966	012_2112.tif	3	C-2
388	M18	9/9/1971	048_2250.tif	3	C-2
387	M19	9/9/1971	048_2250.tif	3	C-2
426	M2	3/20/1980	024_2324.tif	3	C-2
386	M20	9/9/1971	048_2250.tif	3	C-2
787	M21	12/14/1966	013_2113.tif	3	C-2
542	M22	12/29/1966	014_2114.tif	3	C-2
541	M23	12/29/1966	014_2114.tif	3	C-2
788	M24	12/14/1966	013_2113.tif	3	C-2
422	M25	12/29/1966	015_2115.tif	3	C-2
421	M26	12/29/1966	015_2115.tif	3	C-2
515	M29	6/23/1966	016_2116.tif	4	C-2
427	M3	3/20/1980	024_2324.tif	3	C-2
428	M4	3/20/1980	024_2324.tif	3	C-2
344	M40		010_2110.tif	3	C-2
2195	M42			3	C-2
782	M44	12/22/1966	011_2111A.tif	3	C-2
777	M4-5	3/28/1986	009_7109.tif	3	C-2
838	M6	12/19/1966	018_2118.tif	3	C-2
786	M7	12/14/1966	013_2113.tif	3	C-2
839	M8	12/19/1966	018_2118.tif	3	C-2
861	M9	12/29/1966	019_2119.tif	3	C-2
155	NOMHID	4/22/1968	030_2230.tif	3	C-2
653	NOMHID	4/22/1968	028_2228.tif	3	C-2
841	NOMHID	12/19/1966	018_2118.tif	3	C-2
2082	NOMHID	4/22/1968	037_2237.tif	2	C-2
946	PRI	6/7/2004	200452.tif	3	C-2


City of Montclair
Sewer Atlas Map
Tile: C-2
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
ARROW HWY
OAKDALE DR
OLIVE ST
HIGHLAND ST
MORENO AVE
MORENO ST
MONTE VISTA ST
MONTE VISTA AVE
RAMONA AVE
CAMILLOS AVE
FELIPE AVE
HELENA AVE
SURREY AVE
MILLS AVE
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UPL-UPL

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9775	E45	E45-5	4/11/1964	10	1	VCP	0.02	-9	23.13	024_1124.tif	2	C-3	VCP	26.96
9776	E45-5	E46	4/11/1964	10	1	VCP	0.02	-9	446.00	024_1124.tif	2	C-3	VCP	424.29
9777	E46	E47	4/11/1964	10	1	VCP	0.03	-9	446.00	024_1124.tif	2	C-3	VCP	449.79
9766	E47	E69	10/16/1963	10	1	VCP	0.02	-9	392.70	023_1123.tif	2	C-3	VCP	373.67
9767	E69	E70	10/16/1963	10	1	VCP	0.02	-9	-9.00	023_1123.tif	2	C-3	VCP	473.52
11021	E70	E71	10/16/1963	10	1	VCP	0.02	-9	-9.00	023_1123.tif	2	C-3	VCP	36.78
9785	E76	E77		8	1	VCP	0.00	-9	195.47	027_2227.tif	3	C-3	VCP	192.10
9786	E77	E47		8	1	VCP	0.00	-9	319.50	027_2227.tif	3	C-3	VCP	314.20
9414	M28	M27	6/23/1966	8	1	VCP	0.01	-9	171.56	016_2116.tif	4	C-3	VCP	175.11
9415	M29	M28	6/23/1966	8	1	VCP	0.02	-9	463.52	016_2116.tif	4	C-3	VCP	465.93
4239	M33	M35	9/16/1981	8	1	VCP	0.04	-9	35.80	018_2318.tif	4	C-3	VCP	38.49
9660	M34	M32	12/29/1966	8	1	VCP	0.01	-9	319.53	008_2108.tif	4	C-3	VCP	109.95
1945	M35	M34	12/29/1966	8	1	VCP	0.01	-9	-9.00	008_2108.tif	4	C-3	VCP	94.73
9659	M37	M35	12/29/1966	8	1	VCP	0.01	-9	-9.00	008_2108.tif	4	C-3	VCP	212.91
9235	M38	M37		8	1	VCP	0.02	-9	442.00	010_2110.tif	3	C-3	VCP	439.91
9234	M39	M38		8	1	VCP	0.02	-9	371.42	010_2110.tif	3	C-3	VCP	376.33
9233	M40	M39		8	1	VCP	0.03	-9	-9.00	010_2110.tif	3	C-3	VCP	290.69
9671	M41	M39	12/24/1966	8	1	VCP	0.01	-9	334.97	011_2111.tif	3	C-3	VCP	337.81
9670	M43	M41	12/24/1966	8	1	VCP	0.01	-9	276.49	011_2111.tif	3	C-3	VCP	279.51
9673	M44	M43	12/22/1966	8	1	VCP	-9.00	-9	404.06	011_2111.tif	3	C-3	VCP	407.77
9658	M45	M37	12/29/1966	8	1	VCP	0.01	-9	326.15	008_2108.tif	3	C-3	VCP	330.32
9663	M46	M45	12/29/1966	8	1	VCP	0.02	-9	302.00	009_2109.tif	3	C-3	VCP	287.52
9662	M47	M46	12/29/1966	8	1	VCP	0.02	-9	310.48	009_2109.tif	3	C-3	VCP	320.74
5576	M48	M49	5/12/1977	-9	1	UNK	0.07	-9	41.00	028_2328.tif	3	C-3	UNK	37.86
8955	M49	NOMHID	5/12/1977	8	1	VCP	0.01	-9	195.59	029_2329.tif	3	C-3	VCP	190.33
9642	M61	M60	12/29/1966	8	1	VCP	0.02	-9	448.72	005_2105.tif	3	C-3	VCP	455.79
9653	M62	M61	12/29/1966	8	1	VCP	0.01	-9	251.00	007_2107.tif	3	C-3	VCP	255.98
9652	M63	M62	12/29/1966	8	1	VCP	0.01	-9	251.02	007_2107.tif	3	C-3	VCP	254.16
9641	M64	M61	12/29/1966	8	1	VCP	0.02	-9	262.02	005_2105.tif	3	C-3	VCP	266.00
9643	M65	M64	12/29/1966	8	1	UNK	0.01	-9	404.00	006_2106.tif	3	C-3	UNK	410.09
9654	M66	M63	12/29/1966	8	1	VCP	0.03	-9	262.02	007_2107.tif	3	C-3	VCP	265.84
9644	M68	M67	12/29/1966	8	1	VCP	0.02	-9	207.00	006_2106.tif	3	C-3	VCP	211.85
9648	M71	M69	12/29/1966	8	1	VCP	0.02	-9	216.11	006_2106.tif	3	C-3	VCP	219.01
9782	M72	M71		8	1	VCP	0.03	-9	266.78	025_7125.tif	3	C-3	VCP	257.58
557	M73	M72		8	1	VCP	0.01	-9	26.22	025_7125.tif	3	C-3	VCP	31.16
9781	M74	M73		8	1	VCP	0.01	-9	130.73	025_7125.tif	3	C-3	VCP	134.70
9780	M75	M74		8	1	VCP	0.01	-9	292.20	025_7125.tif	3	C-3	VCP	299.86
9784	M76	M75		8	1	VCP	0.02	-9	91.00	025_7125.tif	3	C-3	VCP	95.94
9779	M77	M75		8	1	VCP	0.05	-9	191.00	025_7125.tif	3	C-3	VCP	195.26
4240	NOMHID	NOMHID	9/16/1981	8	1	VCP	0.02	-9	-9.00	018_2318.tif	4	C-3	VCP	59.90
583	NOMHID	NOMHID	7/26/1979	8	1	VCP	0.01		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-3	VCP	235.36
584	NOMHID	NOMHID	7/26/1979	8	1	VCP	0.01		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-3	VCP	320.20
585	NOMHID	NOMHID	7/26/1979	8	1	VCP	0.04		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-3	VCP	304.39
588	NOMHID	NOMHID	7/26/1979	6	1	VCP	0.00		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-3	VCP	230.32
592	NOMHID	NOMHID	7/26/1979	8	1	VCP	0.02		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-3	VCP	463.46
593	NOMHID	NOMHID	7/26/1979	8	1	VCP	0.04		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-3	VCP	158.11
610	NOMHID	NOMHID	7/26/1979	8	1	VCP	0.00		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-3	VCP	233.71
4735	NOMHID	M32	9/14/2001	8	1	VCP	0.05	-9	35.00	017_2317.tif	4	C-3	VCP	43.43
6675	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0022.tif	3	C-3	VCP	187.37
6676	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0022.tif	3	C-3	VCP	376.57
6679	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0021.tif	3	C-3	VCP	326.59
6680	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0021.tif	3	C-3	VCP	333.77
6681	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0021.tif	3	C-3	VCP	158.22
6682	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.01	-9	-9.00	MORENO & MILLS_0021.tif	3	C-3	UNK	99.81
6683	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0021.tif	3	C-3	VCP	105.81
6684	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0021.tif	3	C-3	VCP	249.39
5571	NOMHID	M48	5/12/1977	-9	1	UNK	0.01	-9	-9.00	028_2328.tif	3	C-3	UNK	119.24
5573	NOMHID	NOMHID	5/12/1977	-9	1	UNK	-9.00	-9	-9.00	028_2328.tif	3	C-3	UNK	52.51
5574	NOMHID	NOMHID	5/12/1977	-9	1	UNK	0.01	-9	-9.00	028_2328.tif	3	C-3	UNK	70.45
5575	NOMHID	NOMHID	5/12/1977	-9	1	UNK	0.02	-9	160.00	028_2328.tif	3	C-3	UNK	64.94
5577	NOMHID	NOMHID	5/12/1977	-9	1	UNK	-9.00	-9	100.50	028_2328.tif	3	C-3	UNK	50.51
5578	NOMHID	NOMHID	5/12/1977	-9	1	UNK	-9.00	-9	-9.00	028_2328.tif	3	C-3	UNK	74.87
5579	NOMHID	NOMHID	5/12/1977	6	1	UNK	0.02	-9	150.00	028_2328.tif	3	C-3	UNK	75.52
5580	NOMHID	NOMHID	5/12/1977	-9	1	UNK	0.03	-9	100.00	028_2328.tif	3	C-3	UNK	155.71
5581	NOMHID	NOMHID	5/12/1977	-9	1	UNK	-9.00	-9	166.00	028_2328.tif	3	C-3	UNK	90.66
5582	NOMHID	NOMHID	5/12/1977	-9	1	UNK	0.01	-9	-9.00	028_2328.tif	3	C-3	UNK	74.78
5583	NOMHID	NOMHID	5/12/1977	-9	1	UNK	-9.00	-9	170.00	028_2328.tif	3	C-3	UNK	69.03
5584	NOMHID	NOMHID	5/12/1977	-9	1	UNK	0.01	-9	56.00	028_2328.tif	3	C-3	UNK	99.93
5585	NOMHID	NOMHID	5/12/1977	-9	1	UNK	0.02	-9	-9.00	028_2328.tif	3	C-3	UNK	96.21
5586	NOMHID	NOMHID	5/12/1977	-9	1	UNK	-9.00	-9	225.00	028_2328.tif	3	C-3	UNK	128.35
6030	NOMHID	E71	10/16/1963	8	1	UNK	-9.00	-9	-9.00	023_1123.tif	2	C-3	UNK	34.05
6595	NOMHID	M41	12/24/1966	8	1	UNK	-9.00	-9	-9.00	011_2111.tif	3	C-3	UNK	159.31
8960	NOMHID	E45	4/22/1968	10	1	VCP	-9.00	-9	-9.00	033_2233.tif	2	C-3	VCP	418.19

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
572	28	7/3/1989	MORENO & MILLS_0020.tif	3	C-3
576	32	7/3/1989	MORENO & MILLS_0021.tif	3	C-3
577	33	7/3/1989	MORENO & MILLS_0021.tif	3	C-3
578	34	7/3/1989	MORENO & MILLS_0021.tif	3	C-3
579	35	7/3/1989	MORENO & MILLS_0021.tif	3	C-3
580	36	7/3/1989	MORENO & MILLS_0021.tif	3	C-3
583	39	7/3/1989	MORENO & MILLS_0022.tif	3	C-3
584	40	7/3/1989	MORENO & MILLS_0022.tif	3	C-3
585	41	7/3/1989	MORENO & MILLS_0022.tif	3	C-3
2105	E45	4/22/1968	033_2233.tif	2	C-3
891	E45-5	4/11/1964	024_1124.tif	2	C-3
892	E46	4/11/1964	024_1124.tif	2	C-3
893	E47	4/11/1964	024_1124.tif	2	C-3
887	E69	10/16/1963	023_1123.tif	2	C-3
373	E70	4/5/1977	030_2330.tif	2	C-3
886	E71	10/16/1963	023_1123.tif	2	C-3
932	E76		027_2227.tif	3	C-3
933	E77		027_2227.tif	3	C-3
513	M27	6/23/1966	016_2116.tif	4	C-3
514	M28	6/23/1966	016_2116.tif	4	C-3
832	M32	9/14/2001	017_2317.tif	4	C-3
858	M33	9/16/1981	018_2318.tif	4	C-3
770	M34	12/29/1966	008_2108.tif	4	C-3
859	M35	9/16/1981	018_2318.tif	4	C-3
771	M37	12/29/1966	008_2108.tif	3	C-3
345	M38		010_2110.tif	3	C-3
781	M39	12/24/1966	011_2111.tif	3	C-3
780	M41	12/24/1966	011_2111.tif	3	C-3
779	M43	12/24/1966	011_2111.tif	3	C-3
772	M45	12/29/1966	008_2108.tif	3	C-3
774	M46	12/29/1966	009_2109.tif	3	C-3
773	M47	12/29/1966	009_2109.tif	3	C-3
667	M48	5/12/1977	028_2328.tif	3	C-3
146	M49	5/12/1977	029_2329.tif	3	C-3
757	M59	12/29/1966	004_2104.tif	4	C-3
762	M61	12/29/1966	005_2105.tif	3	C-3
767	M62	12/29/1966	007_2107.tif	3	C-3
766	M63	12/29/1966	007_2107.tif	3	C-3
761	M64	12/29/1966	005_2105.tif	3	C-3
763	M65	12/29/1966	006_2106.tif	3	C-3
768	M66	12/29/1966	007_2107_A.tif	3	C-3
764	M68	12/29/1966	006_2106_A.tif	3	C-3
765	M71	12/29/1966	006_2106_B.tif	3	C-3
930	M72		025_7125.tif	3	C-3
929	M73		025_7125.tif	3	C-3
928	M74		025_7125.tif	3	C-3
927	M75		025_7125.tif	3	C-3
931	M76		025_7125.tif	3	C-3
926	M77		025_7125.tif	3	C-3
654	NOMHID	5/12/1977	028_2328.tif	3	C-3
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756	NOMHID	12/29/1966	004_2104.tif	4	C-3
760	NOMHID	12/29/1966	005_2105.tif	3	C-3
13	PRI	7/26/1979	SEWER & PATIO HOMES PRIVATE.tif	3	C-3
125	PRI	7/26/1979	SEWER & PATIO HOMES PRIVATE.tif	3	C-3
126	PRI	7/26/1979	SEWER & PATIO HOMES PRIVATE.tif	3	C-3
127	PRI	7/26/1979	SEWER & PATIO HOMES PRIVATE.tif	3	C-3
129	PRI	7/26/1979	SEWER & PATIO HOMES PRIVATE.tif	3	C-3
130	PRI	7/26/1979	SEWER & PATIO HOMES PRIVATE.tif	3	C-3
131	PRI	7/26/1979	SEWER & PATIO HOMES PRIVATE.tif	3	C-3
655	PRI	5/12/1977	028_2328.tif	3	C-3
656	PRI	5/12/1977	028_2328.tif	3	C-3
657	PRI	5/12/1977	028_2328.tif	3	C-3
658	PRI	5/12/1977	028_2328.tif	3	C-3
659	PRI	5/12/1977	028_2328.tif	3	C-3
660	PRI	5/12/1977	028_2328.tif	3	C-3
661	PRI	5/12/1977	028_2328.tif	3	C-3
662	PRI	5/12/1977	028_2328.tif	3	C-3
663	PRI	5/12/1977	028_2328.tif	3	C-3
664	PRI	5/12/1977	028_2328.tif	3	C-3
665	PRI	5/12/1977	028_2328.tif	3	C-3
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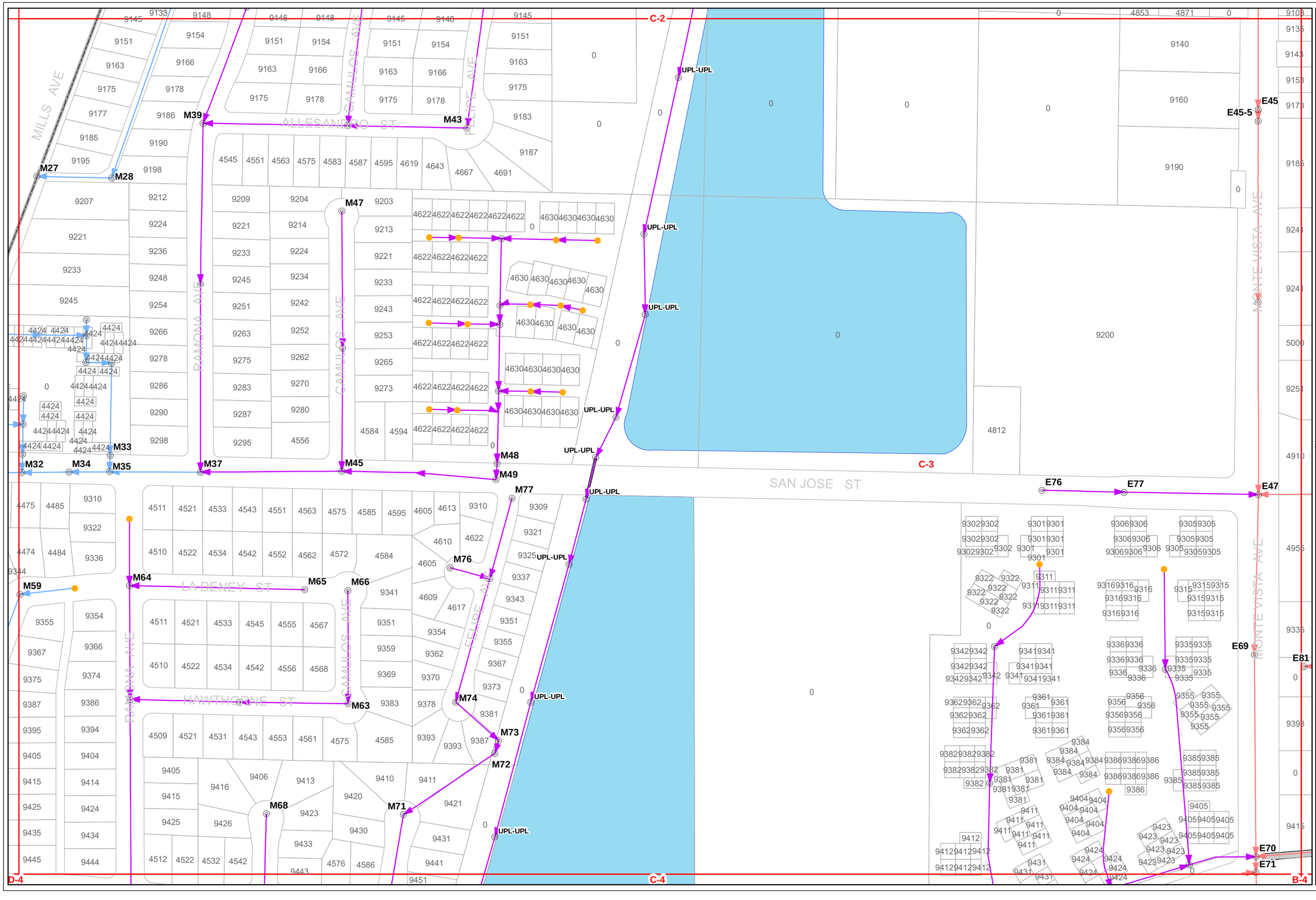
668	PRI	5/12/1977	028_2328.tif	3	C-3



City of Montclair
Sewer Atlas Map
Tile: C-3
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
MILLS AVE
ALLESANDRO ST
CAMULOS AVE
FELIPE AVE
RAMONA AVE
SAN JOSE ST
LA DENEY ST
HAWTHORNE ST
MONTE VISTA AVE
C-2
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D-4
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UPL-UPL
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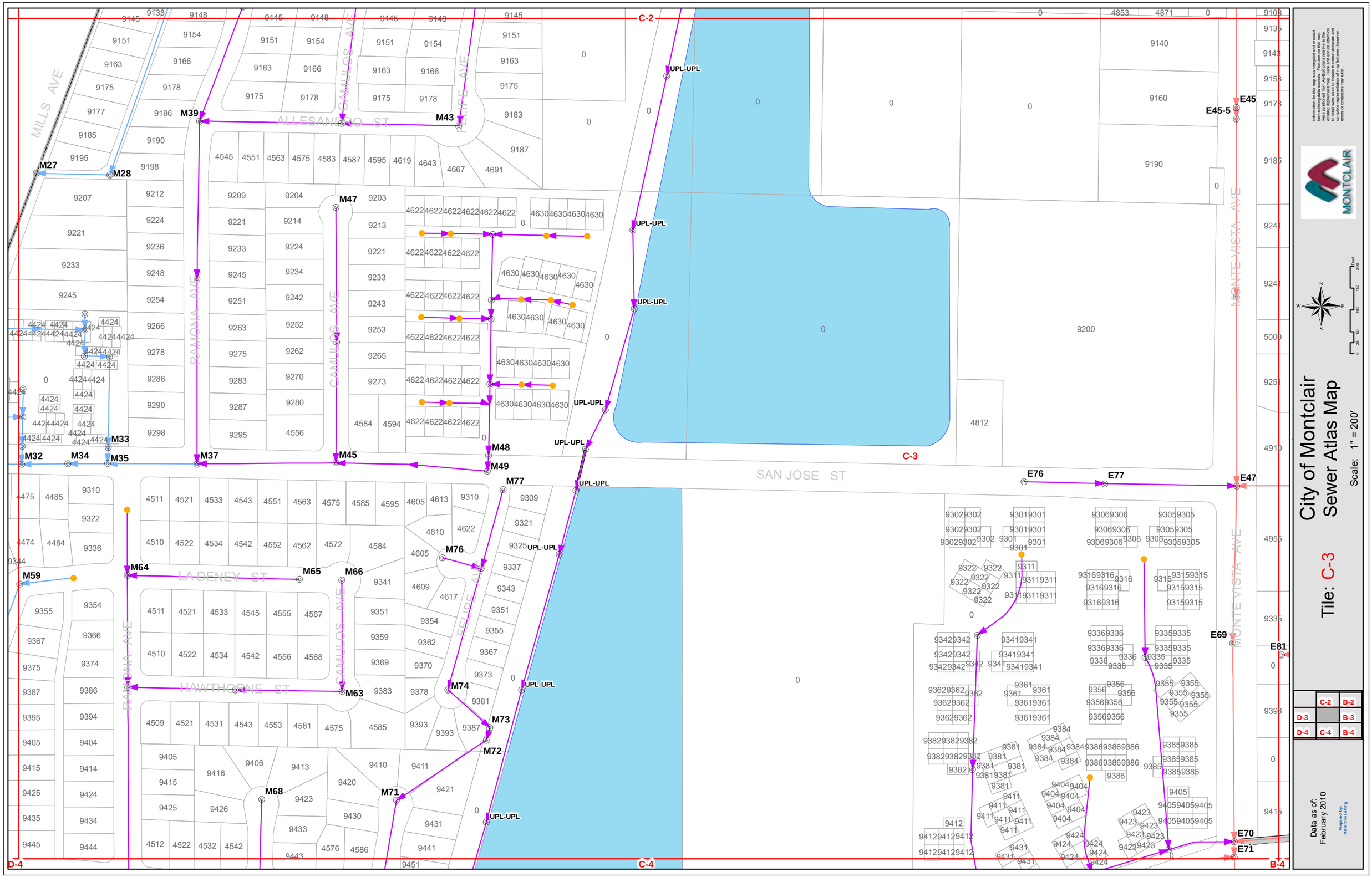
E81

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9725	NOMHID	NOMHID	9/16/1981	8	1	VCP	0.01	-9	32.00	018_2318.tif	4	C-3	VCP	37.17
9726	NOMHID	NOMHID	9/16/1981	8	1	VCP	0.01	-9	61.61	018_2318.tif	4	C-3	VCP	62.98
9727	NOMHID	M33	9/16/1981	8	1	VCP	0.01	-9	210.00	018_2318.tif	4	C-3	VCP	216.00
9556	NOMHID	NOMHID	5/12/1977	-9	1	UNK	0.03	-9	-9.00	028_2328.tif	3	C-3	UNK	201.06
9618	NOMHID	NOMHID	5/12/1977	6	1	UNK	-9.00	-9	-9.00	028_2328.tif	3	C-3	UNK	97.82
9619	NOMHID	NOMHID	5/12/1977	-9	1	UNK	-9.00	-9	195.00	028_2328.tif	3	C-3	UNK	73.13
9635	NOMHID	M59	12/29/1966	8	1	VCP	0.02	-9	128.24	004_2104.tif	4	C-3	VCP	128.72
9640	NOMHID	M64	12/29/1966	8	1	VCP	0.02	-9	155.26	005_2105.tif	3	C-3	VCP	156.54
9657	NOMHID	M45	12/29/1966	8	1	VCP	0.01	-9	164.38	008_2108.tif	3	C-3	VCP	171.42
9688	NOMHID	NOMHID	9/14/2001	8	1	VCP	0.01	-9	61.50	017_2317.tif	4	C-3	VCP	69.17
9689	NOMHID	NOMHID	9/14/2001	8	1	VCP	0.01	-9	63.00	017_2317.tif	4	C-3	VCP	66.44
9714	NOMHID	NOMHID	9/16/1981	8	1	VCP	0.01	-9	93.00	018_2318.tif	4	C-3	VCP	95.86
9715	NOMHID	NOMHID	9/16/1981	8	1	VCP	0.01	-9	98.00	018_2318.tif	4	C-3	VCP	102.98

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
669	PRI	5/12/1977	028_2328.tif	3	C-3
735	PRI	5/12/1977	028_2328.tif	3	C-3
830	PRI	9/14/2001	017_2317.tif	4	C-3
831	PRI	9/14/2001	017_2317.tif	4	C-3
833	PRI	9/14/2001	017_2317.tif	4	C-3
854	PRI	9/16/1981	018_2318.tif	4	C-3
855	PRI	9/16/1981	018_2318.tif	4	C-3
856	PRI	9/16/1981	018_2318.tif	4	C-3
857	PRI	9/16/1981	018_2318.tif	4	C-3



City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: C-3
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
MILLS AVE
ALLESANDRO ST
CAMULOS AVE
FELIPE AVE
RAMONA AVE
SAN JOSE ST
LA DENEY ST
HAWTHORNE ST
MONTE VISTA AVE
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SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9768	E71	G2	10/16/1963	12	1	VCP	0.01	-9	446.00	023_1123.tif	2	C-4	VCP	477.55
9032	F1	F2	8/27/1965	8	1	VCP	0.02	-9	431.00	045_1246.tif	3	C-4	VCP	435.94
9047	F10	F7	8/26/1965	8	1	VCP	0.01	-9	252.61	046_1247.tif	3	C-4	VCP	260.39
9406	F11	F10	8/27/1965	8	1	VCP	0.02	-9	211.00	049_1250.tif	3	C-4	VCP	205.18
9046	F12	F10	8/26/1965	8	1	VCP	0.01	-9	246.01	046_1247.tif	3	C-4	VCP	250.08
9405	F13	F12	8/27/1965	8	1	VCP	0.02	-9	211.00	049_1250.tif	3	C-4	VCP	202.88
9178	F14	F15	8/27/1965	8	1	VCP	0.01	-9	355.75	037_1238.tif	3	C-4	VCP	358.55
9181	F15	F19	8/26/1965	8	1	VCP	0.01	-9	311.87	039_1240.tif	3	C-4	VCP	315.09
9220	F16	F15	8/27/1965	8	1	VCP	0.01	-9	396.00	044_1245.tif	3	C-4	VCP	400.16
9219	F17	F16	8/27/1965	8	1	VCP	0.01	-9	396.00	044_1245.tif	3	C-4	VCP	400.56
9218	F18	F17	8/27/1965	8	1	VCP	0.01	-9	391.00	044_1245.tif	3	C-4	VCP	391.35
9033	F2	NOMHID	8/27/1965	8	1	VCP	0.02	-9	445.77	045_1246.tif	3	C-4	VCP	411.20
9034	F3	F15	8/27/1965	8	1	VCP	0.02	-9	315.23	045_1246.tif	3	C-4	VCP	320.31
9011	F32	F31	4/13/1965	8	1	VCP	0.02	-9	-9.00	036_1237.tif	3	C-4	VCP	352.19
9049	F4	F3	8/26/1965	8	1	VCP	0.01	-9	259.02	046_1247.tif	3	C-4	VCP	263.49
9368	F40	F39		8	1	VCP	0.02	-9	221.00	012_2412.tif	3	C-4	VCP	229.39
9060	F5	F4	8/26/1965	8	1	VCP	0.02	-9	396.00	047_1248.tif	3	C-4	VCP	401.27
9059	F6	F5	8/26/1965	8	1	VCP	0.02	-9	396.00	047_1248.tif	3	C-4	VCP	399.63
5945	F62	F64	1/12/2004	8	1	UNK	0.00	-9	123.74	200402.tif	3	C-4	UNK	126.11
5946	F63	F62	1/12/2004	8	1	UNK	0.00	-9	7.31	200402.tif	3	C-4	UNK	11.71
5947	F64	F63	1/12/2004	8	1	UNK	0.00	-9	51.77	200402.tif	3	C-4	UNK	55.35
6344	F64	F7	8/26/1965	8	1	VCP	0.00	-9	396.00	048_1249.tif	3	C-4	VCP	352.84
6279	F65	F64	1/12/2004	8	1	UNK	0.00	-9	117.25	200402.tif	3	C-4	UNK	120.71
6319	F66	F65	3/25/2005	8	1	VCP	0.00	-9	190.37	200404.tif	3	C-4	VCP	194.41
6318	F67	F66	3/25/2005	8	1	VCP	0.00	-9	256.00	200404.tif	3	C-4	VCP	259.61
6336	F68	F65	3/25/2005	8	1	VCP	0.02	-9	218.00	200404.tif	3	C-4	VCP	224.03
6284	F69	F68	3/25/2005	8	1	VCP	0.02	-9	185.81	200403.tif	3	C-4	VCP	190.28
9048	F7	F4	8/26/1965	8	1	VCP	0.01	-9	256.02	046_1247.tif	3	C-4	VCP	256.08
6283	F70	F69	3/25/2005	8	1	VCP	0.01	-9	240.00	200403.tif	3	C-4	VCP	249.78
6335	F71	F68	3/25/2005	8	1	VCP	0.03	-9	206.05	200404.tif	3	C-4	VCP	209.22
6301	F72	F71	3/25/2005	8	1	VCP	0.01	-9	186.72	200403.tif	3	C-4	VCP	192.84
6300	F73	F72	3/25/2005	8	1	VCP	0.01	-9	248.00	200403.tif	3	C-4	VCP	244.91
9070	F8	F64	8/26/1965	8	1	VCP	0.00	-9	396.00	048_1249.tif	3	C-4	VCP	49.46
9069	F9	F8	8/26/1965	8	1	VCP	0.02	-9	396.00	048_1249.tif	3	C-4	VCP	399.51
9080	G10	G40		15	1	VCP	0.02	-9	347.96	021_1121.tif	2	C-4	VCP	352.02
9168	G2	G7		10	1	VCP	0.02	-9	306.90	022_1122.tif	2	C-4	VCP	309.70
9171	G7	G8		10	1	VCP	0.02	-9	341.00	022_1122.tif	2	C-4	VCP	344.96
9170	G8	G9		10	1	VCP	0.02	-9	333.77	022_1122.tif	2	C-4	VCP	337.22
9169	G9	G10		10	1	VCP	0.03	-9	323.23	022_1122.tif	2	C-4	VCP	328.29
9632	M60	M56	12/29/1966	8	1	VCP	0.00	-9	339.10	003_2103.tif	4	C-4	VCP	343.69
9631	M67	M60	12/29/1966	8	1	VCP	0.00	-9	310.12	003_2103.tif	3	C-4	VCP	311.60
9630	M69	M67	12/29/1966	8	1	VCP	0.00	-9	284.51	003_2103.tif	3	C-4	VCP	289.90
9242	N66	N65	3/1/1966	8	1	VCP	0.02	-9	248.77	037_2136.tif	4	C-4	VCP	252.73
6772	N67-5	N67	6/11/1965	8	1	VCP	0.01	-9	117.60	038_2137.tif	3	C-4	VCP	176.33
7986	N68	N67-5	3/1/1966	8	1	VCP	0.03	-9	160.45	039_2138.tif	3	C-4	VCP	161.43
9257	N69	N68	3/1/1966	8	1	VCP	0.02	-9	432.09	039_2138.tif	3	C-4	VCP	438.07
9256	N70	N69	3/1/1966	8	1	VCP	0.02	-9	384.91	039_2138.tif	3	C-4	VCP	389.49
9255	N71	N70	3/1/1966	8	1	VCP	0.02	-9	411.00	039_2138.tif	3	C-4	VCP	410.18
9188	N72	N69	3/1/1966	8	1	VCP	0.01	-9	226.94	040_2139.tif	3	C-4	VCP	235.76
9185	N73	N72	3/1/1966	8	1	VCP	0.02	-9	200.93	040_2139.tif	3	C-4	VCP	203.40
9186	N74	N73	3/1/1966	8	1	VCP	0.02	-9	210.34	040_2139.tif	3	C-4	VCP	216.24
9187	N75	N74	3/1/1966	8	1	VCP	0.02	-9	387.79	040_2139.tif	3	C-4	VCP	388.81
586	NOMHID	NOMHID	7/26/1979	8	1	VCP	0.04		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-4	VCP	272.70
587	NOMHID	NOMHID	7/26/1979	8	1	VCP	0.04		0.00	SEWER & PATIO HOMES PRIVATE.tif	3	C-4	VCP	190.21
6685	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0020.tif	3	C-4	VCP	306.18
6686	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0020.tif	3	C-4	UNK	264.60
6687	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0020.tif	3	C-4	VCP	304.69
6688	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.03	-9	-9.00	MORENO & MILLS_0019.tif	3	C-4	VCP	420.53
6774	NOMHID	F14	8/27/1965	6	1	VCP	-9.00	-9	-9.00	037_1238.tif	3	C-4	VCP	5.60
6780	NOMHID	F31	5/27/1965	8	1	VCP	0.03	-9	80.00	037_1238.tif	3	C-4	VCP	80.47
7186	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0019.tif	3	C-4	UNK	136.12
7187	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0019.tif	3	C-4	VCP	331.41
7188	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0019.tif	3	C-4	VCP	93.56
7189	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0019.tif	3	C-4	VCP	305.82
7190	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0019.tif	3	C-4	VCP	302.30
7970	NOMHID	N71	3/1/1966	8	1	VCP	-9.00	-9	-9.00	039_2138.tif	3	C-4	VCP	7.77
8795	NOMHID	F3	8/27/1965	8	1	VCP	0.03	-9	445.77	045_1246.tif	3	C-4	VCP	38.01
9035	NOMHID	F1	8/27/1965	8	1	VCP	-9.00	-9	-9.00	045_1246.tif	3	C-4	VCP	9.77
9042	NOMHID	N17	3/1/1966	8	1	VCP	0.02	-9	161.00	045_2144.tif	4	C-4	VCP	163.10
9045	NOMHID	F12	8/26/1965	8	1	VCP	0.02	-9	159.34	046_1247.tif	3	C-4	VCP	147.59
9056	NOMHID	N20	3/1/1966	8	1	VCP	0.01	-9	150.00	046_2145.tif	4	C-4	VCP	149.12
9058	NOMHID	F6	8/26/1965	8	1	VCP	0.03	-9	148.00	047_1248.tif	3	C-4	VCP	149.85
9068	NOMHID	F9	8/26/1965	8	1	VCP	0.04	-9	153.00	048_1249.tif	3	C-4	VCP	155.75

SEWER STRUCTURE					
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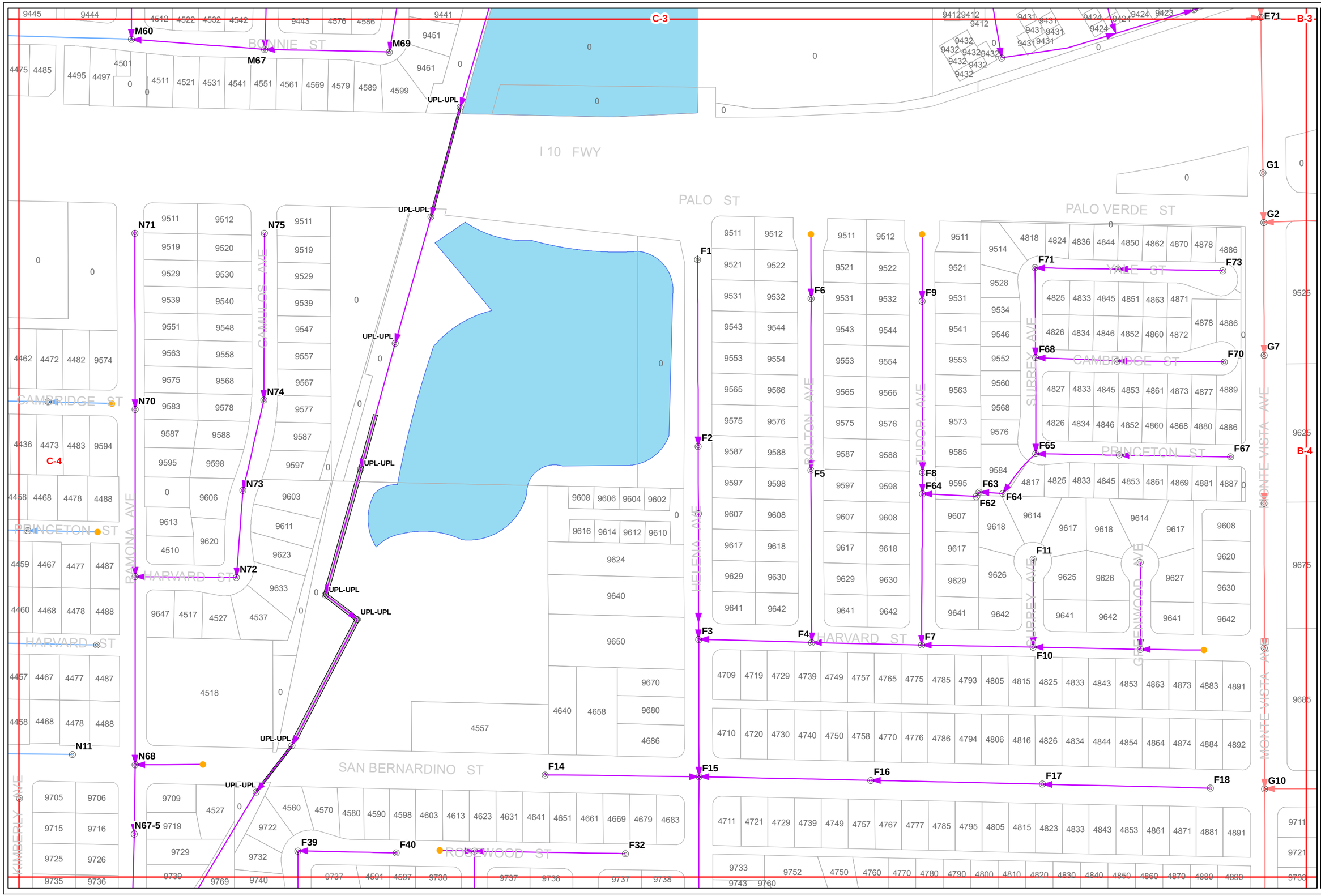
567	23	7/3/1989	MORENO & MILLS_0019.tif	3	C-4
568	24	7/3/1989	MORENO & MILLS_0019.tif	3	C-4
569	25	7/3/1989	MORENO & MILLS_0019.tif	3	C-4
570	26	7/3/1989	MORENO & MILLS_0019.tif	3	C-4
571	27	7/3/1989	MORENO & MILLS_0019.tif	3	C-4
573	29	7/3/1989	MORENO & MILLS_0020.tif	3	C-4
574	30	7/3/1989	MORENO & MILLS_0020.tif	3	C-4
575	31	7/3/1989	MORENO & MILLS_0020.tif	3	C-4
205	F1	8/27/1965	045_1246.tif	3	C-4
218	F10	8/26/1965	046_1247.tif	3	C-4
505	F11	8/27/1965	049_1250.tif	3	C-4
217	F12	8/26/1965	046_1247.tif	3	C-4
504	F13	8/27/1965	049_1250.tif	3	C-4
277	F14	8/27/1965	037_1238.tif	3	C-4
276	F15	8/27/1965	037_1238.tif	3	C-4
333	F16	8/27/1965	044_1245.tif	3	C-4
332	F17	8/27/1965	044_1245.tif	3	C-4
331	F18	8/27/1965	044_1245.tif	3	C-4
204	F2	8/27/1965	045_1246.tif	3	C-4
207	F2-5			3	C-4
203	F3	8/27/1965	045_1246.tif	3	C-4
273	F31	5/27/1965	037_1238.tif	3	C-4
192	F32	4/13/1965	036_1237.tif	3	C-4
414	F39	7/6/1965	012_2412.tif	3	C-4
231	F4	8/26/1965	047_1248.tif	3	C-4
460	F40		012_2412.tif	3	C-4
230	F5	8/26/1965	047_1248.tif	3	C-4
229	F6	8/26/1965	047_1248.tif	3	C-4
997	F62	1/12/2004	200402.tif	3	C-4
992	F63	1/12/2004	200402.tif	3	C-4
991	F64	1/12/2004	200402.tif	3	C-4
998	F64	1/12/2004	200402.tif	3	C-4
1005	F65	3/25/2005	200404.tif	3	C-4
1006	F66	3/25/2005	200404.tif	3	C-4
1004	F67	3/25/2005	200404.tif	3	C-4
1007	F68	3/25/2005	200404.tif	3	C-4
1000	F69	3/25/2005	200403.tif	3	C-4
219	F7	8/26/1965	046_1247.tif	3	C-4
999	F70	3/25/2005	200403.tif	3	C-4
1003	F71	3/25/2005	200403.tif	3	C-4
1002	F72	3/25/2005	200403.tif	3	C-4
1001	F73	3/25/2005	200403.tif	3	C-4
245	F8	8/26/1965	048_1249.tif	3	C-4
244	F9	8/26/1965	048_1249.tif	3	C-4
2189	G1			2	C-4
255	G10		021_1121.tif	2	C-4
263	G2		022_1122.tif	2	C-4
264	G7		022_1122.tif	2	C-4
265	G8		022_1122.tif	2	C-4
266	G9		022_1122.tif	2	C-4
752	M60	12/29/1966	003_2103.tif	3	C-4
751	M67	12/29/1966	003_2103.tif	3	C-4
750	M69	12/29/1966	003_2103.tif	3	C-4
315	N11	3/1/1966	042_2141.tif	4	C-4
983	N14	3/1/1966	044_2143.tif	4	C-4
214	N17	3/1/1966	045_2144.tif	4	C-4
226	N20	3/1/1966	046_2145.tif	4	C-4
354	N66	3/1/1966	037_2136.tif	4	C-4
2116	N67-5	6/11/1965	038_2137.tif	3	C-4
368	N68	3/1/1966	039_2138.tif	3	C-4
369	N69	3/1/1966	039_2138.tif	3	C-4
370	N70	3/1/1966	039_2138.tif	3	C-4
372	N71	3/1/1966	039_2138.tif	3	C-4
288	N72	3/1/1966	040_2139.tif	3	C-4
287	N73	3/1/1966	040_2139.tif	3	C-4
286	N74	3/1/1966	040_2139.tif	3	C-4
285	N75	3/1/1966	040_2139.tif	3	C-4
213	NOMHID	3/1/1966	045_2144.tif	4	C-4
216	NOMHID	8/26/1965	046_1247.tif	3	C-4
227	NOMHID	3/1/1966	046_2145.tif	4	C-4
228	NOMHID	8/26/1965	047_1248.tif	3	C-4
243	NOMHID	8/26/1965	048_1249.tif	3	C-4
274	NOMHID	5/27/1965	037_1238.tif	3	C-4



City of Montclair
Sewer Atlas Map
Tile: C-4
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
I 10 FWY
PALO ST
PALO VERDE ST
BONNIE ST
CAMBRIDGE ST
PRINCETON ST
HARVARD ST
SAN BERNARDINO ST
ROSEWOOD ST
CAMULOS AVE
RAMONA AVE
HELENA AVE
BOLTON AVE
TUDOR AVE
SURREY AVE
GREENWOOD AVE
MONTE VISTA AVE
YALE ST
KIMBERLY AVE
UPL-UPL
C-3
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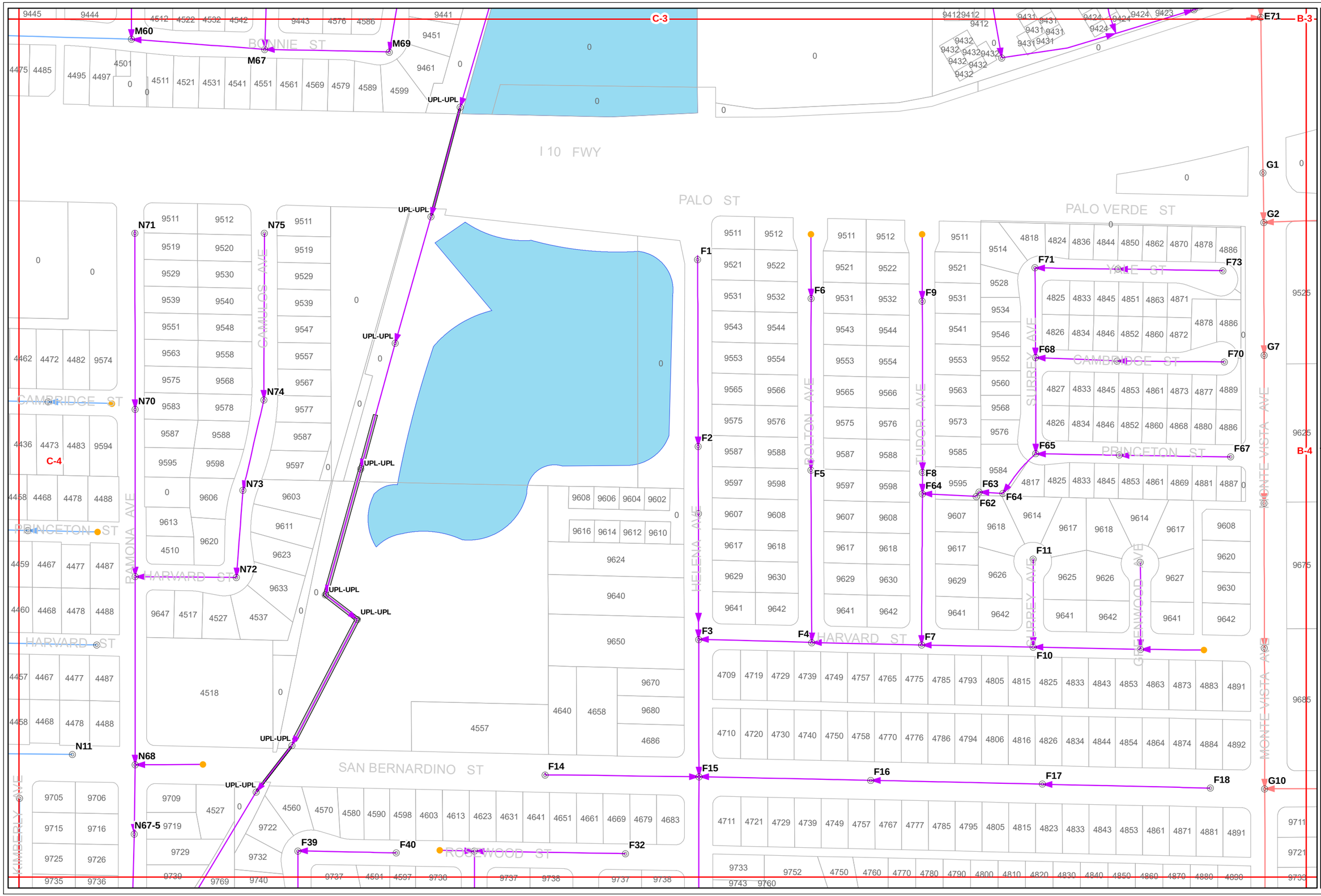
B-3
B-4
D-3
D-4
D-5
C-5
B-5

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9252	NOMHID	N68	3/1/1966	8	1	VCP	0.01	-9	155.00	038_2137.tif	3	C-4	VCP	158.30

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
365	NOMHID	3/1/1966	038_2137.tif	3	C-4
128	PRI	7/26/1979	SEWER & PATIO HOMES PRIVATE.tif	3	C-4


City of Montclair
Sewer Atlas Map
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MONTCLAIR
I 10 FWY
PALO ST
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ROSEWOOD ST
CAMULOS AVE
RAMONA AVE
HELENA AVE
BOLTON AVE
TUDOR AVE
SURREY AVE
GREENWOOD AVE
MONTE VISTA AVE
YALE ST
KIMBERLY AVE
UPL-UPL
C-3
C-4
B-3
B-4
D-3
D-4
D-5
C-5
B-5

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9182	F19	F20	8/26/1965	8	1	VCP	0.02	-9	303.50	039_1240.tif	3	C-5	VCP	306.89
9183	F20	F21	8/26/1965	8	1	VCP	0.02	-9	410.99	039_1240.tif	3	C-5	VCP	414.85
9184	F21	F22	8/26/1965	8	1	VCP	0.02	-9	291.01	039_1240.tif	3	C-5	VCP	295.75
7141	F22	F23	10/16/1963	18	1	VCP	0.00	-9	259.03	019_1119.tif	3	C-5	VCP	262.58
7142	F23	F27	10/16/1963	18	1	VCP	0.00	-9	256.03	019_1119.tif	3	C-5	VCP	260.31
9250	F24	F23	8/27/1965	8	1	VCP	0.03	-9	322.50	038_1239.tif	3	C-5	VCP	328.46
9249	F25	F24	8/27/1965	8	1	VCP	0.02	-9	-9.00	038_1239.tif	3	C-5	VCP	360.38
9248	F26	F25	8/27/1965	8	1	VCP	0.02	-9	322.00	038_1239.tif	3	C-5	VCP	325.41
7143	F27	F33	10/16/1963	18	1	VCP	0.00	-9	402.46	019_1119.tif	3	C-5	VCP	411.61
9012	F28	F27	4/13/1965	8	1	VCP	0.02	-9	-9.00	036_1237.tif	3	C-5	VCP	378.32
6247	F29	F28	4/13/1965	-9	1	UNK	-9.00	-9	-9.00	036_1237.tif	3	C-5	UNK	156.98
9177	F30	F28	5/27/1965	8	1	VCP	0.02	-9	393.01	037_1238.tif	3	C-5	VCP	396.17
9176	F31	F30	5/27/1965	8	1	VCP	0.01	-9	372.97	037_1238.tif	3	C-5	VCP	375.73
7144	F33	F41	10/16/1963	18	1	VCP	0.01	-9	375.48	019_1119.tif	3	C-5	VCP	379.26
9423	F34	F33	8/27/1965	8	1	VCP	0.02	-9	314.50	035_1236.tif	3	C-5	VCP	320.86
9424	F35	F34	8/27/1965	8	1	VCP	0.02	-9	315.28	035_1236.tif	3	C-5	VCP	317.94
9422	F36	F35	8/27/1965	8	1	VCP	0.01	-9	236.72	035_1236.tif	3	C-5	VCP	240.12
9302	F37	F35	7/6/1965	8	1	VCP	0.02	-9	248.34	012_2412.tif	3	C-5	VCP	253.90
9369	F38	F37		8	1	VCP	0.01	-9	141.00	012_2412.tif	3	C-5	VCP	145.96
9301	F39	F37	7/6/1965	8	1	VCP	0.02	-9	248.34	012_2412.tif	3	C-5	VCP	251.93
6355	F41	I1		15	1	VCP	0.02	-9	446.00	018_1118.tif	3	C-5	VCP	433.09
9008	F42	F41	8/27/1965	8	1	VCP	0.02	-9	396.00	034_1235.tif	3	C-5	VCP	399.75
9009	F43	F42	8/27/1965	8	1	VCP	0.02	-9	372.00	034_1235.tif	3	C-5	VCP	375.93
9376	F44	F22		18	1	VCP	0.00	-9	349.00	020_1120.tif	3	C-5	VCP	353.00
9375	F45	F44		18	1	VCP	0.00	-9	346.00	020_1120.tif	3	C-5	VCP	350.09
9374	F46	F45		18	1	VCP	0.00	-9	349.61	020_1120.tif	3	C-5	VCP	352.82
6794	F47	F46	8/27/1965	8	1	VCP	0.02	-9	434.00	043_1244.tif	3	C-5	VCP	440.80
6793	F48	F47	8/27/1965	8	1	VCP	0.02	-9	422.00	043_1244.tif	3	C-5	VCP	426.11
8989	F49	F52	8/27/1965	8	1	VCP	0.01	-9	261.80	040_1241.tif	3	C-5	VCP	264.66
9200	F50	F49	8/27/1965	8	1	VCP	0.02	-9	304.00	042_1243.tif	3	C-5	VCP	303.64
9199	F51	F50	8/27/1965	8	1	VCP	0.02	-9	246.00	042_1243.tif	3	C-5	VCP	255.05
8990	F52	F55	8/27/1965	8	1	VCP	0.01	-9	256.00	040_1241.tif	3	C-5	VCP	261.66
9202	F53	F52	8/27/1965	8	1	VCP	0.02	-9	304.00	042_1243.tif	3	C-5	VCP	309.47
9201	F54	F53	8/27/1965	8	1	VCP	0.02	-9	268.00	042_1243.tif	3	C-5	VCP	271.00
8991	F55	F21	8/27/1965	8	1	VCP	0.01	-9	260.74	040_1241.tif	3	C-5	VCP	264.31
7133	F56	F55	8/27/1965	8	1	VCP	0.02	-9	304.00	041_1242.tif	3	C-5	VCP	309.14
7132	F57	F56	8/27/1965	8	1	VCP	0.02	-9	283.60	041_1242.tif	3	C-5	VCP	288.91
7131	F58	F57	8/27/1965	8	1	VCP	0.01	-9	144.18	041_1242.tif	3	C-5	VCP	146.98
7130	F59	F58	8/27/1965	8	1	VCP	0.01	-9	396.17	041_1242.tif	3	C-5	VCP	399.25
7129	F60	F59	8/27/1965	8	1	VCP	0.01	-9	408.05	041_1242.tif	3	C-5	VCP	381.23
9081	G40	G41		15	1	VCP	0.00	-9	319.97	021_1121.tif	2	C-5	VCP	324.23
9082	G41	G42		15	1	VCP	0.00	-9	318.00	021_1121.tif	2	C-5	VCP	321.35
9083	G42	G43		15	1	VCP	0.02	-9	324.00	021_1121.tif	2	C-5	VCP	328.96
9373	G43	F46		18	1	VCP	0.00	-9	260.20	020_1120.tif	3	C-5	VCP	264.21
6356	I1	I2		15	1	VCP	0.02	-9	446.00	018_1118.tif	3	C-5	VCP	450.47
5941	I10	I9-5	3/23/1978	8	1	VCP	0.01	-9	175.55	033_2333.tif	3	C-5	VCP	125.27
6349	I11	I10	11/11/1972	8	1	VCP	0.00	-9	273.35	033_2333.tif	3	C-5	VCP	279.55
6348	I12	I10	3/23/1978	8	1	VCP	0.04	-9	175.00	033_2333.tif	3	C-5	VCP	228.93
9856	I58	I57	7/6/1971	8	1	VCP	0.01	-9	246.00	044_2244.tif	3	C-5	VCP	250.09
9855	I59	I58	7/6/1971	8	1	VCP	0.01	-9	281.00	044_2244.tif	3	C-5	VCP	286.05
4891	I8	I6	9/12/1977	8	1	VCP	0.00	-9	298.00	032_2332.tif	3	C-5	VCP	296.32
9846	I9	I8	9/12/1977	8	1	VCP	0.00	-9	298.19	032_2332.tif	3	C-5	VCP	293.45
4892	I9-5	I8	9/12/1977	8	1	VCP	0.02	-9	147.88	032_2332.tif	3	C-5	VCP	155.40
6389	K1	K2		8	1	VCP	0.01	-9	245.81	021_1222.tif	3	C-5	VCP	250.96
6390	K2	K3		8	1	VCP	0.01	-9	140.95	021_1222.tif	3	C-5	VCP	140.50
6391	K3	K4		8	1	VCP	0.01	-9	138.96	021_1222.tif	3	C-5	VCP	141.07
6392	K4	K5		8	1	VCP	0.01	-9	354.52	021_1222.tif	3	C-5	VCP	361.70
9813	K5	K9		8	1	VCP	0.01	-9	398.42	020_1221.tif	2	C-5	VCP	405.65
9814	K7	K5		8	1	VCP	0.03	-9	253.08	020_1221.tif	2	C-5	VCP	256.14
9017	N65	N64	3/1/1966	8	1	VCP	0.02	-9	197.25	036_2135.tif	4	C-5	VCP	213.55
6773	N67	NOMHID	6/11/1965	8	1	VCP	0.01	-9	-9.00	038_2137.tif	4	C-5	VCP	44.72
6770	NOMHID	N65	6/11/1965	8	1	VCP	0.01	-9	-9.00	038_2137.tif	4	C-5	VCP	218.18
6771	NOMHID	NOMHID	6/11/1965	4	1	CDI	0.02	-9	93.97	038_2137.tif	3	C-5	UNK	93.62
7193	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0018.tif	4	C-5	VCP	237.34
7194	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0018.tif	3	C-5	UNK	199.53
8988	NOMHID	F49	8/27/1965	8	1	VCP	0.01	-9	98.45	040_1241.tif	3	C-5	VCP	101.55
9010	NOMHID	F43	8/27/1965	8	1	VCP	0.01	-9	191.44	034_1235.tif	3	C-5	VCP	181.66
9857	NOMHID	I59	7/6/1971	8	1	UNK	-9.00	-9	-9.00	044_2244.tif	3	C-5	UNK	6.53
9828	H18	H17	6/8/1964	8	1	VCP	0.01	-9	310.00	009_1309.tif	4	C-6	VCP	316.28

SEWER STRUCTURE

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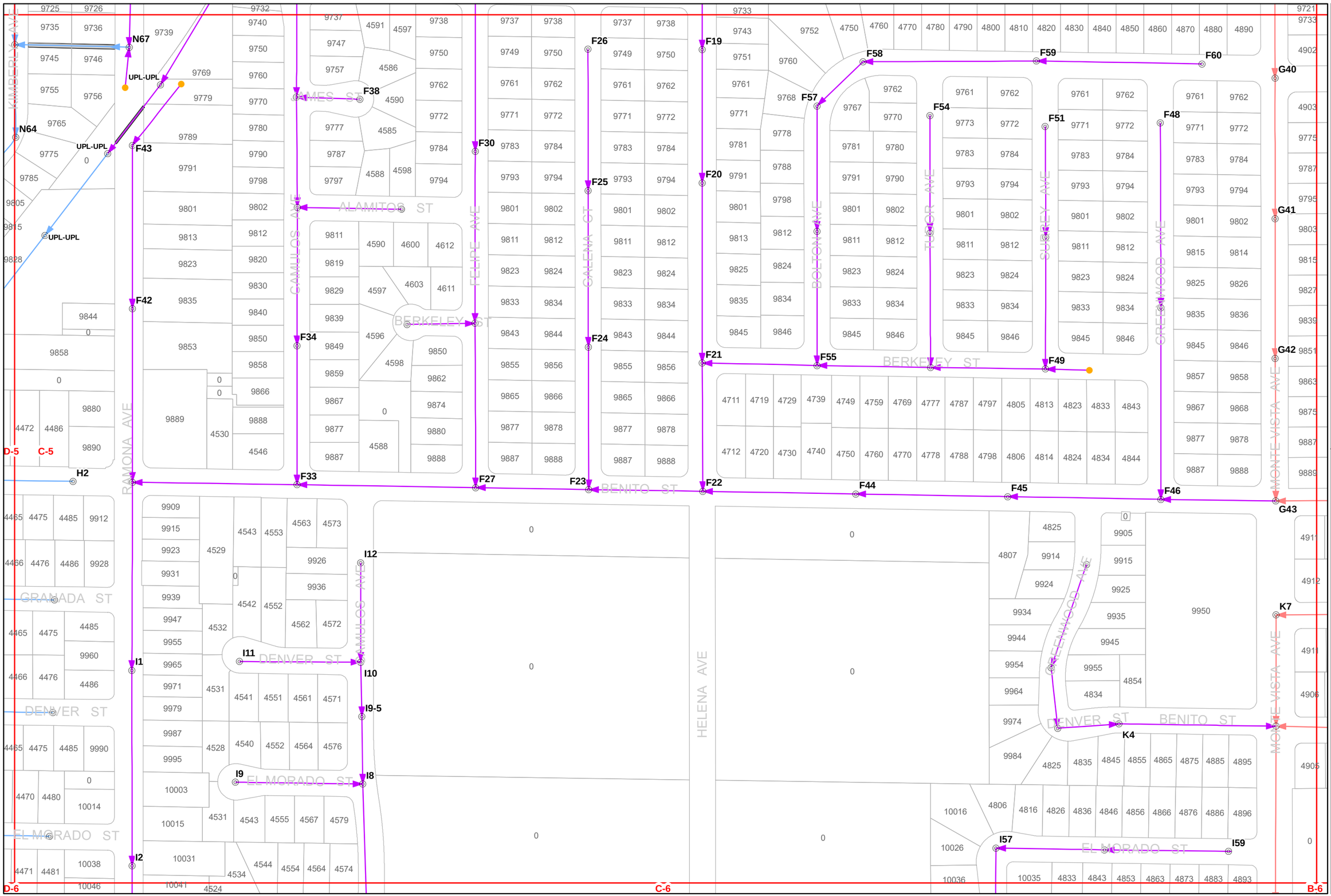
563	19	7/3/1989	MORENO & MILLS_0018.tif	3	C-5
564	20	7/3/1989	MORENO & MILLS_0018.tif	4	C-5
565	21	7/3/1989	MORENO & MILLS_0018.tif	4	C-5
282	F19	8/26/1965	039_1240.tif	3	C-5
283	F20	8/26/1965	039_1240.tif	3	C-5
170	F21	8/27/1965	040_1241.tif	3	C-5
284	F22	8/26/1965	039_1240.tif	3	C-5
362	F23	8/27/1965	038_1239.tif	3	C-5
361	F24	8/27/1965	038_1239.tif	3	C-5
360	F25	8/27/1965	038_1239.tif	3	C-5
359	F26	8/27/1965	038_1239.tif	3	C-5
194	F27	4/13/1965	036_1237.tif	3	C-5
193	F28	4/13/1965	036_1237.tif	3	C-5
1904	F29	4/13/1965	036_1237.tif	3	C-5
275	F30	5/27/1965	037_1238.tif	3	C-5
301	F33	10/16/1963	019_1119.tif	3	C-5
525	F34	8/27/1965	035_1236.tif	3	C-5
524	F35	8/27/1965	035_1236.tif	3	C-5
523	F36	8/27/1965	035_1236.tif	3	C-5
415	F37	7/6/1965	012_2412.tif	3	C-5
461	F38		012_2412.tif	3	C-5
186	F41	8/27/1965	034_1235.tif	3	C-5
189	F42	8/27/1965	034_1235.tif	3	C-5
190	F43	8/27/1965	034_1235.tif	3	C-5
468	F44		020_1120.tif	3	C-5
467	F45		020_1120.tif	3	C-5
466	F46		020_1120.tif	3	C-5
320	F47	8/27/1965	043_1244.tif	3	C-5
319	F48	8/27/1965	043_1244.tif	3	C-5
167	F49	8/27/1965	040_1241.tif	3	C-5
303	F50	8/27/1965	042_1243.tif	3	C-5
302	F51	8/27/1965	042_1243.tif	3	C-5
168	F52	8/27/1965	040_1241.tif	3	C-5
305	F53	8/27/1965	042_1243.tif	3	C-5
304	F54	8/27/1965	042_1243.tif	3	C-5
169	F55	8/27/1965	040_1241.tif	3	C-5
291	F56	8/27/1965	041_1242.tif	3	C-5
292	F57	8/27/1965	041_1242.tif	3	C-5
293	F58	8/27/1965	041_1242.tif	3	C-5
289	F59	8/27/1965	041_1242.tif	3	C-5
290	F60	8/27/1965	041_1242.tif	3	C-5
256	G40		021_1121.tif	2	C-5
257	G41		021_1121.tif	2	C-5
258	G42		021_1121.tif	2	C-5
628	G43	10/16/1963	031_1131.tif	2	C-5
1047	H10	7/28/1977	043_2243.tif	4	C-5
1148	H13	8/27/1965	033_1234.tif	4	C-5
643	H2	8/27/1965	033_1234.tif	4	C-5
316	H6	9/12/1975	042_2242.tif	4	C-5
1013	I1		018_1118.tif	3	C-5
1011	I10	11/11/1972	033_2333.tif	3	C-5
1010	I11	11/11/1972	033_2333.tif	3	C-5
1009	I12	3/23/1978	033_2333.tif	3	C-5
1014	I2		018_1118.tif	3	C-5
1161	I57	7/6/1971	044_2244.tif	3	C-5
1160	I58	7/6/1971	044_2244.tif	3	C-5
1159	I59	7/6/1971	044_2244.tif	3	C-5
1144	I8	9/12/1977	032_2332.tif	3	C-5
1146	I9	9/12/1977	032_2332.tif	3	C-5
1008	I9-5	3/23/1978	033_2333.tif	3	C-5
1021	K1		021_1222.tif	3	C-5
1020	K2		021_1222.tif	3	C-5
1019	K3		021_1222.tif	3	C-5
1022	K4		021_1222.tif	3	C-5
1025	K5	4/5/1965	022_1223.tif	2	C-5
1026	K7	4/5/1965	022_1223_A.tif	2	C-5
1466	N64	3/1/1966	037_2136_A.tif	4	C-5
355	N65	3/1/1966	037_2136.tif	4	C-5
279	N67	6/11/1965	038_2137.tif	3	C-5
166	NOMHID	8/27/1965	040_1241.tif	3	C-5
191	NOMHID	8/27/1965	034_1235.tif	3	C-5
281	NOMHID	6/11/1965	038_2137.tif	3	C-5
1119	H18	6/8/1964	009_1309.tif	4	C-6


KIMBERLY AVE
RAMONA AVE
CAMULOS AVE
FELIPE AVE
GALENA CT
BOLTON AVE
TUDOR AVE
SUSSEX AVE
GREENWOOD AVE
MONTE VISTA AVE
HELENA AVE
JAMES ST
ALAMITOS ST
BERKELEY ST
DENVER ST
BENITO ST
GRANADA ST
EL MORADO ST
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G43
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I12
I11
I10
I9-5
I9
I8
K7
K4
I57
I59
D-5
C-5
D-6
C-6
B-6
MONTCLAIR
City of Montclair
Sewer Atlas Map
Tile: C-5
Scale: 1" = 200'
Data as of:
February 2010
Prepared by:
D&W Consulting

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
10705	I121	J1	1/17/1963	15	1	VCP	0.02	-9	315.00	016_1116.tif	3	C-6	VCP	318.99
10729	I13	I14	10/16/1963	15	1	VCP	0.02	-9	408.68	017_1117.tif	3	C-6	VCP	162.86
10861	I14	I17	10/16/1963	15	1	VCP	0.02	-9	408.68	017_1117.tif	3	C-6	VCP	251.97
10524	I15	I14	9/6/1978	-9	1	UNK	-9.00	-9	-9.00	040_2340.tif	3	C-6	UNK	162.47
10523	I16	I15	9/6/1978	8	1	VCP	0.01	-9	241.90	040_2340.tif	3	C-6	VCP	245.72
10730	I17	I19	10/16/1963	15	1	VCP	0.02	-9	258.32	017_1117.tif	3	C-6	VCP	260.60
2266	I18	I17	6/8/1964	8	1	VCP	0.01	-9	148.00	014_1314.tif	3	C-6	VCP	151.63
10731	I19	I121	10/16/1963	15	1	VCP	0.02	-9	246.00	017_1117.tif	3	C-6	VCP	250.88
6357	I2	I3		15	1	VCP	0.02	-9	446.00	018_1118.tif	3	C-6	VCP	450.19
10894	I20	I19	10/2/1978	8	1	VCP	0.02	-9	165.00	025_2425.tif	3	C-6	VCP	165.51
6885	I22	I121	7/20/1966	8	1	VCP	0.01	-9	421.84	004_2204.tif	3	C-6	VCP	429.98
6895	I23	I22	7/20/1966	8	1	VCP	0.02	-9	321.00	006_2206.tif	3	C-6	VCP	330.79
6897	I24	I23	7/20/1966	8	1	VCP	0.02	-9	352.53	006_2206.tif	3	C-6	VCP	348.62
6898	I25	I24	7/20/1966	8	1	VCP	0.02	-9	183.97	006_2206.tif	3	C-6	VCP	190.70
6896	I26	I25	7/20/1966	8	1	VCP	0.02	-9	231.50	006_2206.tif	3	C-6	VCP	237.05
6884	I27	I22	7/20/1966	8	1	VCP	0.01	-9	272.01	004_2204.tif	3	C-6	VCP	275.93
6883	I28	I27	7/20/1966	8	1	VCP	0.01	-9	308.15	004_2204.tif	3	C-6	VCP	317.51
6882	I29	I28	7/20/1966	8	1	VCP	0.01	-9	210.00	004_2204.tif	3	C-6	VCP	211.71
10728	I3	NOMHID	10/16/1963	15	1	VCP	0.02	-9	410.65	017_1117.tif	3	C-6	VCP	257.01
10419	I30	I27	7/20/1966	8	1	VCP	0.02	-9	288.51	007_2207.tif	3	C-6	VCP	283.95
10833	I31	I30	7/20/1966	8	1	VCP	0.01	-9	421.00	008_2208.tif	3	C-6	VCP	419.56
10832	I32	I31	7/20/1966	8	1	VCP	0.01	-9	421.00	008_2208.tif	3	C-6	VCP	425.74
10831	I33	I32	7/20/1966	8	1	AC	0.01	-9	380.00	008_2208.tif	3	C-6	AC	387.54
10420	I34	I30	7/20/1966	8	1	VCP	0.02	-9	134.39	007_2207.tif	3	C-6	VCP	140.58
10421	I35	I34	7/20/1966	8	1	VCP	0.02	-9	170.36	007_2207.tif	3	C-6	VCP	171.37
6900	I36	I35	7/20/1966	8	1	VCP	0.01	-9	450.83	009_2209.tif	3	C-6	VCP	457.67
6899	I37	I36	7/20/1966	8	1	VCP	0.01	-9	450.00	009_2209.tif	3	C-6	VCP	451.16
10803	I38	I37	7/20/1966	8	1	VCP	0.02	-9	216.17	009_2209.tif	3	C-6	VCP	220.38
10422	I39	I35	7/20/1966	8	1	VCP	0.02	-9	290.03	007_2207.tif	3	C-6	VCP	294.60
6452	I4	I3	6/8/1964	8	1	VCP	0.00	-9	273.00	014_1314.tif	3	C-6	VCP	278.18
10423	I40	I39	7/20/1966	8	1	VCP	0.02	-9	-9.00	007_2207.tif	3	C-6	VCP	342.85
10952	I41	I39	7/20/1966	8	1	VCP	0.01	-9	298.61	010_2210.tif	3	C-6	VCP	302.25
10813	I42	I41		8	1	VCP	0.02	-9	341.00	011_2211.tif	3	C-6	VCP	345.19
10951	I43	I41	7/20/1966	8	1	VCP	0.08	-9	296.00	010_2210.tif	3	C-6	VCP	299.97
10814	I44	I43		8	1	VCP	0.01	-9	336.00	011_2211.tif	3	C-6	VCP	340.39
10950	I45	I43	7/20/1966	8	1	AC	0.01	-9	221.16	010_2210.tif	3	C-6	AC	225.68
10949	I46	I45	7/20/1966	8	1	VCP	0.01	-9	243.23	010_2210.tif	3	C-6	VCP	248.28
10251	I47	J10	2/4/1964	8	1	VCP	0.02	-9	316.01	029_7129.tif	3	C-6	VCP	319.43
6893	I48	I47	9/20/1966	8	1	VCP	-9.00	-9	349.86	005_2205.tif	3	C-6	VCP	353.88
6891	I49	NOMHID	9/20/1966	8	1	VCP	0.01	-9	62.93	005_2205.tif	3	C-6	VCP	66.10
6454	I5	I4	6/8/1964	8	1	VCP	0.00	-9	258.03	014_1314.tif	3	C-6	VCP	261.37
10429	I50	I49	7/20/1966	8	1	VCP	0.00	-9	382.49	012_2212.tif	3	C-6	VCP	384.82
10428	I51	I50	7/20/1966	8	1	VCP	0.02	-9	276.29	012_2212.tif	3	C-6	VCP	283.06
10427	I52	I51	7/20/1966	8	1	VCP	0.01	-9	366.02	012_2212.tif	3	C-6	VCP	369.28
10913	I53	I52	7/20/1966	8	1	VCP	0.01	-9	446.00	015_2215.tif	3	C-6	VCP	450.35
6449	I54	I55	7/20/1966	8	1	VCP	0.02	-9	351.00	013_2213.tif	3	C-6	VCP	354.78
10426	I55	I52	7/20/1966	8	1	VCP	0.01	-9	285.20	012_2212.tif	3	C-6	VCP	289.60
6408	I5-5	I5	8/4/1965	8	1	VCP	0.02	-9	98.50	041_2341.tif	3	C-6	VCP	107.13
9854	I56	I55	7/6/1971	8	1	VCP	0.03	-9	178.10	044_2244.tif	3	C-6	VCP	182.52
9853	I57	I56	7/6/1971	8	1	VCP	0.02	-9	346.00	044_2244.tif	3	C-6	VCP	348.94
4890	I6	I5-5	9/12/1977	8	1	VCP	0.03	-9	246.00	032_2332.tif	3	C-6	VCP	241.39
6451	I60	I55	7/20/1966	8	1	VCP	0.02	-9	106.00	013_2213.tif	3	C-6	VCP	111.84
9859	I61	I60	7/20/1966	8	1	VCP	0.01	-9	397.00	013_2213.tif	3	C-6	VCP	231.68
9831	I62	I61	7/28/1976	8	1	VCP	0.02	-9	293.03	034_2334.tif	3	C-6	VCP	294.27
6450	I63	I61	7/20/1966	8	1	VCP	0.01	-9	397.00	013_2213.tif	3	C-6	VCP	167.60
6890	I64	I49	9/20/1966	8	1	VCP	0.01	-9	281.05	005_2205.tif	3	C-6	VCP	284.84
10850	I65	NOMHID	7/20/1966	8	1	VCP	0.02	-9	408.00	014_2214.tif	3	C-6	VCP	418.10
10851	I66	I65	7/20/1966	8	1	VCP	0.01	-9	296.99	014_2214.tif	3	C-6	VCP	301.03
10914	I67	I66	7/20/1966	8	1	VCP	0.01	-9	149.60	015_2215.tif	3	C-6	VCP	152.28
9832	I7	I6	8/2/1982	8	1	VCP	0.00	-9	237.32	034_2435.tif	3	C-6	VCP	241.83
6867	K10	K20-5	4/5/1965	8	1	VCP	0.02	-9	287.24	009_1210.tif	2	C-6	VCP	288.10
6868	K20-5	K21	4/5/1965	8	1	VCP	0.02	-9	248.00	009_1210.tif	2	C-6	VCP	252.94
6869	K21	K23	4/5/1965	8	1	UNK	0.02	-9	383.49	009_1210.tif	2	C-6	UNK	390.09
6870	K23	K24	4/5/1965	8	1	VCP	0.02	-9	376.00	009_1210.tif	2	C-6	VCP	380.51
10920	K24	L1	4/5/1965	8	1	VCP	0.01	-9	302.10	050_1202.tif	2	C-6	VCP	306.14
9812	K9	K10		8	1	VCP	0.02	-9	417.00	020_1221.tif	2	C-6	VCP	417.72
1927	NOMHID	I64	7/20/1966	8	1	VCP	0.01	-9	28.00	014_2214.tif	3	C-6	VCP	21.73
1928	NOMHID	NOMHID	7/20/1966	-9	1	VCP	0.01	-9	10.00	014_2214.tif	3	C-6	VCP	10.00
6453	NOMHID	I5	6/8/1964	8	1	VCP	0.01	-9	75.00	014_1314.tif	3	C-6	VCP	75.44
6889	NOMHID	I64	9/20/1966	8	1	VCP	-9.00	-9	-9.00	005_2205.tif	3	C-6	VCP	77.24
6892	NOMHID	I48	9/20/1966	8	1	VCP	0.01	-9	291.92	005_2205.tif	3	C-6	VCP	291.19
10695	NOMHID	H26	4/5/1965	8	1	VCP	0.01	-9	167.02	013_2413.tif	4	C-6	VCP	175.36
10852	NOMHID	I66	7/20/1966	8	1	VCP	0.02	-9	133.22	014_2214.tif	3	C-6	VCP	135.07

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1704	I121	1/17/1963	016_1116.tif	3	C-6
1721	I13	10/16/1963	017_1117.tif	3	C-6
1571	I14	9/6/1978	040_2340.tif	3	C-6
1570	I15	9/6/1978	040_2340.tif	3	C-6
1569	I16	9/6/1978	040_2340.tif	3	C-6
1722	I17	10/16/1963	017_1117.tif	3	C-6
1723	I18	6/8/1964	014_1314.tif	3	C-6
1902	I19	10/2/1978	025_2425.tif	3	C-6
1903	I20	10/2/1978	025_2425.tif	3	C-6
1624	I22	7/20/1966	004_2204.tif	3	C-6
1635	I23	7/20/1966	006_2206.tif	3	C-6
1636	I24	7/20/1966	006_2206.tif	3	C-6
1637	I25	7/20/1966	006_2206.tif	3	C-6
1638	I26	7/20/1966	006_2206.tif	3	C-6
1625	I27	7/20/1966	004_2204.tif	3	C-6
1626	I28	7/20/1966	004_2204.tif	3	C-6
1627	I29	7/20/1966	004_2204.tif	3	C-6
1087	I3	10/16/1963	017_1117.tif	3	C-6
1477	I30	7/20/1966	007_2207.tif	3	C-6
1831	I31	7/20/1966	008_2208.tif	3	C-6
1832	I32	7/20/1966	008_2208.tif	3	C-6
1833	I33	7/20/1966	008_2208.tif	3	C-6
1478	I34	7/20/1966	007_2207.tif	3	C-6
1479	I35	7/20/1966	007_2207.tif	3	C-6
1640	I36	7/20/1966	009_2209.tif	3	C-6
1639	I37	7/20/1966	009_2209.tif	3	C-6
1792	I38	7/20/1966	009_2209.tif	3	C-6
1480	I39	7/20/1966	007_2207.tif	3	C-6
1086	I4	6/8/1964	014_1314.tif	3	C-6
1481	I40	7/20/1966	007_2207.tif	3	C-6
1801	I41		011_2211.tif	3	C-6
1802	I42		011_2211.tif	3	C-6
2010	I43	7/20/1966	010_2210.tif	3	C-6
1803	I44		011_2211.tif	3	C-6
2009	I45	7/20/1966	010_2210.tif	3	C-6
2008	I46	7/20/1966	010_2210.tif	3	C-6
1634	I47	9/20/1966	005_2205.tif	3	C-6
1633	I48	9/20/1966	005_2205.tif	3	C-6
1632	I49	9/20/1966	005_2205.tif	3	C-6
1042	I5	8/4/1965	041_2341.tif	3	C-6
1484	I50	7/20/1966	012_2212.tif	3	C-6
1485	I51	7/20/1966	012_2212.tif	3	C-6
1486	I52	7/20/1966	012_2212.tif	3	C-6
1948	I53	7/20/1966	015_2215.tif	3	C-6
1081	I54	7/20/1966	013_2213.tif	3	C-6
1158	I55	7/6/1971	044_2244.tif	3	C-6
1145	I5-5	9/12/1977	032_2332.tif	3	C-6
1157	I56	7/6/1971	044_2244.tif	3	C-6
1124	I6	8/2/1982	034_2435.tif	3	C-6
1082	I60	7/20/1966	013_2213.tif	3	C-6
1122	I61	7/28/1976	034_2334.tif	3	C-6
1123	I62	7/28/1976	034_2334.tif	3	C-6
1083	I63	7/20/1966	013_2213.tif	3	C-6
1631	I64	9/20/1966	005_2205.tif	3	C-6
1878	I65	7/20/1966	014_2214.tif	3	C-6
1879	I66	7/20/1966	014_2214.tif	3	C-6
1950	I67	7/20/1966	015_2215.tif	3	C-6
1125	I7	8/2/1982	034_2435.tif	3	C-6
1058	K10	4/5/1965	009_1210.tif	2	C-6
1610	K20-5	4/5/1965	009_1210.tif	2	C-6
1611	K21	4/5/1965	009_1210.tif	2	C-6
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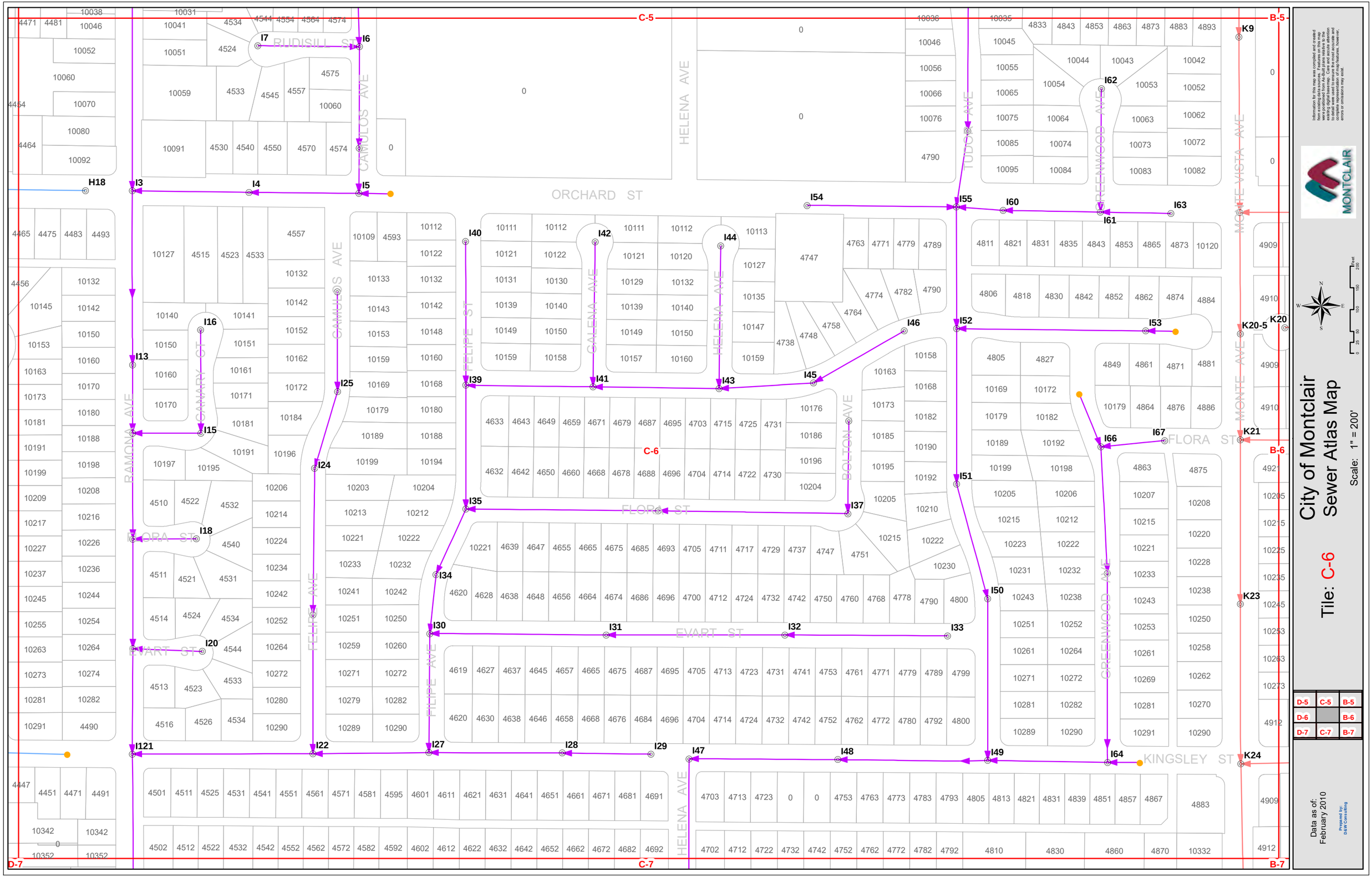
1106	K9		020_1221.tif	2	C-6
1085	NOMHID	6/8/1964	014_1314.tif	3	C-6
1630	NOMHID	9/20/1966	005_2205.tif	3	C-6
1695	NOMHID	4/5/1965	013_2413.tif	4	C-6
1877	NOMHID	7/20/1966	014_2214.tif	3	C-6
1949	NOMHID	7/20/1966	015_2215.tif	3	C-6


City of Montclair
Sewer Atlas Map
Tile: C-6
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
ORCHARD ST
RUDISILL ST
CAMULOS AVE
HELENA AVE
TUDOR AVE
GREENWOOD AVE
MONTE VISTA AVE
RAMONA AVE
CANARY CT
FELIPE ST
GALENA AVE
BOLTON AVE
FLORA ST
EVART ST
KINGSLEY ST
C-5
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D-7
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B-7

SEWER LINE													
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
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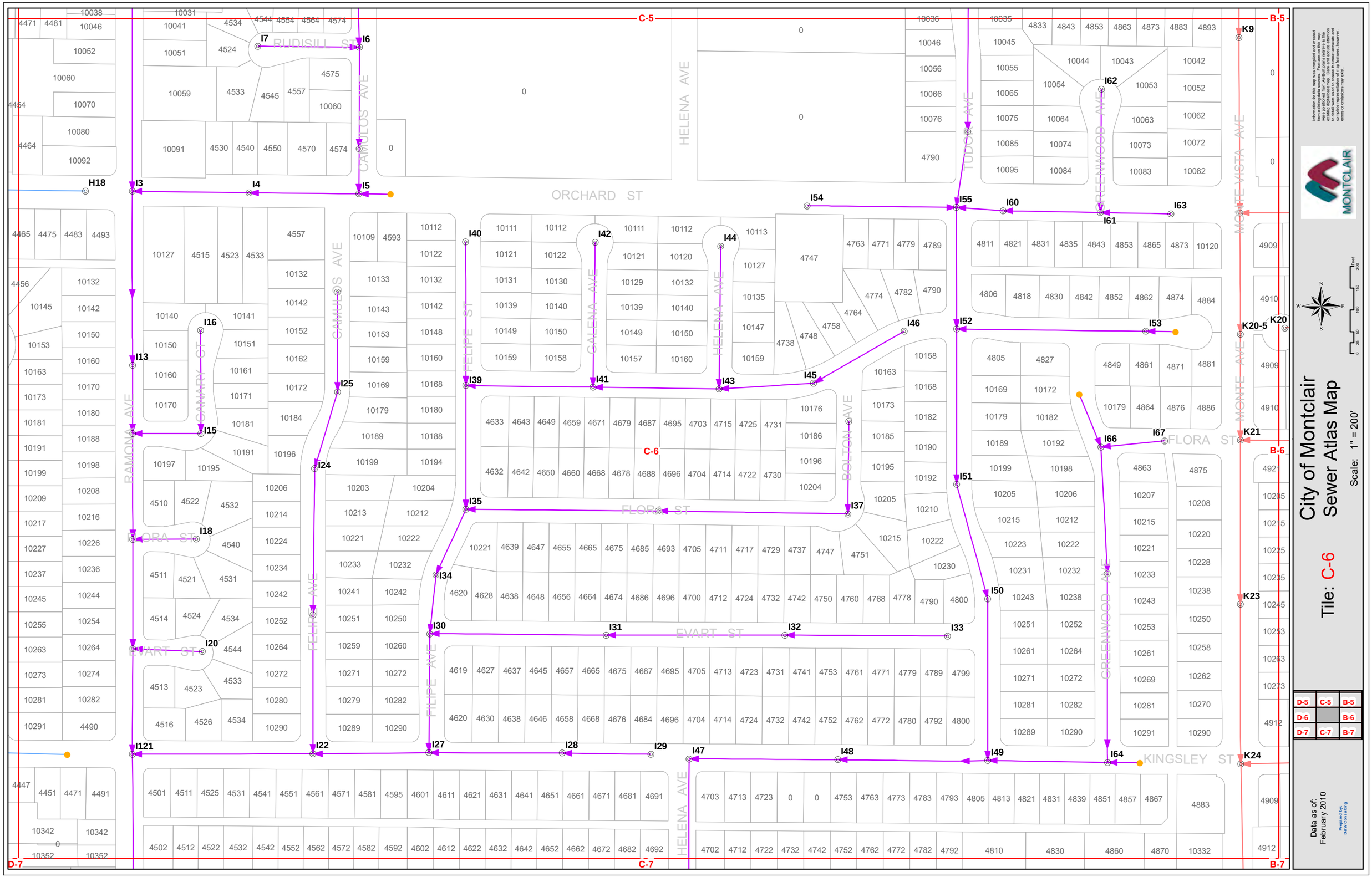
10962	NOMHID	I13	10/16/1963	15	1	VCP	0.02	-9	410.65	017_1117.tif	3	C-6	VCP	157.01

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID


City of Montclair
Sewer Atlas Map
Tile: C-6
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
ORCHARD ST
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CAMULOS AVE
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BOLTON AVE
FLORA ST
EVART ST
KINGSLEY ST
C-5
B-5
C-6
B-6
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SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
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10706	J1	J5	1/17/1963	18	1	VCP	0.01	-9	347.15	016_1116.tif	3	C-7	VCP	351.69
958	J10	J9	2/4/1964	8	1	VCP	0.01	-9	334.70	029_7129.tif	3	C-7	VCP	340.08
10868	J11	J10	8/20/1966	8	1	VCP	-9.00	-9	-9.00	003_2203.tif	3	C-7	VCP	321.01
10867	J12	J11	8/20/1966	8	1	VCP	-9.00	-9	-9.00	003_2203.tif	3	C-7	VCP	327.68
10869	J13	J12	8/20/1966	8	1	VCP	0.01	-9	-9.00	003_2203.tif	3	C-7	VCP	389.53
10910	J14	J9	12/16/1965	8	1	VCP	-9.00	-9	322.44	002_2202.tif	3	C-7	VCP	334.96
10909	J15	J14	12/16/1965	8	1	VCP	-9.00	-9	322.44	002_2202.tif	3	C-7	VCP	325.57
10908	J16	J15	12/16/1965	8	1	VCP	0.01	-9	256.62	002_2202.tif	3	C-7	VCP	260.61
10907	J17	J16	12/16/1965	8	1	VCP	0.01	-9	268.00	002_2202.tif	3	C-7	VCP	271.93
10708	J18	J19	1/17/1963	18	1	VCP	0.01	-9	305.00	016_1116.tif	3	C-7	VCP	140.67
10963	J19	J20	1/17/1963	18	1	VCP	0.01	-9	305.00	016_1116.tif	3	C-7	VCP	170.31
10260	J2	J1	6/30/1964	8	1	VCP	0.01	-9	414.50	031_7131.tif	3	C-7	VCP	415.44
1925	J20	NOMHID	1/17/1963	18	1	VCP	0.01	-9	67.00	015_1115.tif	3	C-7	VCP	61.69
10576	J21	J20	6/8/1964	8	1	VCP	0.01	-9	347.00	015_1315.tif	3	C-7	VCP	349.88
10575	J22	J21	6/8/1964	8	1	VCP	0.01	-9	347.00	015_1315.tif	3	C-7	VCP	352.00
10969	J23	J22	6/8/1964	8	1	VCP	0.01	-9	347.00	015_1315.tif	3	C-7	VCP	264.30
3058	J24	J23	3/7/1990	8	1	VCP	0.02	-9	285.14	036_7136.tif	3	C-7	VCP	288.25
10500	J25	J24	3/7/1990	8	1	VCP	0.01	-9	251.98	036_7136.tif	3	C-7	VCP	254.84
10499	J26	J25	3/7/1990	8	1	VCP	0.03	-9	95.84	036_7136.tif	3	C-7	VCP	102.46
10574	J27	J23	6/8/1964	8	1	VCP	0.01	-9	347.00	015_1315.tif	3	C-7	VCP	86.65
10721	J28	J27	6/8/1964	8	1	VCP	0.01	-9	347.00	016_1316.tif	3	C-7	VCP	357.75
10862	J29	J28	6/8/1964	8	1	VCP	0.01	-9	347.00	016_1316.tif	3	C-7	VCP	139.33
10261	J3	J2	6/30/1964	8	1	VCP	0.01	-9	416.00	031_7131.tif	3	C-7	VCP	421.53
10482	J30	J31		8	1	VCP	0.00	-9	181.56	022_7122.tif	3	C-7	VCP	124.70
3065	J31	NOMHID	9/30/1989	8	1	VCP	0.00	-9	-9.00	022_7122.tif	3	C-7	VCP	174.78
10483	J32	J31		8	1	VCP	0.00	-9	300.48	022_7122.tif	3	C-7	VCP	305.39
10720	J33	J29	6/8/1964	8	1	VCP	0.01	-9	347.00	016_1316.tif	3	C-7	VCP	208.83
10719	J34	J33	6/8/1964	8	1	VCP	0.01	-9	347.00	016_1316.tif	3	C-7	VCP	347.54
10718	J35	NOMHID	6/8/1964	8	1	VCP	0.01	-9	393.28	016_1316.tif	3	C-7	VCP	310.47
10854	J36	J37	1/17/1963	15	1	VCP	0.02	-9	250.30	015_1115.tif	3	C-7	VCP	248.36
10855	J37	J47	1/17/1963	18	1	VCP	0.01	-9	261.70	015_1115.tif	3	C-7	VCP	270.36
10842	J38	J37	9/27/1963	8	1	VCP	0.01	C.I. 1500	396.00	001_1101.tif	3	C-7	VCP	409.70
10841	J39	J38	9/27/1963	8	1	VCP	0.01	C.I. 1500	371.00	001_1101.tif	3	C-7	VCP	384.25
10262	J4	J3	6/30/1964	8	1	VCP	0.01	-9	397.00	031_7131.tif	3	C-7	VCP	401.19
10840	J40	J39	9/27/1963	8	1	VCP	0.01	C.I. 1500	371.00	001_1101.tif	3	C-7	VCP	383.62
10564	J41	NOMHID	3/29/1963	8	1	VCP	0.00	-9	123.00	002_1102.tif	3	C-7	VCP	126.71
10563	J42	J41	3/29/1963	8	1	VCP	0.00	-9	394.41	002_1102.tif	3	C-7	VCP	359.94
1946	J43	J45	2/6/1973	8	1	VCP	0.01	-9	-9.00	033_7133.tif	3	C-7	VCP	108.53
10455	J44	J43	10/7/1986	8	1	VCP	0.03	-9	280.02	017_7117.tif	3	C-7	VCP	256.30
10436	J45	J43	2/6/1973	8	1	VCP	0.01	-9	-9.00	033_7133.tif	3	C-7	VCP	190.59
10435	J46	J45	2/6/1973	8	1	VCP	0.01	-9	210.00	033_7133.tif	3	C-7	VCP	214.35
10707	J5	J18	1/17/1963	18	1	VCP	0.01	-9	302.13	016_1116.tif	3	C-7	VCP	303.54
6906	J6	J5	6/10/1964	8	1	VCP	0.01	-9	346.00	028_7128.tif	3	C-7	VCP	351.74
6905	J7	J6	6/10/1964	8	1	VCP	0.01	-9	346.00	028_7128.tif	3	C-7	VCP	350.08
6904	J8	J7	6/10/1964	8	1	VCP	0.01	-9	346.00	028_7128.tif	3	C-7	VCP	350.69
10510	J9	J8	3/7/1990	-9	1	VCP	-9.00	-9	-9.00	036-7136.tif	3	C-7	VCP	259.44
10919	L1	L5	4/5/1965	8	1	VCP	0.02	-9	336.27	050_1202.tif	2	C-7	VCP	340.83
676	L22	L26	4/5/1965	8	1	VCP	0.01	-9	305.14	050_1202.tif	2	C-7	VCP	46.65
10917	L26	L27	4/5/1965	8	1	VCP	0.01	-9	306.50	050_1202.tif	2	C-7	VCP	312.62
2230	L27	L34-5	6/8/1964	8	1	VCP	0.02	-9	68.00	017_1317.tif	2	C-7	VCP	70.60
10513	L34-5	L35	10/16/1963	10	1	VCP	0.02	-9	238.18	037_1137.tif	2	C-7	VCP	241.04
10514	L35	L35-5	10/16/1963	10	1	VCP	0.02	-9	234.83	037_1137.tif	2	C-7	VCP	239.84
3044	L35-5	L36	10/16/1963	10	1	VCP	0.01	-9	464.48	037_1137.tif	2	C-7	VCP	25.07
10543	L36	L42	10/16/1963	10	1	VCP	0.01	-9	464.48	037_1137.tif	2	C-7	VCP	443.21
10918	L5	L22	4/5/1965	8	1	VCP	0.01	-9	305.14	050_1202.tif	2	C-7	VCP	263.10
638	NOMHID	NOMHID	11/12/2002	6	1	PVC	0.01	-9	-9.00	200272.tif	3	C-7	PVC	106.76
639	NOMHID	NOMHID	11/12/2002	-9	1	UNK	-9.00	-9	-9.00	200272.tif	3	C-7	UNK	122.07
2095	NOMHID	NOMHID	8/12/1980	-9	1	UNK	-9.00	-9	-9.00	024_2424.tif	3	C-7	UNK	2.64
2096	NOMHID	NOMHID	8/12/1980	-9	1	UNK	-9.00	-9	-9.00	024_2424.tif	3	C-7	UNK	3.15
2097	NOMHID	NOMHID	8/12/1980	-9	1	UNK	-9.00	-9	-9.00	024_2424.tif	3	C-7	UNK	2.98
2098	NOMHID	NOMHID	8/12/1980	-9	1	UNK	-9.00	-9	-9.00	024_2424.tif	3	C-7	UNK	2.71
2099	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.02	-9	59.51	024_2424.tif	3	C-7	UNK	56.66
2100	NOMHID	NOMHID	8/12/1980	-9	1	UNK	-9.00	-9	-9.00	024_2424.tif	3	C-7	UNK	3.13
2109	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.06	-9	53.00	024_2424.tif	3	C-7	UNK	49.49
2110	NOMHID	NOMHID	8/12/1980	-9	1	UNK	-9.00	-9	-9.00	024_2424.tif	3	C-7	UNK	58.13
2111	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.04	-9	35.50	024_2424.tif	3	C-7	UNK	32.23
2112	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.01	-9	106.00	024_2424.tif	3	C-7	UNK	110.38
1315	NOMHID	NOMHID	11/12/2002	6	1	PVC	-9.00	-9	-9.00	200272.tif	3	C-7	PVC	12.35
1316	NOMHID	NOMHID	11/12/2002	6	1	PVC	0.01	-9	-9.00	200272.tif	3	C-7	PVC	77.38
1317	NOMHID	NOMHID	11/12/2002	6	1	PVC	0.01	-9	-9.00	200272.tif	3	C-7	PVC	193.13
1318	NOMHID	NOMHID	11/12/2002	6	1	PVC	-9.00	-9	-9.00	200272.tif	3	C-7	PVC	115.75
1319	NOMHID	NOMHID	11/12/2002	4	1	PVC	0.02	-9	-9.00	200272.tif	3	C-7	PVC	2.70

SEWER STRUCTURE

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1782	J11	8/20/1966	003_2203.tif	3	C-7
1783	J12	8/20/1966	003_2203.tif	3	C-7
1784	J13	8/20/1966	003_2203.tif	3	C-7
1941	J14	12/16/1965	002_2202.tif	3	C-7
1942	J15	12/16/1965	002_2202.tif	3	C-7
1943	J16	12/16/1965	002_2202.tif	3	C-7
1944	J17	12/16/1965	002_2202.tif	3	C-7
1707	J18	1/17/1963	016_1116.tif	3	C-7
1979	J19	8/18/1980	023_2423.tif	3	C-7
1270	J2	6/30/1964	031_7131.tif	3	C-7
1708	J20	1/17/1963	016_1116.tif	3	C-7
1662	J21	6/8/1964	015_1315.tif	3	C-7
1663	J22	6/8/1964	015_1315.tif	3	C-7
1553	J23	3/7/1990	036_7136.tif	3	C-7
1552	J24	3/7/1990	036_7136.tif	3	C-7
1551	J25	3/7/1990	036_7136.tif	3	C-7
1550	J26	3/7/1990	036_7136.tif	3	C-7
1664	J27	6/8/1964	015_1315.tif	3	C-7
1715	J28	6/8/1964	016_1316.tif	3	C-7
1544	J29	9/30/1989	022_7122.tif	3	C-7
1269	J3	6/30/1964	031_7131.tif	3	C-7
1548	J30	9/30/1989	022_7122.tif	3	C-7
1547	J31	9/30/1989	022_7122.tif	3	C-7
1546	J32	9/30/1989	022_7122.tif	3	C-7
1714	J33	6/8/1964	016_1316.tif	3	C-7
1713	J34	6/8/1964	016_1316.tif	3	C-7
2011	J34-5	11/12/2002	200272.tif	3	C-7
1712	J35	6/8/1964	016_1316.tif	3	C-7
1880	J35-5	1/17/1963	015_1115.tif	3	C-7
1881	J36	1/17/1963	015_1115.tif	3	C-7
1882	J37	1/17/1963	015_1115.tif	3	C-7
1876	J38	9/27/1963	001_1101.tif	3	C-7
1875	J39	9/27/1963	001_1101.tif	3	C-7
1268	J4	6/30/1964	031_7131.tif	3	C-7
1842	J40	9/27/1963	001_1101.tif	3	C-7
1583	J41	3/29/1963	022_1102.tif	3	C-7
1503	J42	2/6/1973	033_7133.tif	3	C-7
1860	J43	10/7/1986	017_7117.tif	3	C-7
1861	J44	10/7/1986	017_7117.tif	3	C-7
1502	J45	2/6/1973	033_7133.tif	3	C-7
1501	J46	2/6/1973	033_7133.tif	3	C-7
1883	J47	1/17/1963	015_1115.tif	3	C-7
1706	J5	1/17/1963	016_1116.tif	3	C-7
1646	J6	6/10/1964	028_7128.tif	3	C-7
1645	J7	6/10/1964	028_7128.tif	3	C-7
1554	J8	3/7/1990	036_7136.tif	3	C-7
1555	J9	3/7/1990	036-7136.tif	3	C-7
1588	L1	4/5/1965	006_1207.tif	2	C-7
1606	L22	3/11/1986	008_7108.tif	2	C-7
1952	L26	4/5/1965	050_1202.tif	2	C-7
1954	L27	4/5/1965	050_1202.tif	2	C-7
1560	L34-5	10/16/1963	037_1137.tif	2	C-7
1559	L35	10/16/1963	037_1137.tif	2	C-7
1558	L35-5	10/16/1963	037_1137.tif	2	C-7
1474	L36	1/31/1970	040_2240.tif	2	C-7
1951	L5	4/5/1965	050_1202.tif	2	C-7
1734	NOMHID	9/30/1989	023_7123.tif	3	C-7
1735	NOMHID		023_7123.tif	3	C-7
1785	NOMHID	8/20/1966	003_2203.tif	3	C-7
1749	PRI	8/12/1980	024_2424.tif	3	C-7
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1753	PRI	8/12/1980	024_2424.tif	3	C-7
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1756	PRI	8/12/1980	024_2424.tif	3	C-7
1757	PRI	8/12/1980	024_2424.tif	3	C-7
1758	PRI	8/12/1980	024_2424.tif	3	C-7
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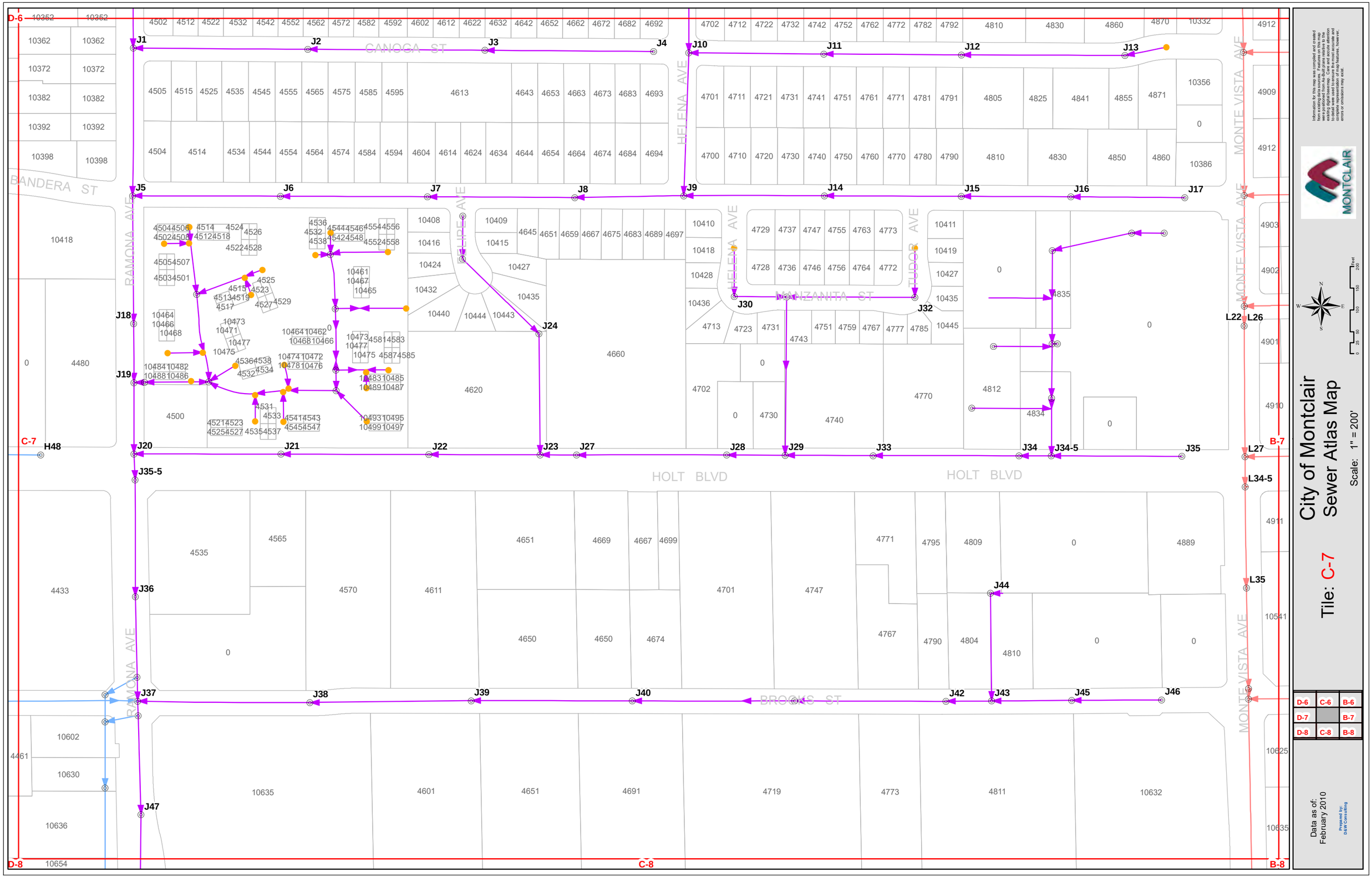
1762	PRI	8/12/1980	024_2424.tif	3	C-7



City of Montclair
Sewer Atlas Map
Tile: C-7
Scale: 1" = 200'
Data as of:
February 2010
Prepared by:
D&W Consulting
MONTCLAIR
CANOGA ST
BANDERA ST
RAMONA AVE
FELIPE AVE
HELENA AVE
MANZANITA ST
TUDOR AVE
MONTE VISTA AVE
HOLT BLVD
BROOKS ST
D-6
C-6
B-6
D-7
B-7
D-8
C-8
B-8

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
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1528	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.02	-9	269.78	023_2423.tif	3	C-7	VCP	51.82
1539	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.02	-9	-9.00	023_2423.tif	3	C-7	VCP	3.70
1541	NOMHID	J19	8/18/1980	8	1	VCP	0.00	-9	-9.00	023_2423.tif	3	C-7	VCP	25.30
1542	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.00	-9	149.46	023_2423.tif	3	C-7	VCP	110.68
1543	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.04	-9	-9.00	023_2423.tif	3	C-7	VCP	41.92
1544	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.02	-9	3.00	023_2423.tif	3	C-7	VCP	5.08
1545	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.03	-9	3.00	023_2423.tif	3	C-7	VCP	3.70
1546	NOMHID	NOMHID	8/18/1980	-9	1	UNK	-9.00	-9	-9.00	023_2423.tif	3	C-7	UNK	3.32
1547	NOMHID	NOMHID	8/18/1980	8	1	VCP	-9.00	-9	-9.00	023_2423.tif	3	C-7	VCP	13.06
1548	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.06	-9	3.00	023_2423.tif	3	C-7	VCP	4.49
1549	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.00	-9	-9.00	023_2423.tif	3	C-7	VCP	112.80
1550	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.00	-9	44.50	023_2423.tif	3	C-7	VCP	48.64
1551	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.02	-9	269.78	023_2423.tif	3	C-7	VCP	71.62
2016	NOMHID	J37	12/28/1964	8	1	AC	0.01	-9	43.00	049_1149.tif	4	C-7	AC	43.59
2115	NOMHID	NOMHID	8/12/1980	-9	1	UNK	-9.00	-9	35.50	024_2424.tif	3	C-7	UNK	3.19
2116	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.03	-9	-9.00	024_2424.tif	3	C-7	UNK	122.42
2117	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.01	-9	169.00	024_2424.tif	3	C-7	UNK	121.33
3032	NOMHID	L35-5	10/16/1963	8	1	UNK	-9.00	-9	-9.00	037_1137.tif	2	C-7	UNK	6.37
3036	NOMHID	L34-5	10/16/1963	8	1	UNK	-9.00	-9	-9.00	037_1137.tif	2	C-7	UNK	8.30
3064	NOMHID	J29	9/30/1989	8	1	VCP	0.01	-9	-9.00	022_7122.tif	3	C-7	VCP	202.11
3191	NOMHID	J44	10/7/1986	-9	1	UNK	0.00	-9	28.44	017_7117.tif	3	C-7	UNK	29.61
10971	NOMHID	NOMHID	11/12/2002	4	1	PVC	0.02	-9	-9.00	200272.tif	3	C-7	PVC	149.98
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10235	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.02	-9	-9.00	023_2423.tif	3	C-7	VCP	23.34
10236	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.06	-9	-9.00	023_2423.tif	3	C-7	VCP	57.62
10237	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.02	-9	-9.00	023_2423.tif	3	C-7	VCP	67.01
10238	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.00	-9	307.70	023_2423.tif	3	C-7	VCP	116.32
10239	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.04	-9	70.00	023_2423.tif	3	C-7	VCP	62.27
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10241	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.02	-9	-9.00	023_2423.tif	3	C-7	VCP	20.00
10242	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.20	-9	43.50	023_2423.tif	3	C-7	VCP	38.53
10243	NOMHID	NOMHID	8/18/1980	8	1	VCP	-9.00	-9	-9.00	023_2423.tif	3	C-7	VCP	70.71
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10246	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.26	-9	108.78	023_2423.tif	3	C-7	VCP	102.89
10247	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.02	-9	74.78	023_2423.tif	3	C-7	VCP	74.83
10248	NOMHID	NOMHID	8/18/1980	8	1	VCP	0.02	-9	230.26	023_2423.tif	3	C-7	VCP	140.04
10249	NOMHID	NOMHID	8/18/1980	6	1	VCP	0.02	-9	-9.00	023_2423.tif	3	C-7	VCP	52.00
10764	NOMHID	J32		8	1	VCP	0.01	-9	116.00	023_7123.tif	3	C-7	VCP	117.09
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10797	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.00	-9	-9.00	024_2424.tif	3	C-7	UNK	42.40
10798	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.04	-9	-9.00	024_2424.tif	3	C-7	UNK	36.08
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10800	NOMHID	NOMHID	8/12/1980	-9	1	UNK	0.02	-9	-9.00	024_2424.tif	3	C-7	UNK	137.43
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10839	NOMHID	J40	9/27/1963	8	1	VCP	0.00	C.I. 1500	248.00	001_1101.tif	3	C-7	VCP	259.91
10853	NOMHID	J36	1/17/1963	15	1	VCP	0.02	-9	260.60	015_1115.tif	3	C-7	VCP	278.46
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10964	NOMHID	J34	6/8/1964	8	1	VCP	0.01	-9	393.28	016_1316.tif	3	C-7	VCP	77.07
10970	NOMHID	NOMHID	11/12/2002	6	1	PVC	0.02	-9	-9.00	200272.tif	3	C-7	PVC	111.17
2498			9/30/2009	18	1	VCP	0.04		82.10	RGSP02.tif	4	C-7		87.10
2499			9/30/2009	18	1	VCP	0.00		216.83	RGSP02.tif	4	C-7		221.83
2500			9/30/2009	18	1	VCP	0.01		307.19	RGSP02.tif	4	C-7		312.19
2502			9/30/2009	8	1	VCP	0.01		74.95	RGSP02.tif	4	C-7		79.95

SEWER STRUCTURE					
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1964	PRI	8/18/1980	023_2423.tif	3	C-7
1965	PRI	8/18/1980	023_2423.tif	3	C-7
1966	PRI	8/18/1980	023_2423.tif	3	C-7
1968	PRI	8/18/1980	023_2423.tif	3	C-7
1970	PRI	8/18/1980	023_2423.tif	3	C-7
1972	PRI	8/18/1980	023_2423.tif	3	C-7
1973	PRI	8/18/1980	023_2423.tif	3	C-7
1975	PRI	8/18/1980	023_2423.tif	3	C-7
1977	PRI	8/18/1980	023_2423.tif	3	C-7
1978	PRI	8/18/1980	023_2423.tif	3	C-7
1980	PRI	8/18/1980	023_2423.tif	3	C-7
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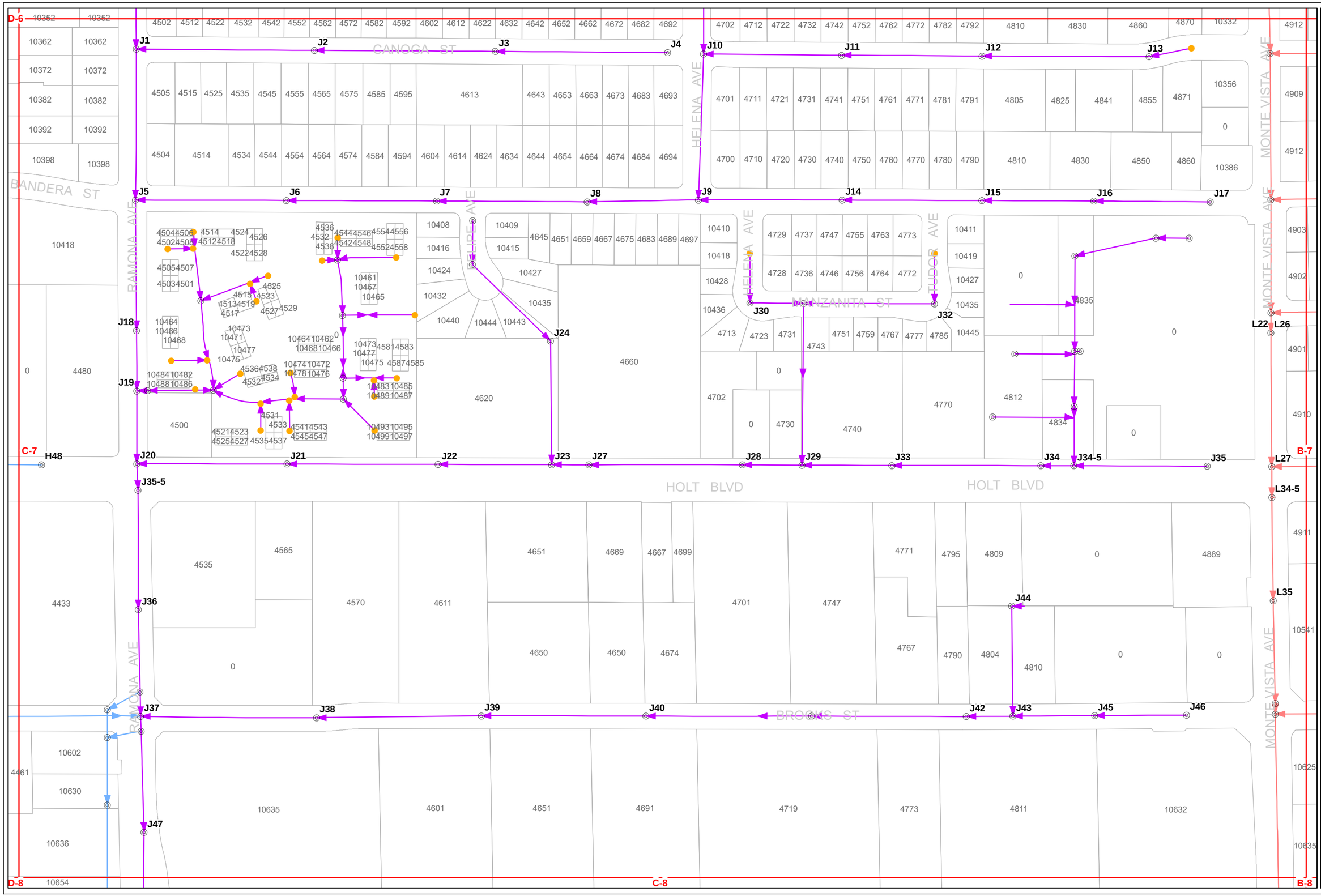
1983	PRI	8/18/1980	023_2423.tif	3	C-7
1984	PRI	8/18/1980	023_2423.tif	3	C-7
1986	PRI	8/18/1980	023_2423.tif	3	C-7
1987	PRI	8/18/1980	023_2423.tif	3	C-7
1988	PRI	8/18/1980	023_2423.tif	3	C-7
1989	PRI	8/18/1980	023_2423.tif	3	C-7
2012	PRI	11/12/2002	200272.tif	3	C-7
2013	PRI	11/12/2002	200272.tif	3	C-7
2014	PRI	11/12/2002	200272.tif	3	C-7
2015	PRI	11/12/2002	200272.tif	3	C-7
2017	PRI	11/12/2002	200272.tif	3	C-7
2018	PRI	11/12/2002	200272.tif	3	C-7
2019	PRI	11/12/2002	200272.tif	3	C-7
2027	PRI	11/12/2002	200272.tif	3	C-7
2073	UNK-16	9/30/2009	RGSP02.tif	3	C-7
2074	UNK-17	9/30/2009	RGSP02.tif	4	C-7
2075	UNK-18	9/30/2009	RGSP02.tif	4	C-7
2078	UNK-21	9/30/2009	RGSP02.tif	3	C-7
2079	UNK-22	9/30/2009	RGSP02.tif	4	C-7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HELENA AVE
FELIPE AVE
TUDOR AVE
MANZANITA ST
MONTE VISTA AVE
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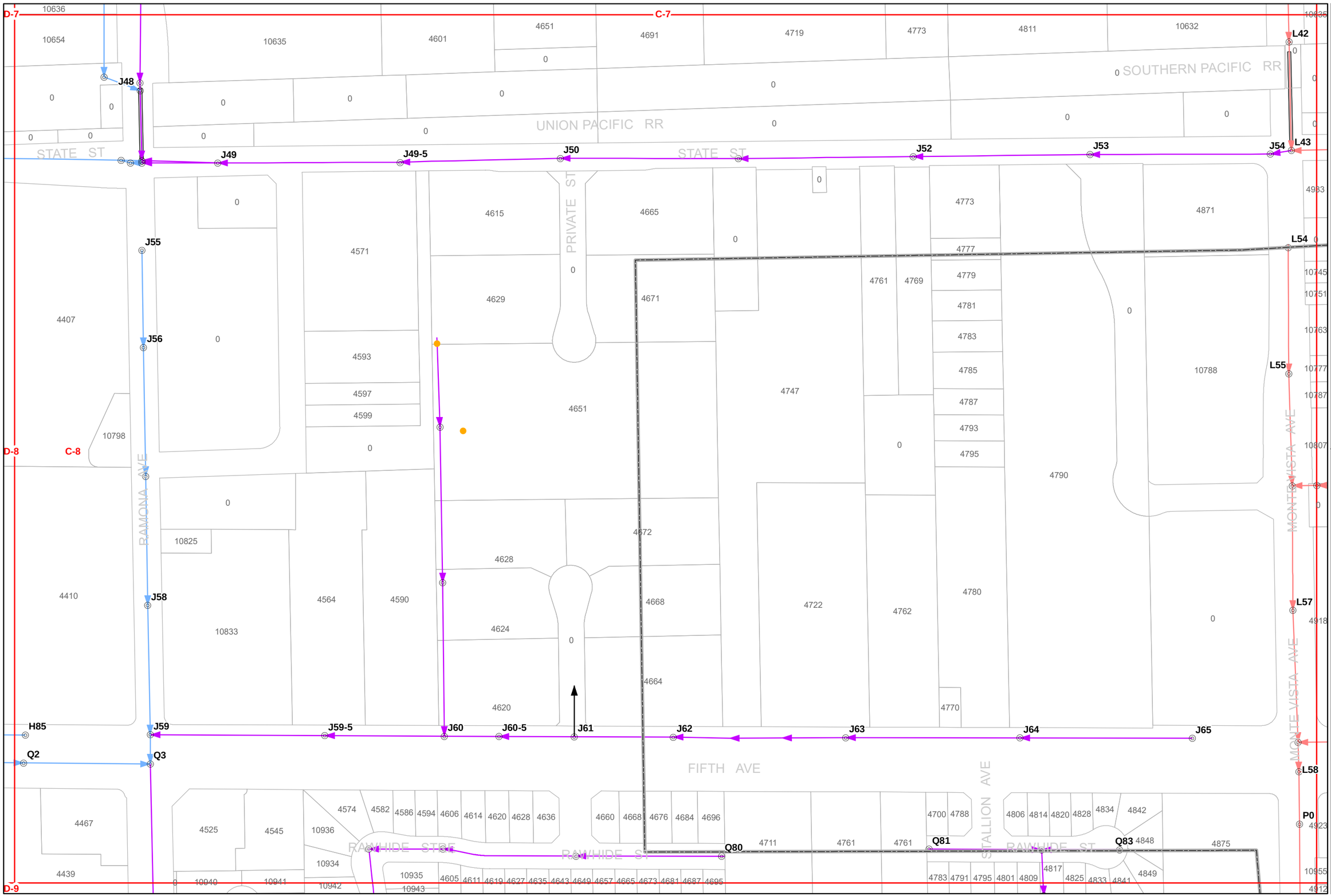
SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
10696	H69	H68	1/8/1963	24	1	VCP	0.00	-9	372.82	014_1114.tif	4	C-8	VCP	358.98
10856	J47	J48	1/17/1963	18	1	VCP	0.01	-9	254.97	015_1115.tif	3	C-8	VCP	262.14
1924	J48	H69	1/17/1963	18	1	VCP	0.04	-9	167.03	015_1115.tif	3	C-8	VCP	179.00
10929	J49	H69	1/9/1963	15	1	VCP	0.02	-9	101.00	033_1133.tif	3	C-8	VCP	175.00
10927	J50	NOMHID	1/9/1963	15	1	VCP	0.01	-9	396.00	033_1133.tif	3	C-8	VCP	369.38
10930	J51	J50	1/9/1963	15	1	VCP	0.00	-9	396.00	033_1133.tif	3	C-8	VCP	410.00
10439	J52	J51	1/9/1963	15	1	VCP	0.01	-9	396.00	034_1134.tif	3	C-8	VCP	402.52
10438	J53	J52	1/9/1963	15	1	VCP	0.00	-9	396.00	034_1134.tif	3	C-8	VCP	407.38
10437	J54	J53	1/9/1963	15	1	VCP	0.00	-9	412.50	034_1134.tif	3	C-8	VCP	415.92
11144	J55	J56	7/15/1993	8	1	VCP	0.02		221.00	004_15304.tif	4	C-8	VCP	223.63
11145	J56	J57	7/15/1993	8	1	VCP	0.01		296.00	004_15304.tif	4	C-8	VCP	297.19
11146	J57	J58	7/15/1993	8	1	VCP	0.15		296.00	004_15304.tif	4	C-8	VCP	297.18
11147	J58	J59	7/15/1993	8	1	VCP	0.01		296.00	004_15304.tif	4	C-8	VCP	298.24
80	J59	Q3	7/15/1993	6	1	VCP	0.01		71.04	004_15304.tif	4	C-8	VCP	66.95
3964	J59-5	J59	7/15/1993	8	1	VCP	0.05		396.00	005_15305.tif	3	C-8	VCP	402.58
3963	J60-5	J59-5	7/15/1993	8	1	VCP	0.05		396.00	005_15305.tif	3	C-8	VCP	400.80
3962	J61	J60-5	7/15/1993	8	1	VCP	0.05		396.00	005_15305.tif	3	C-8	VCP	401.68
11131	J63	NOMHID	7/15/1993	8	1	VCP	0.05		0.00	006_15306.tif	3	C-8	VCP	147.72
11130	J64	J63	7/15/1993	8	1	VCP	0.05		396.00	006_15306.tif	3	C-8	VCP	401.20
11129	J65	J64	7/15/1993	8	1	VCP	0.05		396.00	006_15306.tif	3	C-8	VCP	397.04
10515	L42	L43	10/16/1963	10	1	VCP	0.03	-9	238.69	037_1137.tif	2	C-8	VCP	250.29
3261	L43	J54	1/9/1963	15	1	VCP	0.00	-9	39.68	034_1134.tif	3	C-8	VCP	48.95
359	L54	NOMHID	12/15/1988	8	1	VCP	-9.00	-9	-9.00	026_7126.tif	2	C-8	VCP	6.32
10219	L54	L55	12/15/1988	8	1	VCP	0.02	-9	278.00	026_7126.tif	2	C-8	VCP	290.61
10220	L55	L56	12/15/1988	8	1	VCP	0.02	-9	278.00	026_7126.tif	2	C-8	VCP	258.83
10183	L56	L57	3/3/1986	8	1	VCP	0.01	-9	294.89	004_7104.tif	2	C-8	VCP	286.99
10184	L57	L59	3/3/1986	8	1	VCP	0.01	-9	282.13	004_7104.tif	2	C-8	VCP	304.45
10154	L58	P1		8	1	VCP	0.02	-9	349.68	020_2320.tif	2	C-8	VCP	351.36
3661	L59	L58	3/3/1986	8	1	VCP	0.01	-9	60.00	004_7104.tif	2	C-8	VCP	67.79
113	NOMHID	NOMHID	3/28/2005	4	1	VCP	0.00		5.72	TM1731502.TIF	3	C-8	VCP	6.63
114	NOMHID	NOMHID	3/28/2005	4	1	VCP	0.00		331.28	TM1731502.TIF	3	C-8	VCP	335.54
115	NOMHID	NOMHID	3/28/2005	4	1	VCP	0.00		312.40	TM1731502.TIF	3	C-8	VCP	307.98
3908	NOMHID	Q3	9/30/1989	8	1	VCP	0.00	-9	296.00	024_7124.tif	4	C-8	VCP	291.56
3033	NOMHID	L42	10/16/1963	8	1	UNK	-9.00	-9	-9.00	037_1137.tif	2	C-8	UNK	5.89
3662	NOMHID	L56	3/3/1986	-9	1	UNK	-9.00	-9	-9.00	004_7104.tif	2	C-8	UNK	56.63
3740	NOMHID	L58		8	1	VCP	-9.00	-9	-9.00	020_2320.tif	2	C-8	VCP	6.30
3944	NOMHID	NOMHID	5/22/1997	-9	1	UNK	-9.00	-9	-9.00	200065.tif	3	C-8	UNK	13.22
3945	NOMHID	NOMHID	5/22/1997	8	1	VCP	0.01	-9	196.00	200065.tif	3	C-8	VCP	193.60
3946	NOMHID	NOMHID	5/22/1997	8	1	VCP	0.01	-9	346.00	200065.tif	3	C-8	VCP	353.32
3947	NOMHID	NOMHID	5/22/1997	-9	1	UNK	-9.00	-9	-9.00	200065.tif	3	C-8	UNK	129.13
3948	NOMHID	NOMHID	5/22/1997	8	1	VCP	-9.00	-9	-9.00	200065.tif	3	C-8	VCP	120.73
10075	NOMHID	NOMHID	5/22/1997	8	1	VCP	0.01	-9	346.00	200065.tif	3	C-8	VCP	358.70
10372	NOMHID	Q76	5/24/2005	8	1	VCP	0.01	-9	174.00	200414.tif	3	C-8	VCP	170.29
10928	NOMHID	J49	1/9/1963	15	1	VCP	0.01	-9	406.00	033_1133.tif	3	C-8	VCP	420.00
11297	NOMHID	NOMHID	7/14/2006	8	1	VCP	0.05		5.00	TM1795403.TIF	3	C-8	VCP	2.06
11222	NOMHID	NOMHID	7/14/2006	8	1	VCP	0.05		256.00	TM1795403.TIF	3	C-8	VCP	259.68
11223	NOMHID	NOMHID	7/14/2006	8	1	VCP	0.05		176.00	TM1795403.TIF	3	C-8	VCP	179.30
11224	NOMHID	NOMHID	7/14/2006	8	1	VCP	0.06		110.07	TM1795403.TIF	3	C-8	VCP	106.40
10141	Q3	Q4		8	1	VCP	0.01	-9	357.60	003_7103.tif	3	C-8	VCP	368.64
642					1		0.00		0.00		3	C-8		117.58
2501			9/30/2009	18	1	CDI	0.01		83.81	RGSP02.tif	4	C-8		88.81
2503			9/30/2009	15	1	VCP	0.02		158.90	RGSP01.tif	3	C-8		174.84
2504			9/30/2009	18	1	VCP	0.01		16.96	RGSP01.tif	3	C-8		5.74
2505			9/30/2009	24	1	VCP	0.00		21.32	RGSP01.tif	4	C-8		26.32
2506			9/30/2009	24	1	VCP	0.00		17.11	RGSP01.tif	4	C-8		22.11

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1278	H69	1/9/1963	033_1133.tif	3	C-8
1928	H85	7/15/1993	003_15303.tif	4	C-8
1884	J48	1/17/1963	015_1115.tif	3	C-8
1277	J49	1/9/1963	033_1133.tif	3	C-8
1276	J49-5	1/9/1963	033_1133.tif	3	C-8
1275	J50	1/9/1963	033_1133.tif	3	C-8
1507	J51	1/9/1963	034_1134.tif	3	C-8
1506	J52	1/9/1963	034_1134.tif	3	C-8
1505	J53	1/9/1963	034_1134.tif	3	C-8
1504	J54	1/9/1963	034_1134.tif	3	C-8
41	J55	7/15/1993	004_15304.tif	4	C-8
42	J56	7/15/1993	004_15304.tif	4	C-8
43	J57	7/15/1993	004_15304.tif	4	C-8
44	J58	7/15/1993	004_15304.tif	4	C-8
40	J59	7/15/1993	005_15305.tif	3	C-8
39	J59-5	7/15/1993	005_15305.tif	3	C-8
1182	J60	5/22/1997	200065.tif	3	C-8
38	J60-5	7/15/1993	005_15305.tif	3	C-8
187	J61			3	C-8
37	J62	7/15/1993	005_15305.tif	3	C-8
36	J63	7/15/1993	006_15306.tif	3	C-8
35	J64	7/15/1993	006_15306.tif	3	C-8
34	J65	7/15/1993	006_15306.tif	3	C-8
1557	L42	10/16/1963	037_1137.tif	2	C-8
1556	L43	10/16/1963	037_1137.tif	2	C-8
1421	L54	12/15/1988	026_7126.tif	2	C-8
1420	L55	12/15/1988	026_7126.tif	2	C-8
1402	L56	3/3/1986	004_7104.tif	2	C-8
1401	L57	3/3/1986	004_7104.tif	2	C-8
1375	L58		020_2320.tif	2	C-8
1400	L59	3/3/1986	004_7104.tif	2	C-8
2194	P0			2	C-8
1179	PRI	5/22/1997	200065.tif	3	C-8
1180	PRI	5/22/1997	200065.tif	3	C-8
1181	PRI	5/22/1997	200065.tif	3	C-8
1183	PRI	5/22/1997	200065.tif	3	C-8
1304	Q2	9/30/1989	024_7124.tif	4	C-8
1324	Q3		003_7103.tif	3	C-8
1246	Q76	5/24/2005	200415.tif	3	C-8
1244	Q78	5/24/2005	200414.tif	3	C-8
2150	Q79	3/28/2005	TM1731502.TIF	3	C-8
2149	Q80	3/28/2005	TM1731502.TIF	3	C-8
2147	Q81	7/14/2006	TM1795403.TIF	3	C-8
2146	Q82	7/14/2006	TM1795403.TIF	3	C-8
2145	Q83	7/14/2006	TM1795403.TIF	3	C-8
2076	UNK-19	9/30/2009	RGSP02.tif	4	C-8
2077	UNK-20	9/30/2009	RGSP02.tif	3	C-8
2127	UNK-23	9/30/2009	RGSP01.tif	3	C-8
2128	UNK-24	9/30/2009	RGSP01.tif	4	C-8
2129	UNK-25	9/30/2009	RGSP01.tif	4	C-8



City of Montclair
Sewer Atlas Map
Tile: C-8
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
D-7
C-7
D-8
C-8
D-9
B-7
B-8
B-9
UNION PACIFIC RR
SOUTHERN PACIFIC RR
STATE ST
PRIVATE ST
RAMONA AVE
FIFTH AVE
RAWHIDE ST
STALLION AVE
MONTE VISTA AVE
J48
J49
J49-5
J50
J52
J53
J54
L42
L43
L54
L55
L57
L58
J55
J56
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J59
J59-5
J60
J60-5
J61
J62
J63
J64
J65
H85
Q2
Q3
Q80
Q81
Q83
P0

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
405	NOMHID	P1		8	1	UNK	-9.00	-9	-9.00	020_2320.tif	2	C-9	UNK	5.73
4536	NOMHID	Q29		8	1	UNK	-9.00	-9	-9.00	023_2323.tif	3	C-9	UNK	4.62
4537	NOMHID	Q29		8	1	UNK	-9.00	-9	-9.00	023_2323.tif	3	C-9	UNK	3.88
9881	NOMHID	R49	12/25/1992	8	1	VCP	0.01	-9	94.00	046_7146.tif	4	C-9	VCP	89.83
9975	NOMHID	Q45	5/4/1978	8	1	VCP	0.01	-9	83.79	043_2343.tif	3	C-9	VCP	92.86
10116	NOMHID	Q28	9/14/1981	8	1	VCP	0.01	-9	-9.00	023_2323.tif	3	C-9	VCP	139.49
11298	NOMHID	NOMHID	9/24/2005	8	1	VCP	0.00		98.86	Tract 17100 Sewer0002.TIF	4	C-9	VCP	100.50
10155	P1	P2		8	1	VCP	0.01	-9	318.89	020_2320.tif	2	C-9	VCP	322.83
10156	P2	P3		8	1	VCP	0.02	-9	321.00	020_2320.tif	2	C-9	VCP	325.62
3790	P25	Q32-5		8	1	VCP	0.00	-9	56.57	019_2319.tif	3	C-9	VCP	56.46
9923	P25	P26	10/3/1985	10	1	VCP	0.01	-9	356.00	039_2440.tif	2	C-9	VCP	361.14
9924	P26	P27	10/3/1985	10	1	VCP	0.01	-9	356.00	039_2440.tif	2	C-9	VCP	359.35
9925	P27	P28	10/3/1985	10	1	VCP	0.01	-9	356.00	039_2440.tif	2	C-9	VCP	362.36
10157	P3	P25		8	1	VCP	0.01	-9	321.00	020_2320.tif	2	C-9	VCP	324.05
9573	Q10	Q9	1/17/1979	8	1	VCP	0.01	-9	199.88	045_2247.tif	3	C-9	VCP	202.01
9575	Q11	Q10	1/17/1979	8	1	VCP	0.00	-9	198.00	045_2247_B.tif	3	C-9	VCP	203.86
9889	Q12	Q8	5/4/1978	8	1	VCP	0.01	-9	346.00	047_2347.tif	3	C-9	VCP	189.90
9888	Q13	Q12	5/4/1978	8	1	VCP	0.00	-9	346.00	047_2347.tif	3	C-9	VCP	346.16
9887	Q14	Q13	5/4/1978	8	1	VCP	0.00	-9	346.00	047_2347.tif	3	C-9	VCP	360.90
9886	Q15	Q14	5/4/1978	8	1	VCP	0.01	-9	168.33	047_2347.tif	3	C-9	VCP	165.32
10153	Q16	Q15		8	1	VCP	0.00	-9	226.07	019_2319.tif	3	C-9	VCP	227.96
9916	Q17	Q16	9/14/1981	8	1	VCP	0.00	-9	216.00	021_2321.tif	3	C-9	VCP	221.66
9915	Q18	Q17	9/14/1981	8	1	VCP	0.00	-9	217.07	021_2321.tif	3	C-9	VCP	220.85
9914	Q19	Q18	9/14/1981	8	1	VCP	0.01	-9	209.35	021_2321.tif	3	C-9	VCP	212.20
9891	Q20	Q19	1/24/1983	8	1	VCP	0.01	-9	175.35	047_2448.tif	3	C-9	VCP	178.35
9892	Q21	Q20	1/24/1983	8	1	VCP	0.04	-9	-9.00	047_2448.tif	3	C-9	VCP	395.24
9893	Q22	Q21	1/24/1983	8	1	VCP	0.00	-9	-9.00	047_2448.tif	3	C-9	VCP	394.82
9894	Q23	Q22	1/24/1983	8	1	VCP	0.00	-9	149.00	047_2448.tif	3	C-9	VCP	151.72
9936	Q24	Q18	9/14/1981	8	1	VCP	0.00	-9	382.00	022_2322.tif	3	C-9	VCP	386.87
9935	Q25	Q24	9/14/1981	8	1	VCP	0.01	-9	288.00	022_2322.tif	3	C-9	VCP	293.27
4430	Q26	Q24	9/14/1981	8	1	VCP	0.01	-9	216.00	022_2322.tif	3	C-9	VCP	220.59
9917	Q27	Q26	9/14/1981	8	1	VCP	0.01	-9	213.48	022_2322.tif	3	C-9	VCP	215.81
10115	Q28	Q27	9/14/1981	8	1	VCP	0.01	-9	98.93	023_2323.tif	3	C-9	VCP	100.74
4538	Q29	Q28		8	1	VCP	0.04	-9	156.00	023_2323.tif	3	C-9	VCP	160.61
10117	Q30	NOMHID	9/14/1981	8	1	VCP	0.01	-9	-9.00	023_2323.tif	3	C-9	VCP	235.99
10152	Q31	Q16		8	1	VCP	0.00	-9	359.60	019_2319.tif	3	C-9	VCP	366.53
10151	Q32	Q31		8	1	VCP	0.00	-9	359.00	019_2319.tif	3	C-9	VCP	360.92
10150	Q32-5	Q32		8	1	VCP	0.00	-9	299.00	019_2319.tif	3	C-9	VCP	302.72
4547	Q33	Q34	12/20/1978	10	1	VCP	0.01	-9	321.00	005_2305.tif	3	C-9	VCP	335.70
10073	Q34	Q35	6/7/1971	10	1	VCP	0.01	-9	329.07	051_2351.tif	3	C-9	VCP	144.68
10398	Q35	NOMHID	6/7/1971	10	1	VCP	0.01	-9	329.07	051_2351.tif	3	C-9	VCP	164.32
10379	Q36	Q35	5/4/1978	8	1	VCP	0.00	-9	269.24	044_2344.tif	3	C-9	VCP	272.14
10378	Q36-5	Q36	5/4/1978	8	1	VCP	0.00	-9	208.01	044_2344.tif	3	C-9	VCP	210.04
9864	Q37	Q36	5/4/1978	8	1	VCP	0.01	-9	226.00	045_2345.tif	3	C-9	VCP	227.39
9865	Q38	Q37	5/4/1978	8	1	VCP	0.02	-9	223.00	045_2345.tif	3	C-9	VCP	229.38
10377	Q39	Q36-5	5/4/1978	8	1	VCP	0.00	-9	208.00	044_2344.tif	3	C-9	VCP	209.55
3875	Q4	Q5		8	1	VCP	0.00	-9	300.00	003_7103.tif	3	C-9	VCP	309.29
10315	Q40	Q39	5/4/1978	8	1	VCP	0.01	-9	226.00	042_2342.tif	3	C-9	VCP	227.89
10314	Q41	Q40	5/4/1978	8	1	VCP	0.01	-9	223.00	042_2342.tif	3	C-9	VCP	230.47
9971	Q42	Q39		8	1	VCP	0.00	-9	277.46	043_2343.tif	3	C-9	VCP	277.60
9877	Q43	NOMHID	5/4/1978	8	1	VCP	0.01	-9	140.71	046_2346.tif	3	C-9	VCP	135.54
9878	Q44	Q43	5/4/1978	8	1	VCP	0.01	-9	224.50	046_2346.tif	3	C-9	VCP	229.31
9876	Q5	Q6	1/17/1979	8	1	VCP	0.01	-9	378.86	046_2248.tif	3	C-9	VCP	334.85
4498	Q6	Q7	1/17/1979	8	1	VCP	0.02	-9	-9.00	046_2248.tif	3	C-9	VCP	326.87
9572	Q69	Q10	1/17/1979	8	1	VCP	0.01	-9	198.15	045_2247.tif	3	C-9	VCP	182.48
4548	Q7	Q33	12/20/1978	10	1	VCP	0.01	-9	319.07	005_2305.tif	3	C-9	VCP	336.69
3397	Q70	Q69	1/30/2004	8	1	VCP	0.01	-9	-9.00	200416.tif	3	C-9	VCP	22.43
10369	Q71	Q72	5/24/2005	8	1	VCP	0.01	-9	100.00	200414.tif	3	C-9	VCP	114.99
10370	Q72	Q74	5/24/2005	8	1	VCP	0.00	-9	66.89	200414.tif	3	C-9	VCP	70.05
10374	Q73	Q72	1/30/2004	8	1	VCP	0.01	-9	238.00	200415.tif	3	C-9	VCP	242.19
3398	Q74	Q70	1/30/2004	8	1	UNK	0.01	-9	134.00	200416.tif	3	C-9	UNK	137.36
10371	Q75	Q74	5/24/2005	8	1	VCP	0.01	-9	252.60	200414.tif	3	C-9	VCP	257.89
9890	Q7-5	Q7	5/4/1978	8	1	UNK	0.01	-9	-9.00	047_2347.tif	3	C-9	UNK	102.00
10375	Q76	Q75	5/24/2005	8	1	VCP	0.01	-9	348.92	200415.tif	3	C-9	VCP	351.13
10337	Q77	Q75	5/24/2005	8	1	VCP	0.01	-9	100.00	200414.tif	3	C-9	VCP	103.91
8959	Q8	Q7-5	5/4/1978	8	1	VCP	0.01	-9	346.00	047_2347.tif	3	C-9	VCP	157.32
9574	Q9	Q8	1/17/1979	8	1	VCP	0.01	-9	260.50	045_2247.tif	3	C-9	VCP	266.71
11028	R39	R38		8	1	VCP	0.00	-9	-9.00	002_2302.tif	4	C-9	VCP	188.91
10166	R48	R47	12/20/1978	8	1	VCP	0.01	-9	206.00	004_2304.tif	4	C-9	VCP	214.32
9900	R50	R49	9/30/1992	8	1	VCP	0.00	-9	213.50	048_7148.tif	4	C-9	VCP	218.66
9899	R51	R50	9/30/1992	8	1	VCP	0.00	-9	215.50	048_7148.tif	4	C-9	VCP	217.75

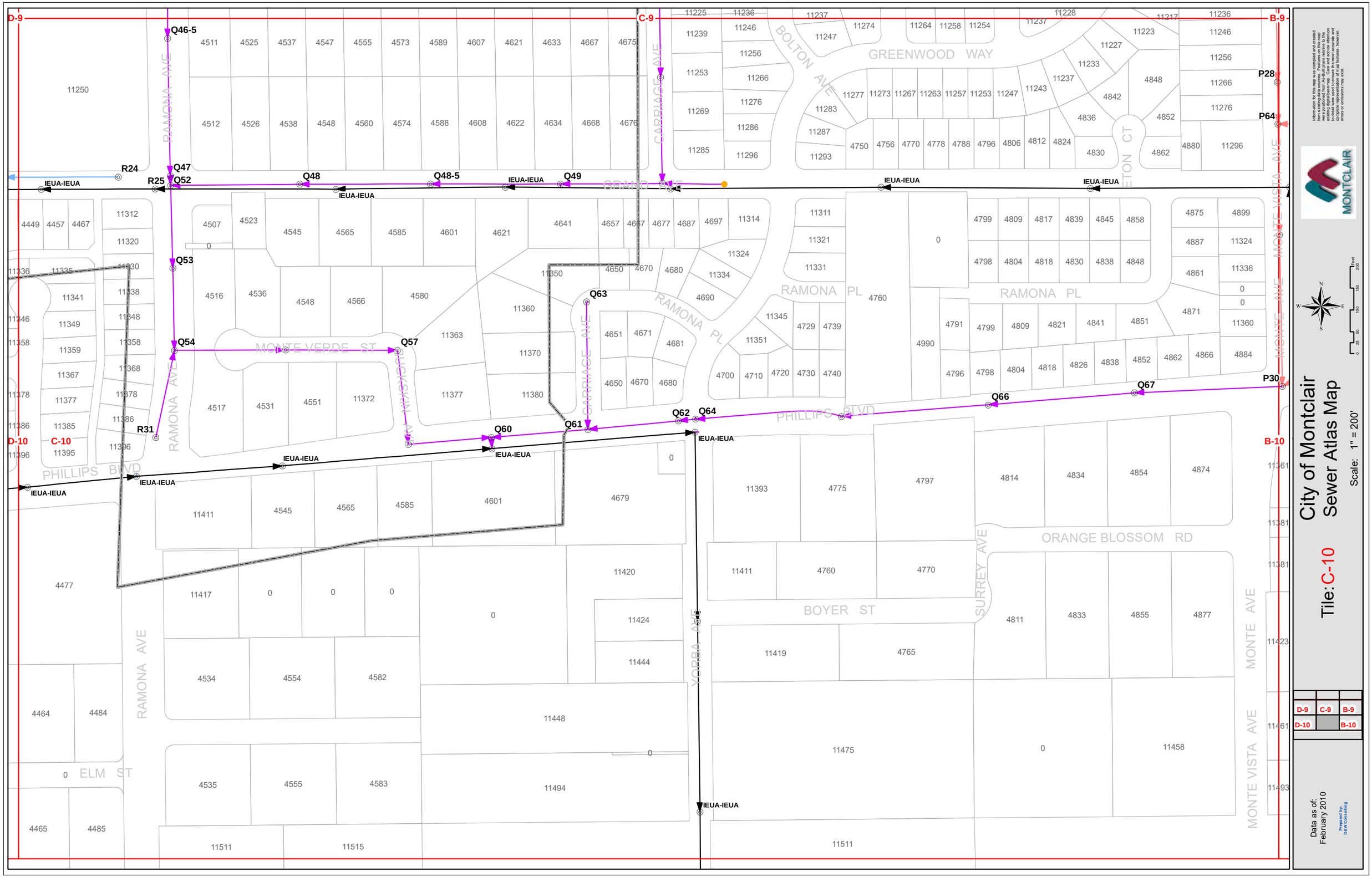
SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
697	NOMHID	12/25/1992	046_7146.tif	4	C-9
1374	P1		020_2320.tif	2	C-9
1373	P2		020_2320.tif	2	C-9
1371	P25		020_2320.tif	2	C-9
727	P26	10/3/1985	039_2440.tif	2	C-9
728	P27	10/3/1985	039_2440.tif	2	C-9
1372	P3		020_2320.tif	2	C-9
682	Q10	1/17/1979	045_2247_A.tif	3	C-9
685	Q11	1/17/1979	045_2247_B.tif	3	C-9
701	Q12	5/4/1978	047_2347.tif	3	C-9
702	Q13	5/4/1978	047_2347.tif	3	C-9
703	Q14	5/4/1978	047_2347.tif	3	C-9
1366	Q15		019_2319.tif	3	C-9
1367	Q16		019_2319.tif	3	C-9
719	Q17	9/14/1981	021_2321.tif	3	C-9
718	Q18	9/14/1981	021_2321.tif	3	C-9
707	Q19	9/14/1981	047_2448.tif	3	C-9
706	Q20	1/24/1983	047_2448.tif	3	C-9
705	Q21	1/24/1983	047_2448.tif	3	C-9
704	Q22	1/24/1983	047_2448.tif	3	C-9
708	Q23	1/24/1983	047_2448.tif	3	C-9
721	Q24	9/14/1981	022_2322.tif	3	C-9
799	Q25	9/14/1981	022_2322.tif	3	C-9
720	Q26	9/14/1981	022_2322.tif	3	C-9
1300	Q27	9/14/1981	023_2323.tif	3	C-9
1301	Q28	9/14/1981	023_2323.tif	3	C-9
676	Q29		023_2323.tif	3	C-9
1302	Q30	9/14/1981	023_2323.tif	3	C-9
1368	Q31		019_2319.tif	3	C-9
1369	Q32		019_2319.tif	3	C-9
1370	Q32-5		019_2319.tif	3	C-9
673	Q33	12/20/1978	005_2305.tif	3	C-9
1175	Q34	6/7/1971	051_2351.tif	3	C-9
1249	Q35	5/4/1978	044_2344.tif	3	C-9
1250	Q36	5/4/1978	044_2344.tif	3	C-9
1251	Q36-5	5/4/1978	044_2344.tif	3	C-9
686	Q37	5/22/1978	045_2345.tif	3	C-9
687	Q38	5/22/1978	045_2345.tif	3	C-9
816	Q39		043_2343.tif	3	C-9
1325	Q4		003_7103.tif	3	C-9
1440	Q40	5/4/1978	042_2342.tif	3	C-9
1439	Q41	5/4/1978	042_2342.tif	3	C-9
815	Q42		043_2343.tif	3	C-9
693	Q43	5/4/1978	046_2346.tif	3	C-9
694	Q44	5/4/1978	046_2346.tif	3	C-9
817	Q45	5/4/1978	043_2343A.tif	3	C-9
692	Q5	1/17/1979	046_2248.tif	3	C-9
691	Q6	1/17/1979	046_2248.tif	3	C-9
1248	Q69	1/30/2004	200416.tif	3	C-9
699	Q7	5/4/1978	047_2347.tif	3	C-9
1247	Q70	1/30/2004	200416.tif	3	C-9
1243	Q71	5/24/2005	200414.tif	3	C-9
1242	Q72	5/24/2005	200414.tif	3	C-9
1245	Q73	1/30/2004	200415.tif	3	C-9
1241	Q74	5/24/2005	200414.tif	3	C-9
1240	Q75	5/24/2005	200414.tif	3	C-9
700	Q7-5	5/4/1978	047_2347.tif	3	C-9
1239	Q77	5/24/2005	200414.tif	3	C-9
684	Q8	1/17/1979	045_2247_A.tif	3	C-9
683	Q9	1/17/1979	045_2247_A.tif	3	C-9
1918	R38		002_2302.tif	4	C-9
1919	R39		002_2302.tif	4	C-9
828	R47	12/20/1978	003_2303.tif	4	C-9
1387	R48	12/20/1978	004_2304.tif	4	C-9
696	R49	12/25/1992	046_7146.tif	4	C-9
714	R50	9/30/1992	048_7148.tif	4	C-9
713	R51	9/30/1992	048_7148.tif	4	C-9
712	R52	11/25/1992	047_7147.tif	4	C-9
2148	R52-5	9/24/2005	Tract 17100 Sewer0002.TIF	4	C-9


City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: C-9
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
MANE ST
MANE STRE
RODEO ST
HOWARD AVE
CLAIR ST
SADDLEBACK ST
KIMBERLY AVE
RAMONA AVE
SHETLAND AVE
BUCKSKIN AVE
STAGECOACH AVE
STALLION AVE
CARRIAGE AVE
BOLTON AVE
TUDOR AVE
SURVEY AVE
GREENWOOD WAY
MONTE VISTA AVE
D-8
C-8
D-10
C-10
B-10
C-9

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
3563	NOMHID	NOMHID	3/1/1978	-9	1	UNK	-9.00	-9	-9.00	Interceptor-18.tif	4	C-10	UNK	6.51
3579	NOMHID	NOMHID		30	1	UNK	0.00	-9	-9.00	D4349.tif	3	C-10	UNK	202.61
3580	NOMHID	NOMHID		30	1	UNK	0.00	-9	-9.00	D4349.tif	3	C-10	UNK	454.96
3582	NOMHID	Q68		8	1	VCP	-9.00	-9	-9.00	D4349.tif	3	C-10	VCP	9.91
3488	NOMHID	NOMHID	6/15/1967	33	1	VCP	0.00	-9	-9.00	NRWL-15.tif	3	C-10	VCP	498.40
3489	NOMHID	NOMHID	6/15/1967	33	1	VCP	0.00	-9	-9.00	NRWL-15.tif	3	C-10	VCP	501.10
3490	NOMHID	NOMHID	6/15/1967	33	1	VCP	0.00	-9	-9.00	NRWL-15.tif	3	C-10	VCP	393.28
3812	NOMHID	Q47		15	1	UNK	-9.00	-9	-9.00	007_2307.tif	3	C-10	UNK	8.90
4080	NOMHID	Q63	5/10/1978	8	1	UNK	-9.00	-9	-9.00	008_2308.tif	3	C-10	UNK	5.44
4421	NOMHID	Q64	10/3/1985	8	1	UNK	-9.00	-9	-9.00	037_2438.tif	3	C-10	UNK	6.10
9937	NOMHID	Q50	4/5/1978	8	1	VCP	0.00	-9	148.02	042_2342.tif	3	C-10	VCP	147.66
9939	NOMHID	Q48-5	4/5/1978	8	1	VCP	-9.00	-9	-9.00	042_2342.tif	3	C-10	VCP	309.29
10074	NOMHID	Q47	6/7/1971	10	1	VCP	0.01	-9	326.00	051_2351.tif	3	C-10	VCP	327.00
10323	NOMHID	Q56	3/1/1978	30	1	UNK	0.00	-9	-9.00	Interceptor-18.tif	3	C-10	UNK	347.94
10326	NOMHID	NOMHID	6/15/1967	33	1	VCP	0.00	-9	-9.00	NRWL_14.tif	3	C-10	VCP	403.64
10329	NOMHID	R25	6/15/1967	33	1	VCP	0.00	-9	-9.00	NRWL_14.tif	3	C-10	VCP	429.49
10330	NOMHID	NOMHID	6/15/1967	33	1	VCP	0.00	-9	-9.00	NRWL_15.tif	3	C-10	VCP	473.66
150	P28	P29	10/3/1985	10	1	VCP	0.01	-9	356.00	039_2440.tif	2	C-10	VCP	100.50
9926	P28	P29	10/3/1985	10	1	VCP	0.01	-9	356.00	039_2440.tif	2	C-10	VCP	262.93
10064	P30	Q67	10/3/1983	15	1	VCP	0.01	-9	345.56	038_2439.tif	3	C-10	VCP	352.41
9974	Q45	Q46	5/4/1978	8	1	VCP	0.01	-9	252.01	043_2343.tif	3	C-10	VCP	257.11
9973	Q46	Q50	5/4/1978	8	1	VCP	0.00	-9	251.00	043_2343.tif	3	C-10	VCP	252.91
3951	Q47	Q52	6/7/1971	15	1	VCP	-9.00	-9	-9.00	051_2351.tif	3	C-10	VCP	23.50
9867	Q48	Q52	5/4/1978	8	1	VCP	-9.00	-9	-9.00	045_2345.tif	3	C-10	VCP	307.62
9866	Q48-5	Q48	5/4/1978	8	1	VCP	-9.00	-9	-9.00	045_2345.tif	3	C-10	VCP	311.49
4299	Q49	NOMHID	4/5/1978	8	1	UNK	-9.00	-9	-9.00	042_2342.tif	3	C-10	UNK	6.80
9938	Q50	NOMHID	4/5/1978	8	1	VCP	0.00	-9	234.69	042_2342.tif	3	C-10	VCP	242.32
9134	Q52	Q53		10	1	VCP	0.01	-9	195.53	007_2307.tif	3	C-10	VCP	196.97
9133	Q53	Q54		10	1	VCP	0.01	-9	195.53	007_2307.tif	3	C-10	VCP	195.50
9131	Q54	Q55		12	1	VCP	0.00	-9	265.00	007_2307.tif	3	C-10	VCP	264.53
9132	Q55	Q57		12	1	VCP	0.00	-9	264.97	007_2307.tif	3	C-10	VCP	266.57
10325	Q56	Q59	3/1/1978	30	1	UNK	0.00	-9	-9.00	Interceptor-18.tif	3	C-10	UNK	500.52
10048	Q57	Q58	5/10/1978	10	1	VCP	0.01	-9	222.50	008_2308.tif	3	C-10	VCP	225.24
4085	Q58	Q60	5/10/1978	10	1	VCP	0.00	-9	193.63	008_2308.tif	3	C-10	VCP	198.07
10324	Q59	Q68	3/1/1978	30	1	UNK	0.00	-9	-9.00	Interceptor-18.tif	3	C-10	UNK	484.95
4084	Q60	Q59	5/10/1978	15	1	VCP	-9.00	-9	-9.00	008_2308.tif	3	C-10	VCP	26.55
4086	Q61	Q60	5/10/1978	15	1	VCP	0.00	-9	229.02	008_2308.tif	3	C-10	VCP	230.68
9918	Q62	Q61	10/3/1985	15	1	VCP	0.00	-9	209.00	037_2438.tif	3	C-10	VCP	216.28
10017	Q63	Q61	5/10/1978	8	1	VCP	0.01	-9	301.50	008_2308.tif	3	C-10	VCP	303.78
4427	Q64	Q62	10/3/1985	-9	1	UNK	0.00	-9	97.20	037_2438.tif	3	C-10	UNK	41.05
9920	Q65	Q64	10/3/1985	15	1	VCP	0.00	-9	346.74	037_2438.tif	3	C-10	VCP	349.45
9919	Q66	Q65	10/3/1985	15	1	VCP	0.01	-9	346.00	037_2438.tif	3	C-10	VCP	350.76
10063	Q67	Q66	10/3/1983	15	1	VCP	0.01	-9	346.00	038_2439.tif	3	C-10	VCP	348.60
3581	Q68	NOMHID		30	1	UNK	0.00	-9	-9.00	D4349.tif	3	C-10	UNK	449.62
10069	R24	R23	6/1/6435	8	1	VCP	0.01	-9	264.64	050_2350R.tif	4	C-10	VCP	269.43
10328	R25	NOMHID	6/15/1967	33	1	VCP	0.01	-9	-9.00	NRWL_14.tif	4	C-10	VCP	271.46
10322	R30	NOMHID	3/1/1978	30	1	UNK	0.00	-9	-9.00	Interceptor-18.tif	4	C-10	UNK	260.67
3818	R31	Q54		8	1	UNK	0.00	-9	216.00	007_2307.tif	3	C-10	UNK	212.36

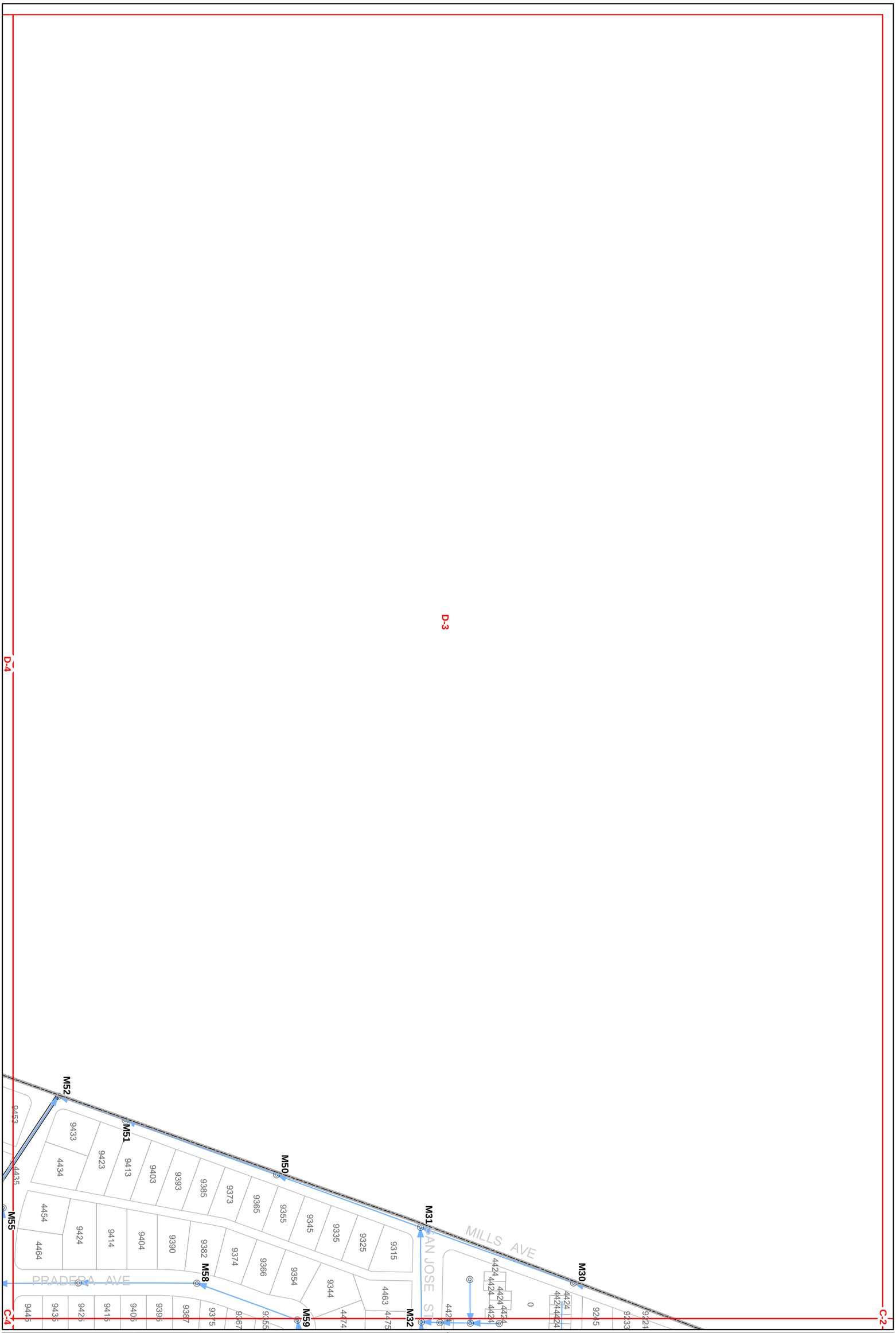
SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1203	IEUA	3/1/1978	Interceptor-18.tif	4	C-10
1205	IEUA	3/1/1978	Interceptor-18.tif	3	C-10
1206	IEUA	3/1/1978	Interceptor-18.tif	3	C-10
1226	IEUA	6/15/1967	NRWL_14A.tif	3	C-10
1228	IEUA	6/15/1967	NRWL_14A.tif	4	C-10
1229	IEUA	6/15/1967	NRWL-15.tif	3	C-10
1230	IEUA	6/15/1967	NRWL-15.tif	3	C-10
1231	IEUA	6/15/1967	NRWL-15.tif	3	C-10
1232	IEUA	6/15/1967	NRWL_15_A.tif	3	C-10
1441	IEUA		D4349.tif	3	C-10
1442	IEUA		D4349.tif	3	C-10
1443	IEUA		D4349.tif	3	C-10
1463	IEUA	3/1/1978	Interceptor-18.tif	4	C-10
800	NOMHID	4/5/1978	042_2342.tif	3	C-10
729	P28	10/3/1985	039_2440.tif	2	C-10
69	P64	2/26/1997	034_123037.tif	2	C-10
818	Q46	5/4/1978	043_2343A.tif	3	C-10
1176	Q46-5	6/7/1971	051_2351.tif	3	C-10
1353	Q47		007_2307.tif	3	C-10
689	Q48	5/4/1978	045_2345.tif	3	C-10
688	Q48-5	5/4/1978	045_2345.tif	3	C-10
802	Q49	4/5/1978	042_2342.tif	3	C-10
801	Q50	4/5/1978	042_2342.tif	3	C-10
690	Q52	5/4/1978	045_2345.tif	3	C-10
1355	Q53		007_2307.tif	3	C-10
1351	Q54		007_2307.tif	3	C-10
1350	Q55		007_2307.tif	3	C-10
911	Q57	5/10/1978	008_2308.tif	3	C-10
912	Q58	5/10/1978	008_2308.tif	3	C-10
900	Q60	5/10/1978	008_2308.tif	3	C-10
901	Q61	5/10/1978	008_2308.tif	3	C-10
722	Q62	10/3/1985	037_2438.tif	3	C-10
902	Q63	5/10/1978	008_2308.tif	3	C-10
724	Q65	10/3/1985	037_2438.tif	3	C-10
725	Q66	10/3/1985	037_2438.tif	3	C-10
918	Q67	10/3/1983	038_2439.tif	3	C-10
1174	R24	6/1/6435	050_2350R.tif	4	C-10
1227	R25	6/15/1967	NRWL_14A.tif	4	C-10
1352	R31		007_2307.tif	3	C-10
723	Q64	10/3/1985	037_2438.tif	3	C-10



City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: C-10
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
D-9
C-9
B-9
D-10
B-10
GREENWOOD WAY
BOLTON AVE
CARRIAGE AVE
RAMONA AVE
GRAND AVE
MONTE VERDE ST
RAMONA PL
PHILLIPS BLVD
ORANGE BLOSSOM RD
BOYER ST
SURREY AVE
MONTE AVE
MONTE VISTA AVE
YORBA AVE
ELM ST
IEUA-IEUA
Q46-5
Q47
Q48
Q48-5
Q49
Q52
Q53
Q54
Q57
Q60
Q61
Q62
Q63
Q64
Q66
Q67
R24
R25
R31
P28
P30
P64

SEWER LINE													
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9413	M27	M30	6/23/1966	8	1	VCP	0.02	-9	360.40	016_2116.tif	4	D-3	VCP	364.15
9412	M30	M31	6/23/1966	8	1	VCP	0.03	-9	356.00	016_2116.tif	4	D-3	VCP	374.99
9624	M31	M50	12/29/1966	8	1	VCP	0.02	-9	366.00	002_2102.tif	4	D-3	VCP	352.38
9861	M32	M31	12/29/1966	8	1	VCP	0.01	-9	319.53	008_2108.tif	4	D-3	VCP	217.88
9625	M50	M51	12/29/1966	8	1	VCP	0.02	-9	366.00	002_2102.tif	4	D-3	VCP	369.92
6974	M51	M52	12/29/1966	8	1	VCP	0.01	-9	158.82	002_2102.tif	4	D-3	VCP	163.99
9634	M54	M52	12/29/1966	8	1	VCP	0.01	-9	283.83	003_2103.tif	4	D-3	VCP	289.58
9636	M57	M56	12/29/1966	8	1	VCP	0.01	-9	181.00	004_2104.tif	4	D-3	VCP	186.48
9637	M58	M57	12/29/1966	8	1	VCP	0.02	-9	268.45	004_2104.tif	4	D-3	VCP	272.62
9638	M59	M58	12/29/1966	8	1	VCP	0.02	-9	244.31	004_2104.tif	4	D-3	VCP	247.14
9696	NOMHID	NOMHID	9/14/2001	8	1	VCP	0.01	-9	91.00	017_2317.tif	4	D-3	VCP	100.11

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
512	M30	6/23/1966	016_2116.tif	4	D-3
769	M31	12/29/1966	008_2108.tif	4	D-3
743	M50	12/29/1966	002_2102.tif	4	D-3
744	M51	12/29/1966	002_2102.tif	4	D-3
745	M52	12/29/1966	002_2102.tif	4	D-3
758	M57	12/29/1966	004_2104A.tif	4	D-3
759	M58	12/29/1966	004_2104A.tif	4	D-3
834	PRI	9/14/2001	017_2317A.tif	4	D-3



Data as of:
February 2010

Prepared by:
D&W Consulting

D-4		
C-4	C-3	C-2

Tile: D-3

City of Montclair
Sewer Atlas Map

Scale: 1" = 200'

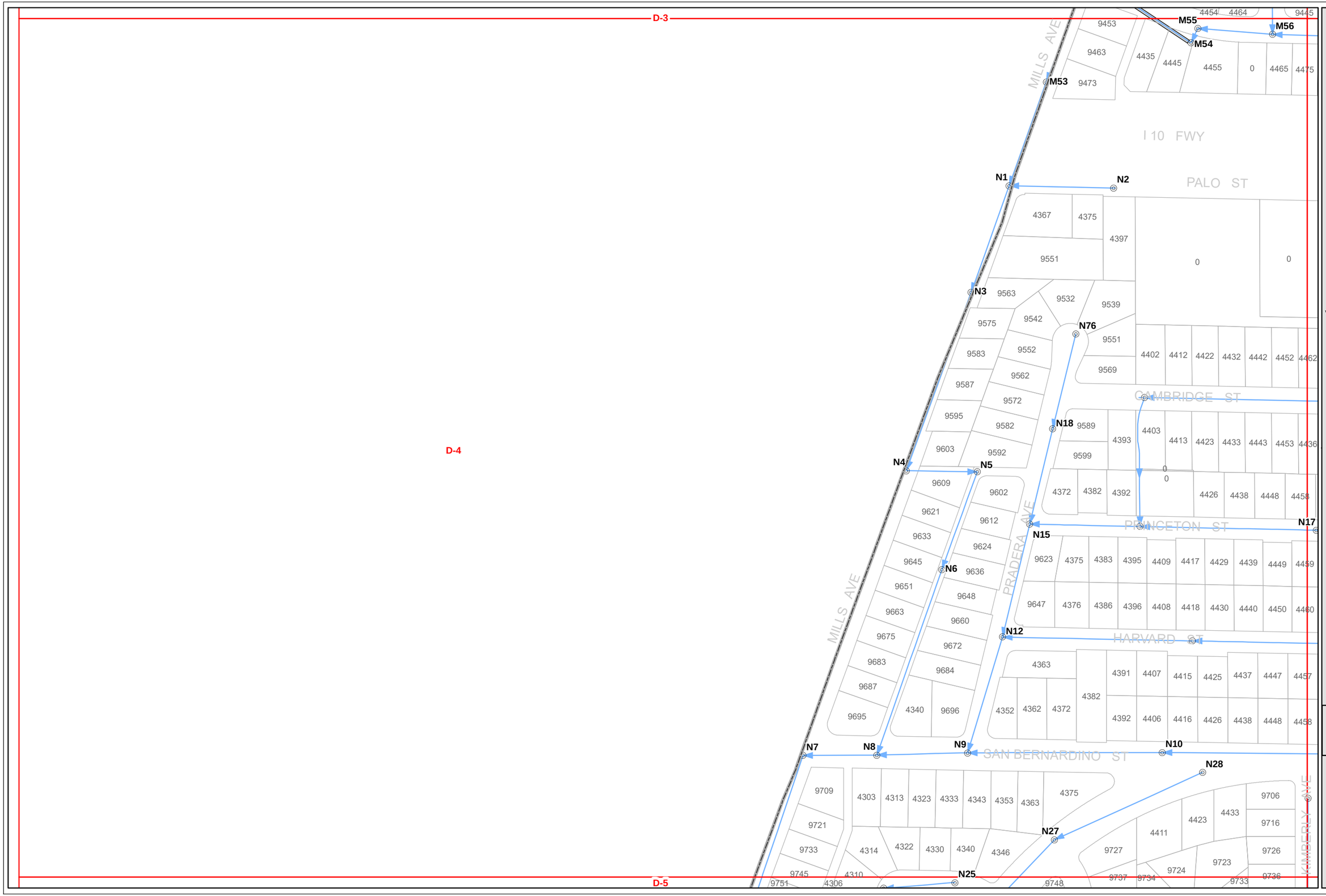
0 25 50 100 150 200 Feet

MONTCLAIR

Information for this map was compiled and created from existing data sources. Features on this map were positioned from As-Built plans relative to the existing digital basemap. Care and accute attention to detail were used to ensure the most accurate and complete representation of map features, however, errors or omissions may exist.

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9626	M52	M53	12/29/1966	8	1	VCP	0.02	-9	263.18	002_2102.tif	4	D-4	VCP	269.27
9627	M53	N1	12/29/1966	8	1	VCP	0.02	-9	252.03	002_2102.tif	4	D-4	VCP	256.52
6957	M55	M54	12/29/1966	8	1	VCP	0.01	-9	33.07	003_2103.tif	4	D-4	VCP	37.51
9633	M56	M55	12/29/1966	8	1	VCP	0.00	-9	170.95	003_2103.tif	4	D-4	VCP	174.18
9620	N1	N3		8	1	VCP	0.01	-9	257.63	9583 MILLS.tif	4	D-4	VCP	263.69
9208	N10	N9	3/1/1966	8	1	VCP	0.01	-9	443.48	042_2141.tif	4	D-4	VCP	452.80
9207	N11	N10	3/1/1966	8	1	VCP	0.01	-9	460.00	042_2141.tif	4	D-4	VCP	462.79
8174	N12	N9	3/1/1966	8	1	VCP	0.02	-9	271.99	043_2142.tif	4	D-4	VCP	281.38
6274	N13	N12	3/1/1966	8	1	VCP	0.01	-9	437.81	044_2143.tif	4	D-4	VCP	442.14
6273	N14	N13	3/1/1966	8	1	VCP	0.01	-9	446.00	044_2143.tif	4	D-4	VCP	449.26
8175	N15	N12	3/1/1966	8	1	VCP	0.02	-9	265.67	043_2142.tif	4	D-4	VCP	270.50
9044	N16	N15	3/1/1966	8	1	VCP	0.01	-9	253.23	045_2144.tif	4	D-4	VCP	256.89
9043	N17	N16	3/1/1966	8	1	VCP	0.01	-9	405.58	045_2144.tif	4	D-4	VCP	410.60
46	N18	N15	5/22/1972	8	1	VCP	0.02		225.15	015_2415.tif	4	D-4	VCP	228.33
9623	N2	N1		8	1	VCP	-9.00	-9	-9.00	CAMBRIDGE ST_0003.tif	4	D-4	VCP	243.54
9057	N20	NOMHID	3/1/1966	8	1	VCP	0.01	-9	443.67	046_2145.tif	4	D-4	VCP	447.42
7136	N28	N27	3/1/1966	8	1	VCP	0.02	-9	371.50	041_2140.tif	4	D-4	VCP	379.11
9621	N3	N4		8	1	VCP	0.02	-9	437.89	9583 MILLS.tif	4	D-4	VCP	441.44
9622	N4	N5		8	1	VCP	0.01	-9	160.88	9583 MILLS.tif	4	D-4	VCP	164.91
9064	N5	N6	2/23/1966	8	1	VCP	0.01	-9	239.43	047_2146.tif	4	D-4	VCP	242.05
9065	N6	N8	2/23/1966	8	1	VCP	0.02	-9	446.00	047_2146.tif	4	D-4	VCP	457.67
9021	N7	N21	10/16/1963	10	1	VCP	0.02	-9	383.24	045_1145.tif	4	D-4	VCP	375.98
45	N76	N18	5/22/1972	8	1	VCP	0.02		225.00	015_2415.tif	4	D-4	VCP	227.70
6789	N8	N7	3/1/1966	8	1	VCP	0.01	-9	161.92	042_2141.tif	4	D-4	VCP	171.96
9209	N9	N8	3/1/1966	8	1	VCP	0.01	-9	216.00	042_2141.tif	4	D-4	VCP	211.60
5952	NOMHID	NOMHID	3/1/1966	8	1	VCP	0.02	-9	10.00	046_2145.tif	4	D-4	VCP	10.00
5953	NOMHID	NOMHID	3/1/1966	8	1	VCP	0.03	-9	10.00	046_2145.tif	4	D-4	VCP	10.00
5954	NOMHID	NOMHID	3/1/1966	8	1	VCP	0.04	-9	10.00	046_2145.tif	4	D-4	VCP	10.00
5956	NOMHID	NOMHID	3/1/1966	8	1	UNK	-9.00	-9	-9.00	046_2145.tif	4	D-4	UNK	13.71
6276	NOMHID	NOMHID	3/1/1966	8	1	VCP	0.01	-9	186.35	046_2145.tif	4	D-4	VCP	190.88
6277	NOMHID	N16	3/1/1966	8	1	VCP	0.06	-9	83.00	046_2145.tif	4	D-4	VCP	82.14
6978	NOMHID	N2		8	1	VCP	-9.00	-9	-9.00	CAMBRIDGE ST_0003.tif	4	D-4	VCP	4.54

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
746	M53	12/29/1966	002_2102.tif	4	D-4
755	M54	12/29/1966	003_2103.tif	4	D-4
754	M55	12/29/1966	003_2103.tif	4	D-4
753	M56	12/29/1966	003_2103.tif	4	D-4
737	N1		9583 MILLS.tif	4	D-4
314	N10	3/1/1966	042_2141.tif	4	D-4
326	N12	3/1/1966	043_2142.tif	4	D-4
984	N13	3/1/1966	044_2143.tif	4	D-4
325	N15	3/1/1966	043_2142.tif	4	D-4
215	N16	3/1/1966	045_2144.tif	4	D-4
88	N18	5/22/1972	015_2415.tif	4	D-4
225	N19	3/1/1966	046_2145.tif	4	D-4
741	N2		CAMBRIDGE ST_0003.tif	4	D-4
178	N27	8/8/1969	006_2406.tif	4	D-4
296	N28	3/1/1966	041_2140.tif	4	D-4
738	N3		9583 MILLS.tif	4	D-4
739	N4		9583 MILLS.tif	4	D-4
740	N5		9583 MILLS.tif	4	D-4
235	N6	2/23/1966	047_2146.tif	4	D-4
311	N7	3/1/1966	042_2141.tif	4	D-4
87	N76	5/22/1972	015_2415.tif	4	D-4
312	N8	3/1/1966	042_2141.tif	4	D-4
313	N9	3/1/1966	042_2141.tif	4	D-4


D-3
D-4
D-5
MILLS AVE
I 10 FWY
PALO ST
CAMBRIDGE ST
PRINCETON ST
HARVARD ST
SAN BERNARDINO ST
PRADERA AVE
KIMBERLY AVE
M53
M54
M55
M56
N1
N2
N3
N4
N5
N6
N7
N8
N9
N10
N12
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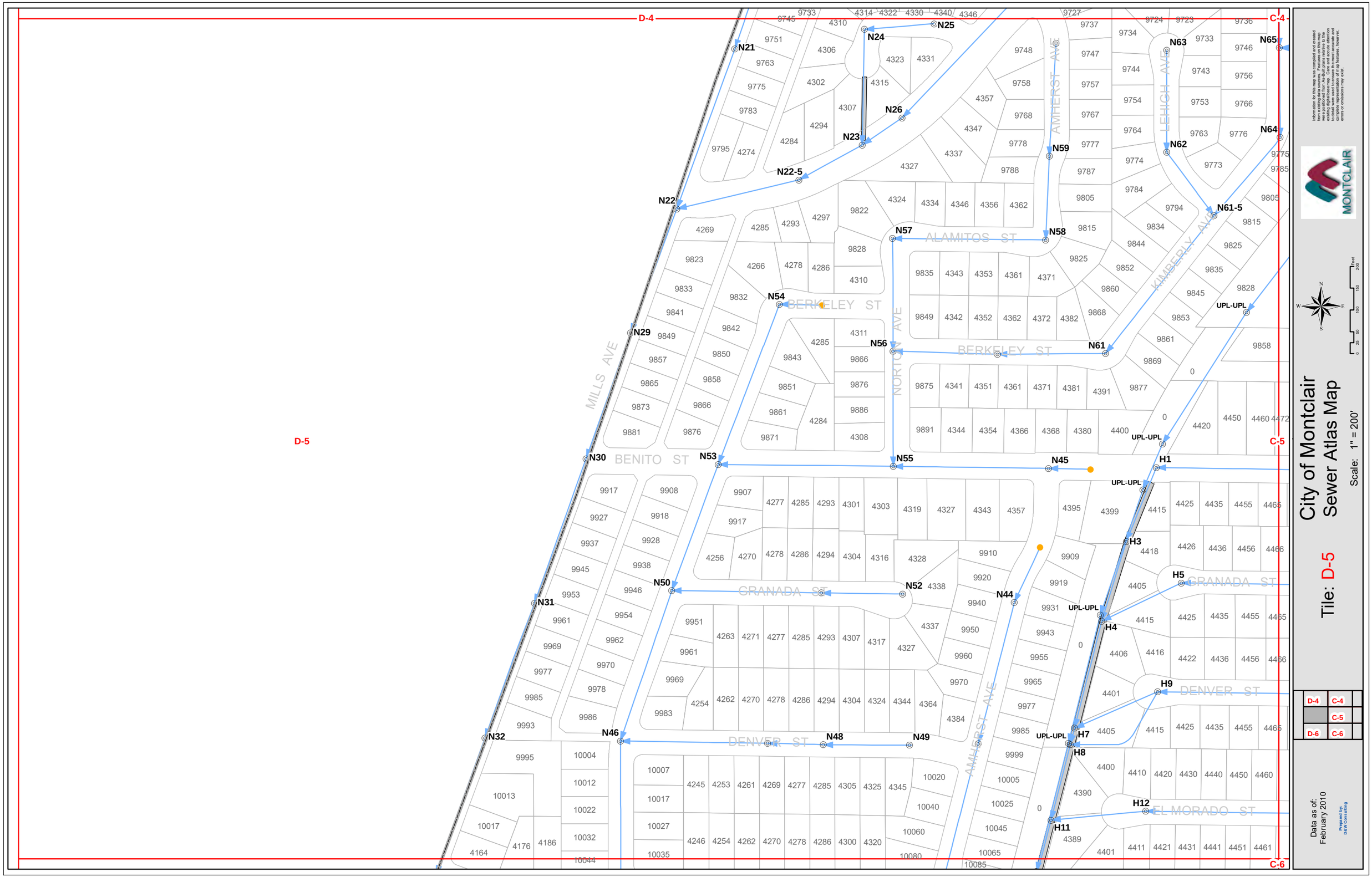
SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
9508	H1	H3	4/13/1965	8	1	VCP	0.03	-9	186.92	032_1233.tif	4	D-5	VCP	190.09
6425	H10	H9	7/28/1977	8	1	VCP	0.01	-9	375.79	043_2243.tif	4	D-5	VCP	377.21
9847	H12	H11	8/27/1965	8	1	VCP	0.01	-9	218.74	033_1234.tif	4	D-5	VCP	226.46
9848	H13	H12	8/27/1965	8	1	VCP	0.01	-9	393.26	033_1234.tif	4	D-5	VCP	397.66
9513	H2	H1	8/27/1965	8	1	VCP	0.01	-9	423.00	0331234.tif	4	D-5	VCP	427.07
9507	H3	H4	4/13/1965	8	1	VCP	0.02	-9	193.46	032_1233.tif	4	D-5	VCP	198.38
9845	H4	H7	4/13/1965	8	1	VCP	0.01	-9	258.15	032_1233.tif	4	D-5	VCP	262.82
5651	H5	H4	9/12/1975	8	1	VCP	0.02	-9	202.85	042_2242.tif	4	D-5	VCP	209.93
6790	H6	H5	9/12/1975	8	1	VCP	0.02	-9	322.15	042_2242.tif	4	D-5	VCP	324.67
9860	H7	H8	4/13/1965	8	1	VCP	0.02	-9	219.23	032_1233.tif	4	D-5	VCP	40.15
4897	H8	H11	4/13/1965	8	1	VCP	0.02	-9	219.23	032_1233.tif	4	D-5	VCP	185.68
4896	H9	H7	4/13/1965	10	1	UNK	-9.00	-9	-9.00	032_1233.tif	4	D-5	UNK	215.89
6426	H9	H8	7/28/1977	8	1	VCP	0.06	-9	267.89	043_2243.tif	4	D-5	VCP	275.30
9022	N21	N22	10/16/1963	10	1	VCP	0.02	-9	401.02	045_1145.tif	4	D-5	VCP	405.11
6799	N22	N29	1/17/1963	10	1	VCP	0.02	-9	305.98	044_1144.tif	4	D-5	VCP	315.29
8999	N23	NOMHID	8/8/1969	8	1	VCP	-9.00	-9	-9.00	006_2406.tif	4	D-5	VCP	172.20
9411	N24	N23		8	1	VCP	0.02	-9	272.28	007_2407.tif	4	D-5	VCP	275.23
9362	N25	N24		8	1	VCP	0.01	-9	161.23	007_2407.tif	4	D-5	VCP	166.85
8873	N26	N23	8/8/1969	8	1	VCP	-9.00	-9	-9.00	006_2406.tif	4	D-5	VCP	114.35
8998	N27	N26	8/8/1969	8	1	VCP	-9.00	-9	-9.00	006_2406.tif	4	D-5	VCP	447.02
6800	N29	N30	1/17/1963	10	1	VCP	0.02	-9	319.20	044_1144.tif	4	D-5	VCP	317.57
6801	N30	N31	1/17/1963	10	1	VCP	0.02	-9	352.80	044_1144.tif	4	D-5	VCP	365.65
6428	N31	N32	1/17/1963	10	1	VCP	0.02	-9	346.00	044_1144.tif	4	D-5	VCP	341.55
6412	N32	N33	1/17/1963	10	1	VCP	0.02	-9	342.82	043_1143.tif	4	D-5	VCP	345.70
9808	N43	N42	12/28/1971	8	1	VCP	0.03	-9	341.68	010_2410.tif	4	D-5	VCP	341.18
9807	N44	N43	12/28/1971	8	1	VCP	0.02	-9	341.68	010_2410.tif	4	D-5	VCP	347.48
9519	N45	N55	3/1/1966	8	1	VCP	0.01	-9	366.01	033_2132.tif	4	D-5	VCP	369.51
9840	N46	N40	2/23/1966	8	1	VCP	0.01	-9	337.23	030_2129.tif	4	D-5	VCP	339.72
9810	N47	N46	3/1/1966	8	1	VCP	0.01	-9	346.00	032_2131.tif	4	D-5	VCP	350.34
9809	N48	N47	3/1/1966	8	1	VCP	0.01	-9	346.00	032_2131.tif	4	D-5	VCP	132.52
9811	N49	N48		8	1	VCP	0.01	-9	206.90	009_2409.tif	4	D-5	VCP	205.52
9839	N50	N46	2/23/1966	8	1	VCP	0.02	-9	374.02	030_2129.tif	4	D-5	VCP	378.37
9354	N51	N50	3/1/1966	8	1	VCP	0.01	-9	352.00	032_2131.tif	4	D-5	VCP	355.58
9445	N52	N51		8	1	VCP	0.01	-9	-9.00	009_2409.tif	4	D-5	VCP	193.45
9466	N53	N50	2/23/1966	8	1	VCP	0.03	-9	317.67	030_2129.tif	4	D-5	VCP	320.01
9458	N54	N53	3/1/1966	8	1	VCP	0.02	-9	402.28	034_2133.tif	4	D-5	VCP	407.91
9520	N55	N53	3/1/1966	8	1	VCP	0.01	-9	412.93	033_2132.tif	4	D-5	VCP	416.74
9356	N56	N55	3/1/1966	8	1	VCP	0.01	-9	-9.00	035_2134.tif	4	D-5	VCP	274.16
9020	N56-5	N56	3/1/1966	8	1	VCP	0.01	-9	246.00	036_2135.tif	4	D-5	VCP	248.78
9357	N57	N56	3/1/1966	8	1	VCP	0.02	-9	-9.00	035_2134.tif	4	D-5	VCP	268.36
9355	N58	N57	3/1/1966	8	1	VCP	0.01	-9	-9.00	035_2134.tif	4	D-5	VCP	364.74
9460	N59	N58		8	1	VCP	0.02	-9	193.94	006_2406.tif	4	D-5	VCP	199.63
9459	N60	N59		8	1	VCP	0.02	-9	266.25	006_2406.tif	4	D-5	VCP	269.11
9019	N61	N56-5	3/1/1966	8	1	VCP	0.01	-9	252.63	036_2135.tif	4	D-5	VCP	257.44
9018	N61-5	N61	3/1/1966	8	1	VCP	0.02	-9	412.81	036_2135.tif	4	D-5	VCP	417.44
9244	N62	N61-5	3/1/1966	8	1	VCP	0.01	-9	184.57	037_2136.tif	4	D-5	VCP	188.03
9243	N63	N62	3/1/1966	8	1	VCP	0.01	-9	238.00	037_2136.tif	4	D-5	VCP	242.67
10399	N64	N61-5	3/1/1966	8	1	VCP	0.02	-9	248.54	036_2135.tif	4	D-5	VCP	244.16
4930	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0017.tif	4	D-5	VCP	315.07
4931	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0017.tif	4	D-5	VCP	314.54
5061	NOMHID	N49		8	1	VCP	-9.00	-9	-9.00	009_2409.tif	4	D-5	VCP	5.45
5406	NOMHID	N52		8	1	VCP	-9.00	-9	-9.00	009_2409.tif	4	D-5	VCP	4.43
7137	NOMHID	N22	3/1/1966	8	1	VCP	0.01	-9	294.74	041_2140.tif	4	D-5	VCP	298.73
7191	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.01	-9	-9.00	MORENO & MILLS_0018.tif	4	D-5	UNK	371.98
7192	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0018.tif	4	D-5	VCP	241.21
7195	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0017.tif	4	D-5	VCP	314.83
7196	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0017.tif	4	D-5	UNK	118.54
9457	NOMHID	N54	3/1/1966	8	1	VCP	0.01	-9	99.07	034_2133.tif	4	D-5	VCP	101.25
9518	NOMHID	N45	3/1/1966	8	1	VCP	0.02	-9	98.00	033_2132.tif	4	D-5	VCP	100.42
9806	NOMHID	N44	12/28/1971	8	1	VCP	0.02	-9	143.02	010_2410.tif	4	D-5	VCP	144.19

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
560	16	7/3/1989	MORENO & MILLS_0017.tif	4	D-5
561	17	7/3/1989	MORENO & MILLS_0017.tif	4	D-5
562	18	7/3/1989	MORENO & MILLS_0017.tif	4	D-5
566	22	7/3/1989	MORENO & MILLS_0018.tif	4	D-5
1130	91	7/3/1989	MORENO & MILLS_0017.tif	4	D-5
638	H1	4/13/1965	032_1233.tif	4	D-5
1141	H11	4/13/1965	032_1233.tif	4	D-5
1147	H12	8/27/1965	033_1234.tif	4	D-5
639	H3	4/13/1965	032_1233.tif	4	D-5
318	H4	9/12/1975	042_2242.tif	4	D-5
317	H5	9/12/1975	042_2242.tif	4	D-5
1140	H7	4/13/1965	032_1233.tif	4	D-5
1049	H8	7/28/1977	043_2243.tif	4	D-5
1048	H9	7/28/1977	043_2243.tif	4	D-5
202	N21	10/16/1963	045_1145.tif	4	D-5
327	N22	1/17/1963	044_1144.tif	4	D-5
181	N22-5	8/8/1969	006_2406.tif	4	D-5
180	N23	8/8/1969	006_2406.tif	4	D-5
511	N24		007_2407.tif	4	D-5
453	N25		007_2407.tif	4	D-5
179	N26	8/8/1969	006_2406.tif	4	D-5
328	N29	1/17/1963	044_1144.tif	4	D-5
329	N30	1/17/1963	044_1144.tif	4	D-5
330	N31	1/17/1963	044_1144.tif	4	D-5
1046	N32	1/17/1963	043_1143.tif	4	D-5
1100	N43	12/28/1971	010_2410.tif	4	D-5
1099	N44	12/28/1971	010_2410.tif	4	D-5
648	N45	3/1/1966	033_2132.tif	4	D-5
1103	N46	3/1/1966	032_2131.tif	4	D-5
1102	N47	3/1/1966	032_2131.tif	4	D-5
1101	N48	3/1/1966	032_2131.tif	4	D-5
1104	N49		009_2409.tif	4	D-5
442	N50	3/1/1966	032_2131.tif	4	D-5
443	N51	3/1/1966	032_2131.tif	4	D-5
534	N52		009_2409.tif	4	D-5
549	N53	3/1/1966	034_2133.tif	4	D-5
550	N54	3/1/1966	034_2133.tif	4	D-5
647	N55	3/1/1966	033_2132.tif	4	D-5
446	N56	3/1/1966	035_2134.tif	4	D-5
200	N56-5	3/1/1966	036_2135.tif	4	D-5
445	N57	3/1/1966	035_2134.tif	4	D-5
444	N58	3/1/1966	035_2134.tif	4	D-5
552	N59		006_2406.tif	4	D-5
551	N60		006_2406.tif	4	D-5
201	N61	3/1/1966	036_2135.tif	4	D-5
358	N61-5	3/1/1966	037_2136_A.tif	4	D-5
357	N62	3/1/1966	037_2136_A.tif	4	D-5
356	N63	3/1/1966	037_2136_A.tif	4	D-5
548	NOMHID	3/1/1966	034_2133.tif	4	D-5
945	NOMHID	3/1/1966	033_2132.tif	4	D-5
1098	NOMHID	12/28/1971	010_2410.tif	4	D-5



City of Montclair
Sewer Atlas Map
Tile: D-5
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
D-4
C-4
C-5
D-6
C-6
D-5
MILLS AVE
BENITO ST
GRANADA ST
DENVER ST
EL MORADO ST
ALAMITOS ST
BERKELEY ST
NORTON AVE
AMHERST AVE
LEHIGH AVE
KIMBERLY AVE
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SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
4898	H11	H14	4/13/1965	8	1	VCP	0.00	-9	352.74	032_1233.tif	4	D-6	VCP	355.87
4899	H14	H15	4/13/1965	8	1	VCP	0.03	-9	146.00	032_1233.tif	4	D-6	VCP	148.72
9826	H15	H16	6/8/1964	8	1	VCP	0.01	-9	182.26	009_1309.tif	4	D-6	VCP	189.41
6859	H16	H19	6/8/1964	8	1	VCP	0.01	-9	226.00	008_1308.tif	4	D-6	VCP	228.37
9827	H17	H16	6/8/1964	8	1	VCP	0.02	-9	296.00	009_1309.tif	4	D-6	VCP	298.73
6860	H19	H20	6/8/1964	8	1	VCP	0.01	-9	136.61	008_1308.tif	4	D-6	VCP	142.22
6861	H20	H21	6/8/1964	8	1	VCP	0.01	-9	334.83	008_1308.tif	4	D-6	VCP	338.38
6862	H21	H22	6/8/1964	8	1	VCP	0.02	-9	331.00	008_1308.tif	4	D-6	VCP	335.25
6863	H22	H23	6/8/1964	8	1	VCP	0.02	-9	331.00	008_1308.tif	4	D-6	VCP	335.03
6856	H23	H24	6/8/1964	8	1	VCP	0.01	-9	285.99	007_1307.tif	4	D-6	VCP	289.23
6857	H24	H25	6/8/1964	8	1	VCP	0.01	-9	281.00	007_1307.tif	4	D-6	VCP	283.93
6858	H25	H37	6/8/1964	8	1	VCP	0.01	-9	281.00	007_1307.tif	4	D-6	VCP	287.01
6855	H26	H23	6/8/1964	8	1	VCP	0.01	-9	298.99	007_1307.tif	4	D-6	VCP	299.02
6873	H27	H26	12/14/1963	8	1	VCP	0.02	-9	331.00	010_1310.tif	4	D-6	VCP	335.53
6874	H28	H27	12/14/1963	8	1	VCP	0.02	-9	331.00	010_1310.tif	4	D-6	VCP	334.13
6875	H29	H28	12/14/1963	8	1	VCP	0.02	-9	337.13	010_1310.tif	4	D-6	VCP	339.85
10425	H29	H20	6/8/1964	8	1	VCP	0.00	-9	302.56	012_1312.tif	4	D-6	VCP	305.81
6853	H37	H36	6/8/1964	8	1	VCP	0.02	-9	350.77	006_1306.tif	4	D-6	VCP	348.89
10694	H44	H43		8	1	VCP	0.02	-9	221.00	013_1313.tif	4	D-6	VCP	228.83
6424	N33	N35	1/17/1963	10	1	VCP	0.02	-9	360.83	043_1143.tif	4	D-6	VCP	365.45
9842	N34	N33	8/22/1966	8	1	VCP	0.01	-9	287.33	031_2130.tif	4	D-6	VCP	291.91
10560	N35	O1	1/17/1963	10	1	VCP	0.01	-9	-9.00	043_1143.tif	4	D-6	VCP	338.88
6444	N36	N35	3/1/1966	8	1	VCP	0.01	-9	274.50	029_2128.tif	4	D-6	VCP	277.82
6443	N37	N36	3/1/1966	8	1	VCP	0.01	-9	282.33	029_2128.tif	4	D-6	VCP	288.19
6442	N38	N37	3/1/1966	8	1	VCP	0.01	-9	459.57	029_2128.tif	4	D-6	VCP	363.62
6440	N39	NOMHID	3/1/1966	8	1	VCP	0.02	-9	30.00	029_2128.tif	4	D-6	VCP	35.92
9841	N40	N37	2/23/1966	8	1	VCP	0.01	-9	324.26	030_2129.tif	4	D-6	VCP	329.72
9843	N41	N40	8/21/1966	8	1	VCP	0.01	-9	346.00	031_2130.tif	4	D-6	VCP	350.66
6437	N42	N77		8	1	VCP	0.01	-9	282.78	010_2410.tif	4	D-6	VCP	286.62
9844	N77	N41	8/21/1966	8	1	VCP	0.01	-9	127.00	031_2130.tif	4	D-6	VCP	128.76
315	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0016.tif	4	D-6	VCP	286.78
316	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0016.tif	4	D-6	VCP	285.25
317	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0016.tif	4	D-6	VCP	283.44
318	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0015.tif	4	D-6	VCP	320.08
319	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0015.tif	4	D-6	UNK	121.89
320	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0015.tif	4	D-6	VCP	293.01
2861	NOMHID	H26	6/8/1964	8	1	VCP	0.01	-9	-9.00	007_1307.tif	4	D-6	VCP	11.78
3288	NOMHID	NOMHID	3/24/1980	-9	1	UNK	-9.00	-9	-9.00	026_2426.tif	4	D-6	UNK	45.85
3289	NOMHID	NOMHID	3/24/1980	8	1	VCP	0.01	-9	-9.00	026_2426.tif	4	D-6	VCP	46.19
3290	NOMHID	NOMHID	3/24/1980	4	1	VCP	0.00	-9	-9.00	026_2426.tif	4	D-6	VCP	37.51
3291	NOMHID	NOMHID	3/24/1980	8	1	VCP	0.01	-9	-9.00	026_2426.tif	4	D-6	VCP	34.13
3292	NOMHID	NOMHID	3/24/1980	4	1	VCP	0.00	-9	-9.00	026_2426.tif	4	D-6	VCP	45.69
3293	NOMHID	NOMHID	3/24/1980	4	1	VCP	0.00	-9	-9.00	026_2426.tif	4	D-6	VCP	39.40
3294	NOMHID	NOMHID	3/24/1980	8	1	VCP	-9.00	-9	-9.00	026_2426.tif	4	D-6	VCP	13.25
3295	NOMHID	NOMHID	3/24/1980	8	1	VCP	0.01	-9	-9.00	026_2426.tif	4	D-6	VCP	132.27
3297	NOMHID	NOMHID	3/24/1980	8	1	VCP	-9.00	-9	-9.00	026_2426.tif	4	D-6	VCP	9.54
6441	NOMHID	N38	3/1/1966	8	1	VCP	0.01	-9	329.00	029_2128.tif	4	D-6	VCP	324.79
4849	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0016.tif	4	D-6	UNK	118.92
4850	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0016.tif	4	D-6	VCP	319.37
6854	NOMHID	H37	6/8/1964	8	1	VCP	0.01	-9	108.00	007_1307.tif	4	D-6	VCP	108.22
10430	NOMHID	NOMHID	3/24/1980	8	1	VCP	0.01	-9	196.90	026_2426.tif	4	D-6	VCP	199.35
10479	NOMHID	O36	2/21/1966	8	1	VCP	0.00	-9	179.08	022_2122.tif	4	D-6	VCP	180.49
10544	O1	O2	10/16/1963	10	1	VCP	0.02	-9	322.47	042_1142.tif	4	D-6	VCP	319.52
10939	O10	O9	3/1/1966	8	1	VCP	0.02	-9	160.13	026_2126.tif	4	D-6	VCP	169.36
10938	O11	O10	3/1/1966	8	1	VCP	0.01	-9	238.69	026_2126.tif	4	D-6	VCP	242.24
10941	O12	O11	3/1/1966	8	1	VCP	0.00	-9	369.68	026_2126.tif	4	D-6	VCP	373.73
10780	O12-5	O9	3/1/1966	-9	1	UNK	-9.00	-9	-9.00	024_2124.tif	4	D-6	UNK	205.27
10785	O13	O12-5	3/1/1966	8	1	VCP	-9.00	-9	-9.00	024_2124.tif	4	D-6	VCP	206.12
10838	O14	O13	4/29/1966	8	1	VCP	0.02	-9	321.71	027_2127.tif	4	D-6	VCP	327.71
10837	O15	O14	4/29/1966	8	1	VCP	0.01	-9	433.38	027_2127.tif	4	D-6	VCP	433.39
10525	O16	O20	10/16/1963	10	1	VCP	0.01	-9	321.00	041_1141.tif	4	D-6	VCP	323.32
10762	O17	O16	3/1/1966	8	1	VCP	0.01	-9	394.01	023_2123.tif	4	D-6	VCP	397.86
10761	O18	O17	3/1/1966	8	1	VCP	0.01	-9	381.56	023_2123.tif	4	D-6	VCP	398.79
10760	O19	O18	3/1/1966	8	1	VCP	0.01	-9	279.44	023_2123.tif	4	D-6	VCP	269.52
10545	O2	O3	10/16/1963	10	1	VCP	0.02	-9	346.00	042_1142.tif	4	D-6	VCP	357.50
10546	O3	O16	10/16/1963	10	1	VCP	0.01	-9	415.26	042_1142.tif	4	D-6	VCP	418.03
10781	O4	O3	3/1/1966	8	1	VCP	-9.00	-9	-9.00	024_2124.tif	4	D-6	VCP	319.57
10792	O5	O4	3/1/1966	8	1	VCP	0.02	-9	344.69	024_2124.tif	4	D-6	VCP	348.08
10791	O6	O5	3/1/1966	8	1	VCP	0.01	-9	368.91	024_2124.tif	4	D-6	VCP	372.94
10886	O7	O6	3/1/1966	8	1	VCP	0.01	-9	440.40	025_2125.tif	4	D-6	VCP	444.88
10885	O8	O7	3/1/1966	8	1	VCP	0.01	-9	318.00	025_2125.tif	4	D-6	VCP	322.18
10779	O9	O4	3/1/1966	8	1	VCP	-9.00	-9	-9.00	024_2124.tif	4	D-6	VCP	341.38

SEWER STRUCTURE

OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
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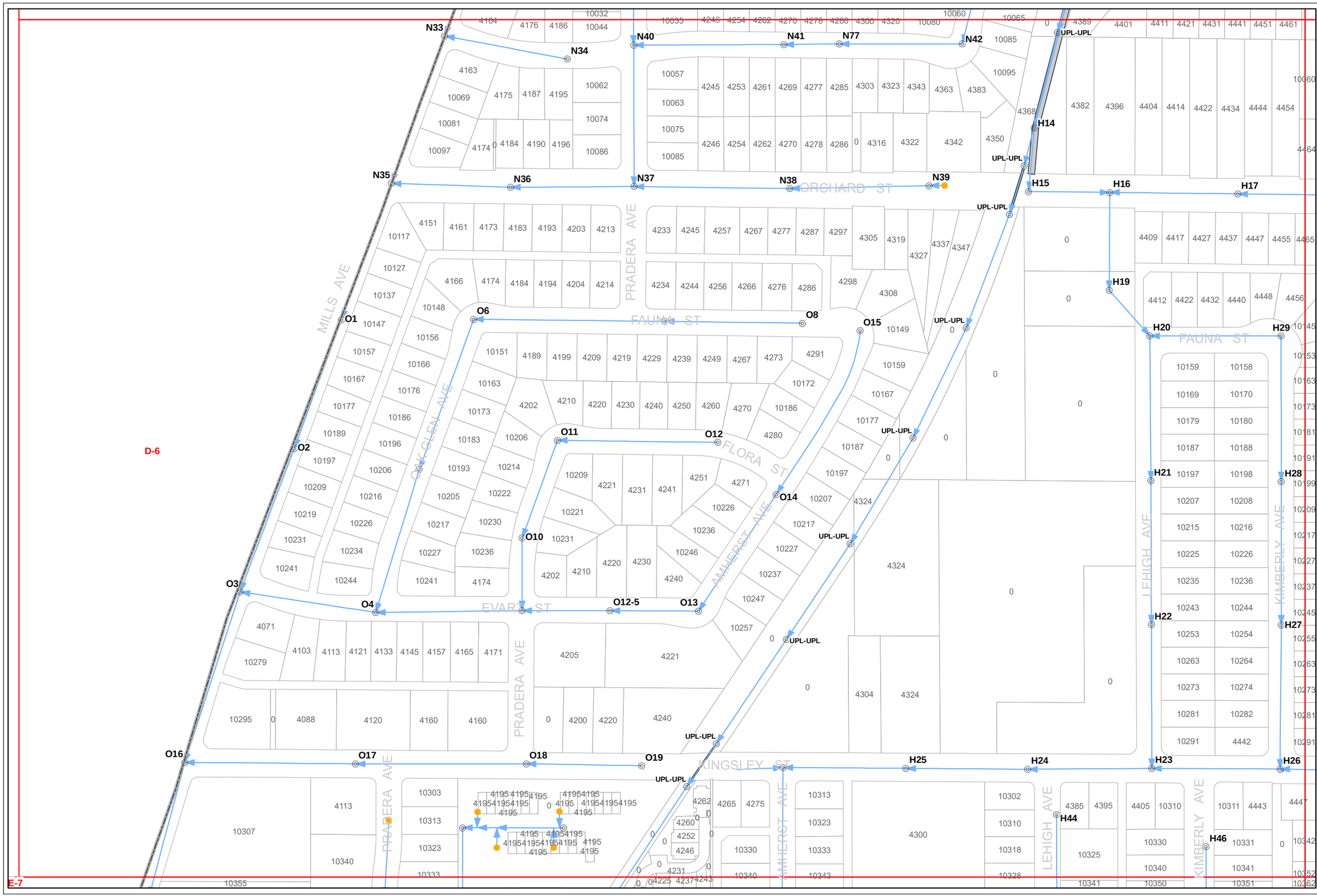
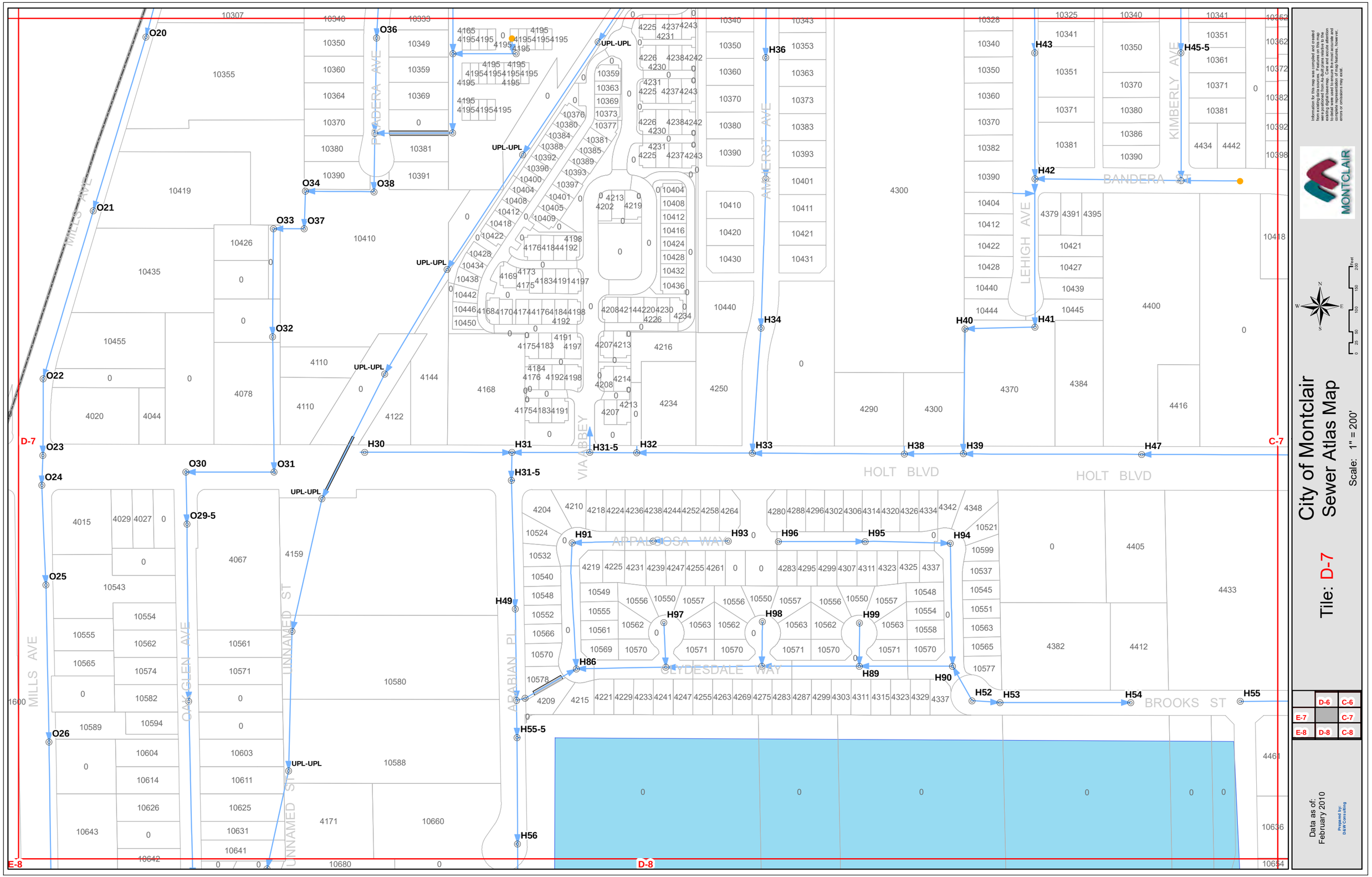
1155	93	7/3/1989	MORENO & MILLS_0016.tif	4	D-6
1156	94	7/3/1989	MORENO & MILLS_0016.tif	4	D-6
2001	113	7/3/1989	MORENO & MILLS_0015.tif	4	D-6
2002	114	7/3/1989	MORENO & MILLS_0015.tif	4	D-6
2003	115	7/3/1989	MORENO & MILLS_0015.tif	4	D-6
2004	116	7/3/1989	MORENO & MILLS_0015.tif	4	D-6
2006	118	7/3/1989	MORENO & MILLS_0016.tif	4	D-6
2007	119	7/3/1989	MORENO & MILLS_0016.tif	4	D-6
1142	H14	4/13/1965	032_1233.tif	4	D-6
1143	H15	4/13/1965	032_1233.tif	4	D-6
1117	H16	6/8/1964	009_1309.tif	4	D-6
1118	H17	6/8/1964	009_1309.tif	4	D-6
1602	H19	6/8/1964	008_1308.tif	4	D-6
1603	H20	6/8/1964	008_1308.tif	4	D-6
1604	H21	6/8/1964	008_1308.tif	4	D-6
1605	H22	6/8/1964	008_1308.tif	4	D-6
1599	H23	6/8/1964	007_1307.tif	4	D-6
1598	H24	6/8/1964	007_1307.tif	4	D-6
1597	H25	6/8/1964	007_1307.tif	4	D-6
1600	H26	6/8/1964	007_1307.tif	4	D-6
1614	H27	12/14/1963	010_1310.tif	4	D-6
1615	H28	12/14/1963	010_1310.tif	4	D-6
1483	H29	6/18/1964	012_1312.tif	4	D-6
1592	H37	6/8/1964	006_1306.tif	4	D-6
1693	H44		013_1313.tif	4	D-6
1692	H46		013_1313.tif	4	D-6
1137	N33	8/21/1966	031_2130.tif	4	D-6
1138	N34	8/21/1966	031_2130.tif	4	D-6
1074	N35	3/1/1966	029_2128.tif	4	D-6
1066	N36	3/1/1966	029_2128.tif	4	D-6
1067	N37	3/1/1966	029_2128.tif	4	D-6
1068	N38	3/1/1966	029_2128.tif	4	D-6
1069	N39	3/1/1966	029_2128.tif	4	D-6
1136	N40	2/23/1966	030_2129.tif	4	D-6
1139	N41	8/21/1966	031_2130.tif	4	D-6
1060	N42		010_2410.tif	4	D-6
1061	N77		010_2410.tif	4	D-6
1073	NOMHID	3/1/1966	029_2128.tif	4	D-6
1542	NOMHID	2/23/1966	022_2122.tif	4	D-6
1582	O1	10/16/1963	042_1142.tif	4	D-6
1287	O10	3/1/1966	026_2126.tif	4	D-6
1286	O11	3/1/1966	026_2126.tif	4	D-6
1288	O12	3/1/1966	026_2126.tif	4	D-6
1743	O12-5	3/1/1966	024_2124.tif	4	D-6
1793	O13	12/25/1964	018_2418.tif	4	D-6
1841	O14	4/29/1966	027_2127.tif	4	D-6
1840	O15	4/29/1966	027_2127.tif	4	D-6
1576	O16	10/16/1963	041_1141.tif	4	D-6
1733	O17	3/1/1966	023_2123.tif	4	D-6
1732	O18	3/1/1966	023_2123.tif	4	D-6
1731	O19	3/1/1966	023_2123.tif	4	D-6
1581	O2	10/16/1963	042_1142.tif	4	D-6
1580	O3	10/16/1963	042_1142.tif	4	D-6
1741	O4	3/1/1966	024_2124.tif	4	D-6
1744	O5	3/1/1966	024_2124A.tif	4	D-6
1893	O6	3/1/1966	025_2125.tif	4	D-6
1894	O7	3/1/1966	025_2125.tif	4	D-6
1895	O8	3/1/1966	025_2125.tif	4	D-6
1742	O9	3/1/1966	024_2124.tif	4	D-6
1487	PRI	3/24/1980	026_2426.tif	4	D-6
1488	PRI	3/24/1980	026_2426.tif	4	D-6
1493	PRI	3/24/1980	026_2426.tif	4	D-6
1494	PRI	3/24/1980	026_2426.tif	4	D-6
1496	PRI	3/24/1980	026_2426.tif	4	D-6
1498	PRI	3/24/1980	026_2426.tif	4	D-6



City of Montclair
Sewer Atlas Map
Tile: D-6
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
D-5
C-5
C-6
E-7
D-7
C-7
D-6
E-7
ORCHARD ST
FAUNA ST
FLORA ST
EVART ST
KINGSLEY ST
MILLS AVE
PRADERA AVE
OAK GLEN AVE
AMHERST AVE
LEHIGH AVE
KIMBERLY AVE
UPL-UPL

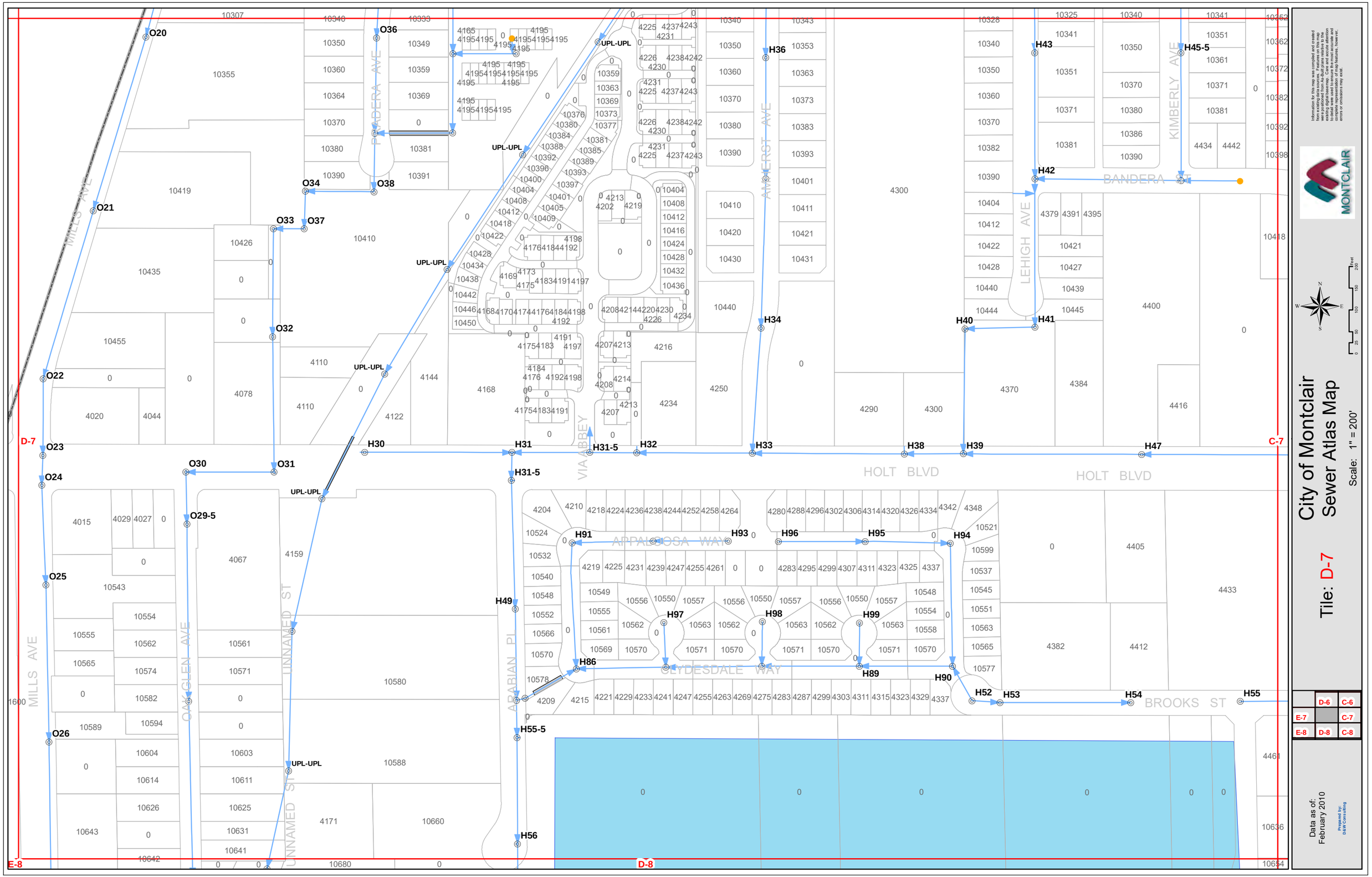
SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
10875	H30	H31	6/8/1964	8	1	VCP	0.02	-9	346.00	004_1304.tif	4	D-7	VCP	350.97
481	H31	H31-5	6/8/1964	8	1	VCP	0.01	-9	63.01	003_1303.tif	4	D-7	VCP	66.58
10863	H31-5	H49	6/8/1964	8	1	VCP	0.01	-9	303.55	003_1303.tif	4	D-7	VCP	306.49
10874	H32	H31	6/8/1964	8	1	VCP	0.01	-9	293.59	004_1304.tif	4	D-7	VCP	297.62
10873	H33	H32	6/8/1964	8	1	VCP	0.01	-9	272.44	004_1304.tif	4	D-7	VCP	275.23
6850	H34	H33	6/8/1964	8	1	VCP	0.02	-9	292.46	006_1306.tif	4	D-7	VCP	298.57
6851	H35	H34	6/8/1964	8	1	VCP	0.01	-9	352.54	006_1306.tif	4	D-7	VCP	355.81
6852	H36	H35	6/8/1964	8	1	VCP	0.02	-9	281.38	006_1306.tif	4	D-7	VCP	288.09
10872	H38	H33	6/8/1964	8	1	VCP	0.01	-9	357.01	004_1304.tif	4	D-7	VCP	361.55
10871	H39	H38	6/8/1964	8	1	VCP	0.01	-9	-9.00	004_1304.tif	4	D-7	VCP	140.87
3211	H41	NOMHID	9/30/1993	-9	1	UNK	-9.00	-9	-9.00	045_7145.tif	4	D-7	UNK	166.64
3196	H42	NOMHID	9/30/1993	8	1	VCP	-9.00	-9	-9.00	045_7145.tif	4	D-7	VCP	35.30
10693	H43	H42		8	1	VCP	0.01	-9	296.00	013_1313.tif	4	D-7	VCP	299.88
6881	H45	H42	6/8/1964	8	1	VCP	0.01	-9	343.12	012_1312.tif	4	D-7	VCP	348.23
10691	H46	NOMHID		8	1	VCP	0.01	-9	-9.00	013_1313.tif	4	D-7	VCP	153.09
6888	H47	H39	6/8/1964	8	1	VCP	0.01	-9	-9.00	005_1305.tif	4	D-7	VCP	424.47
6887	H48	H47	6/8/1964	8	1	VCP	0.01	-9	372.73	005_1305.tif	4	D-7	VCP	377.81
10864	H49	H50	6/8/1964	8	1	VCP	0.02	-9	910.00	003_1303.tif	4	D-7	VCP	217.21
10965	H50	H55-5	6/8/1964	8	1	VCP	0.02	-9	-9.00	003_1303.tif	4	D-7	VCP	88.46
2481	H51	H86	8/14/2001	-9	1	UNK	-9.00	-9	-9.00	17264.tif	4	D-7	UNK	140.83
2482	H52	H90	8/14/2001	8	1	VCP	-9.00	-9	90.63	17263.tif	4	D-7	VCP	94.13
10230	H52	H53	4/28/1986	-9	1	UNK	-9.00	-9	-9.00	019_7119.tif	4	D-7	UNK	66.62
10925	H53	H54	4/28/1986	8	1	VCP	0.02	-9	311.33	019_7119.tif	4	D-7	VCP	311.77
10865	H55-5	H56	6/8/1964	8	1	VCP	0.01	-9	249.03	003_1303.tif	4	D-7	VCP	253.41
10601	H87	H86	8/14/2001	8	1	VCP	0.00	-9	210.33	17263.tif	4	D-7	VCP	213.54
10600	H88	H87	8/14/2001	8	1	VCP	0.00	-9	225.74	17263.tif	4	D-7	VCP	228.57
10599	H89	H88	8/14/2001	8	1	VCP	0.00	-9	225.74	17263.tif	4	D-7	VCP	231.90
10598	H90	H89	8/14/2001	8	1	VCP	0.00	-9	223.38	17263.tif	4	D-7	VCP	222.41
10626	H91	H86	8/14/2001	8	1	VCP	0.02	-9	299.34	17264.tif	4	D-7	VCP	300.55
10578	H92	H91	8/14/2001	8	1	VCP	0.02	-9	184.00	17262.tif	4	D-7	VCP	193.34
10577	H93	H92	8/14/2001	8	1	VCP	0.02	-9	184.00	17262.tif	4	D-7	VCP	178.90
10636	H94	H90	8/14/2001	8	1	VCP	0.02	-9	292.32	17264.tif	4	D-7	VCP	292.59
10678	H95	H94	8/14/2001	8	1	VCP	0.01	-9	200.00	200132.tif	4	D-7	VCP	203.10
10677	H96	H95	8/14/2001	8	1	VCP	0.01	-9	202.00	200132.tif	4	D-7	VCP	206.82
10653	H97	H87	8/14/2001	8	1	VCP	0.06	-9	108.00	17265.tif	4	D-7	VCP	106.80
10661	H98	H88	8/14/2001	8	1	VCP	0.06	-9	108.00	17265.tif	4	D-7	VCP	105.83
10669	H99	H89	8/14/2001	8	1	VCP	0.06	-9	108.00	17265.tif	4	D-7	VCP	103.17
461	NOMHID	H31-5	6/8/1964	8	1	UNK	-9.00	-9	-9.00	003_1303.tif	4	D-7	UNK	8.88
462	NOMHID	H55-5	6/8/1964	8	1	VCP	-9.00	-9	-9.00	003_1303.tif	4	D-7	VCP	8.00
463	NOMHID	H56	6/8/1964	8	1	VCP	-9.00	-9	-9.00	003_1303.tif	4	D-7	VCP	4.67
1328	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0014.tif	4	D-7	UNK	332.64
1329	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0014.tif	4	D-7	VCP	289.86
1330	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0014.tif	4	D-7	VCP	326.94
1331	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0014.tif	4	D-7	VCP	323.19
1333	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0013.tif	4	D-7	VCP	238.48
1334	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0013.tif	4	D-7	VCP	331.75
1335	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0013.tif	4	D-7	VCP	323.54
1852	NOMHID	H32	6/8/1964	8	1	VCP	0.02	-9	-9.00	004_1304.tif	4	D-7	VCP	15.74
1853	NOMHID	H38	6/8/1964	-9	1	UNK	-9.00	-9	-9.00	004_1304.tif	4	D-7	UNK	18.48
1854	NOMHID	H30	6/8/1964	8	1	VCP	-9.00	-9	-9.00	004_1304.tif	4	D-7	VCP	11.65
1891	NOMHID	H31-5	6/8/1964	8	1	VCP	-9.00	-9	-9.00	003_1303.tif	4	D-7	VCP	4.13
2030	NOMHID	O35		8	1	VCP	0.01	-9	175.00	027_2427.tif	4	D-7	VCP	185.44
3135	NOMHID	O30		6	1	VCP	-9.00	-9	-9.00	021_2121.tif	4	D-7	VCP	5.28
3139	NOMHID	O31		6	1	VCP	-9.00	-9	-9.00	021_2121.tif	4	D-7	VCP	5.14
3195	NOMHID	NOMHID	9/30/1993	-9	1	UNK	-9.00	-9	-9.00	045_7145.tif	4	D-7	UNK	53.40
3286	NOMHID	NOMHID	3/24/1980	4	1	VCP	-9.00	-9	-9.00	026_2426.tif	4	D-7	VCP	36.91
3287	NOMHID	NOMHID	3/24/1980	8	1	VCP	-9.00	-9	-9.00	026_2426.tif	4	D-7	VCP	9.39
3296	NOMHID	NOMHID	3/24/1980	8	1	VCP	0.01	-9	-9.00	026_2426.tif	4	D-7	VCP	141.08
6880	NOMHID	H45	6/8/1964	8	1	VCP	0.01	-9	138.88	012_1312.tif	4	D-7	VCP	141.06
10431	NOMHID	NOMHID	3/24/1980	8	1	VCP	0.01	-9	-9.00	026_2426.tif	4	D-7	VCP	188.93
10452	NOMHID	H41	9/30/1993	8	1	VCP	-9.00	-9	-9.00	045_7145.tif	4	D-7	VCP	317.68
10692	NOMHID	H45		8	1	VCP	0.02	-9	-9.00	013_1313.tif	4	D-7	VCP	304.03
10911	NOMHID	H39	6/8/1964	8	1	VCP	0.01	-9	296.00	011_1311.tif	4	D-7	VCP	297.51
10526	O20	O21	10/16/1963	10	1	VCP	0.02	-9	425.27	041_1141.tif	4	D-7	VCP	431.50
10527	O21	O22	10/16/1963	10	1	VCP	0.01	-9	414.04	041_1141.tif	4	D-7	VCP	417.33
10528	O22	O23	10/16/1963	10	1	VCP	0.02	-9	177.96	041_1141.tif	4	D-7	VCP	182.34
3371	O23	O24	10/16/1963	10	1	VCP	0.01	-9	57.53	040_1140.tif	4	D-7	VCP	71.58
10402	O24	O25	10/16/1963	10	1	VCP	0.01	-9	239.72	040_1140.tif	4	D-7	VCP	237.14
10403	O25	O26	10/16/1963	10	1	VCP	0.02	-9	371.00	040_1140.tif	4	D-7	VCP	374.00
10404	O26	O27	10/16/1963	10	1	VCP	0.01	-9	325.35	040_1140.tif	4	D-7	VCP	328.76
10468	O29	O28		8	1	VCP	0.02	-9	421.00	021_2121.tif	4	D-7	VCP	418.50
10467	O29-5	O29		8	1	VCP	0.01	-9	411.00	021_2121.tif	4	D-7	VCP	422.36
10466	O30	O29-5		8	1	VCP	0.03	-9	121.01	021_2121.tif	4	D-7	VCP	124.09

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1295	105	7/3/1989	MORENO & MILLS_0013.tif	4	D-7
1296	106	7/3/1989	MORENO & MILLS_0013.tif	4	D-7
1997	109	7/3/1989	MORENO & MILLS_0014.tif	4	D-7
1998	110	7/3/1989	MORENO & MILLS_0014.tif	4	D-7
1999	111	7/3/1989	MORENO & MILLS_0014.tif	4	D-7
2000	112	7/3/1989	MORENO & MILLS_0014.tif	4	D-7
2005	117	7/3/1989	MORENO & MILLS_0015.tif	4	D-7
1790	H30	6/8/1964	004_1304.tif	4	D-7
1789	H31	6/8/1964	004_1304.tif	4	D-7
188	H31-5			4	D-7
1773	H31-5	6/8/1964	003_1303.tif	4	D-7
1788	H32	6/8/1964	004_1304.tif	4	D-7
1787	H33	6/8/1964	004_1304.tif	4	D-7
1595	H34	6/8/1964	006_1306.tif	4	D-7
1594	H35	6/8/1964	006_1306.tif	4	D-7
1593	H36	6/8/1964	006_1306.tif	4	D-7
1786	H38	6/8/1964	004_1304.tif	4	D-7
1947	H39	6/8/1964	011_1311.tif	4	D-7
1856	H40	9/30/1993	045_7145.tif	4	D-7
1855	H41	9/30/1993	045_7145.tif	4	D-7
1854	H42	9/30/1993	045_7145.tif	4	D-7
1694	H43		013_1313.tif	4	D-7
1623	H45	6/8/1964	012_1312.tif	4	D-7
1691	H45-5		013_1313.tif	4	D-7
1629	H47	6/8/1964	005_1305.tif	4	D-7
1774	H49	6/8/1964	003_1303.tif	4	D-7
1955	H50	11/1/2000	200133.tif	4	D-7
2021	H51	8/14/2001	17264.tif	4	D-7
1956	H52	11/1/2000	200133.tif	4	D-7
1962	H53	4/28/1986	019_7119.tif	4	D-7
1963	H54	4/28/1986	019_7119.tif	4	D-7
1811	H55	12/28/1964	049_1149.tif	4	D-7
1775	H55-5	6/8/1964	003_1303.tif	4	D-7
1776	H56	6/8/1964	003_1303.tif	4	D-7
1676	H86	8/14/2001	17264.tif	4	D-7
1675	H87	8/14/2001	17263.tif	4	D-7
1674	H88	8/14/2001	17263.tif	4	D-7
1668	H89	8/14/2001	17263.tif	4	D-7
1677	H90	8/14/2001	17264.tif	4	D-7
1665	H91	8/14/2001	17262.tif	4	D-7
1666	H92	8/14/2001	17262.tif	4	D-7
1667	H93	8/14/2001	17262.tif	4	D-7
1678	H94	8/14/2001	17264.tif	4	D-7
1682	H95	8/14/2001	200132.tif	4	D-7
1683	H96	8/14/2001	200132.tif	4	D-7
1679	H97	8/14/2001	17265.tif	4	D-7
1680	H98	8/14/2001	17265.tif	4	D-7
1681	H99	8/14/2001	17265.tif	4	D-7
1622	NOMHID	6/8/1964	012_1312.tif	4	D-7
1575	O20	10/16/1963	041_1141.tif	4	D-7
1574	O21	10/16/1963	041_1141.tif	4	D-7
1573	O22	10/16/1963	041_1141.tif	4	D-7
1572	O23	10/16/1963	041_1141.tif	4	D-7
1470	O24	10/16/1963	040_1140.tif	4	D-7
1471	O25	10/16/1963	040_1140.tif	4	D-7
1472	O26	10/16/1963	040_1140.tif	4	D-7
1530	O29		021_2121.tif	4	D-7
1529	O29-5		021_2121.tif	4	D-7
1528	O30		021_2121.tif	4	D-7
1527	O31		021_2121.tif	4	D-7
1541	O32	2/21/1966	022_2122.tif	4	D-7
1540	O33	2/21/1966	022_2122.tif	4	D-7
1538	O34	2/21/1966	022_2122.tif	4	D-7
1808	O35		027_2427.tif	4	D-7
1543	O36	2/23/1966	022_2122.tif	4	D-7
1539	O37	2/21/1966	022_2122.tif	4	D-7
1810	O38		027_2427.tif	4	D-7
1489	PRI	3/24/1980	026_2426.tif	4	D-7
1490	PRI	3/24/1980	026_2426.tif	4	D-7
1500	PRI	3/24/1980	026_2426.tif	4	D-7
1809	PRI		027_2427.tif	4	D-7


City of Montclair
Sewer Atlas Map
Tile: D-7
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
HOLT BLVD
BANDERA ST
BROOKS ST
MILLS AVE
PRADERA AVE
AMHERST AVE
LEHIGH AVE
KIMBERLY AVE
VIA ABBEY
APPALOOSA WAY
CLYDESDALE WAY
ARABIAN PL
UNNAMED ST
OAK GLEN AVE
D-7
C-7
E-8
D-8
D-6
C-6
E-7
C-7
E-8
D-8
C-8

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
10465	O31	O30		8	1	VCP	0.01	-9	205.74	021_2121.tif	4	D-7	VCP	210.47
10478	O32	O31		8	1	VCP	0.01	-9	321.00	022_2122.tif	4	D-7	VCP	322.89
10477	O33	O32		8	1	VCP	0.00	-9	248.70	022_2122.tif	4	D-7	VCP	256.73
10476	O34	O37		8	1	VCP	0.01	-9	86.97	022_2122.tif	4	D-7	VCP	89.58
8957	O35	O38	2/21/1966	8	1	VCP	0.00	-9	-9.00	022_2122.tif	4	D-7	VCP	139.54
10480	O36	O35	2/21/1966	8	1	VCP	0.00	-9	-9.00	022_2122.tif	4	D-7	VCP	226.67
3099	O37	O33		8	1	VCP	0.03	-9	74.00	022_2122.tif	4	D-7	VCP	73.31
10475	O38	O34		8	1	VCP	-9.00	-9	172.00	022_2122.tif	4	D-7	VCP	162.89
625					1		0.00		0.00		4	D-7		20.82
643				8	1	VCP	0.00		0.00		4	D-7		61.46

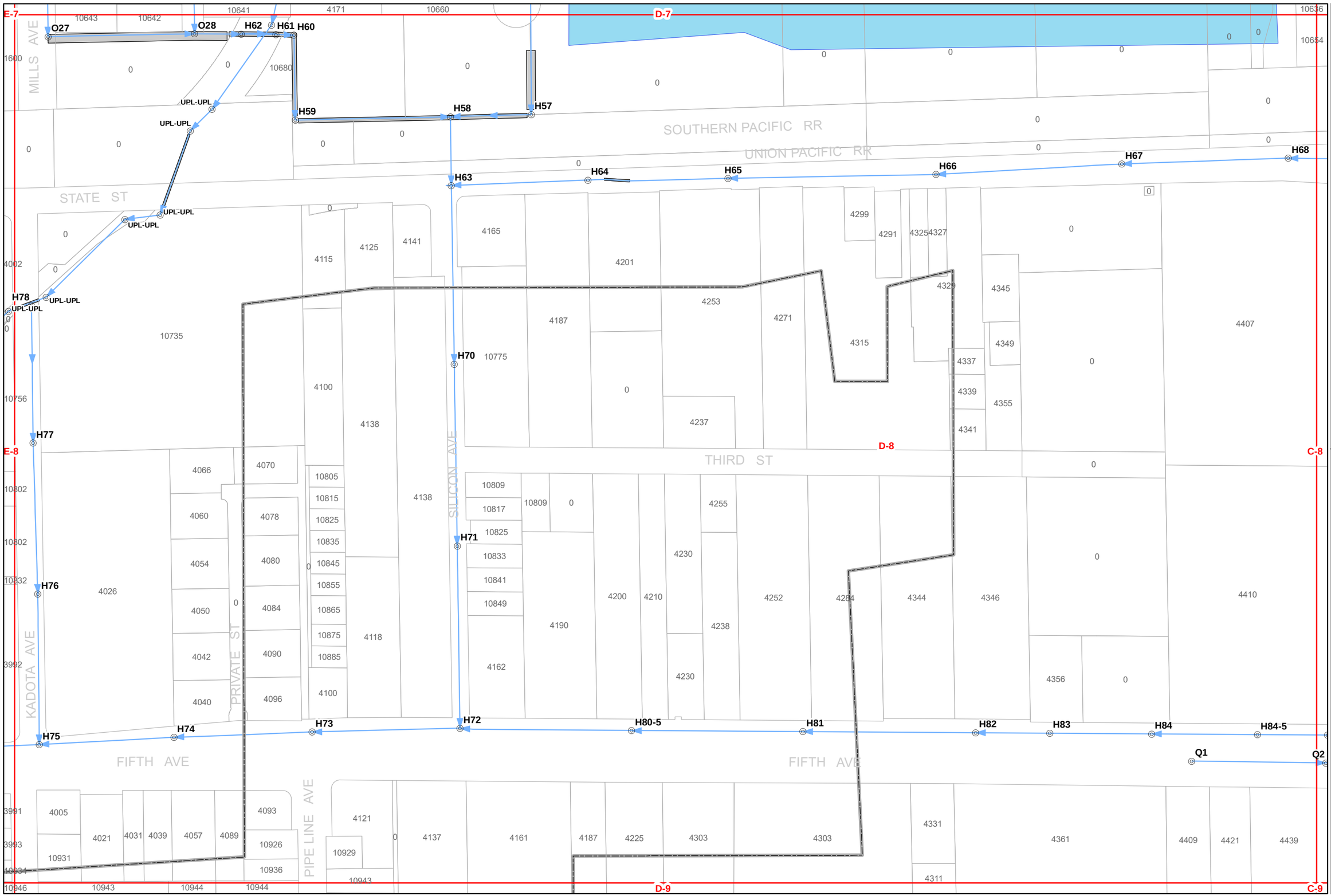
SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID



City of Montclair
Sewer Atlas Map
Tile: D-7
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
HOLT BLVD
BROOKS ST
BANDERA ST
LEHIGH AVE
KIMBERLY AVE
AMHERST AVE
PRADERA AVE
MILLS AVE
OAK GLEN AVE
UNNAMED ST
ARABIAN PL
VIA ABBEY
APPALOOSA WAY
CLYDESDALE WAY
UPL-UPL
D-7
C-7
E-8
D-8

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
10866	H56	H57	6/8/1964	8	1	VCP	0.01	-9	249.03	003_1303.tif	4	D-8	VCP	265.25
1046	H57	NOMHID		8	1	VCP	0.01	-9	-9.00	002_1302.tif	4	D-8	VCP	101.27
2767	H58	H63	6/8/1963	15	1	VCP	0.00	-9	161.02	012_1112.tif	4	D-8	VCP	158.48
10520	H59	H58	10/16/1963	12	1	VCP	0.00	-9	347.19	039_1139.tif	4	D-8	VCP	357.34
10519	H60	H59	10/16/1963	12	1	VCP	0.00	-9	187.02	039_1139.tif	4	D-8	VCP	195.52
3029	H61	H60	10/16/1963	12	1	VCP	0.00	-9	37.21	039_1139.tif	4	D-8	VCP	41.74
3030	H62	H61	10/16/1963	-9	1	VCP	0.01	-9	-9.00	039_1139.tif	4	D-8	VCP	42.69
8410	H62	H61	10/16/1963	8	1	VCP	0.01	-9	-9.00	039_1139.tif	4	D-8	VCP	42.77
8411	H62	H61	10/16/1963	8	1	VCP	0.46	-9	10.67	039_1139.tif	4	D-8	VCP	11.78
9283	H62	H61	10/16/1963	8	1	VCP	0.24	-9	5.00	039_1139.tif	4	D-8	VCP	4.54
9284	H62	H61	10/16/1963	8	1	VCP	0.10	-9	4.50	039_1139.tif	4	D-8	VCP	5.55
10604	H62	H61	10/16/1963	8	1	VCP	0.22	-9	5.00	039_1139.tif	4	D-8	VCP	4.77
10605	H62	H61	10/16/1963	8	1	VCP	0.44	-9	6.36	039_1139.tif	4	D-8	VCP	4.62
10606	H62	H61	10/16/1963	8	1	VCP	0.22	-9	5.00	039_1139.tif	4	D-8	VCP	4.65
11029	H62	H61	10/16/1963	10	1	VCP	0.46	-9	10.67	039_1139.tif	4	D-8	VCP	10.77
11030	H62	H61	10/16/1963	-9	1	VCP	0.24	-9	5.00	039_1139.tif	4	D-8	VCP	4.69
11031	H62	H61	10/16/1963	-9	1	VCP	0.22	-9	5.00	039_1139.tif	4	D-8	VCP	4.69
11032	H62	H61	10/16/1963	-9	1	VCP	0.22	-9	5.00	039_1139.tif	4	D-8	VCP	4.77
11033	H62	H61	10/16/1963	-9	1	VCP	0.44	-9	6.36	039_1139.tif	4	D-8	VCP	4.54
11034	H62	H61	10/16/1963	-9	1	VCP	0.10	-9	4.50	039_1139.tif	4	D-8	VCP	4.47
11035	H62	H61	10/16/1963	8	1	VCP	0.01	-9	1.50	039_1139.tif	4	D-8	VCP	1.54
11036	H62	H61	10/16/1963	8	1	VCP	0.01	-9	1.50	039_1139.tif	4	D-8	VCP	1.54
11037	H62	H61	10/16/1963	-9	1	VCP	0.01	-9	1.50	039_1139.tif	4	D-8	VCP	1.61
11038	H62	H61	10/16/1963	-9	1	VCP	0.01	-9	1.50	039_1139.tif	4	D-8	VCP	1.54
10045	H63	H70	6/8/1963	24	1	VCP	0.01	-9	411.08	012_1112.tif	4	D-8	VCP	411.55
10818	H65	H63		21	1	VCP	0.01	-9	-9.00	013_1113.tif	4	D-8	VCP	637.75
10817	H66	H65		21	1	VCP	0.01	-9	476.00	013_1113.tif	4	D-8	VCP	479.26
10816	H67	H66		21	1	VCP	0.01	-9	-9.00	013_1113.tif	4	D-8	VCP	428.86
10697	H68	H67	1/8/1963	24	1	VCP	0.00	-9	386.00	014_1114.tif	4	D-8	VCP	383.58
10046	H70	H71	6/8/1963	24	1	VCP	0.01	-9	416.00	012_1112.tif	4	D-8	VCP	418.65
10047	H71	H72	6/8/1963	21	1	VCP	0.01	-9	417.21	012_1112.tif	4	D-8	VCP	420.16
10122	H72	H73	10/16/1963	24	1	VCP	0.01	-9	326.15	011_1111.tif	4	D-8	VCP	340.78
10123	H73	H74	10/16/1963	24	1	VCP	0.01	-9	316.13	011_1111.tif	4	D-8	VCP	318.69
10124	H74	H75	10/16/1963	24	1	VCP	0.01	-9	306.42	011_1111.tif	4	D-8	VCP	310.70
10313	H76	H75	6/10/1964	8	1	VCP	0.01	-9	342.00	032_7132.tif	4	D-8	VCP	347.08
10334	H77	H76	6/10/1964	8	1	VCP	0.01	-9	346.00	032_7132.tif	4	D-8	VCP	347.90
10335	H78	H77	6/10/1964	8	1	VCP	1.40	-9	342.00	032_7132.tif	4	D-8	VCP	181.66
140	H80-5	H72	7/15/1993	8	1	VCP	0.04		396.00	002_15302.tif	4	D-8	VCP	395.51
139	H81	H80-5	7/15/1993	8	1	VCP	0.04		396.00	002_15302.tif	4	D-8	VCP	394.52
96	H82	H81	7/15/1993	8	1	VCP	0.06		396.00	002_15302.tif	4	D-8	VCP	398.11
95	H84	H82	7/15/1993	8	1	VCP	0.06		396.00	003_15303.tif	4	D-8	VCP	405.14
94	H85	H84	7/15/1993	8	1	VCP	0.05		401.60	003_15303.tif	4	D-8	VCP	405.59
1045	NOMHID	H58		8	1	VCP	0.01	-9	-9.00	002_1302.tif	4	D-8	VCP	85.52
1332	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0013.tif	4	D-8	VCP	238.62
1336	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.03	-9	-9.00	MORENO & MILLS_0012.tif	4	D-8	UNK	206.50
1337	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0012.tif	4	D-8	VCP	69.87
2766	NOMHID	H63	6/8/1963	8	1	UNK	-9.00	-9	-9.00	012_1112.tif	4	D-8	UNK	13.03
3522	NOMHID	NOMHID	7/3/1989	16	1	UNK	0.02	-9	-9.00	MORENO & MILLS_0012.tif	4	D-8	UNK	92.32
3523	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0012.tif	4	D-8	VCP	255.29
3524	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0012.tif	4	D-8	VCP	82.17
10336	NOMHID	H78	6/10/1964	8	1	VCP	0.01	-9	-9.00	032_7132.tif	4	D-8	VCP	134.86
10518	O27	O28	10/16/1963	12	1	VCP	0.00	-9	-9.00	039_1139.tif	4	D-8	VCP	337.79
3031	O28	H62	10/16/1963	12	1	VCP	0.00	-9	104.75	039_1139.tif	4	D-8	VCP	107.33
10118	Q2	NOMHID	9/30/1989	8	1	VCP	0.00	-9	296.00	024_7124.tif	4	D-8	VCP	309.22

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1211	99	7/3/1989	MORENO & MILLS_0012.tif	4	D-8
1212	100	7/3/1989	MORENO & MILLS_0012.tif	4	D-8
1213	101	7/3/1989	MORENO & MILLS_0012.tif	4	D-8
1294	104	7/3/1989	MORENO & MILLS_0012.tif	4	D-8
1297	107	7/3/1989	MORENO & MILLS_0013.tif	4	D-8
1298	108	7/3/1989	MORENO & MILLS_0013.tif	4	D-8
1584	H57		002_1302.tif	4	D-8
1585	H58		002_1302.tif	4	D-8
1567	H59	10/16/1963	039_1139.tif	4	D-8
1566	H60	10/16/1963	039_1139.tif	4	D-8
1565	H61	10/16/1963	039_1139.tif	4	D-8
1568	H62	10/16/1963	039_1139.tif	4	D-8
1616	H63	6/8/1963	012_1112.tif	4	D-8
2196	H64			4	D-8
1806	H65		013_1113.tif	4	D-8
1805	H66		013_1113.tif	4	D-8
1804	H67		013_1113.tif	4	D-8
1696	H68	1/8/1963	014_1114.tif	4	D-8
910	H70	6/8/1963	012_1112.tif	4	D-8
909	H71	6/8/1963	012_1112.tif	4	D-8
1315	H72	10/16/1963	011_1111.tif	4	D-8
1316	H73	10/16/1963	011_1111.tif	4	D-8
1317	H74	10/16/1963	011_1111.tif	4	D-8
1318	H75	10/16/1963	011_1111.tif	4	D-8
1436	H76	6/10/1964	032_7132.tif	4	D-8
1437	H77	6/10/1964	032_7132.tif	4	D-8
1438	H78	6/10/1964	032_7132.tif	4	D-8
64	H80-5	7/15/1993	002_15302.tif	4	D-8
63	H81	7/15/1993	002_15302.tif	4	D-8
62	H82	7/15/1993	003_15303.tif	4	D-8
2198	H83			4	D-8
61	H84	7/15/1993	003_15303.tif	4	D-8
2197	H84-5			4	D-8
1473	O27	10/16/1963	040_1140.tif	4	D-8
1564	O28	10/16/1963	039_1139.tif	4	D-8
1303	Q1	9/30/1989	024_7124.tif	4	D-8



City of Montclair
Sewer Atlas Map
Tile: D-8
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
MILLS AVE
STATE ST
SOUTHERN PACIFIC RR
UNION PACIFIC RR
THIRD ST
SILICON AVE
KADOTA AVE
PRIVATE ST
FIFTH AVE
PIPE LINE AVE
E-7
D-7
E-8
D-8
C-8
D-9
C-9
O27
O28
H62
H61
H60
H59
H58
H57
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H64
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H67
H68
H78
H77
H76
H75
H74
H73
H72
H71
H70
H80-5
H81
H82
H83
H84
H84-5
Q1
Q2
UPL-UPL

SEWER LINE

OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
3832	NOMHID	R1		8	1	VCP	0.01	-9	-9.00	006_6306.tif	4	D-9	VCP	3.52
3833	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	5.89
3834	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	12.82
3835	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	90.83
3836	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	81.42
3837	NOMHID	NOMHID		8	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	21.72
3838	NOMHID	R1		8	1	VCP	0.02	-9	25.00	006_6306.tif	4	D-9	VCP	27.91
4098	NOMHID	R42	12/20/1978	-9	1	UNK	-9.00	-9	-9.00	003_2303.tif	4	D-9	UNK	15.43
9120	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	76.62
9121	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	90.65
9122	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	91.04
9123	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	78.94
10145	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	28.49
10146	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	90.61
10147	NOMHID	NOMHID		6	1	VCP	0.02	-9	-9.00	006_6306.tif	4	D-9	VCP	81.61
10302	NOMHID	R5	8/11/1982	8	1	VCP	0.00	-9	178.00	029_2429.tif	4	D-9	VCP	183.43
3839	R1	R2		8	1	VCP	-9.00	-9	-9.00	006_6306.tif	4	D-9	VCP	143.39
10222	R10	R11	11/13/1980	8	1	VCP	0.01	-9	280.78	028_2428.tif	4	D-9	VCP	304.90
10223	R11	R12	11/13/1980	8	1	VCP	0.01	-9	286.00	028_2428.tif	4	D-9	VCP	279.81
10305	R2	R3	8/11/1982	8	1	VCP	0.06	-9	318.93	030_2430.tif	4	D-9	VCP	324.73
9576	R3	R4	8/11/1982	8	1	VCP	0.01	-9	296.00	030_2430.tif	4	D-9	VCP	300.19
9566	R32	R20	6/7/1971	8	1	VCP	0.01	-9	338.58	034_7134.tif	4	D-9	VCP	346.49
1197	R33	R32		8	1	VCP	0.01	-9	165.70	001_2301.tif	4	D-9	VCP	171.27
11025	R34	R33		8	1	VCP	0.00	-9	351.17	002_2302.tif	4	D-9	VCP	355.60
10172	R35	R34	12/20/1978	8	1	VCP	0.00	-9	188.00	004_2304.tif	4	D-9	VCP	193.79
11026	R36	R34		8	1	VCP	0.00	-9	-9.00	002_2302.tif	4	D-9	VCP	361.45
32	R37	R36	12/20/1978	4	1	VCP	0.01		276.00	001_2301.tif	4	D-9	VCP	277.61
11027	R38	R36		8	1	VCP	0.00	-9	-9.00	002_2302.tif	4	D-9	VCP	359.50
10301	R4	R5	8/11/1982	8	1	VCP	0.00	-9	296.93	029_2429.tif	4	D-9	VCP	304.74
10010	R40	R33		8	1	VCP	0.01	-9	236.00	001_2301.tif	4	D-9	VCP	240.25
9922	R41	R42	12/27/1978	8	1	VCP	0.00	-9	246.00	039_2339.tif	4	D-9	VCP	264.25
10009	R42	R40		8	1	VCP	0.01	-9	238.09	001_2301.tif	4	D-9	VCP	241.09
10014	R43	R42	12/20/1978	8	1	VCP	0.01	-9	326.00	003_2303.tif	4	D-9	VCP	330.74
10013	R44-5	R43	12/20/1978	8	1	VCP	0.01	-9	385.50	003_2303.tif	4	D-9	VCP	347.92
10012	R45	R44-5	12/20/1978	8	1	VCP	0.01	-9	123.85	003_2303.tif	4	D-9	VCP	128.89
10169	R45-5	R45	12/20/1978	8	1	VCP	0.00	-9	206.00	004_2304.tif	4	D-9	VCP	214.01
10011	R47	R45	12/20/1978	8	1	VCP	0.01	-9	297.40	003_2303.tif	4	D-9	VCP	301.05
9882	R49	R57	12/25/1992	8	1	VCP	0.01	-9	-9.00	046_7146.tif	4	D-9	VCP	314.27
10225	R5	R9-5	8/11/1982	8	1	VCP	0.02	-9	232.82	029_2429.tif	4	D-9	VCP	230.48
9897	R52	R53	11/25/1992	8	1	VCP	0.02	-9	236.14	047_7147.tif	4	D-9	VCP	240.75
9895	R53	R55	11/25/1992	8	1	VCP	0.01	-9	247.74	047-7147.tif	4	D-9	VCP	251.13
9901	R54	R55	9/30/1992	8	1	VCP	0.01	-9	141.00	048_7148.tif	4	D-9	VCP	145.94
9896	R55	R56	11/25/1992	8	1	VCP	0.01	-9	156.50	047-7147.tif	4	D-9	VCP	161.46
9883	R56	R57	12/25/1992	8	1	VCP	0.06	-9	93.89	046_7146.tif	4	D-9	VCP	58.54
1114	R57	R46	12/25/1992	8	1	CDI	0.01	-9	224.91	046_7146.tif	4	D-9	CDI	228.70
9594	R7	R8	8/11/1982	8	1	VCP	0.01	-9	238.38	031_2431.tif	4	D-9	VCP	238.52
9595	R8	R9	8/11/1982	8	1	VCP	0.01	-9	231.00	031_2431.tif	4	D-9	VCP	234.17
9596	R9	R10	8/11/1982	-9	1	UNK	-9.00	-9	-9.00	031_2431.tif	4	D-9	UNK	350.11
10226	R9-5	R10	8/11/1982	8	1	VCP	0.02	-9	236.22	029_2429.tif	4	D-9	VCP	240.77
6089				8	1	VCP	0.00		156.31	008_15308.tif	4	D-9		160.31

SEWER STRUCTURE

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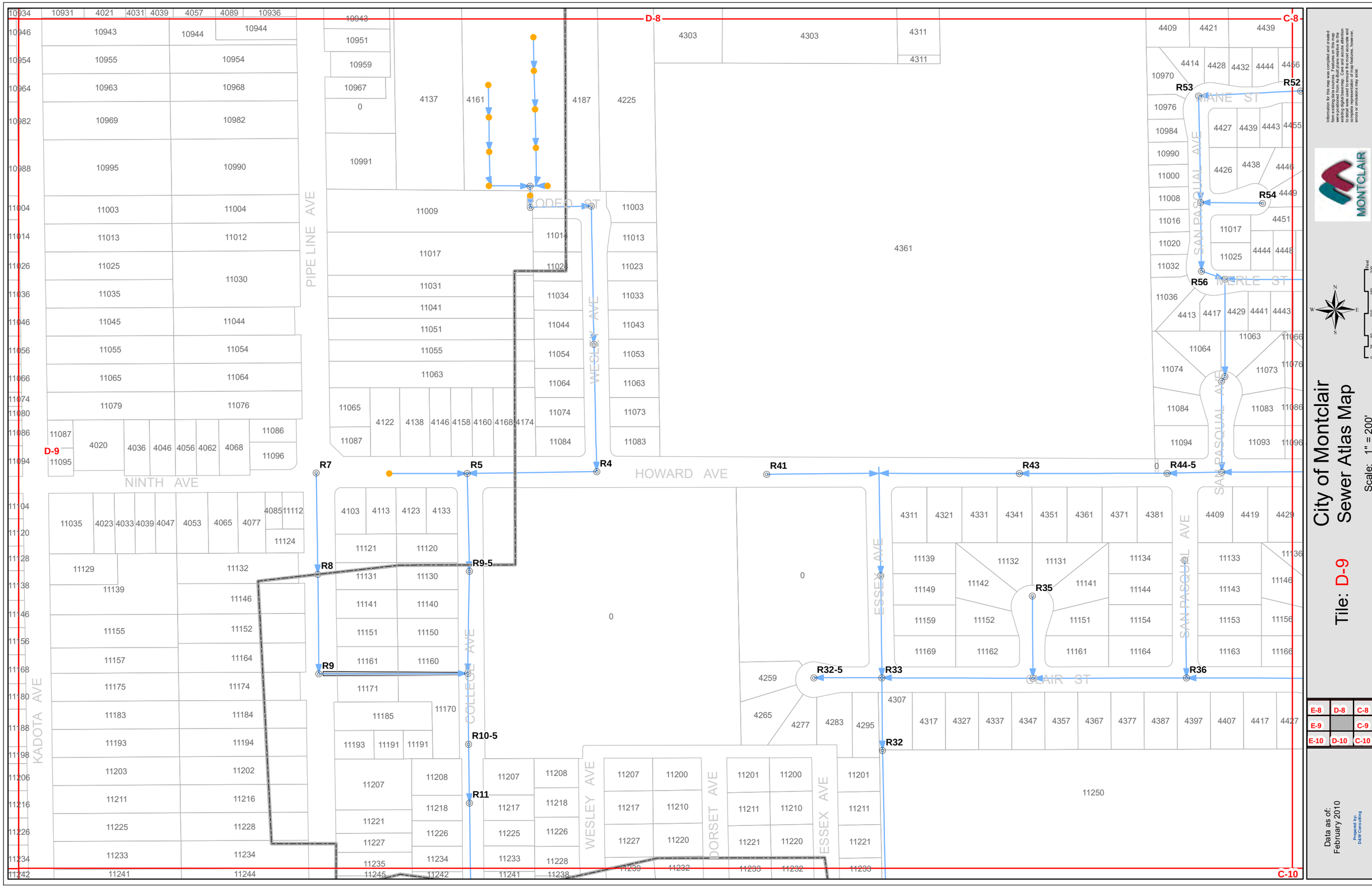
1429	NOMHID	8/11/1982	029_2429.tif	4	D-9
1336	PRI		006_6306.tif	4	D-9
1337	PRI		006_6306.tif	4	D-9
1338	PRI		006_6306.tif	4	D-9
1339	PRI		006_6306.tif	4	D-9
1340	PRI		006_6306.tif	4	D-9
1341	PRI		006_6306.tif	4	D-9
1342	PRI		006_6306.tif	4	D-9
1343	PRI		006_6306.tif	4	D-9
1344	PRI		006_6306.tif	4	D-9
1345	PRI		006_6306.tif	4	D-9
1346	PRI		006_6306.tif	4	D-9
1335	R1		006_6306.tif	4	D-9
1425	R10	11/13/1980	028_2428.tif	4	D-9
2200	R10-5			4	D-9
1424	R11	11/13/1980	028_2428.tif	4	D-9
1334	R2		006_6306.tif	4	D-9
1430	R3	8/11/1982	030_2430.tif	4	D-9
674	R32	6/7/1971	034_7134.tif	4	D-9
2199	R32-5		008_18308.tif	4	D-9
1915	R33		002_2302.tif	4	D-9
1916	R34		002_2302.tif	4	D-9
1389	R35	12/20/1978	004_2304.tif	4	D-9
1917	R36		002_2302.tif	4	D-9
86	R37	12/20/1978	001_2301.tif	4	D-9
1427	R4	8/11/1982	029_2429.tif	4	D-9
827	R40		001_2301.tif	4	D-9
1920	R41	12/27/1978	039_2339.tif	4	D-9
896	R43	12/20/1978	003_2303.tif	4	D-9
895	R44-5	12/20/1978	003_2303.tif	4	D-9
894	R45	12/20/1978	003_2303.tif	4	D-9
1388	R45-5	12/20/1978	004_2304.tif	4	D-9
698	R46	12/25/1992	046_7146.tif	4	D-9
1428	R5	8/11/1982	029_2429.tif	4	D-9
709	R53	11/25/1992	047_7147.tif	4	D-9
715	R54	9/30/1992	048_7148.tif	4	D-9
710	R55	11/25/1992	047_7147.tif	4	D-9
711	R56	11/25/1992	047_7147.tif	4	D-9
695	R57	12/25/1992	046_7146.tif	4	D-9
1431	R7	8/11/1982	031_2431.tif	4	D-9
1432	R8	8/11/1982	031_2431.tif	4	D-9
1433	R9	8/11/1982	031_2431.tif	4	D-9
1426	R9-5	8/11/1982	029-2429.tif	4	D-9



City of Montclair
Sewer Atlas Map
Tile: D-9
Scale: 1" = 200'
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
E-8 D-8 C-8
E-9 C-9
E-10 D-10 C-10
D-8
C-8
D-9
C-10
PIPE LINE AVE
NINTH AVE
HOWARD AVE
RODEO ST
WESLEY AVE
COLLEGE AVE
KADOTA AVE
ESSEX AVE
DORSET AVE
SAN PASQUAL AVE
MAINE ST
MERLE ST
CLAIR ST
R4
R5
R7
R8
R9
R9-5
R10-5
R11
R32
R32-5
R33
R35
R36
R41
R43
R44-5
R52
R53
R54
R56

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
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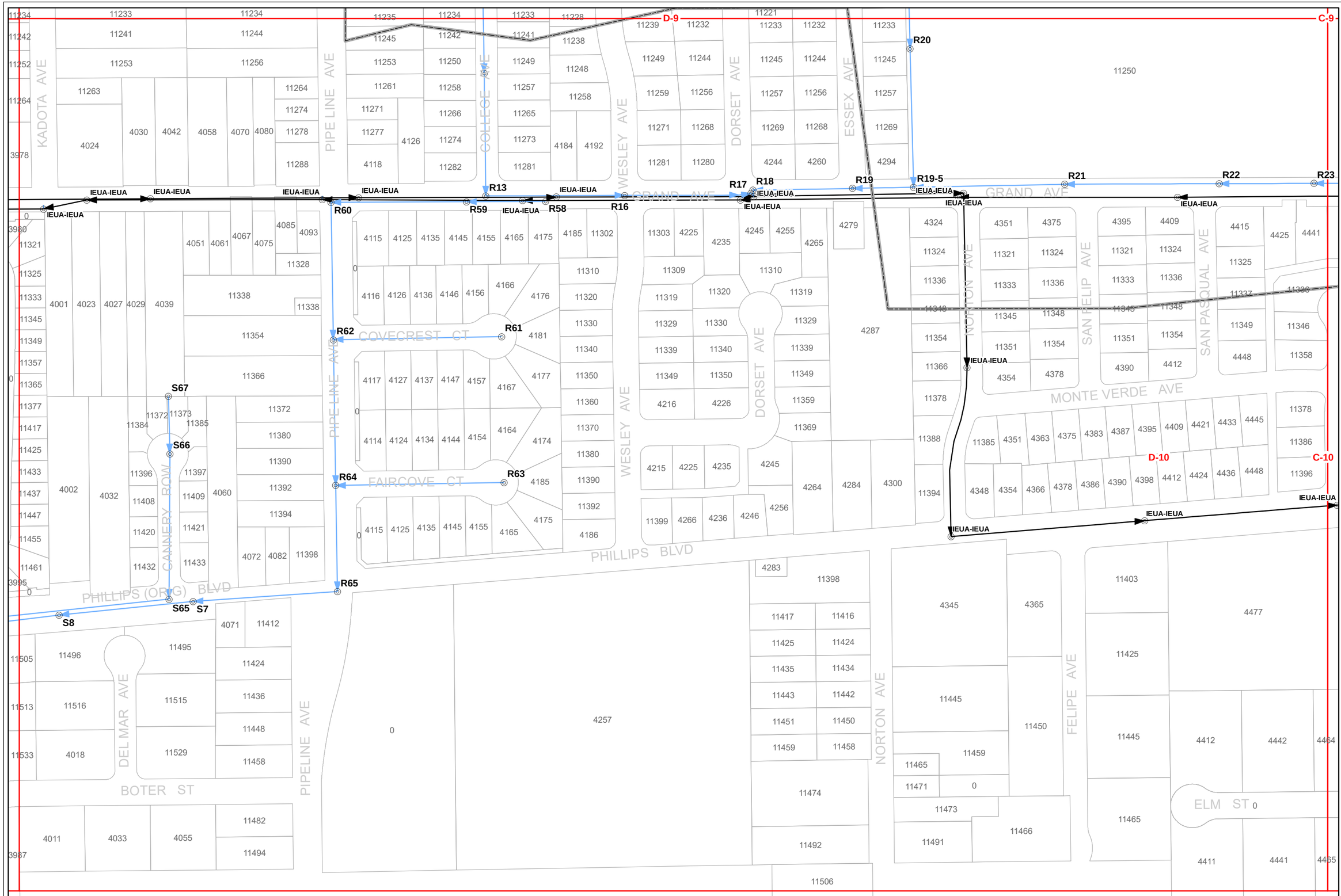
3576	NOMHID	R14	3/1/1978	30	1	UNK	0.00	-9	-9.00	D4352-001plan&profile sta 399 &419.tif	4	D-10	UNK	477.32
3510	NOMHID	R16-5	6/15/1967	36	1	VCP	0.00	-9	-9.00	NRWL_14R.tif	4	D-10	VCP	500.33
3511	NOMHID	NOMHID	6/15/1967	33	1	VCP	0.01	-9	-9.00	NRWL_14R.tif	4	D-10	VCP	501.30
3512	NOMHID	NOMHID	6/15/1967	8	1	VCP	-9.00	-9	-9.00	NRWL-13.tif	4	D-10	VCP	8.65
3515	NOMHID	NOMHID	6/15/1967	8	1	VCP	-9.00	-9	-9.00	NRWL-13.tif	4	D-10	VCP	9.18
3519	NOMHID	S10	6/15/1967	36	1	VCP	0.00	-9	-9.00	NRWL-13.tif	4	D-10	VCP	539.61
3624	NOMHID	NOMHID	11/13/1980	8	1	UNK	0.01	-9	26.77	032_2432.tif	4	D-10	UNK	27.05
3638	NOMHID	R19	6/7/1971	8	1	VCP	-9.00	-9	-9.00	049_2349.tif	4	D-10	VCP	4.70
3639	NOMHID	R17	6/7/1971	8	1	VCP	-9.00	-9	-9.00	049_2349.tif	4	D-10	VCP	4.30
10327	NOMHID	NOMHID	6/15/1967	33	1	VCP	0.01	-9	-9.00	NRWL_14.tif	4	D-10	VCP	398.89
11302	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		176.00	Tract 17509_SwImp01.TIF	4	D-10	VCP	181.28
11303	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.01		305.81	Tract 17509_SwImp01.TIF	4	D-10	VCP	310.70
11304	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.02		311.78	Tract 17509_SwImp01.TIF	4	D-10	VCP	315.16
11305	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		380.30	Tract 17509_SwImp01.TIF	4	D-10	VCP	386.21
11306	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.02		331.00	Tract 17509_SwImp01.TIF	4	D-10	VCP	334.51
11307	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		380.34	Tract 17509_SwImp01.TIF	4	D-10	VCP	385.91
11308	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		239.67	Tract 17509_SwImp01.TIF	4	D-10	VCP	243.30
11315	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	D-10	VCP	331.23
11316	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	D-10	VCP	308.95
10224	R12	R13	11/13/1980	8	1	VCP	0.01	-9	281.00	028_2428.tif	4	D-10	VCP	280.43
10311	R13	R16	11/13/1980	8	1	VCP	0.01	-9	314.71	032_2432.tif	4	D-10	VCP	318.54
41	R14	R18	3/1/1978	30	1	UNK	0.00	-9	-9.00	D4352-001plan&profile sta 399 &419.tif	4	D-10	UNK	452.54
10317	R14	R18	3/1/1978	30	1	UNK	0.00	-9	-9.00	D4352-001plan&profile sta 399 &419.tif	4	D-10	UNK	453.68
3513	R15	NOMHID	6/15/1967	36	1	VCP	0.00	-9	-9.00	NRWL-13.tif	4	D-10	VCP	459.53
10312	R16	NOMHID	11/13/1980	8	1	VCP	0.01	-9	258.58	032_2432.tif	4	D-10	VCP	262.78
3514	R16-5	R15	6/15/1967	36	1	VCP	0.00	-9	-9.00	NRWL-13.tif	4	D-10	VCP	499.53
724	R17	NOMHID	11/13/1980	8	1	UNK	-9.00	-9	-9.00	032_2432.tif	4	D-10	UNK	14.79
3578	R18	R25	3/1/1978	30	1	UNK	0.00	-9	-9.00	D4351-001 PLAN & PROFLIE STA 381 TO STA 399.tif	4	D-10	UNK	480.60
10186	R19	R17	6/7/1971	8	1	VCP	0.00	-9	228.67	049_2349.tif	4	D-10	VCP	227.93
10185	R19-5	R19	6/7/1971	8	1	VCP	0.00	-9	199.50	049_2349.tif	4	D-10	VCP	140.34
9567	R20	R19-5	6/7/1971	8	1	VCP	0.01	-9	316.00	034_7134.tif	4	D-10	VCP	317.64
10072	R21	R19-5	6/1/6435	8	1	VCP	0.00	-9	345.32	050_2350R.tif	4	D-10	VCP	346.87
10071	R22	R21	6/1/6435	8	1	VCP	0.01	-9	348.97	050_2350R.tif	4	D-10	VCP	353.62
10070	R23	R22	6/1/6435	8	1	VCP	0.01	-9	214.24	050_2350R.tif	4	D-10	VCP	217.41
3577	R25	R26	3/1/1978	30	1	UNK	0.00	-9	391.00	D4351-001 PLAN & PROFLIE STA 381 TO STA 399.tif	4	D-10	UNK	400.51
10316	R26	R28	3/1/1978	30	1	UNK	0.00	-9	-9.00	D4351-001 PLAN & PROFLIE STA 381 TO STA 399.tif	4	D-10	UNK	391.59
10320	R28	R29	3/1/1978	30	1	UNK	0.00	-9	-9.00	Interceptor-18.tif	4	D-10	UNK	445.30
10321	R29	R30	3/1/1978	30	1	UNK	0.00	-9	-9.00	Interceptor-18.tif	4	D-10	UNK	443.19
3518	S10	NOMHID	6/15/1967	36	1	VCP	0.00	-9	101.12	NRWL-13.tif	4	D-10	VCP	101.39
3574	S9	NOMHID		30	1	UNK	0.00	-9	-9.00	D4352-001 plan &profile sta 399 & 419.tif	4	D-10	UNK	456.59
644				8	1	VCP	0.00		0.00		4	D-10		131.70
645				8	1	VCP	0.00		0.00		4	D-10		333.09
646				8	1	CDI	0.00		0.00		4	D-10		397.60

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
113	IEUA	3/1/1978	D4352-001 Plan & Profile Sta 399 & 419.tif	4	D-10
1204	IEUA	3/1/1978	Interceptor-18.tif	4	D-10
1216	IEUA	6/15/1967	NRWL-13.tif	4	D-10
1217	IEUA	6/15/1967	NRWL-13.tif	4	D-10
1220	IEUA	6/15/1967	NRWL-13.tif	4	D-10
1221	IEUA	6/15/1967	NRWL-13.tif	4	D-10
1222	IEUA	6/15/1967	NRWL-13.tif	4	D-10
1224	IEUA	6/15/1967	NRWL_14R.tif	4	D-10
1225	IEUA	6/15/1967	NRWL_14R.tif	4	D-10
1446	IEUA	3/1/1978	D4351-001 PLAN & PROFLIE STA 381 TO STA 399.tif	4	D-10
1447	IEUA	3/1/1978	D4351-001 PLAN & PROFLIE STA 381 TO STA 399.tif	4	D-10
1448	IEUA	3/1/1978	D4351-001 PLAN & PROFLIE STA 381 TO STA 399.tif	4	D-10
1454	IEUA	3/1/1978	D4352-001plan&profile sta 399 &419.tif	4	D-10
1456	IEUA	3/1/1978	D4352-001 plan &profile sta 399 & 419.tif	4	D-10
1910	IEUA	3/1/1978	D4351-001 PLAN & PROFLIE STA 381 TO STA 399.tif	4	D-10
1423	R12	11/13/1980	028_2428.tif	4	D-10
1435	R13	11/13/1980	032_2432.tif	4	D-10
1434	R16	11/13/1980	032_2432.tif	4	D-10
1445	R17	3/1/1978	D4351-001 PLAN & PROFLIE STA 381 TO STA 399.tif	4	D-10
1406	R18	6/7/1971	049_2349.tif	4	D-10
1405	R19	6/7/1971	049_2349.tif	4	D-10
1404	R19-5	6/7/1971	049_2349.tif	4	D-10
675	R20	6/7/1971	034_7134.tif	4	D-10
925	R21	6/1/6435	050_2350R.tif	4	D-10
1172	R22	6/1/6435	050_2350R.tif	4	D-10
1173	R23	6/1/6435	050_2350R.tif	4	D-10
2159	R58	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
2160	R59	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
2161	R60	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
2162	R61	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
2163	R62	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
2164	R63	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
2165	R64	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
2166	R65	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
451	S65			4	D-10
450	S66			4	D-10
449	S67			4	D-10
2167	S7	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10
2168	S8	3/28/2006	Tract 17509_SwImp01.TIF	4	D-10



City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: D-10
Data as of: February 2010
Prepared by: D&W Consulting
MONTCLAIR
E-9
D-9
C-9
E-10
C-10
KADOTA AVE
PIPE LINE AVE
COLLEGE AVE
WESLEY AVE
DORSET AVE
ESSEX AVE
GRAND AVE
NORTON AVE
SAN FELIP AVE
SAN PASQUAL AVE
MONTE VERDE AVE
COVECREST CT
FAIRCOVE CT
CANNERY ROW
PHILLIPS (ORIG) BLVD
PHILLIPS BLVD
DEL MAR AVE
BOTER ST
PIPELINE AVE
NORTON AVE
FELIPE AVE
ELM ST
IEUA-IEUA
R13
R16
R17
R18
R19
R19-5
R20
R21
R22
R23
R58
R59
R60
R61
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R64
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S66
S67
S7
S8
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D-10
C-10

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
10018	H75	H79	1/8/1963	24	1	VCP	0.01	-9	344.45	010_1110.tif	4	E-8	VCP	347.16
10019	H79	H80	1/8/1963	24	1	VCP	0.01	-9	341.26	010_1110.tif	4	E-8	VCP	348.40
10331	H80	S1	1/8/1963	24	1	VCP	0.01	-9	345.74	009_1109.tif	4	E-8	VCP	356.45
3448	NOMHID	H80	1/8/1963	8	1	UNK	-9.00	-9	-9.00	009_1109.tif	4	E-8	UNK	9.02
3520	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0012.tif	4	E-8	VCP	94.27
3521	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0012.tif	4	E-8	VCP	291.15
3525	NOMHID	NOMHID	7/3/1989	16	1	VCP	0.02	-9	-9.00	MORENO & MILLS_0011.tif	4	E-8	VCP	191.37
3526	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0011.tif	4	E-8	VCP	352.16
3527	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0011.tif	4	E-8	VCP	444.32
3528	NOMHID	NOMHID	7/3/1989	15	1	VCP	0.01	-9	-9.00	MORENO & MILLS_0011.tif	4	E-8	VCP	400.78

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
1207	95	7/3/1989	MORENO & MILLS_0011.tif	4	E-8
1208	96	7/3/1989	MORENO & MILLS_0011.tif	4	E-8
1209	97	7/3/1989	MORENO & MILLS_0011.tif	4	E-8
1210	98	7/3/1989	MORENO & MILLS_0011.tif	4	E-8
1214	102	7/3/1989	MORENO & MILLS_0012.tif	4	E-8
1215	103	7/3/1989	MORENO & MILLS_0012.tif	4	E-8
904	H79	1/8/1963	010_1110.tif	4	E-8
903	H80	1/8/1963	010_1110.tif	4	E-8

E-7

D-7

E-8

D-8

E-9

D-9

1600

0

UNION PACIFIC RR

STATE ST

4000

4002

UPL-UPL

0

0

UPL-UPL

4007

UPL-UPL

10756

0

10802

10802

0

10802

UPL-UPL

0

10832

3900

3992

3946

3964

3894

UPL-UPL

H80

H79

FIFTH AVE

FIFTH AVE

UPL-UPL

ROSWELL AVE

3983

3991

3895

3905

3919

3933

3945

3949

3973

3993

0

0

10932

10934

10952

10944

10941

10946

Information for this map was compiled and created from various sources. Features on this map were positioned from As-Built plans relative to the existing digital base map. Care and attention was given to detail were used to ensure the most accurate and complete representation of map features, however, errors or omissions may exist.

MONTCLAIR

N

W

E

S

0 25 50 100 150 200 Feet

City of Montclair
Sewer Atlas Map

Scale: 1" = 200'

Tile: E-8

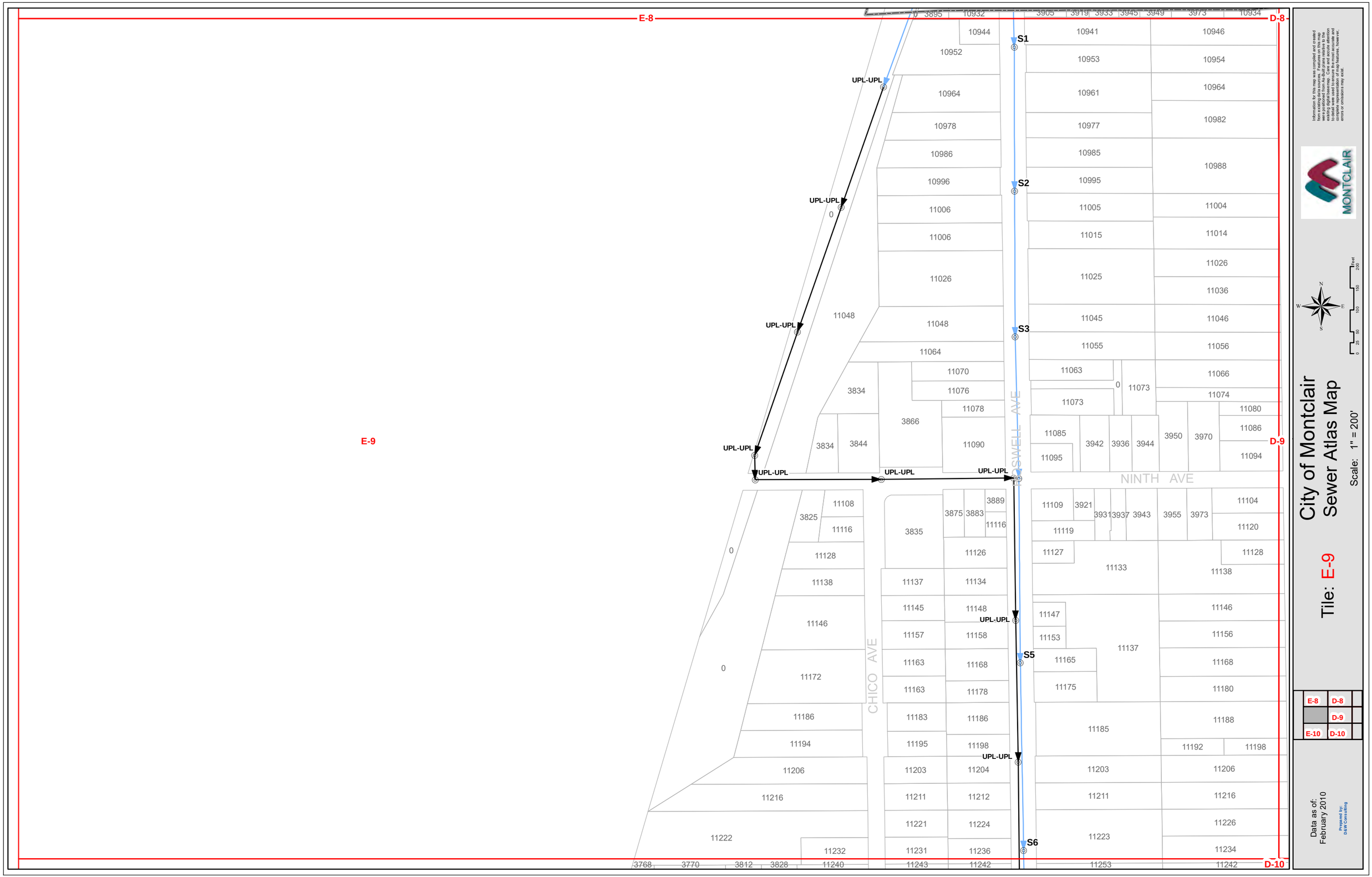
E-7	D-7	
	D-8	
E-9	D-9	

Data as of:
February 2010

Prepared by:
D&W Consulting

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
103	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-Roswell to 9th.tif	4	E-9	VCP	338.89
104	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-Roswell to 9th.tif	4	E-9	VCP	337.71
105	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-Roswell to 9th.tif	4	E-9	VCP	333.95
107	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-9th to SAC.tif	4	E-9	VCP	57.94
108	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-9th to SAC.tif	4	E-9	VCP	300.54
109	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-9th to SAC.tif	4	E-9	VCP	315.27
110	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-SAC 9th to Mission.tif	4	E-9	VCP	310.17
111	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-SAC 9th to Mission.tif	4	E-9	VCP	304.06
112	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-SAC 9th to Mission.tif	4	E-9	VCP	314.59
3447	NOMHID	S4		-9	1	UNK	-9.00	-9	-9.00	009_1109.tif	4	E-9	UNK	6.71
10332	S1	S2	1/8/1963	21	1	VCP	0.01	-9	341.00	009_1109.tif	4	E-9	VCP	343.03
10333	S2	S3	1/8/1963	21	1	VCP	0.01	-9	341.00	009_1109.tif	4	E-9	VCP	347.35
693	S3	S4		21	1	VCP	0.01	-9	340.93	009_1109.tif	4	E-9	VCP	337.23
10164	S4	S5		21	1	VCP	0.01	-9	426.07	008_1108.tif	4	E-9	VCP	438.71
10165	S5	S6		21	1	VCP	0.01	-9	446.00	008_1108.tif	4	E-9	VCP	446.89

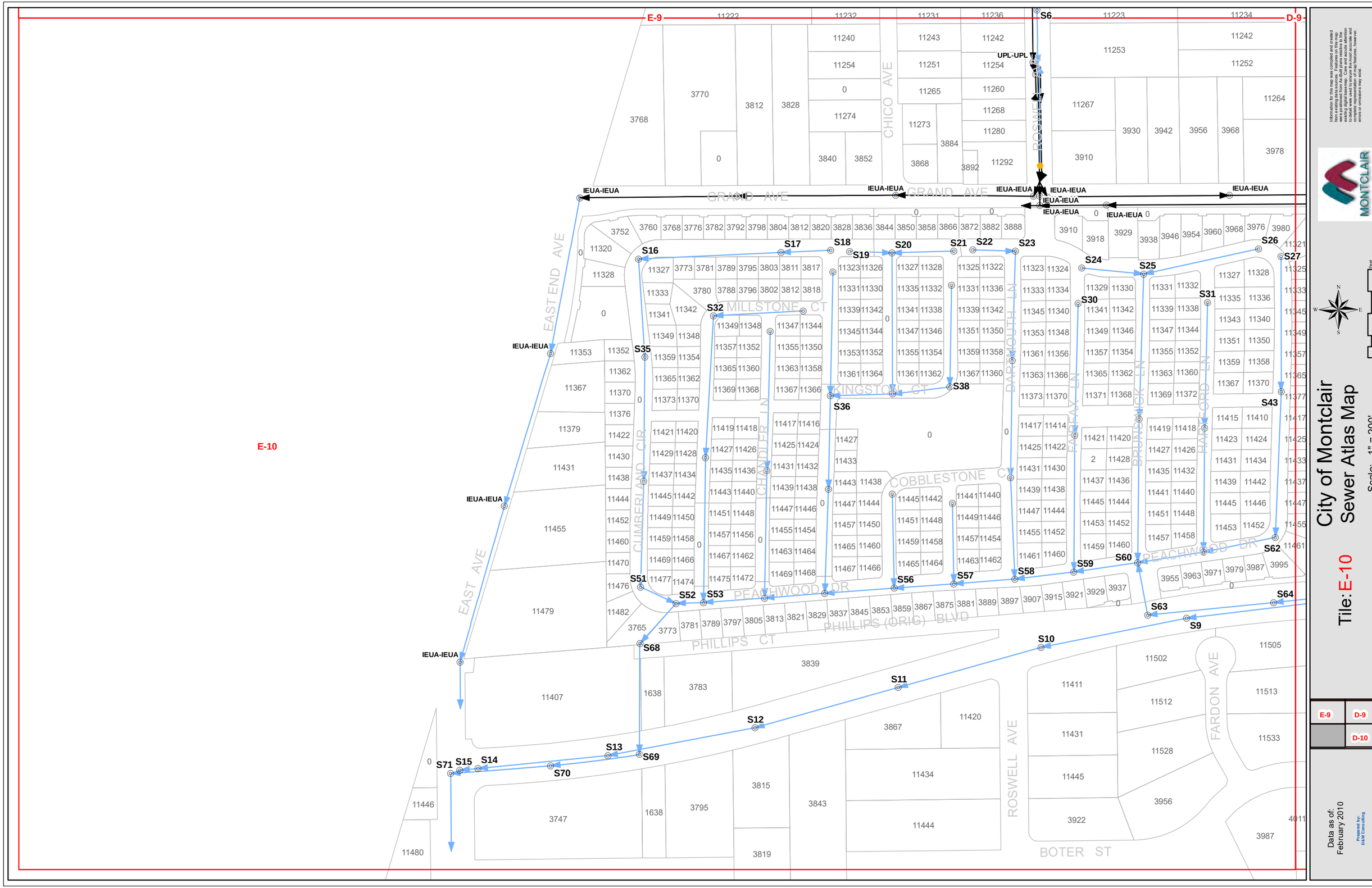
SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
52	7	7/3/1989	Upland-Roswell to 9th.tif	4	E-9
53	8	7/3/1989	Upland-Roswell to 9th.tif	4	E-9
54	9	7/3/1989	Upland-9th to SAC.tif	4	E-9
55	10	7/3/1989	Upland-9th to SAC.tif	4	E-9
56	11	7/3/1989	Upland-9th to SAC.tif	4	E-9
57	12	7/3/1989	Upland-9th to SAC.tif	4	E-9
58	13	7/3/1989	Upland-SAC 9th to Mission.tif	4	E-9
59	14	7/3/1989	Upland-SAC 9th to Mission.tif	4	E-9
60	15	7/3/1989	Upland-SAC 9th to Mission.tif	4	E-9
1238	S1	1/8/1963	009_1109.tif	4	E-9
1237	S2	1/8/1963	009_1109.tif	4	E-9
1236	S3	1/8/1963	009_1109.tif	4	E-9
1235	S4	1/8/1963	009_1109.tif	4	E-9
1386	S5	1/8/1963	008_1108.tif	4	E-9
1385	S6	6/2/1988	008_1108.tif	4	E-9



E-8
D-8
E-9
D-9
D-10
S1
S2
S3
S5
S6
UPL-UPL
NINTH AVE
CHICO AVE
City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: E-9
Data as of:
February 2010
Prepared by:
D&W Consulting
MONTCLAIR

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
7648	-9	-9	6/2/1980	27	1	VCP	0.00	-9	-9.00	D4563.tif	4	E-10	VCP	34.17
106	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.01		0.00	Upland-Roswell to 9th.tif	4	E-10	VCP	27.60
42	NOMHID	NOMHID	08130713	8	1	VCP	0.00		217.17	Peachwood Phillips Sewer.tif	4	E-10	VCP	210.16
43	NOMHID	NOMHID	08130713	8	1	VCP	0.01		217.68	Peachwood Phillips Sewer.tif	4	E-10	VCP	235.67
44	NOMHID	NOMHID	08130713	8	1	VCP	0.01		177.48	Peachwood Phillips Sewer.tif	4	E-10	VCP	184.06
370	NOMHID	S12	1/8/1963	8	1	UNK	-9.00	-9	-9.00	007_1107.tif	4	E-10	UNK	5.50
726	NOMHID	NOMHID	6/15/1967	36	1	VCP	0.00	-9	-9.00	NRWL-13.tif	4	E-10	VCP	44.13
3566	NOMHID	NOMHID	6/2/1988	27	1	VCP	0.00	-9	49.00	D4563.tif	4	E-10	VCP	21.99
3567	NOMHID	NOMHID	6/2/1988	24	1	VCP	-9.00	-9	33.60	D4563.tif	4	E-10	VCP	40.02
3568	NOMHID	S8	6/2/1988	24	1	VCP	-9.00	-9	33.60	D4563.tif	4	E-10	VCP	36.82
3575	NOMHID	S9	3/1/1978	30	1	UNK	0.00	-9	-9.00	D4352-001 plan &profile sta 399 & 419.tif	4	E-10	UNK	427.79
3871	NOMHID	S13		8	1	UNK	-9.00	-9	-9.00	006_1106.tif	4	E-10	UNK	7.61
3872	NOMHID	S16		18	1	UNK	-9.00	-9	-9.00	006_1106.tif	4	E-10	UNK	6.11
3516	NOMHID	NOMHID	6/15/1967	36	1	VCP	0.00	-9	-9.00	NRWL-13.tif	4	E-10	VCP	156.36
3517	NOMHID	NOMHID	6/15/1967	36	1	VCP	0.00	-9	-9.00	NRWL-13.tif	4	E-10	VCP	500.43
4580	NOMHID	NOMHID	08130713	8	1	VCP	0.00		216.23	Peachwood Phillips Sewer.tif	4	E-10	VCP	261.57
7396	NOMHID	NOMHID	6/2/1988	27	1	VCP	0.00	-9	78.00	D4563.tif	4	E-10	VCP	92.42
7647	NOMHID	NOMHID	7/3/1989	18	1	VCP	0.00	-9	0.00	Upland-Roswell to 9th.tif	4	E-10	VCP	73.11
10161	NOMHID	S12	1/8/1963	27	1	VCP	0.00	-9	346.02	007_1107.tif	4	E-10	VCP	323.87
10318	NOMHID	NOMHID	6/2/1988	8	1	VCP	0.00	-9	-9.00	D4563.tif	4	E-10	VCP	237.26
10319	NOMHID	NOMHID	6/2/1988	30	1	VCP	0.00	-9	210.00	D4563.tif	4	E-10	VCP	187.51
11317	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	E-10	VCP	350.40
11318	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	E-10	VCP	349.05
11319	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	E-10	VCP	348.60
11320	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	E-10	VCP	349.75
11321	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	E-10	VCP	351.17
11322	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	E-10	VCP	306.90
11323	NOMHID	NOMHID	3/28/2006	8	1	VCP	0.00		0.00	Tract 17509_SwImp01.TIF	4	E-10	VCP	42.67
10163	S11	S13	1/8/1963	27	1	VCP	0.00	-9	369.74	007_1107.tif	4	E-10	VCP	369.00
10162	S12	S11	1/8/1963	27	1	VCP	0.00	-9	373.53	007_1107.tif	4	E-10	VCP	373.00
10142	S13	S14		24	1	VCP	0.01	-9	362.26	006_1106.tif	4	E-10	VCP	372.22
10143	S14	S15		24	1	VCP	0.01	-9	376.00	006_1106.tif	4	E-10	VCP	374.95
10144	S15	S16		24	1	VCP	0.01	-9	374.01	006_1106.tif	4	E-10	VCP	380.13
3873	S16	NOMHID		24	1	VCP	-9.00	-9	-9.00	006_1106.tif	4	E-10	VCP	111.54
5964	S6	S7		21	1	VCP	0.01	-9	435.48	008_1108.tif	4	E-10	VCP	129.06
7397	S6	S7		21	1	VCP	0.01	-9	435.48	008_1108.tif	4	E-10	VCP	274.34
647				8	1	CDI	0.00		0.00		4	E-10		297.24
648				8	1	VCP	0.00		0.00		4	E-10		125.57
649				8	1	VCP	0.00		0.00		4	E-10		317.29
650				8	1	VCP	0.00		0.00		4	E-10		342.58
651				8	1	VCP	0.00		0.00		4	E-10		172.57
652				8	1	VCP	0.00		0.00		4	E-10		294.99
653				8	1	VCP	0.00		0.00		4	E-10		292.29
654				8	1	VCP	0.00		0.00		4	E-10		276.32
758				8	1	VCP	0.00		0.00		4	E-10		145.90
759				8	1	VCP	0.00		0.00		4	E-10		341.15
760				8	1	VCP	0.00		0.00		4	E-10		337.06
761				8	1	VCP	0.00		0.00		4	E-10		156.35
1234				8	1	VCP	0.00		0.00		4	E-10		309.93
1235				8	1	VCP	0.00		0.00		4	E-10		320.81
1236				8	1	VCP	0.00		0.00		4	E-10		151.25
1237				8	1	VCP	0.00		0.00		4	E-10		140.17
1238				8	1	VCP	0.00		0.00		4	E-10		100.09
1239				8	1	VCP	0.00		0.00		4	E-10		257.22
1240				8	1	VCP	0.00		0.00		4	E-10		275.69
1241				8	1	VCP	0.00		0.00		4	E-10		238.07
1242				8	1	VCP	0.00		0.00		4	E-10		143.49
1243				8	1	VCP	0.00		0.00		4	E-10		188.74
1244				8	1	VCP	0.00		0.00		4	E-10		238.77
1605				8	1	VCP	0.00		0.00		4	E-10		145.75
1606				8	1	VCP	0.00		0.00		4	E-10		99.24
1607				8	1	VCP	0.00		0.00		4	E-10		331.78
1608				8	1	VCP	0.00		0.00		4	E-10		135.76
1609				8	1	VCP	0.00		0.00		4	E-10		290.58
1610				8	1	VCP	0.00		0.00		4	E-10		145.75
1611				8	1	VCP	0.00		0.00		4	E-10		221.23
1612				8	1	VCP	0.00		0.00		4	E-10		140.80
1613				8	1	VCP	0.00		0.00		4	E-10		220.35
1614				8	1	VCP	0.00		0.00		4	E-10		244.16
1615				8	1	VCP	0.00		0.00		4	E-10		163.28
1616				8	1	VCP	0.00		0.00		4	E-10		210.96
1617				8	1	VCP	0.00		0.00		4	E-10		327.04
1618				8	1	VCP	0.00		0.00		4	E-10		299.34

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
50	5	7/3/1989	Upland-Roswell to 9th.tif	4	E-10
51	6	7/3/1989	Upland-Roswell to 9th.tif	4	E-10
1218	IEUA	6/15/1967	NRWL-13.tif	4	E-10
1326	IEUA		006_1106.tif	4	E-10
1327	IEUA		006_1106.tif	4	E-10
1328	IEUA		006_1106.tif	4	E-10
1331	IEUA		006_1106.tif	4	E-10
1382	IEUA	1/8/1963	007_1107.tif	4	E-10
1383	IEUA	1/8/1963	007_1107.tif	4	E-10
1384	IEUA	3/1/1978	008_1108.tif	4	E-10
1455	IEUA	3/1/1978	D4352-001 plan &profile sta 399 & 419.tif	4	E-10
1458	IEUA	6/2/1988	D4563.tif	4	E-10
1459	IEUA	6/2/1988	D4563.tif	4	E-10
1460	IEUA	6/2/1988	D4563.tif	4	E-10
1457	NOMHID	6/2/1988	D4563.tif	4	E-10
2170	S10	3/28/2006	Tract 17509_SwImp01.TIF	4	E-10
2171	S11	3/28/2006	Tract 17509_SwImp01.TIF	4	E-10
2172	S12	3/28/2006	Tract 17509_SwImp01.TIF	4	E-10
2173	S13	3/28/2006	Tract 17509_SwImp01.TIF	4	E-10
2174	S14	3/28/2006	Tract 17509_SwImp01.TIF	4	E-10
2175	S15	3/28/2006	Tract 17509_SwImp01.TIF	4	E-10
1450	S16			4	E-10
1072	S17			4	E-10
1070	S18			4	E-10
996	S19			4	E-10
995	S20			4	E-10
993	S21			4	E-10
979	S22			4	E-10
978	S23			4	E-10
976	S24			4	E-10
975	S25			4	E-10
939	S26			4	E-10
938	S27			4	E-10
1071	S28			4	E-10
994	S29			4	E-10
977	S30			4	E-10
937	S31			4	E-10
1449	S32			4	E-10
1306	S33			4	E-10
1305	S34			4	E-10
1451	S35			4	E-10
1670	S36			4	E-10
1669	S37			4	E-10
1652	S38			4	E-10
1845	S39			4	E-10
1817	S40			4	E-10
846	S41			4	E-10
845	S42			4	E-10
847	S43			4	E-10
1452	S44			4	E-10
1453	S45			4	E-10
1651	S46			4	E-10
1671	S47			4	E-10
1672	S48			4	E-10
1673	S49			4	E-10
1816	S50			4	E-10
1825	S51			4	E-10
1844	S52			4	E-10
1824	S53			4	E-10
1823	S54			4	E-10
1822	S55			4	E-10
1821	S56			4	E-10
1820	S57			4	E-10
1819	S58			4	E-10
1818	S59			4	E-10
808	S60			4	E-10
843	S61			4	E-10
844	S62			4	E-10
807	S63			4	E-10
806	S64			4	E-10
117	S68	7/13/1981	Peachwood Phillips Sewer.tif	4	E-10
114	S69	7/13/1981	Peachwood Phillips Sewer.tif	4	E-10
115	S70	7/13/1981	Peachwood Phillips Sewer.tif	4	E-10



Information for this map was compiled and created from existing data sources. Features on this map were positioned from As-Built plans relative to the existing digital basemap. Care and accute attention to detail were used to ensure the most accurate and complete representation of map features, however, errors or omissions may exist.

MONTCLAIR

City of Montclair
Sewer Atlas Map

Scale: 1" = 200'

Tile: E-10

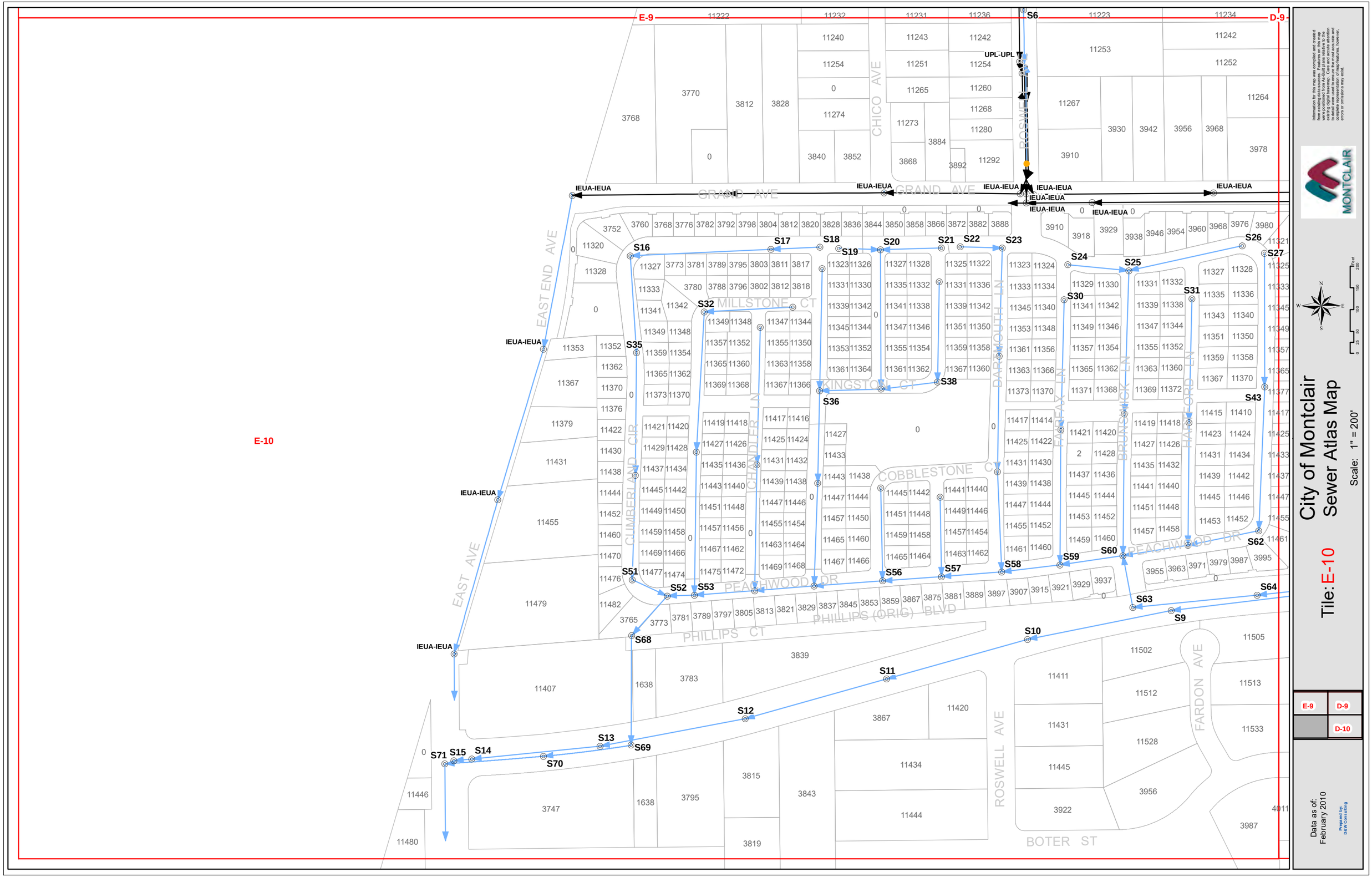
E-9	D-9
	D-10

Data as of: February 2010

Prepared by: D&W Consulting

SEWER LINE														
OBJECTID	UP_STRUCT	DN_STRUCT	INSTALL_DA	DIAMETER	SUBTYPE	MATERIAL	SLOPE	LOAD	LENGTH	IMAGE_	ZONE_	TILE_ID	MAT	SHAPE_Leng
1619				8	1	VCP	0.00		0.00		4	E-10		141.74
1620				8	1	VCP	0.00		0.00		4	E-10		143.89
1621				8	1	VCP	0.00		0.00		4	E-10		64.99
1622				8	1	VCP	0.00		0.00		4	E-10		91.89
1623				8	1	VCP	0.00		0.00		4	E-10		334.06
1624				8	1	VCP	0.00		0.00		4	E-10		340.14
1815				8	1	VCP	0.00		0.00		4	E-10		116.85
1816				8	1	VCP	0.00		0.00		4	E-10		335.20
1817				8	1	VCP	0.00		0.00		4	E-10		231.32
2025				8	1	VCP	0.00		0.00		4	E-10		291.41
2026				8	1	VCP	0.00		0.00		4	E-10		248.52
2485				8	1	VCP	0.00		0.00		4	E-10		126.24

SEWER STRUCTURE					
OBJECTID	STRUCT_ID	INSTALL_DA	IMAGE_	ZONE_	TILE_ID
116	S71	7/13/1981	Peachwood Phillips Sewer.tif	4	E-10
2169	S9	3/28/2006	Tract 17509_SwImp01.TIF	4	E-10


E-9
D-9
E-10
S6
UPL-UPL
IEUA-IEUA
GRAND AVE
CHICO AVE
ROSWELL AVE
EAST END AVE
EAST AVE
MILLSTONE CT
KINGSTON CT
DARTMOUTH LN
FAIRFAX LN
BRUNSWICK LN
HARFORD LN
CHANDLER LN
CUMBERLAND CIR
COBBLESTONE CT
PEACHWOOD DR
PHILLIPS (ORIG) BLVD
PHILLIPS CT
FARDON AVE
BOTER ST
S16
S17
S18
S19
S20
S21
S22
S23
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S71
S15
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S12
S11
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S9
MONTCLAIR
City of Montclair
Sewer Atlas Map
Scale: 1" = 200'
Tile: E-10
Data as of:
February 2010
Prepared by:
D&W Consulting

MONTCLAIR

Inventory of Sewer Parts

Clay

9- 6’ of 4” straight pipe
1- 3 ½’ of 8” straight pipe
4- 4” elbows
1- 8” elbow
3- 8” main to 4” lateral wye
6- 4” lateral wyes
2- 8” band clamps
8- 4” band clamps

ABS (4”)

2- Two way sweeps
1- Long sweep wye
1- Wye
2- Sweeps
4- 90 degree ells
3- 45 degree ells
4- Reducing rubber couplers-(Clay to abs)
2- 4” couplings
1- 3” coupling
5- caps

MONTCLAIR

Condition Assessment Criteria for Pipelines/Manholes



Condition Assessment Ranking Tables

Condition Criticality Ranking

1	2	3	4	5
Good	Adequate	Moderate	Poor	Failing
Maintenance	5 + Years	3 to 5 Years	1 to 2 Years	Immediate

MONTCLAIR

Pipeline Severity Assessment Criteria and Condition Criticality Ranking

Observation	1	2	3	4	5
Cracks • Circular • Longitudinal • Multiple	None	Very small hair line crack(s)	Hair line crack(s) <50% of ID in length	Cracks ≤1/8" wide or >50% of ID in length	Cracks > 1/8" wide
Broken Pipe	None	Connecting cracks, no displacement	Connecting cracks, displacement ≤1/4"	Connecting cracks, displacement >1/4"	Collapsed pipe, impassable
Joints – Offset	Minimal	Up to ½ of the pipe thickness	½ to thickness of the pipe	Thickness of the pipe to 1 ½ times	> 1 ½ times the thickness of the pipe
Joints – Separation	None	Gasket exposed	Bell exposed	Dirt exposed at top	Dirt exposed at invert
Roots	Minimal	10% to 35% fine roots	35% to 60% fine/medium roots	60% to 80% Medium roots	80% to 100% tap root(s) visible
Grease	None	>1/4" thick	¼" to ½" thick	½" to 2" thick	> 2" thick
Debris Accumulation	Minimal	Sporadic deposits (no rocks)	≤10% of ID (no rocks)	10% to 25% of ID and/or rocks	> 25% of ID or impassable
Corrosion (metal pipe only)	None	Minimal	Light tuberculation	Moderate tuberculation	Impassable, heavy tuberculation
Mineral Deposits	None	Minimal (possible infiltration)	≤10% ID thickness	<10% ID thickness	Impassable, heavy mineral deposits
Infiltration	None	Dripping	Seeping	Constant stream	Gushing water
Sag	None	Minimal (probably not perceptible)	V25% of ID	25% to 75% of ID	> 75% of ID
Flow Capacity	Minimal	2/5 or less full	2/5 to ½ full	¼ to ¾ full	¾ to totally full



Preliminary Pipeline Recommendation Criteria

Observation	1	2	3	4	5
Cracks • Circular • Longitudinal • Multiple	No Action	No Action or Rehabilitate	No Action or Rehabilitate	Rehabilitate	Rehabilitate or Replace
Broken Pipe	No Action	No Action or Rehabilitate	Point Repair or Rehabilitate/Replace	Point Repair or Replace	Immediate Point Repair
Joints – Offset	No Action	No Action or Rehabilitate	Point Repair and/or rehabilitate	Point Repair and/or Rehabilitate/Replace	Point Repair and/or Rehabilitate/ Replace
Joints – Separation	No Action	Rehabilitate	Rehabilitate	Point Repair and/or Rehabilitate/Replace	Rehabilitate or Replace
Roots	No Action	Clean and Cut	Clean and Cut	Clean and Cut	Clean and Cut/Replace
Grease	No Action	Clean	Clean	Clean	Clean
Debris Accumulation	No Action	Clean	Clean	Clean	Clean
Corrosion (metal pipe only)	No Action	Jet and Rehabilitate	Jet and Rehabilitate	Replace	Replace
Mineral Deposits	No Action	No Action or Rehabilitate	Point Repair or Rehabilitate	Rehabilitate	Rehabilitate
Infiltration	No Action	No Action or Rehabilitate	Point Repair or Rehabilitate	Rehabilitate	Rehabilitate
Sag	No Action	No Action	Any Option	Replace	Replace
Flow Capacity	No Action	No Action	No Option	Evaluate Capacity	Evaluate Capacity

MONTCLAIR

Manhole Severity Assessment Criteria and Condition Criticality Ranking

Observation	1	2	3	4	5
Cover	Good Condition	Slight Corrosion	Moderate corrosion	Severe corrosion	Missing
Frame	Good Condition	Slight Offset	Offset < 1"	Offset 1" to 3"	Missing or offset > 3"
Grade Adjustments	Good Condition	Hairline cracks	Cracks with gaps or some corrosion	Large gaps or spalling	In pieces and/or offset
Cone/Top	Good Condition	Rough Surface	Exposed aggregate and/or offset < 1"	Exposed aggregate and/or offset 1" to 3"	Dirt visible and/or offset 3"
Wall/Barrel	Good Condition	Rough surface and/or slight offset	Exposed aggregate and/or offset < 1"	Exposed aggregate and/or offset 1" to 3"	Dirt visible and/or offset 3"
Bench	Good Condition	Rough surface	Exposed aggregate	Exposed aggregate, ponding water	Missing concrete, ponding water
Trough	Good Condition	Rough surface	Eroded edges	Deformed trough	No trough
Pipe Seal	Good Condition	Concrete backfill visible	Gaps and shadows visible	Infiltration evident, roots incoming	Dirt visible
Infiltration	Good Condition	Dripping	Seeping	Constant stream	Gushing water
Lining (if applicable)	Good Condition	Tiny bubbles in lining but no visible breaches in lining	Bubbles/separation from MH and visible breaches in lining	Evidence that lining is separating in sections > 1 s.f.	Lining is torn and/or missing

MONTCLAIR

Sewer Televising Inspection Worksheet

Departement of Public Works
Sewer Maintenance Division

Section _____

Pipeline Severity Assessment

Date	Manholes	Location	Footage	Pipe Condition	Joint Offset	Joint Separation	Roots	Grease	Debris	Corrosion	Mineral Desposits	Infiltration	Sag	Flow Capacity	Cracks	Broken Pipe

MONTCLAIR

Sewer Televising Inspection Worksheet

Departement of Public Works
Sewer Maintenance Division

Reccomendations

Date	Manholes	Location	Joint Offset	Joint Separation	Roots	Grease	Debris	Erosion	Corrosion	Mineral Desposits	Infiltration	Sag	Flow Capacity	Cracks	Broken Pipe

SECTION 4

- City of Montclair Standard Plans

City of Montclair

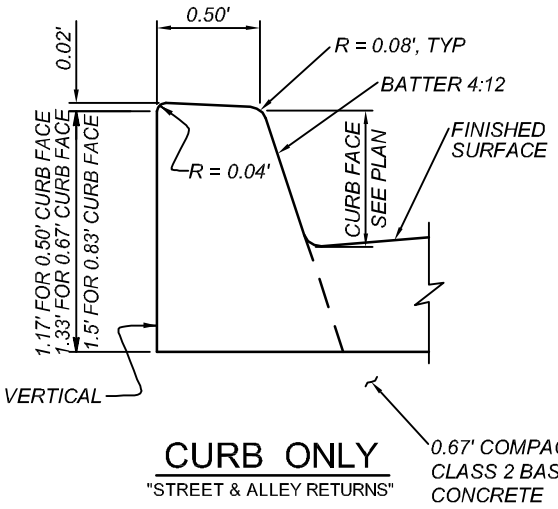
STANDARD PLANS

STD No. 101	CURB DETAILS
STD No. 102	DRIVE APPROACH
STD No. 103	CROSS GUTTER
STD No. 104	ALLEY INTERSECTION
STD No. 105	RIBBON GUTTER
STD No. 106	STREET CROSS SECTION
STD No. 107	STANDARD CUL-DE-SAC
STD No. 108	OFFSET CUL-DE-SAC
STD No. 109	STANDARD KNUCKLE (60' RIGHT-OF-WAY)
STD No. 110	INTERSECTION SIGHT DISTANCE
STD No. 111	BARRICADE
STD No. 112	STREET NAME SIGN
STD No. 113	STREET AND OVERHEAD SIGNS
STD No. 114	SIDEEWALK JOINT LOCATION (NMDSP)
STD No. 115	CENTERLINE TIE NOTES
STD No. 116	WHEELCHAIR RAMP
STD No. 117	WHEELCHAIR RAMP AT EXISTING CURB RETURN
STD No. 118	STREET LIGHTS INSTALLATION DETAILS
-	CATCH BASIN – SEE APWA SPPWC PLAN – PLANS 300 THROUGH 312
STD No. 201	LOCAL DEPRESSION
STD No. 202	SIDEWALK DRAIN OUTLET AND PIPE DRAIN THRU CURB
STD No. 203	WQMP GRAVEL FILTER DETAIL
STD No. 301	STANDARD PAVING AND TRENCH REPAIR
STD No. 302	PLATE BRIDGING
STD No. 401	ECCENTRIC CONE PRECAST CONCRETE MANHOLE
STD No. 402	SEWER LATERAL
STD No. 403	STANDARD CHIMNEY PIPE
STD No. 404	SEWER SADDLE
STD No. 405	SEWER TERMINAL CLEAN-OUT
STD No. 406	CONCRETE CRADLE & ENCASEMENT
STD No. 407	MANHOLE FRAME AND COVER
STD No. 408	STANDARD PLAN DROP MANHOLE
STD No. 409	BREAK INTO AND RECHANNEL AN EXISTING MANHOLE
STD No. 410	SAMPLING STATION
STD No. 411	SAND INTERCEPTOR
STD No. 412	GREASE INTERCEPTOR
-	STANDARD TREE WELL WITH TREE – SEE APWA SPPWC PLANS 518, 519 & 520
-	ROOT BARRIER – SEE APWA SPPWC PLAN 523
STD DETAIL A	MICRO TRENCHING

CITY OF MONTCLAIR

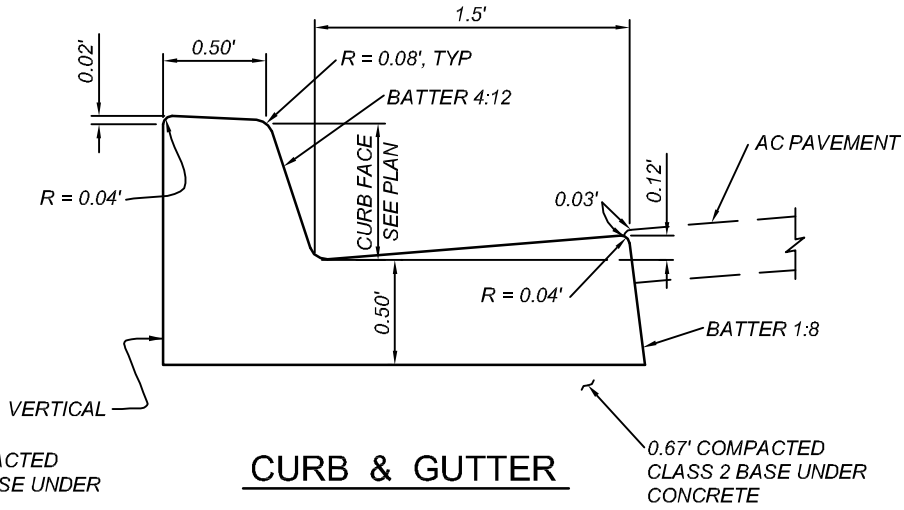
ABBREVIATIONS

AC	= ASPHALT CONCRETE
BCR	= BEGIN CURB RETURN
BLDG	= BUILDING
CONC	= CONCRETE
CF	= CUBIC FEET
℄	= CENTER LINE
CONST	= CONSTRUCTION
DIAM	= DIAMETER
ECR	= END CURB RETURN
EJ	= EXPANSION JOINT
FL	= FLOW LINE
FT	= FEET
GA	= GAUGE
GALV	= GALVANIZED
MAX	= MAXIMUM
MH	= MANHOLE
MIN	= MINIMUM
NO	= NUMBER
OC	= ON CENTER
OD	= OUTSIDE DIAMETER
P	= PLATE
PCC	= PORTLAND CEMENT CONCRETE
PKWY	= PARKWAY
PL	= PROPERTY LINE
PT	= POINT OF TANGENCY
PWC	= POINT WORKING CENTER
R	= RADIUS
R/W	= RIGHT OF WAY
SC	= SAW CUT
SQFT	= SQUARE FEET
STD	= STANDARD
TC	= TOP OF CURB
TI	= TRAFFIC INDEX
TYP	= TYPICAL
VCP	= VITRIFIED CLAY PIPE
WPJ	= WEAKEND PLANE POINT

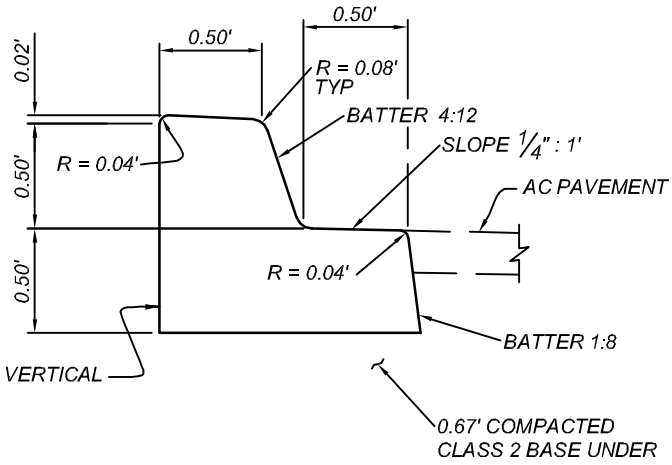


CURB ONLY

"STREET & ALLEY RETURNS"



CURB & GUTTER



MEDIAN CURB

NOTES:

1. CLASS 560-C-3250 PCC SHALL BE USED UNLESS OTHERWISE SPECIFIED.
2. CURB SHALL BE SCORED AT 5' INTERVALS TO CONFORM TO SIDEWALK SCORING, WITH EXPANSION JOINTS PLACED NOT TO EXCEED 60' OC AND @ BCR'S / ECR'S. WEAKENED PLANE JOINTS NOT TO EXCEED 15 FT OC.
3. IMMEDIATELY AFTER COMPLETION OF FINISHING, CONCRETE CURING COMPOUND SHALL BE APPLIED AS A FINE SPRAY TO ALL EXPOSED SURFACES INCLUDING THE BACK OF CURB.
4. CURB AND GUTTER SHALL NOT BE CONSTRUCTED MONOLITHIC WITH SIDEWALK OR DRIVE APPROACH.

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
No. C 78044
CIVIL
STATE OF CALIFORNIA

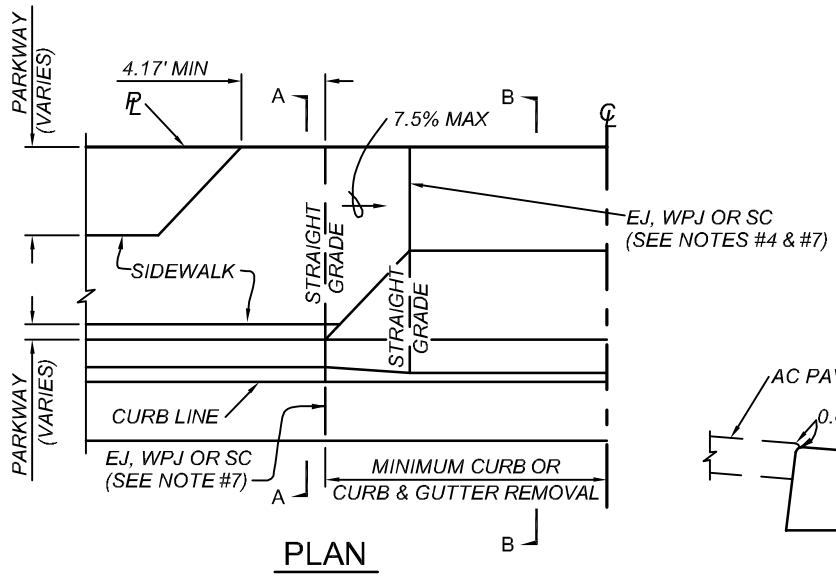
APPROVED BY:

09-20-19
NOEL A. CASTILLO — DATE
CITY ENGINEER

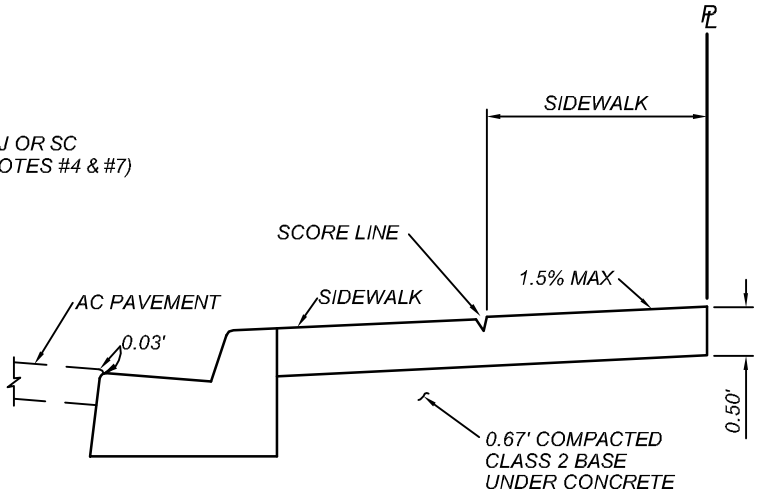
CITY OF MONTCLAIR

CURB DETAILS

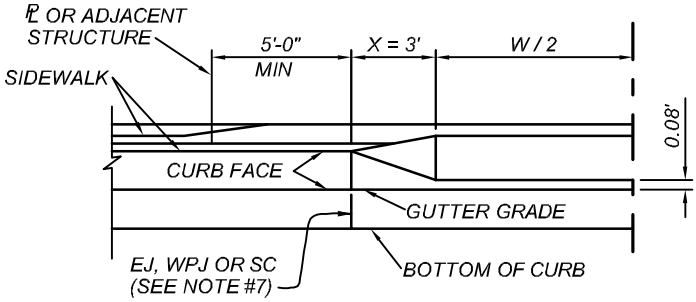
NO SCALE	STD. PLAN NO. 101	SHEET 1 of 1



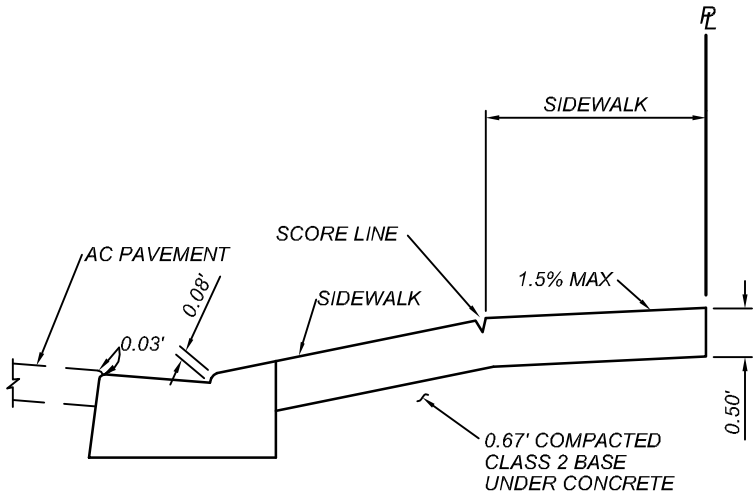
PLAN



SECTION A-A



FRONT ELEVATION



SECTION B-B

NOTES:

1. MINIMUM "W" SHALL BE 12'.
2. MINIMUM FULL CURB BETWEEN DRIVEWAYS SHALL BE 1.50'.
3. MINIMUM CLEARANCE TO FIRE HYDRANTS, LIGHT STANDARDS, POWER POLES AND OTHER OBSTRUCTIONS SHALL BE 5' FROM TOP OF "X".
4. WHERE SIDEWALKS EXIST, WITHIN LIMITS OF A RESIDENTIAL DRIVEWAY, THE WALK MAY REMAIN AT OPTION OF THE INSPECTOR IF IN GOOD CONDITION.
5. WHERE CURB & GUTTER EXIST, BOTH SHALL BE REMOVED AND REPLACED AS SHOWN FOR MINIMUM CURB REMOVAL.
6. ALL DRIVEWAYS SHALL BE 560-C-3250 PCC.
7. CURB AND WALK SHALL BE REMOVED BY SAW CUTTING OR, IF WITHIN 5', TO A WEAKENED PLANE OR EXPANSION JOINT.
8. FOR CURB-ADJACENT PARKWAY WITH SIDEWALK, SEE CALTRANS STANDARD PLAN A87A FOR SIDEWALK TRANSITIONS.

REGISTERED CIVIL ENGINEER
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CIVIL
STATE OF CALIFORNIA

APPROVED BY:

09-20-19
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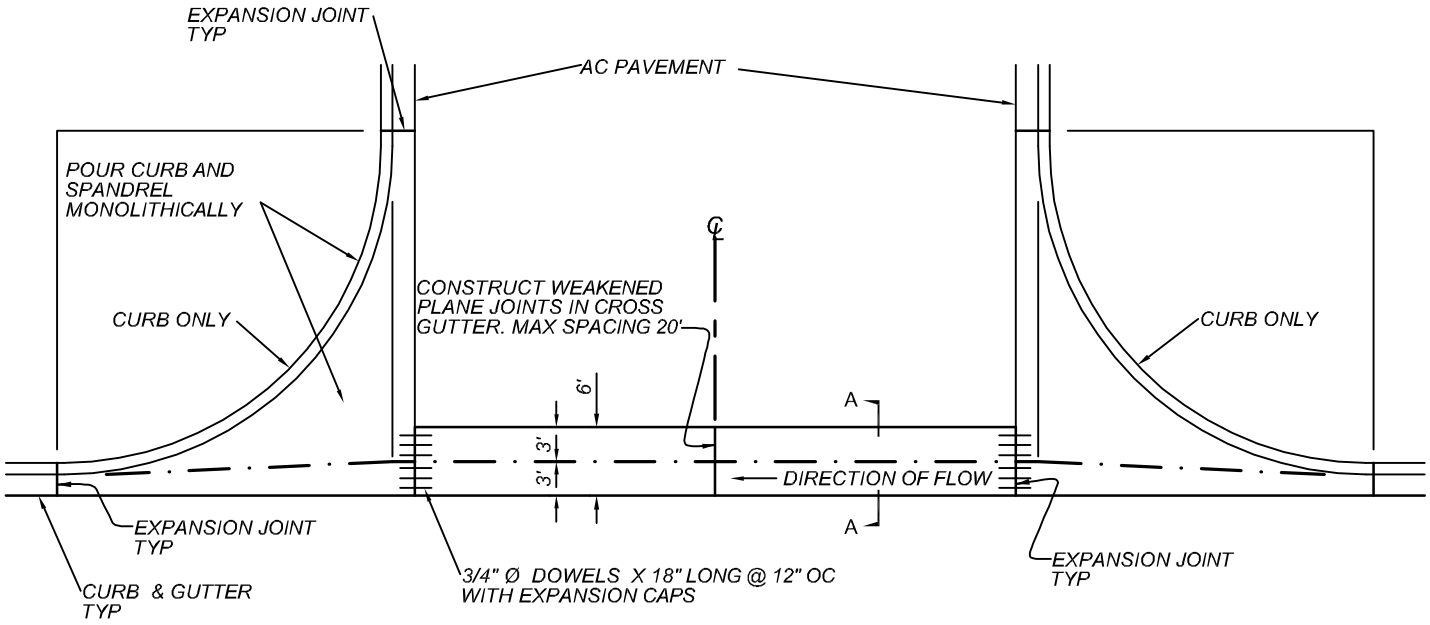
CITY ENGINEER

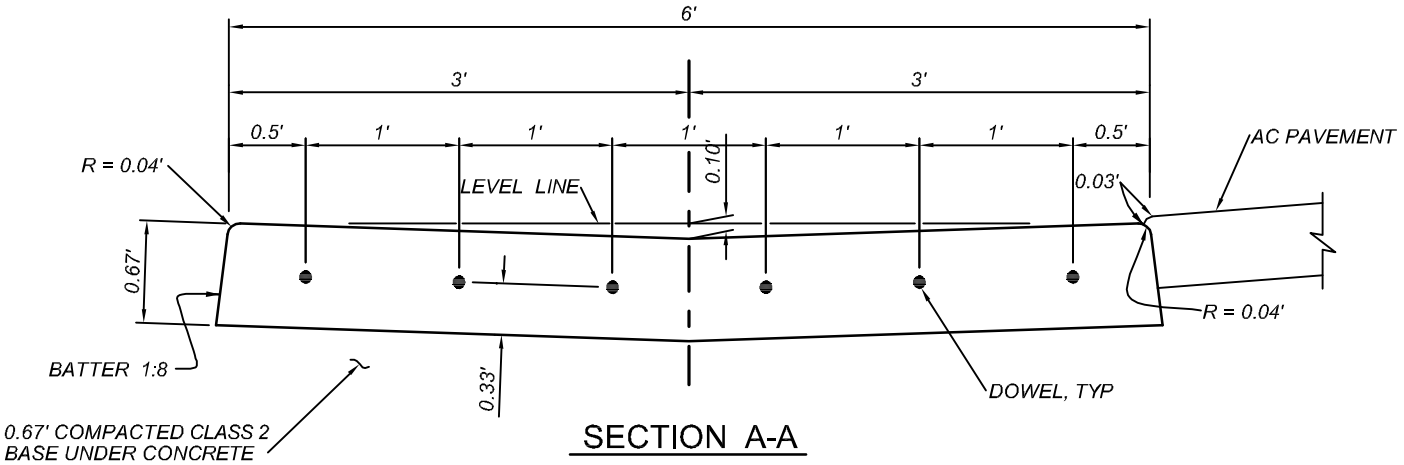
CITY OF MONTCLAIR

DRIVE APPROACH

NO SCALE	STD. PLAN NO. 102	SHEET 1 of 1



PLAN



SECTION A-A

NOTES:

1. CLASS 560-C-3250 PCC SHALL BE USED FOR COMPLETE SPANDREL AND CROSS GUTTER AS SHOWN.
2. IMMEDIATELY AFTER COMPLETION OF FINISHING, CONCRETE CURING COMPOUND SHALL BE APPLIED AS A FINE SPRAY TO ALL EXPOSED SURFACES INCLUDING THE BACK OF CURB.

REGISTERED CIVIL ENGINEER
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No. C 78044
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STATE OF CALIFORNIA

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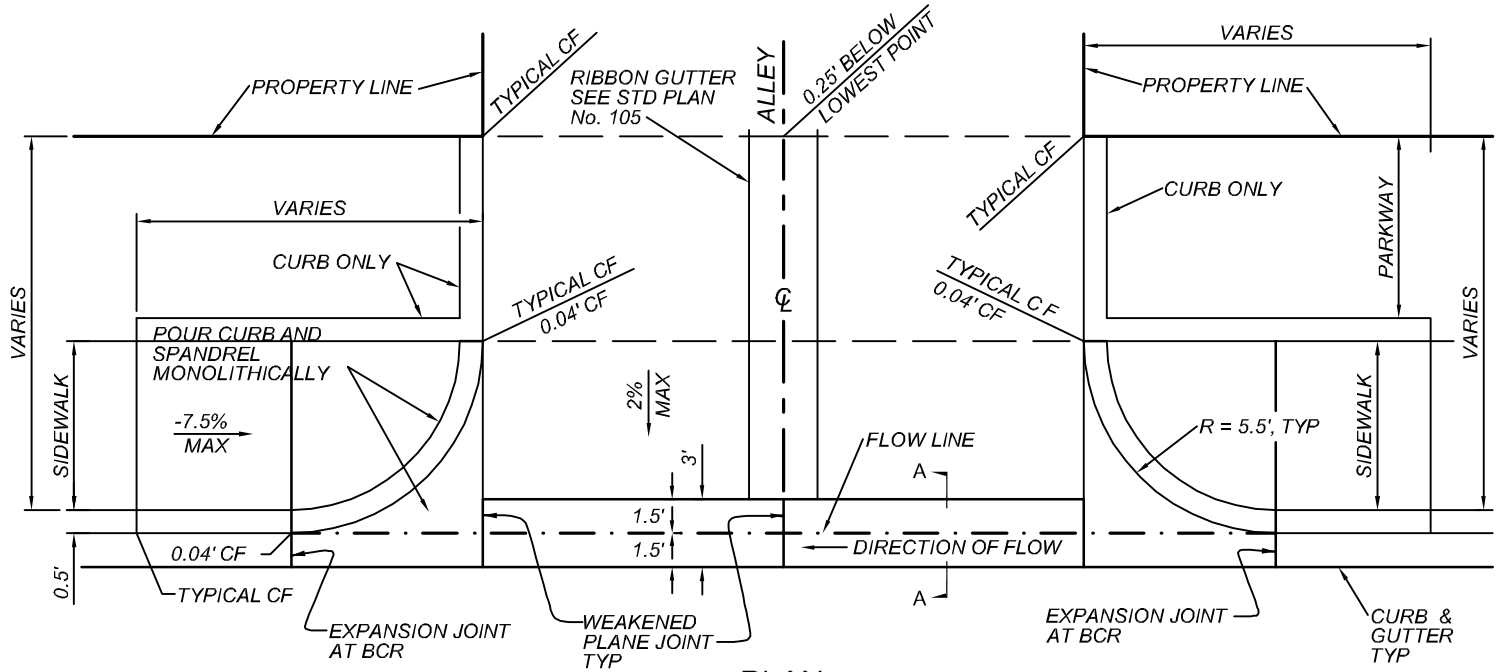
CITY OF MONTCLAIR

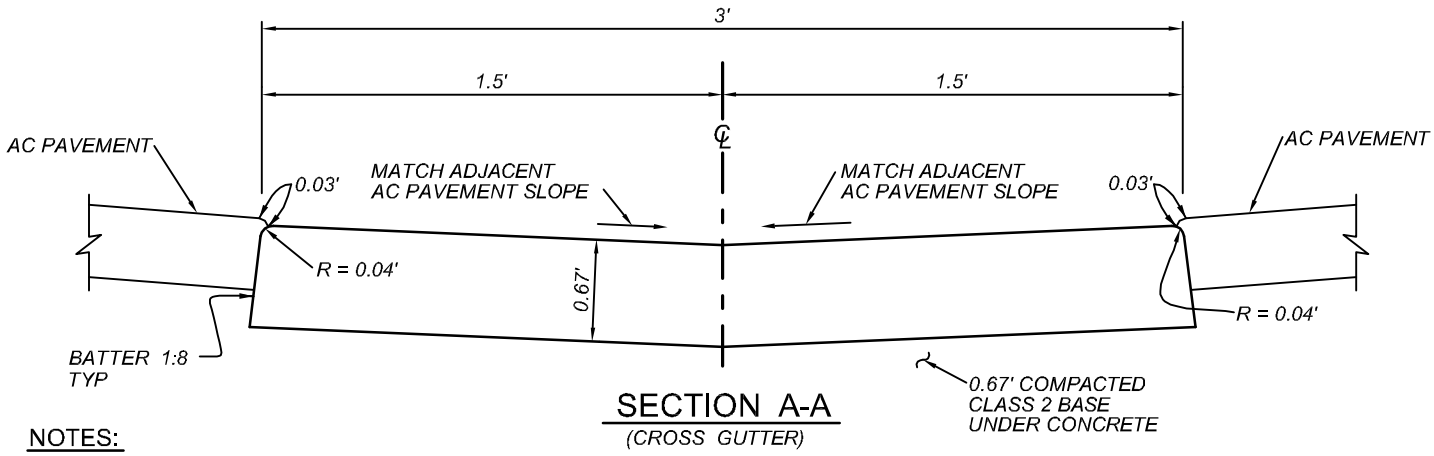
SPANDREL AND CROSS GUTTER

NO SCALE	STD. PLAN NO. 103	SHEET 1 of 1

321



PLAN
CURB-ADJACENT SIDEWALK



SECTION A-A
(CROSS GUTTER)

NOTES:

1. CLASS 560-C-3250 PCC SHALL BE USED UNLESS OTHERWISE SPECIFIED.
2. NOTE TOP OF CURB ELEVATION AT PROPERTY LINE TO BE SET AT 1/4" PER FT SLOPE ABOVE TC AT CURB PI.
3. CURB FROM ECR TO PROPERTY LINE TO BE SET AT 1/4" PER FT SLOPE.
4. IMMEDIATELY AFTER COMPLETION OF FINISHING, CONCRETE CURING COMPOUND SHALL BE APPLIED AS A FINE SPRAY TO ALL EXPOSED SURFACES INCLUDING THE BACK OF CURB.
5. WHEN CROSS GUTTER IS TO BE POURED SEPARATE FROM SPANDREL, PLACE 3- 3/4"Ø DOWELS, 1.5' LONG TOGETHER WITH EXPANSION JOINTS AT EDGE OF SPANDREL.
6. WHEN CROSS GUTTER IS POURED MONOLITHIC WITH SPANDREL, A WEAKENED PLANE JOINT SHALL BE CONSTRUCTED AT CENTER OF CROSS GUTTER.

90° INTERSECTION - CROSS GUTTER AREA - SQ.FT.	
20' ALLEY	89.5

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
No. C 78044
CIVIL
STATE OF CALIFORNIA

APPROVED BY:

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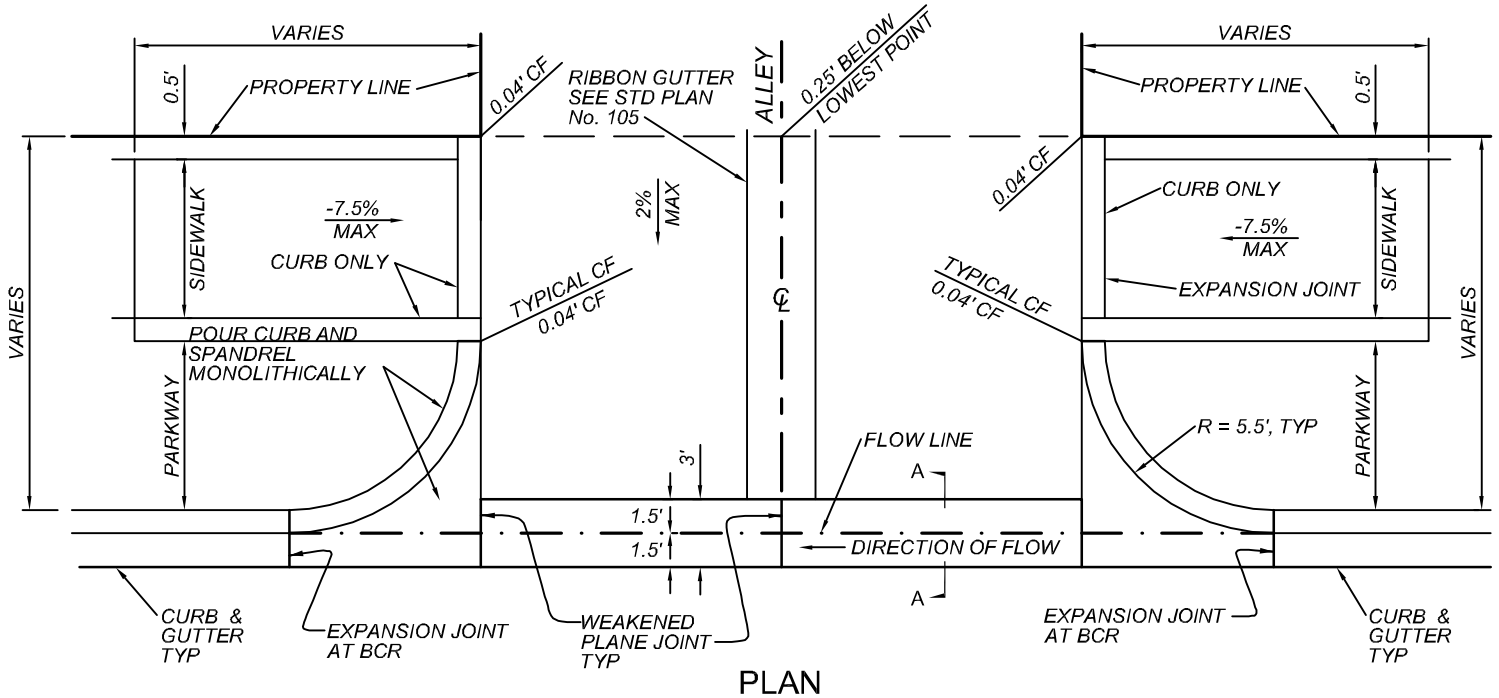
CITY ENGINEER

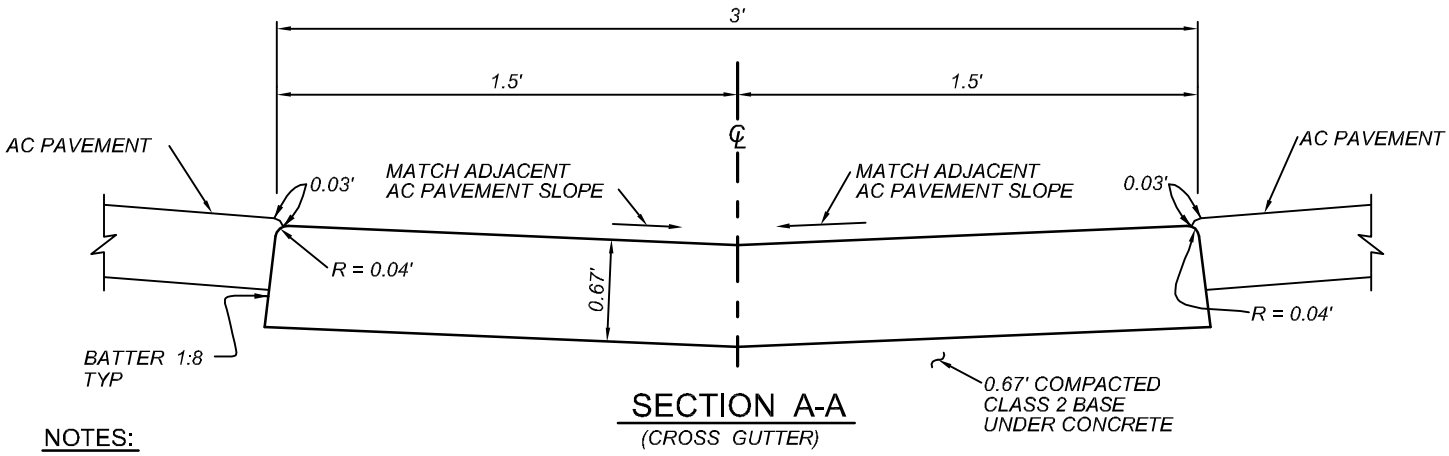
CITY OF MONTCLAIR

ALLEY INTERSECTION

NO SCALE	STD. PLAN NO. 104	SHEET 1 of 2



PLAN
CURB-ADJACENT PARKWAY



SECTION A-A
(CROSS GUTTER)

NOTES:

1. CLASS 560-C-3250 PCC SHALL BE USED UNLESS OTHERWISE SPECIFIED.
2. NOTE TOP OF CURB ELEVATION AT PROPERTY LINE TO BE SET AT 1/4" PER FT SLOPE ABOVE TC AT CURB PI.
3. CURB FROM ECR TO PROPERTY LINE TO BE SET AT 1/4" PER FT SLOPE.
4. IMMEDIATELY AFTER COMPLETION OF FINISHING, CONCRETE CURING COMPOUND SHALL BE APPLIED AS A FINE SPRAY TO ALL EXPOSED SURFACES INCLUDING THE BACK OF CURB.
5. WHEN CROSS GUTTER IS TO BE POURED SEPARATE FROM SPANDREL, PLACE 3- 3/4"Ø DOWELS, 1.5' LONG TOGETHER WITH EXPANSION JOINTS AT EDGE OF SPANDREL.
6. WHEN CROSS GUTTER IS POURED MONOLITHIC WITH SPANDREL, A WEAKENED PLANE JOINT SHALL BE CONSTRUCTED AT CENTER OF CROSS GUTTER.

90° INTERSECTION - CROSS GUTTER AREA - SQ.FT.	
20' ALLEY	89.5

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
No. C 78044
CIVIL
STATE OF CALIFORNIA

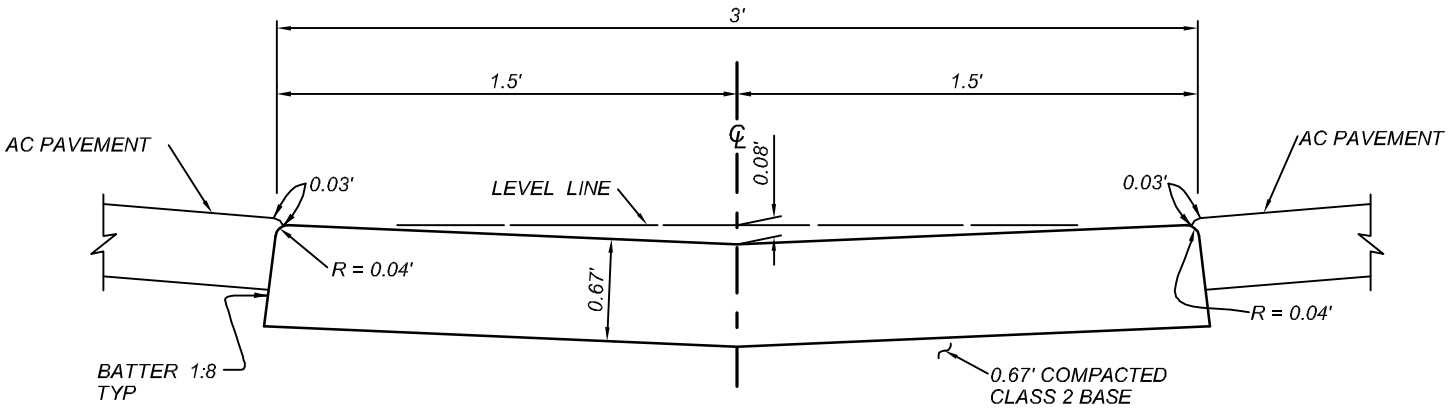
APPROVED BY:

09-20-19
NOEL A. CASTILLO — DATE
CITY ENGINEER

CITY OF MONTCLAIR

ALLEY INTERSECTION

NO SCALE	STD. PLAN NO. 104	SHEET 2 of 2



SECTION

NOTES:

1. CLASS 560-C-3250 PCC SHALL BE USED UNLESS OTHERWISE SPECIFIED.
2. EXPANSION JOINTS SHALL BE PLACED NOT TO EXCEED 60' OC & WEAKENED PLANE JOINTS NOT TO EXCEED 15' OC.
3. IMMEDIATELY AFTER COMPLETION OF FINISHING, CONCRETE CURING COMPOUND SHALL BE APPLIED AS A FINE SPRAY TO ALL EXPOSED SURFACES INCLUDING THE BACK OF CURB.

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
No. C 78044
CIVIL
STATE OF CALIFORNIA

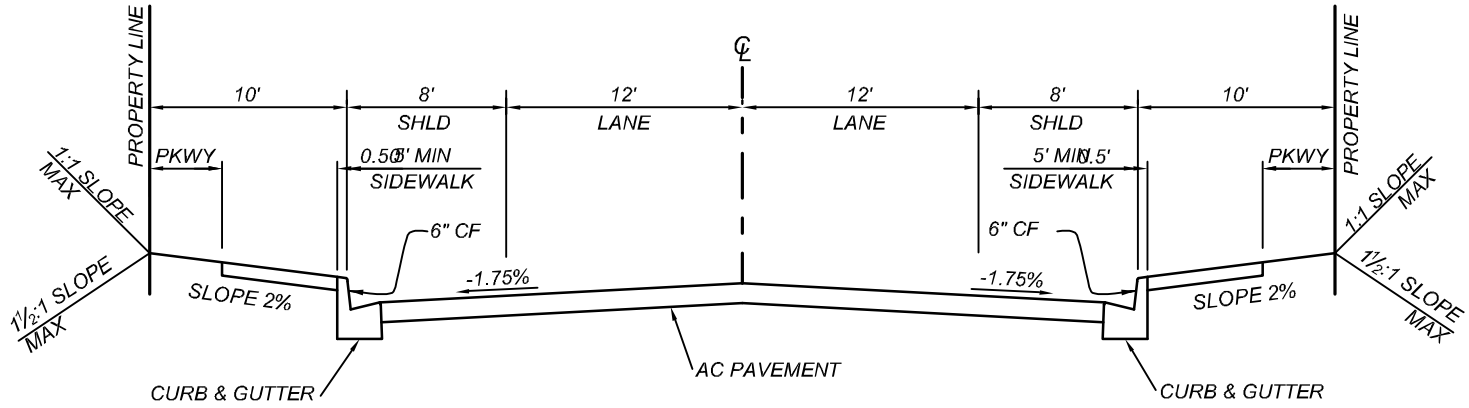
APPROVED BY:

09-20-19
NOEL A. CASTILLO — DATE
CITY ENGINEER

CITY OF MONTCLAIR

RIBBON GUTTER

NO SCALE	STD. PLAN NO. 105	SHEET 1 of 1



SECTION

MINIMUM A.C. PAVEMENT THICKNESS REQUIREMENTS

MAJOR STEET	6"
SECONDARY STREET	5"
COLLECTOR STREET	4"
INDUSTRIAL STREET	5"
LOCAL STREET	4"

NOTES:

1. CROSS SECTIONS AND CURB LOCATIONS ARE TO BE DETERMINED BY THE CITY ENGINEER FOR ALL OTHER THAN 60' R/W.
2. SIDEWALK SHALL BE ADJACENT TO CURB UNLESS IT IS NECESSARY TO PROVIDE A PARKWAY TO MATCH EXISTING CONDITIONS, AS DETERMINED BY THE CITY ENGINEER.
3. THICKNESS OF PAVEMENT AND BASE SHALL BE DETERMINED FROM TI & R VALUE FROM SOILS TEST AND SO INDICATED ON THE PLANS.

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
No. C 78044
CIVIL
STATE OF CALIFORNIA

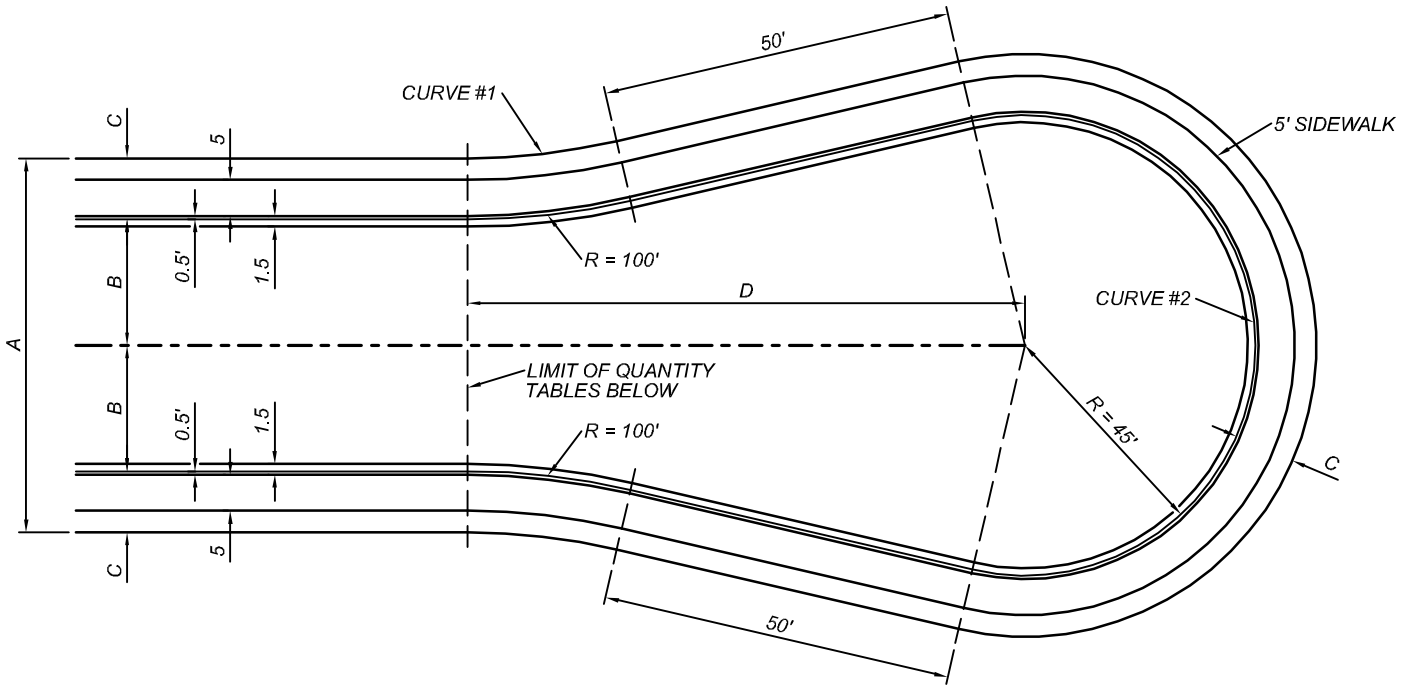
APPROVED BY:

09-20-19
NOEL A. CASTILLO — DATE
CITY ENGINEER

CITY OF MONTCLAIR

STREET CROSS SECTION

NO SCALE	STD. PLAN NO. 106	SHEET 1 of 1



				CURVE #1							CURVE #2				
A	B	C	D	Δ	CURB			℄			Δ	CURB		℄	
					R	L	T	R	L	T		R	L	R	L
50	18	7	97.99	20°40'48"	100	36.09	18.25	93	33.57	16.97	221°21'35"	45	173.86	52	200.90
60	18	12	97.99	20°40'48"	100	36.09	18.25	88	31.76	16.06	221°21'35"	45	173.86	57	220.22
60	20	10	95.53	19°29'44"	100	34.03	17.18	90	30.62	15.46	218°59'28"	45	172.00	55	210.22

A	B	CURB LENGTH FT.	SIDEWALK - SQ. FT.		PAVEMENT SQ. FT. 1.5' GUTTER
			ADJACENT TO CURB	ADJACENT TO ℄	
50	18	346.04	1777.33	1793.04	8770.15
60	18	346.04	1777.33	1871.58	8770.15
60	20	340.05	1747.36	1810.19	8841.78

NOTES:

1. SIDEWALK LOCATION SHALL BE ADJACENT TO THE CURB UNLESS DETERMINED OTHERWISE BY THE CITY ENGINEER.
2. ALL STREET RIGHT OF WAY WIDTHS SHALL BE 60' UNLESS OTHERWISE APPROVED.

REGISTERED CIVIL ENGINEER
MONICA HEREDIA
No. C 56547
CIVIL
STATE OF CALIFORNIA

APPROVED BY:

M Heredia

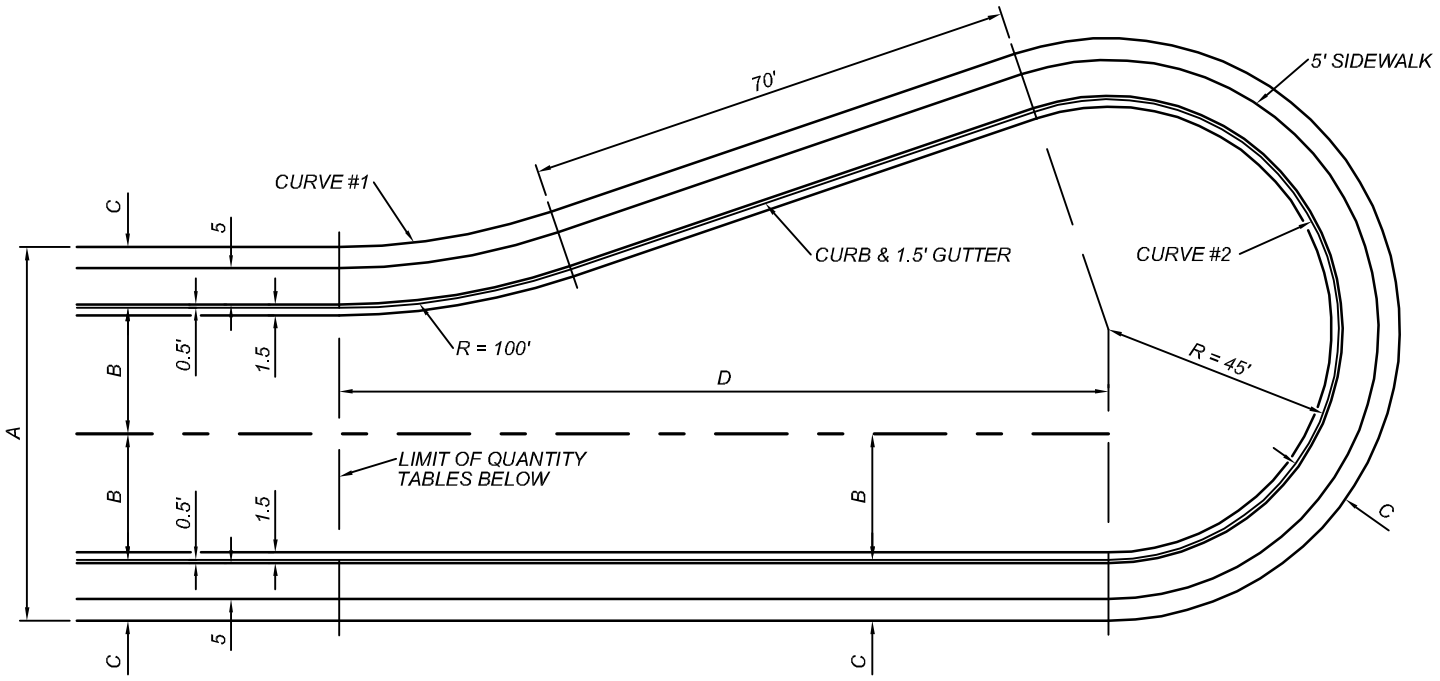
MONICA HEREDIA
CITY ENGINEER

05-14-24
DATE

CITY OF MONTCLAIR

STANDARD CUL-DE-SAC

NO SCALE	STD. PLAN NO. 107	SHEET 1 of 1



				CURVE #1							CURVE #2				
A	B	C	D	Δ	CURB			℄			Δ	CURB		℄	
					R	L	T	R	L	T		R	L	R	L
50	18	7	132.83	29°48'59"	100	52.04	26.62	93	48.40	24.76	209°48'59"	45	164.79	52	190.42
60	18	12	132.83	29°48'59"	100	52.04	26.62	88	45.79	23.43	209°48'59"	45	164.79	57	208.73
60	20	10	130.00	28°04'21"	100	49.00	25.00	90	44.10	22.50	208°04'21"	45	163.42	55	199.74

A	B	CURB LENGTH FT.	SIDEWALK - SQ. FT.		PAVEMENT SQ. FT. 1.5' GUTTER
			ADJACENT TO CURB	ADJACENT TO ℄	
50	18	419.66	2145.42	2161.13	10783.89
60	18	419.66	2145.42	2239.67	10783.89
60	20	412.42	2109.20	2172.03	10916.31

NOTES:

1. SIDEWALK LOCATION SHALL BE ADJACENT TO THE CURB UNLESS DETERMINED OTHERWISE BY THE CITY ENGINEER.
2. ALL STREET RIGHT OF WAY WIDTHS SHALL BE 60' UNLESS OTHERWISE APPROVED.

REGISTERED CIVIL ENGINEER
MONICA HEREDIA
No. C 56547
CIVIL
STATE OF CALIFORNIA

APPROVED BY:

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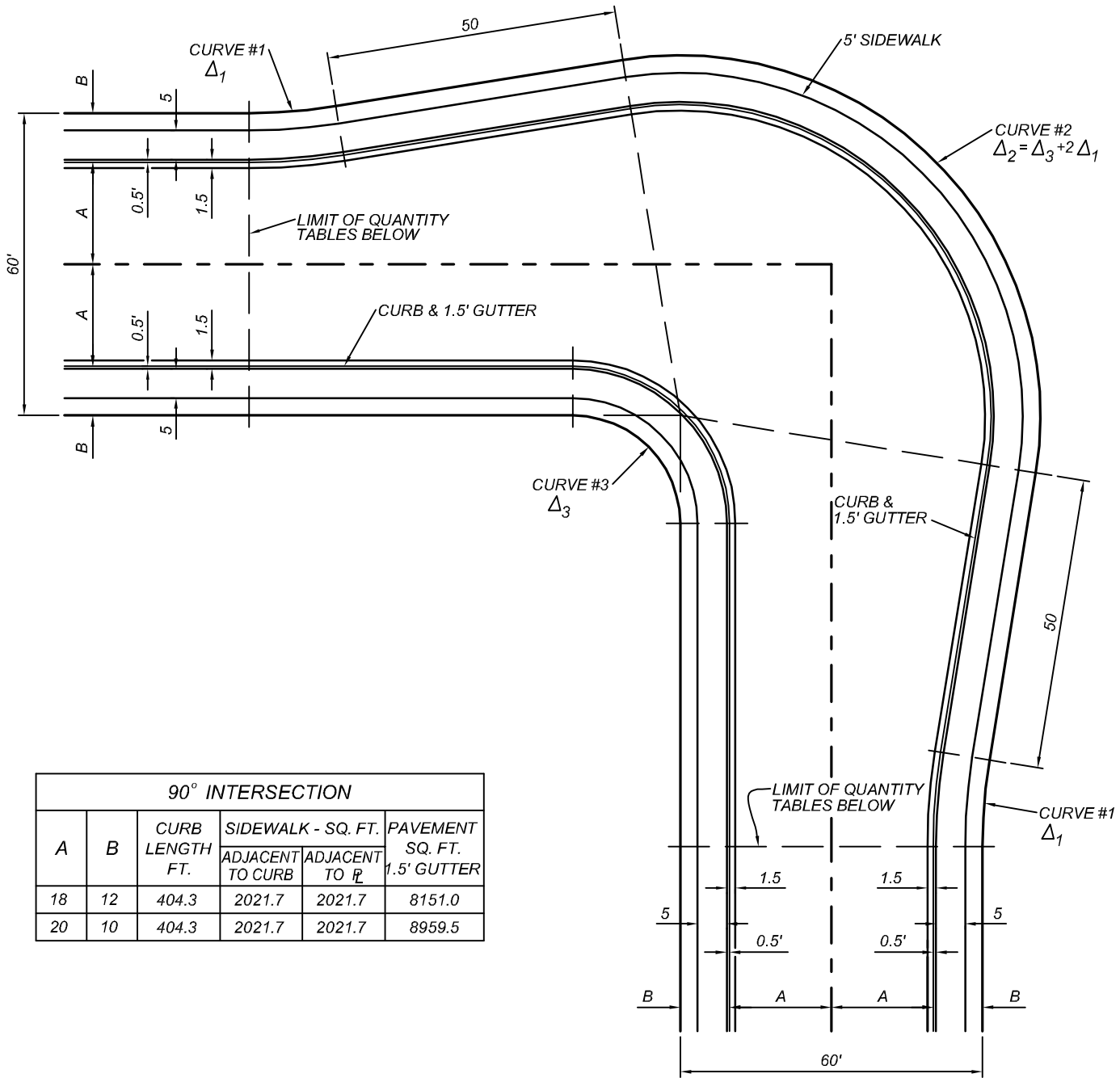
05-14-24
DATE

MONICA HEREDIA
CITY ENGINEER

CITY OF MONTCLAIR

OFFSET CUL-DE-SAC

NO SCALE	STD. PLAN NO. 108	SHEET 1 of 1



90° INTERSECTION					
A	B	CURB LENGTH FT.	SIDEWALK - SQ. FT. ADJACENT TO CURB	SIDEWALK - SQ. FT. ADJACENT TO ℄	PAVEMENT SQ. FT. 1.5' GUTTER
18	12	404.3	2021.7	2021.7	8151.0
20	10	404.3	2021.7	2021.7	8959.5

			CURVE #1							CURVE #2			CURVE #3		
A	B	C	Δ_1	CURB			℄			Δ_2	CURB		Δ_3	CURB	
				R	L	T	R	L	T		R	℄		R	℄
18	12	74.83	9°09'36"	102	16.31	8.17	90	14.39	7.21	VARIES	58	70	VARIES	27	15
20	10	74.83	9°09'36"	100	15.99	8.01	90	14.39	7.21	VARIES	60	70	VARIES	25	15

NOTE:

1. SIDEWALK LOCATION SHALL BE ADJACENT TO THE CURB UNLESS DETERMINED OTHERWISE BY THE CITY ENGINEER.

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
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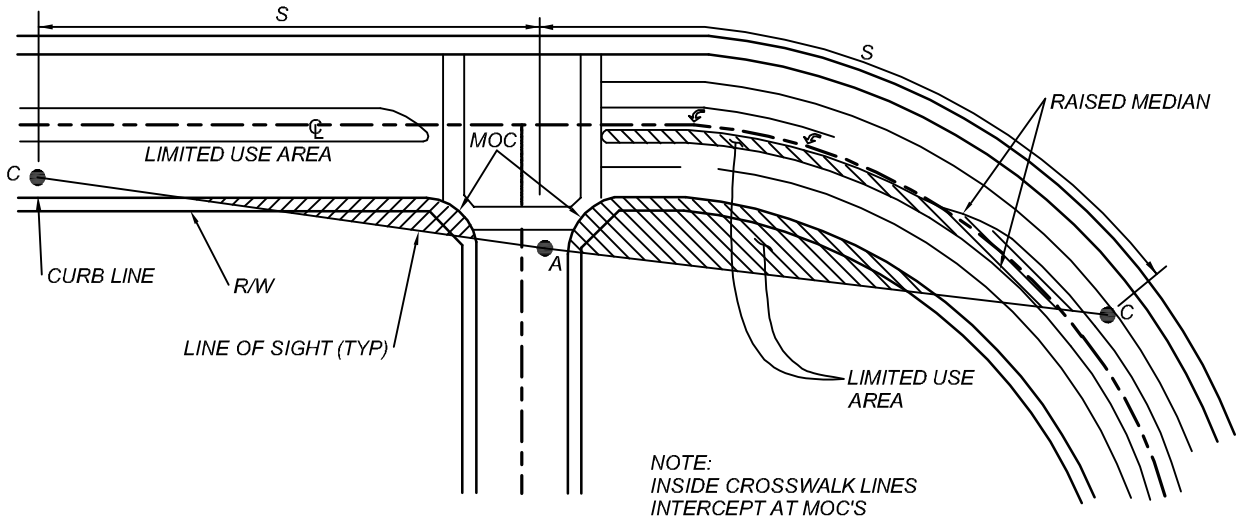
09-20-19
NOEL A. CASTILLO — DATE
CITY ENGINEER

CITY OF MONTCLAIR

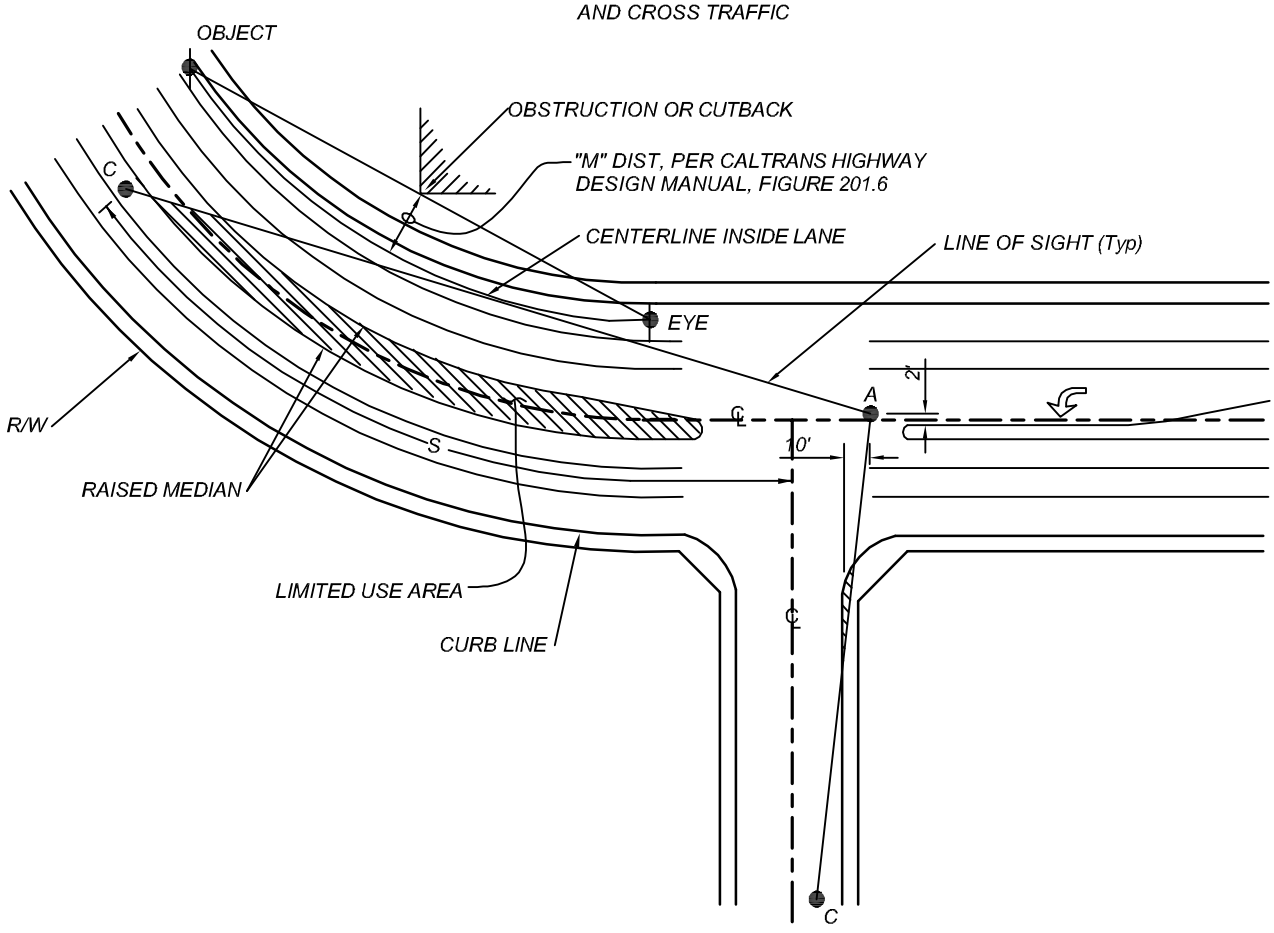
STANDARD KNUCKLE (60' RIGHT-OF-WAY)

NO SCALE	STD. PLAN NO. 109	SHEET 1 of 1



SIGHT DISTANCE

LEFT AND RIGHT TURN OUT AND CROSS TRAFFIC



SIGHT DISTANCE

LEFT TURN IN

REGISTERED CIVIL ENGINEER
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CIVIL
STATE OF CALIFORNIA

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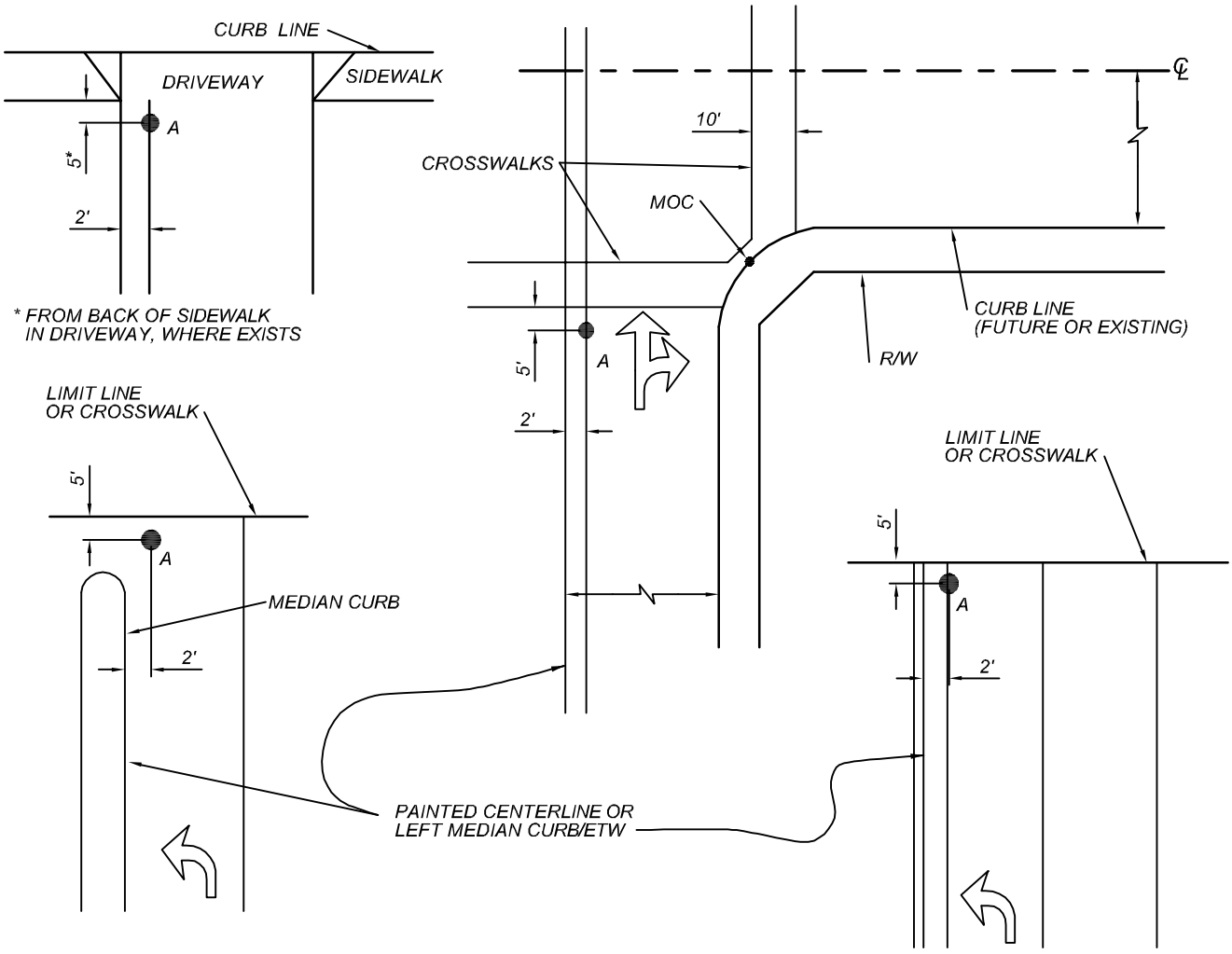
CITY ENGINEER

CITY OF MONTCLAIR

INTERSECTION SIGHT DISTANCE

NO SCALE	STD. PLAN NO. 110	SHEET 1 of 3



DESIGN SPEED OR 85TH PERCENTILE (MPH)	STOPPING DISTANCE (S) (FT)
0	0
15	80
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

(1) STOPPING DISTANCE = SIGHT DISTANCE = S

SOURCE: AASHTO GEOMETRIC DESIGN
OF HIGHWAYS AND STREETS
DATED: 2018

NOTES:

1. ● = POINT OF MEASUREMENT.
2. REFER TO SHEET 1 FOR LINE OF SITE APPLICATION TO DISTANCE (S).
3. WHERE VEHICLES ARE BACKING INTO ON COMING TRAFFIC, OFFSET DISTANCE FOR POINT "A" SHALL BE 13' VERSUS 5'.
4. MOC - MIDDLE OF CURB RETURN.

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CITY OF MONTCLAIR

INTERSECTION SIGHT DISTANCE

NO SCALE	STD. PLAN NO. 110	SHEET 2 of 3

NOTES:

1. THE DISTANCE "S" REPRESENTS THE INTERSECTION SIGHT DISTANCE MEASURED ALONG THE CENTERLINE OF THE ROAD. THE INTERSECTION SIGHT DISTANCE IS THE DISTANCE REQUIRED TO ALLOW STOPPING DISTANCE FOR THE DRIVER ON THE CROSS ROAD (OR LEFT TURN POCKET) TO SAFETY CROSS THE MAIN ROADWAY OR TURN LEFT WHILE THE APPROACH VEHICLE TRAVELS AT THE ASSUMED DESIGN SPEED OF THE MAIN ROADWAY.

2. THE DISTANCE S SHOULD BE INCREASED BY 20% FROM THE AMOUNT SHOWN ON THE STOPPING DISTANCE TABLE ON SUSTAINED DOWNGRADES STEEPER THAN 3% AND LONGER THAN ONE MILE. INTERSECTIONS SHALL BE ILLUMINATED.

3. POINT "A" IS THE LOCATION OF A DRIVER'S LINE OF SIGHT (3.5 FOOT EYE HEIGHT) TO ONCOMING VEHICLES (4.25 FOOT OBJECT HEIGHT) LOCATED AT POINT "C" WHILE IN A VEHICLE AT AN INTERSECTION 5 FEET BACK FROM THE PROJECTION OF THE FIRST CROSSWALK LINE LEADING INTO THE INTERSECTION. IN NO CASE SHALL POINT A BE LESS THAN FIFTEEN FEET FROM THE EDGE OF THE TRAVELED WAY. POINT "C" IS LOCATED AT THE CENTER OF LANE.

4. THE LIMITED USE AREA IS DETERMINED BY THE GRAPHICAL METHOD USING THE APPROPRIATE SIGHT DISTANCES. IT SHALL BE USED FOR THE PURPOSE OF PROHIBITING OR CLEARING OBSTRUCTIONS IN ORDER TO MAINTAIN ADEQUATE SIGHT DISTANCE AT INTERSECTIONS.

5. THE LINE OF SIGHT LINE SHALL BE SHOWN AT INTERSECTIONS ON ALL LANDSCAPING PLANS, GRADING PLANS, AND TENTATIVE TRACT MAPS. IN CASES WHERE AN INTERSECTION IS LOCATED ON A VERTICAL CURVE, A PROFILE OF THE LINE OF SIGHT MAY BE REQUIRED. THE LANDSCAPE PLAN SUBMITTED SHALL SHOW THE NAME, LOCATION AND MATURE DIMENSIONS, PLOTTED TO SCALE OF ALL THE PROPOSED TREES WITHIN THE LIMITED USE AREA.

6. OBSTRUCTIONS SUCH AS BUS SHELTERS, WALLS, COMMERCIAL SIGNAGE OR LANDSCAPING WITHIN THE LIMITED USE AREA WHICH COULD RESTRICT THE LINE OF SIGHT SHALL NOT BE PERMITTED. DRIVEWAYS ARE NOT PERMITTED WITHIN INTERSECTION AREA DUE TO SIGHT DISTANCE RESTRICTION BY ENTERING VEHICLES.

   a. PLANTS AND SHRUBS WITHIN THE LIMITED USE AREA SHALL BE OF THE TYPE THAT WILL GROW NO HIGHER THAN 30 INCHES ABOVE THE TOP OF CURB AND SHALL BE MAINTAINED AT A HEIGHT WHICH WILL ASSURE THAT THE 30 INCH MAXIMUM HEIGHT IS NOT EXCEEDED BETWEEN MAINTENANCE INTERVALS. MAINTENANCE AT A LOWER HEIGHT MAY BE REQUIRED ON CREST VERTICAL CURVES PER NOTE 5 ABOVE.

   b. A PROFILE DETAIL OF THE LINE OF SIGHT MAY BE REQUIRED TO VERIFY 12" MINIMUM VERTICAL CLEARANCE ABOVE VARIABLE HEIGHT OBSTRUCTIONS SUCH AS SLOPE LANDSCAPING, PLANTS, SHRUBS AND PERIMETER WALLS.

   c. THE TOE OF SLOPE MAY NOT ENCROACH INTO THE LIMITED USE AREA UNLESS THE REQUIREMENTS OF (b) ABOVE ARE SATISFIED.

   d. IN LIEU OF PROVIDING A PROFILE OF THE LINE OF SIGHT PER NOTE 6.b. ABOVE, THE TOE OF SLOPE SHALL NOT ENCROACH INTO THE LIMITED USE AREA, AND THE LIMITED USE AREA SHALL SLOPE 2% MAXIMUM BETWEEN THE LINE OF SIGHT AND THE BACK OF SIDEWALK.

7. NO PARKING OF ANY KIND IS TO BE ALLOWED WITHIN THE LIMITED USE AREA.

8. TREES ARE GENERALLY NOT PERMITTED WITHIN ANY PORTION OF THE LIMITED USE AREA. EXCEPTIONS ARE ALLOWED WHEN THE SPECIES HAS A MATURE DIAMETER OF LESS THAN 6 INCHES.

9. MEDIAN AREAS LESS THAN FIVE (5) FEET IN WIDTH SHALL NOT BE LANDSCAPED.

10. INTERSECTION SIGHT DISTANCE AT RIGHT ANGLE INTERSECTIONS IS MEASURED FROM THE IDENTIFIED MEASUREMENT POINT "A", IN ACCORDANCE WITH THE DIAGRAMS ON SHEET 2.



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09-20-19

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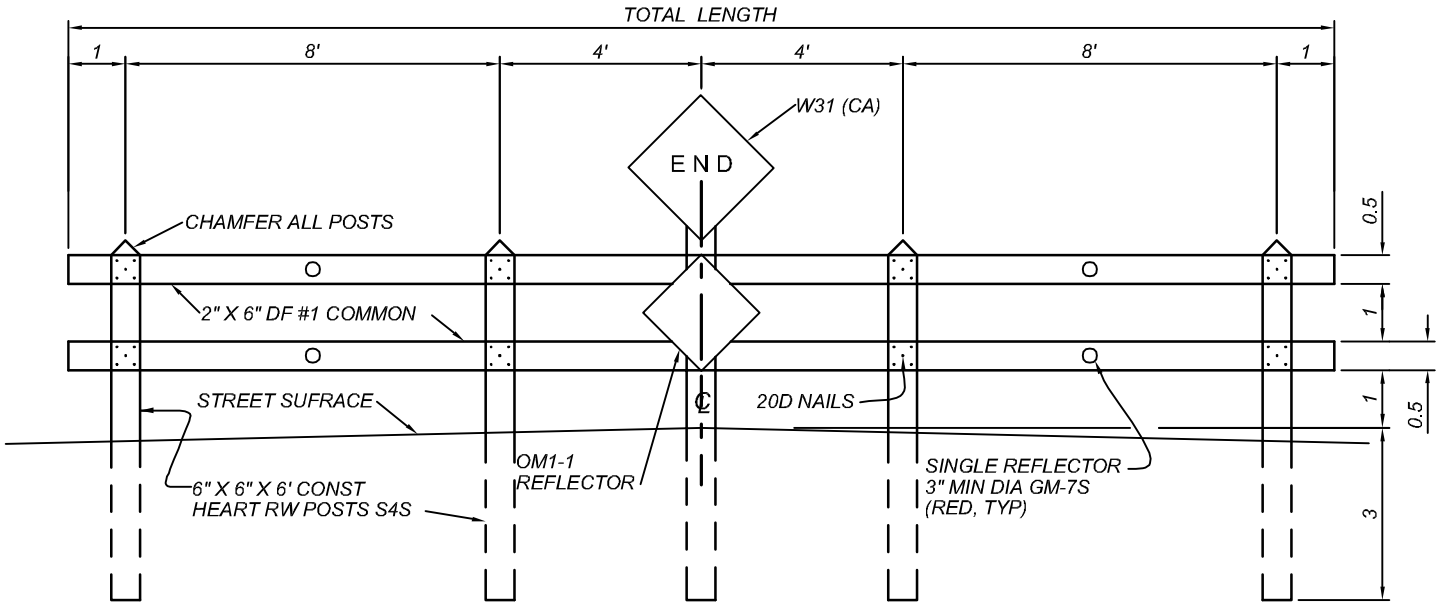
CITY ENGINEER

DATE

CITY OF MONTCLAIR

INTERSECTION SIGHT DISTANCE

NO SCALE	STD. PLAN NO. 110	SHEET 3 of 3



ELEVATION

TABLE OF PANELS FOR VARIOUS ROADWAY WIDTHS

8' SECTIONS SHALL BE ADDED OR DELETED TO GIVE THE FOLLOWING WIDTHS:		
WIDTH OF ROADWAY	NO. OF 8' SECTIONS	TOTAL LENGTH OF PANELS
20' ALLEY	2	18'
36'	3	26'
40'	4	34'
44'	4	34'
64'	7	58'

NOTES:

1. OM1-1 REFLECTOR IS TO BE A 1.5' X 1.5' SIGN, AND IS TO BE BOLTED ON THE CENTER OF THE BARRICADE AS SHOWN.
2. SIGNS TO BE W31 (CA) & OM1-1 OR APPROVED EQUAL.
3. ALL WOOD ASSEMBLY IS TO BE PAINTED WITH ONE COAT OF PRIMER AND TWO COATS OF WHITE EXTERIOR PAINT.

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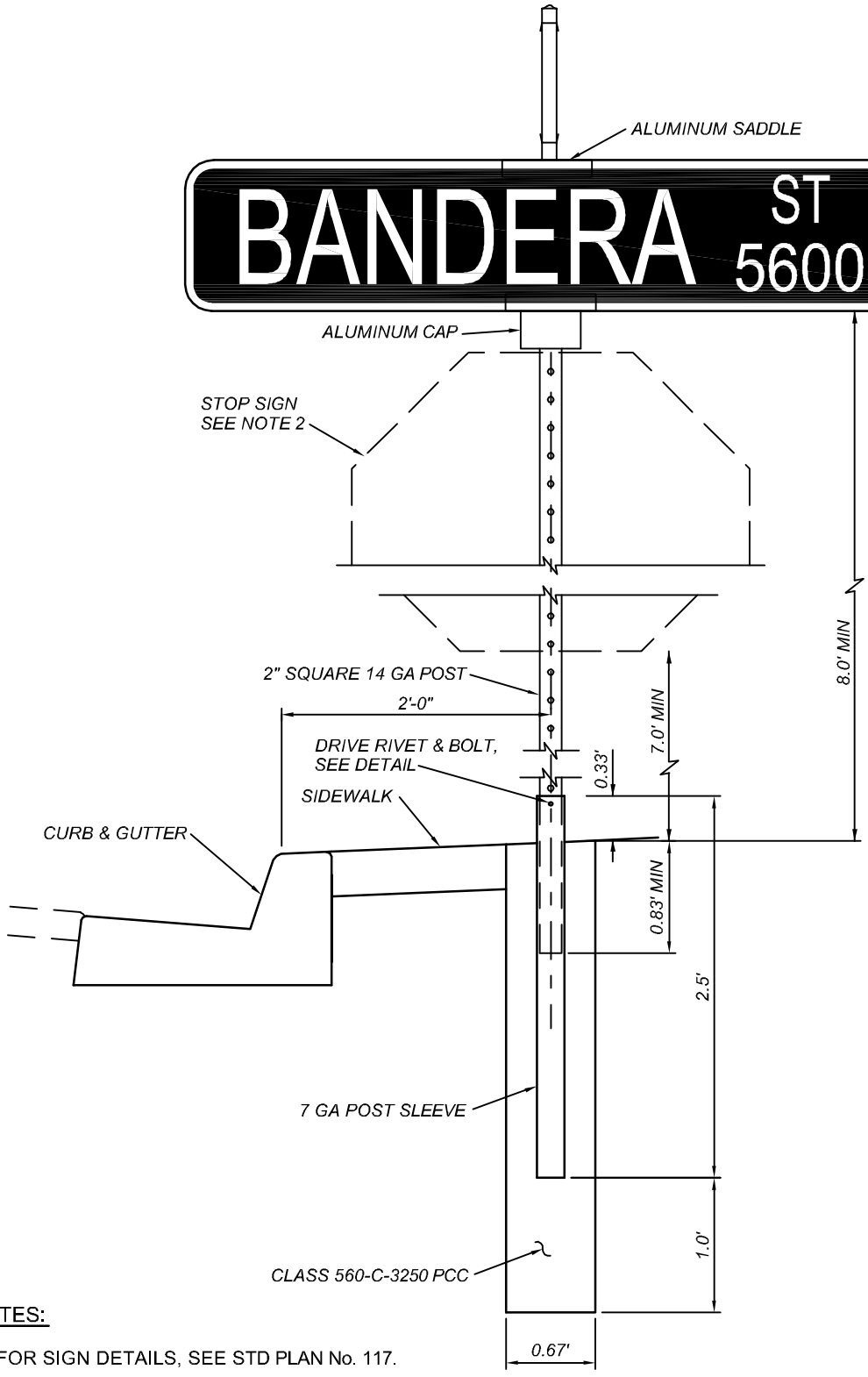
CITY ENGINEER

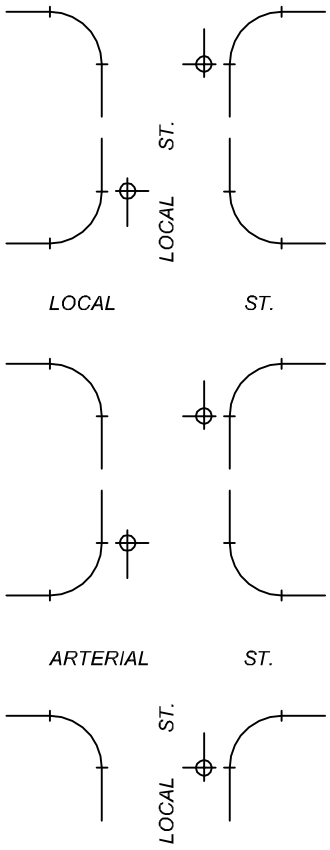
CITY OF MONTCLAIR

BARRICADE

NO SCALE	STD. PLAN NO. 111	SHEET 1 of 1



POST LOCATIONS



NOTES:

1. FOR SIGN DETAILS, SEE STD PLAN No. 117.
2. WHEN A STOP SIGN IS ATTACHED TO THE SIGN POST THERE MUST BE SEVEN (7) FEET OF CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND THE WALKING SURFACE.

REGISTERED CIVIL ENGINEER
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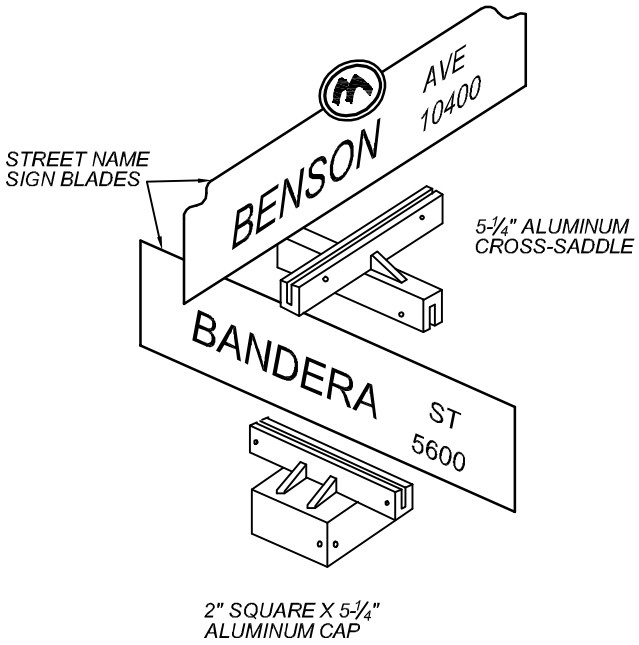
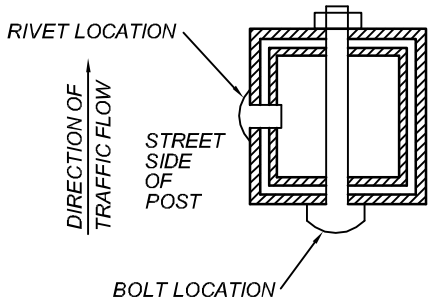
CITY ENGINEER

CITY OF MONTCLAIR

STREET NAME SIGN

NO SCALE	STD. PLAN NO. 112	SHEET 1 of 2





NOTE:

1. EACH SIGN POST SHALL ACCOMMODATE TWO STREET NAME SIGN BLADES.

REGISTERED CIVIL ENGINEER
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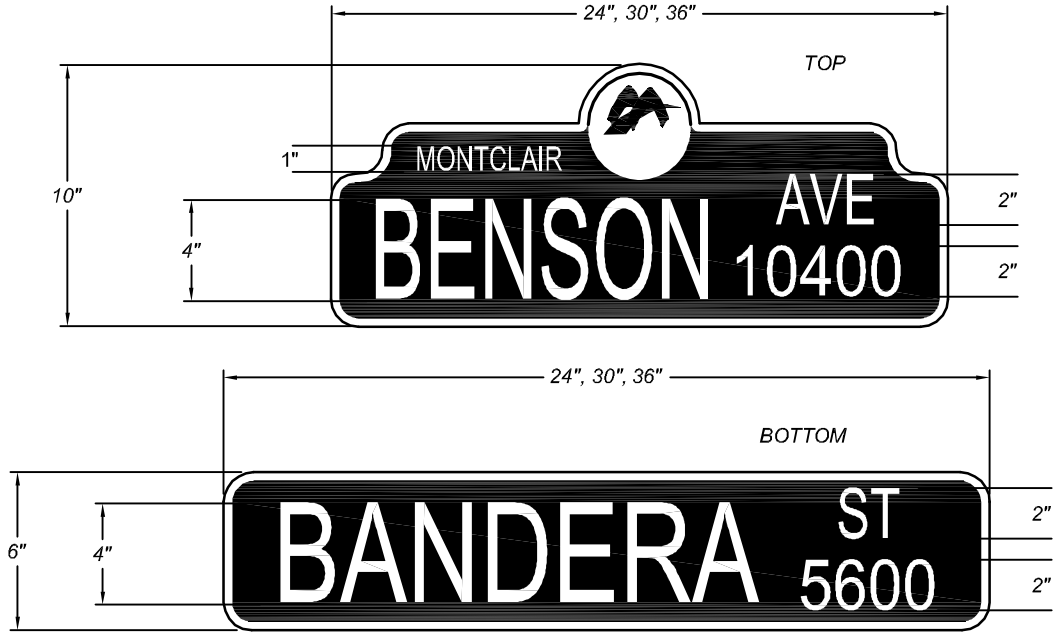
CITY ENGINEER

DATE

CITY OF MONTCLAIR

STREET NAME SIGN

NO SCALE	STD. PLAN NO. 112	SHEET 2 of 2



MONTCLAIR STREET SIGNS



MONTCLAIR OVERHEAD SIGNS

NOTE:

CA MUTCD SUPERSEDES
SIGN LAYOUTS AS NEEDED

LOGO

MAIN STREET TEAL AND MAIN STREET BURGUNDY
3 7/8" TALL LOGO GRAPHICS
MONTCLAIR LETTERS 1/2" TALL

STREET SIGN MATERIAL

0.100" ALUMINUM
3M HIP SHEETING OR EQUAL
BLUE UC FILM
ANTI-GRAFFITTI COATTING 3M1160 OR EQUAL
WHITE LETTERS AND 1/4" MARGIN
ON BLUE BACKGROUND ANTI-GRAFFITI

OVERHEAD SIGN MATERIAL

3M VIP SHEETING OR EQUAL
BLUE UC FILM
ANTI-GRAFFITTI COATTING 3M1160 OR EQUAL
WHITE LETTERS, ARROWS AND 1/2" MARGIN
ON BLUE BACKGROUND ANTI-GRAFFITI
WITH FRAME

REGISTERED CIVIL ENGINEER
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CIVIL
STATE OF CALIFORNIA

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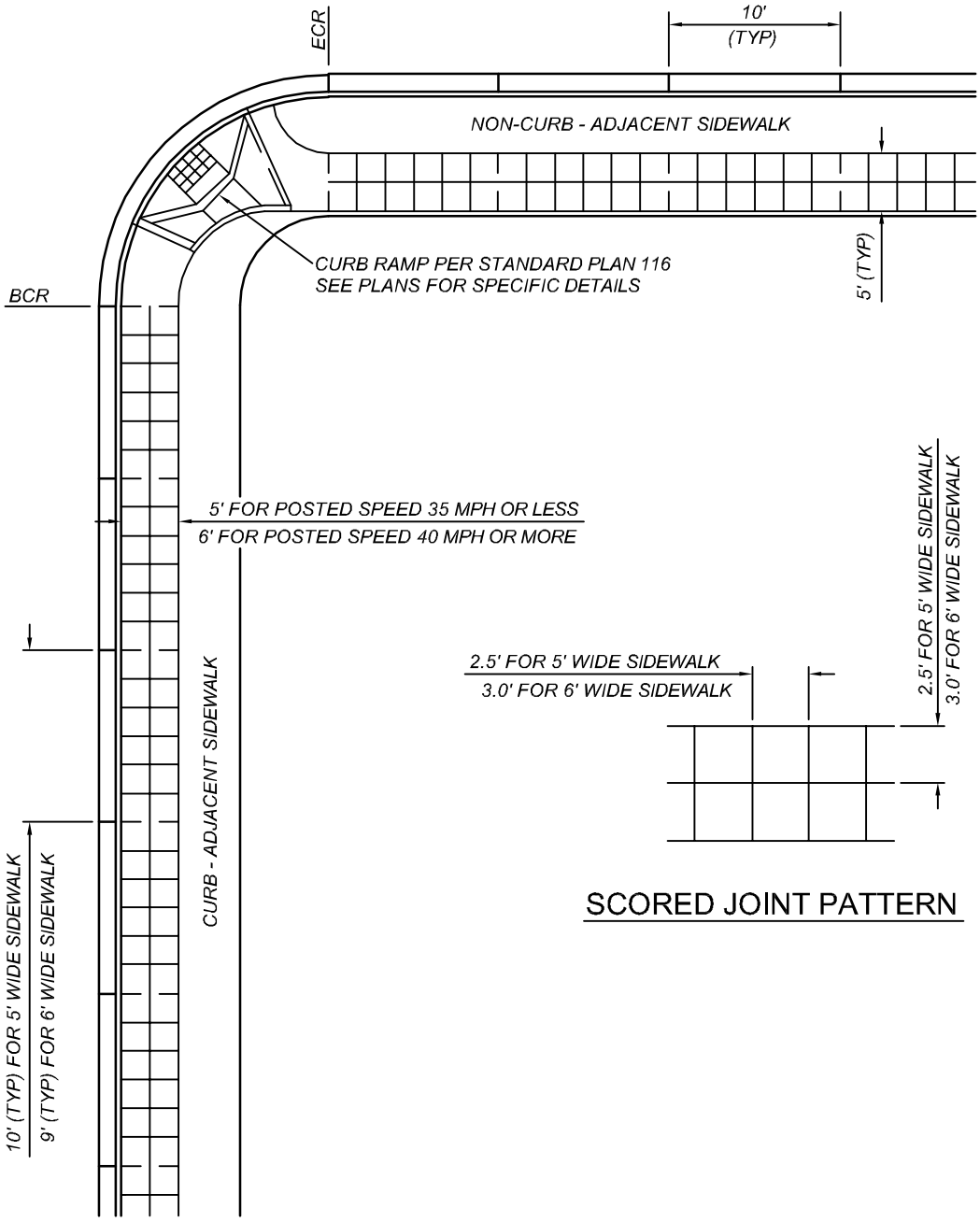
CITY ENGINEER

CITY OF MONTCLAIR

STREET AND OVERHEAD SIGNS

NO SCALE	STD. PLAN NO. 113	SHEET 1 of 1



SCORED JOINT PATTERN

NOTES:

1. EXPANSION JOINTS: AT CURB RETURNS, ADJACENT TO STRUCTURES AND 45' (6' WIDE SIDEWALKS) OR 50' (5' WIDE SIDEALKS).
2. TOOLED JOINTS WITH ¼" GROVES AND ¼" RADIUS.
3. MEDIUM BROOM FINISH. FINISH QUALITY AND WORKMANSHIP SHALL BE PER STAFF-PROVIDED REFERENCE AREA AND PER STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. THE FIELD ENGINEERING INSPECTOR SHALL HAVE THE FINAL DETERMINATION OF APPROVAL.
4. CONCRETE SHALL BE 560-C-3250 PER STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND SHALL BE 4" THICK.
5. CURB JOINTS ARE TO BE ALIGNED WITH SIDEWALK JOINTS.

REGISTERED CIVIL ENGINEER
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CIVIL
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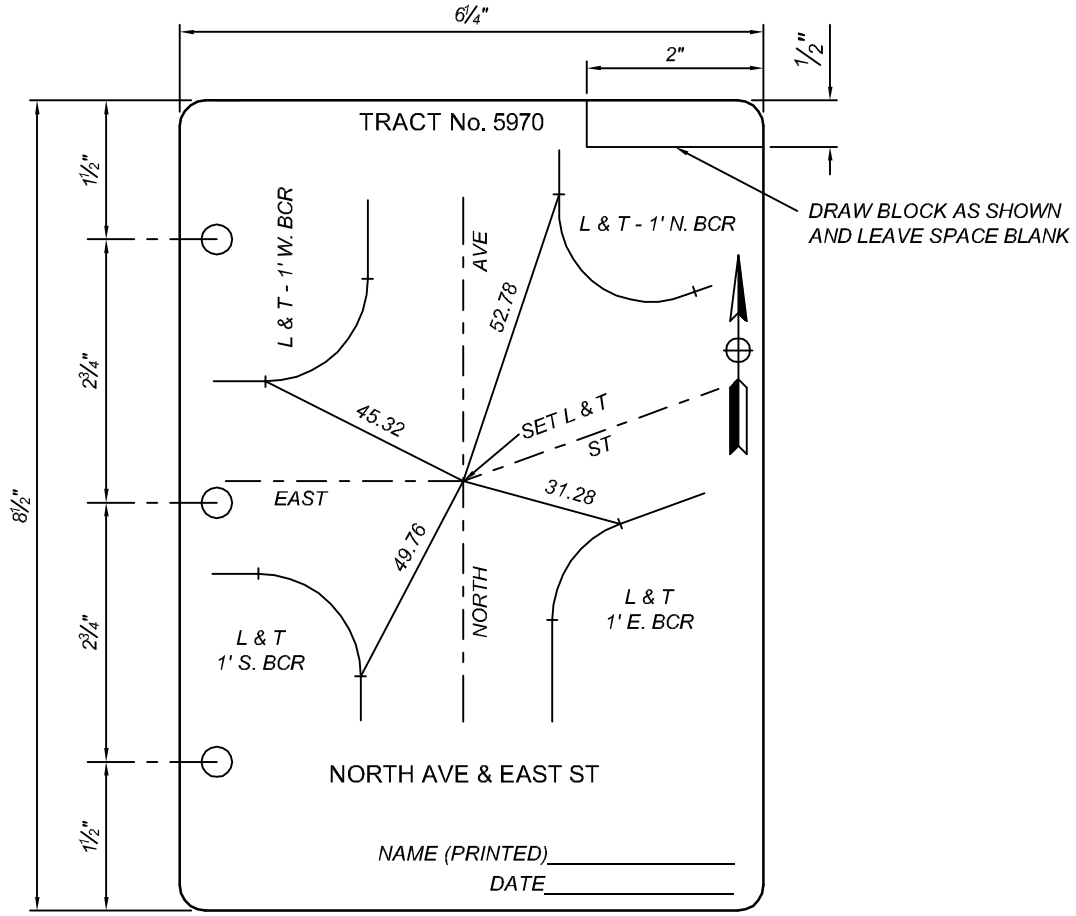
CITY ENGINEER

CITY OF MONTCLAIR

SIDEWALK JOINT LOCATION (NMDSP AREA)

NO SCALE	STD. PLAN NO. 114	SHEET 1 of 1



½ ACTUAL SIZE

NOTES:

1. REFERENCE POINTS SHALL BE L & Ts IN SIDEWALKS OR IN TANGENT PORTION OF THE CURB AND A MINIMUM OF 3 REFERENCE POINTS FOR EACH INTERSECTION.
2. CENTER LINE MONUMENTS SHALL BE:
   a. CEMENT CONCRETE - LEAD & TACK.
   b. MACADAM OR PLANT MIX - 6" RR SPIKE.
   c. OIL & ROCK, GRAVELLED & OTHER - 1" IP 12" DOWN.
   d. WHERE MANHOLES EXIST - 4 PUNCH MARKS ON MH RING.
3. TANGENT TIES AND POINTS ON C PRODS ARE PREFERRED.
4. ONLY ONE STREET INTERSECTION SHALL BE SHOWN ON EACH SHEET.
5. SHEETS SHALL BE WET-SIGNED BY LICENSED ENGINEER OR LAND SURVEYOR ON GOOD QUALITY BOND PAPER.
6. SUBMITTAL SHALL INCLUDE AN ELECTRONIC PDF FILE.

REGISTERED CIVIL ENGINEER
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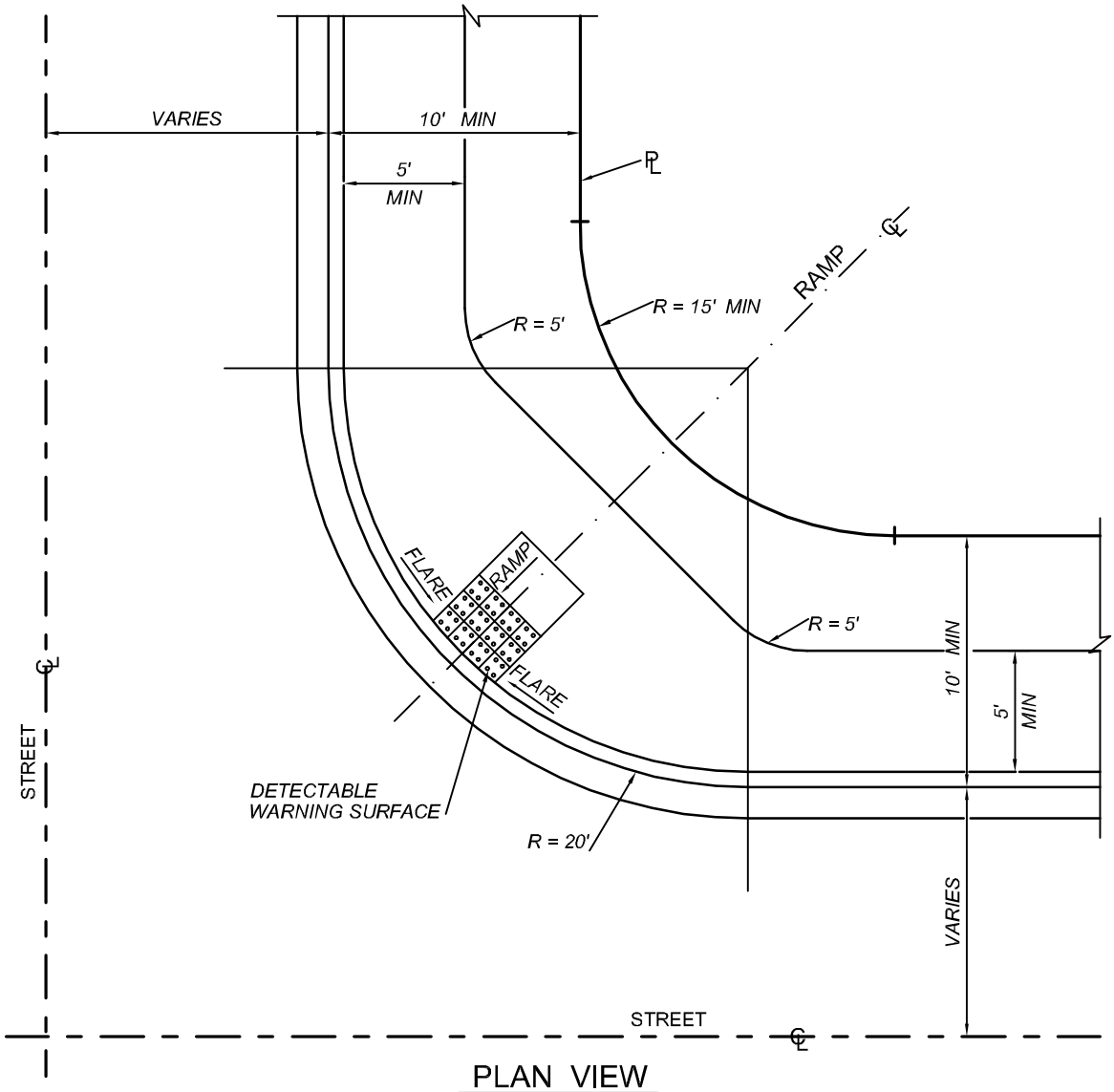
CITY ENGINEER

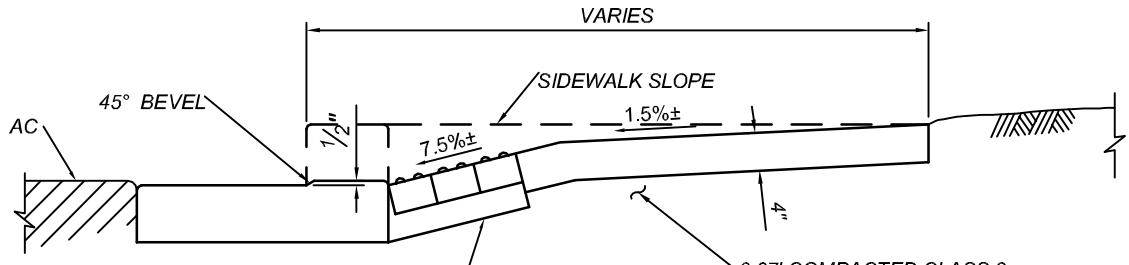
CITY OF MONTCLAIR

CENTER LINE TIE NOTES

NO SCALE	STD. PLAN NO. 115	SHEET 1 of 1



PLAN VIEW



ELEVATION

NOTES:

1. FOR CURB RAMP GEOMETRY AND DETAILS, SEE CALTRANS STANDARD PLAN A88A AND A88B.
2. THE DETECTABLE WARNING SURFACE SHALL BE WAUSAU ADA-2 12" SQUARE PAVERS, COLOR A-80, THICKNESS = 2"
3. RAMP SHALL HAVE A HEAVY BROOM FINISH.
4. CLASS 560 - C - 3250 PCC SHALL BE USED UNLESS OTHERWISE SPECIFIED.

REGISTERED CIVIL ENGINEER
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CIVIL
STATE OF CALIFORNIA

APPROVED BY:

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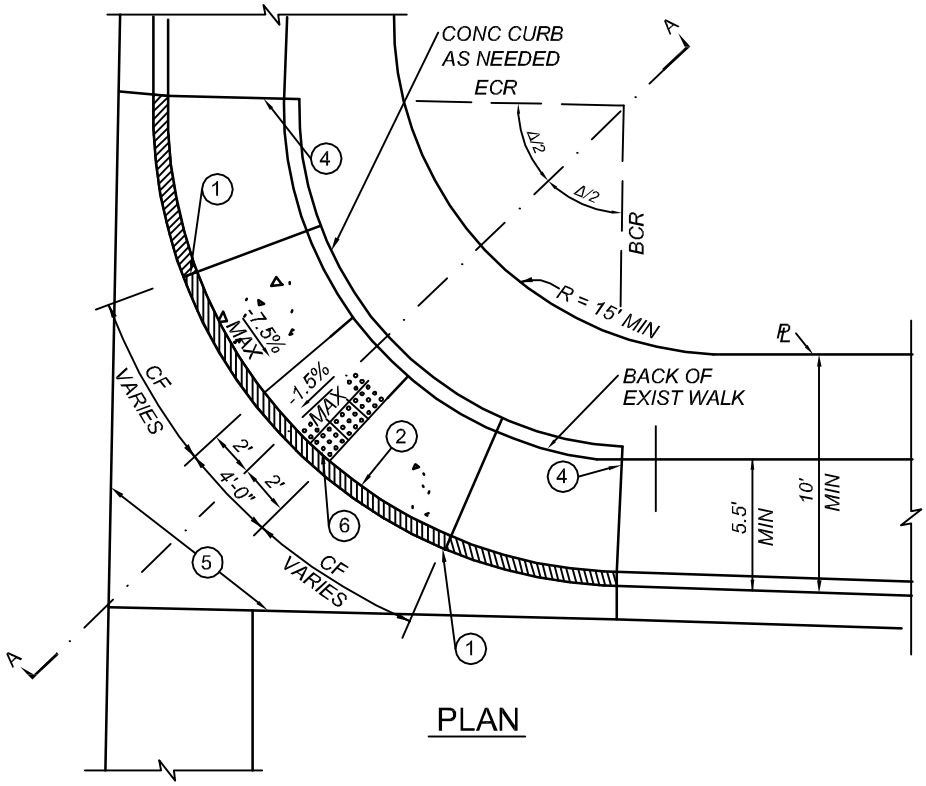
CITY ENGINEER

05-14-24
DATE

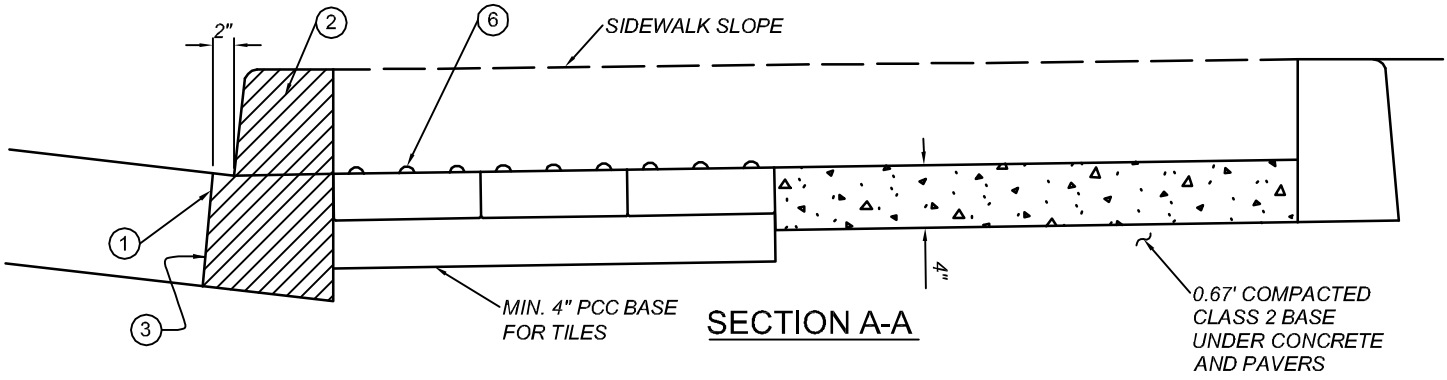
CITY OF MONTCLAIR

WHEELCHAIR RAMP

NO SCALE	STD. PLAN NO. 116	SHEET 1 of 1



PLAN



SECTION A-A

CONSTRUCTION NOTES:

1. SAW CUT A MINIMUM OF 6" DEPTH BEFORE BREAKING OFF CURB PORTION.
2. REMOVE EXISTING CURB SHOWN CROSS-HATCHED AND EXISTING SIDEWALK
3. THOROUGHLY CLEAN WITH WIRE BRUSH AND APPLY HUNT 101 EPOXY RESIN BOND OR APPROVED EQUAL TO MANUFACTURER'S RECOMMENDATION AND TO SATISFACTION OF THE CITY ENGINEER.
4. REMOVE SIDEWALK & CURB BCR TO ECR OR AS NECESSARY TO GET TRANSITION SLOPE (8.33% MAX)
5. REMOVE PCC SPANDREL IF CRACKED OR SETTLED PER PUBLIC WORKS INSPECTOR'S REQUIREMENTS
6. THE DETECTABLE WARNING SURFACE SHALL BE WAUSAU ADA-2 12" SQUARE PAVERS, COLOR A-80, THICKNESS = 2".

NOTES:

1. RAMP SHALL HAVE A HEAVY BROOM FINISH
2. CLASS 500-C-3250 CONCRETE SHALL BE USED UNLESS OTHERWISE SPECIFIED

REGISTERED CIVIL ENGINEER
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CIVIL
STATE OF CALIFORNIA

APPROVED BY:

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CITY ENGINEER

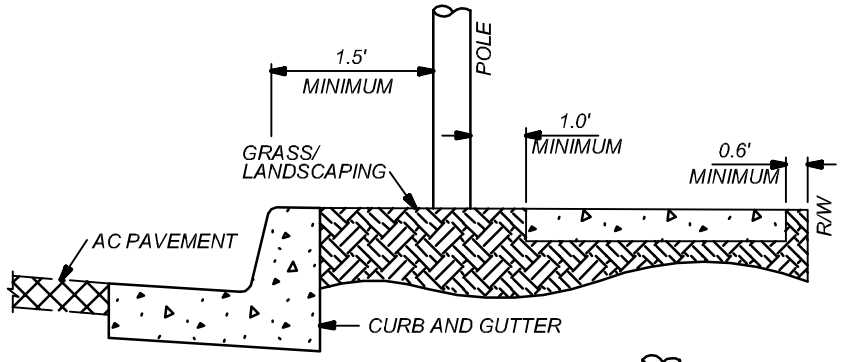
05-14-24
DATE

CITY OF MONTCLAIR

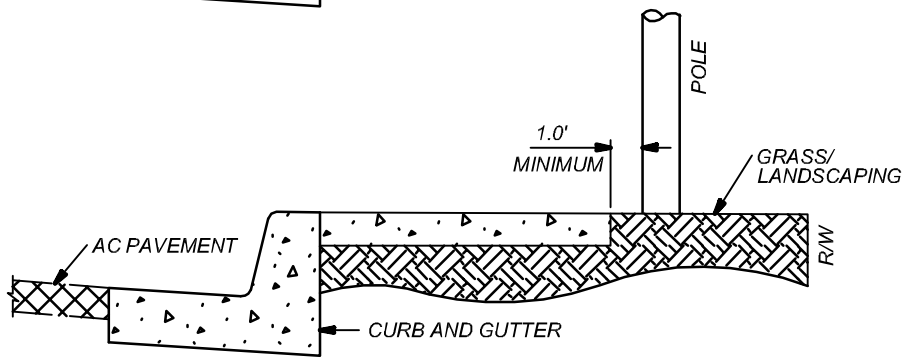
WHEELCHAIR RAMP AT EXISTING CURB RETURN

NO SCALE	STD. PLAN NO. 117	SHEET 1 of 1

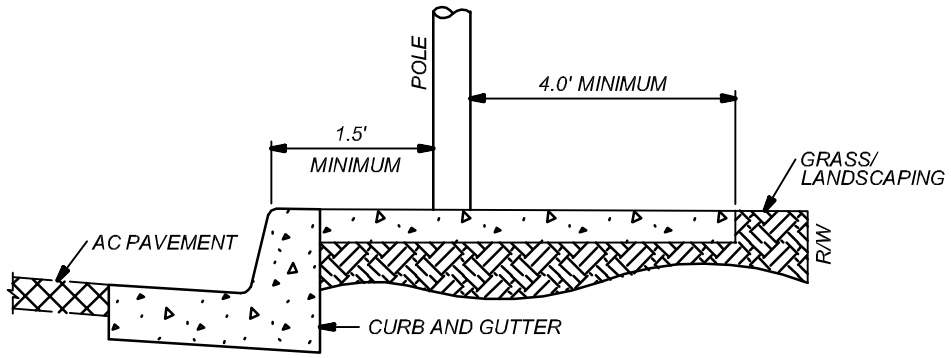
CASE 1
LANDSCAPING ADJACENT TO CURB



CASE 2
SIDEWALK ADJACENT TO CURB



CASE 3
SIDEWALK ADJACENT TO CURB



STREET LIGHT GENERAL NOTES:

1. LIGHTING LAYOUT SHALL COMMENCE AT STREET INTERSECTIONS. STREET LIGHT SPACING BETWEEN INTERSECTIONS SHALL BE AS SPECIFIED IN THE TABLE ON SHEET 2 AND LOCATED AT THE PROLONGATION OF PROPERTY LINES. STREET LIGHT LAYOUTS SHALL BE REVIEWED FOR CONFLICTS WITH OTHER UTILITIES (CATCH BASINS, FIRE HYDRANTS, TRANSFORMERS, ETC.)

2. USE OF BRAND NAMES IN THESE STANDARDS IS NOT INTENDED TO RESTRICT COMPETITION. EQUIVALENT PRODUCTS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE CITY ENGINEER.

3. SIDEWALK WIDTHS TO BE PER APPROVED STREET IMPROVEMENT PLANS. A MINIMUM OF 4' UNOBSTRUCTED SIDEWALK CLEARANCE IS REQUIRED.

4. ANY CHANGE IN LOCATION OF STREET LIGHTS FROM THE APPROVED PLANS OR STANDARDS IS SUBJECT TO WRITTEN APPROVAL BY THE CITY ENGINEER.

5. ALL STREET LIGHTS SHALL HAVE AN ANTI-GRAFFITI COATING.

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
No. C 78044
CIVIL
STATE OF CALIFORNIA

APPROVED BY:

09-20-19
NOEL A. CASTILLO — DATE
CITY ENGINEER

CITY OF MONTCLAIR

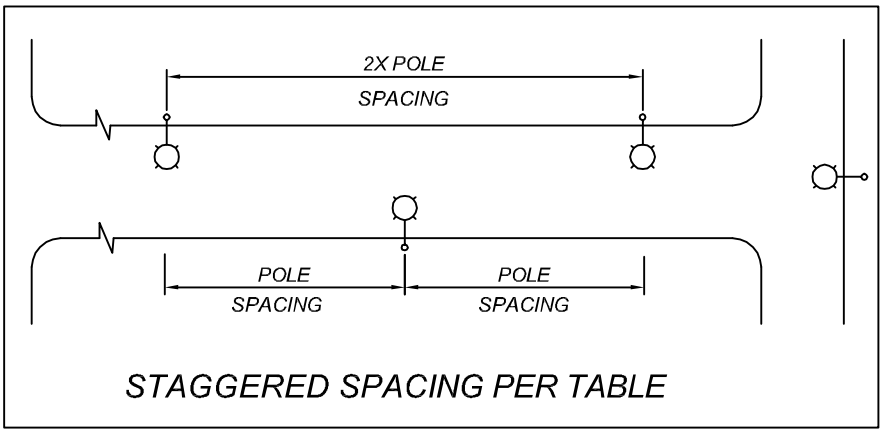
STREET LIGHT INSTALLATION DETAILS

NO SCALE	STD. PLAN NO. 118	SHEET 1 of 2

SPACING, PART NUMBERS, WATTAGES						
STREET CLASSIFICATION	POLE SPACING	HPS WATTAGE EQUIVALENT	LUMINAIRE, LED, COBRAHEAD		LUMINAIRE, LED, DECORATIVE**	
			SCE PART #	WATTAGE	SCE PART #	WATTAGE
LOCAL	250' ± 50'	100W	10205809	41W	10184035	75W
COLLECTOR	250' ± 50'	100W	10205809	41W	10184035	75W
ARTERIAL	125' ± 50'*	200W	10205811	90W	10184043	165W

* 100' MAX SPACING FOR COMMERCIAL ZONES

** DECORATIVE LUMINAIRE IS KING K804 'CARPINTERIA' TEARDROP PENDANT



STAGGERED SPACING PER TABLE

NOTES:

1. SEE PROJECT PLANS AND SPECIFICATIONS FOR DETAILS REGARDING INSTALLATION OF STANDARD OR DECORATIVE STREET LIGHT POLES.
2. PLANS SHALL INCLUDE POINT BY POINT FOOT-CANDLE VALUES ARRANGED IN A GRID VERIFYING A MINIMUM LIGHTING LEVEL OF 21 LUX (2 FOOT-CANDLES) THROUGHOUT EVERY INTERSECTION.

REGISTERED CIVIL ENGINEER
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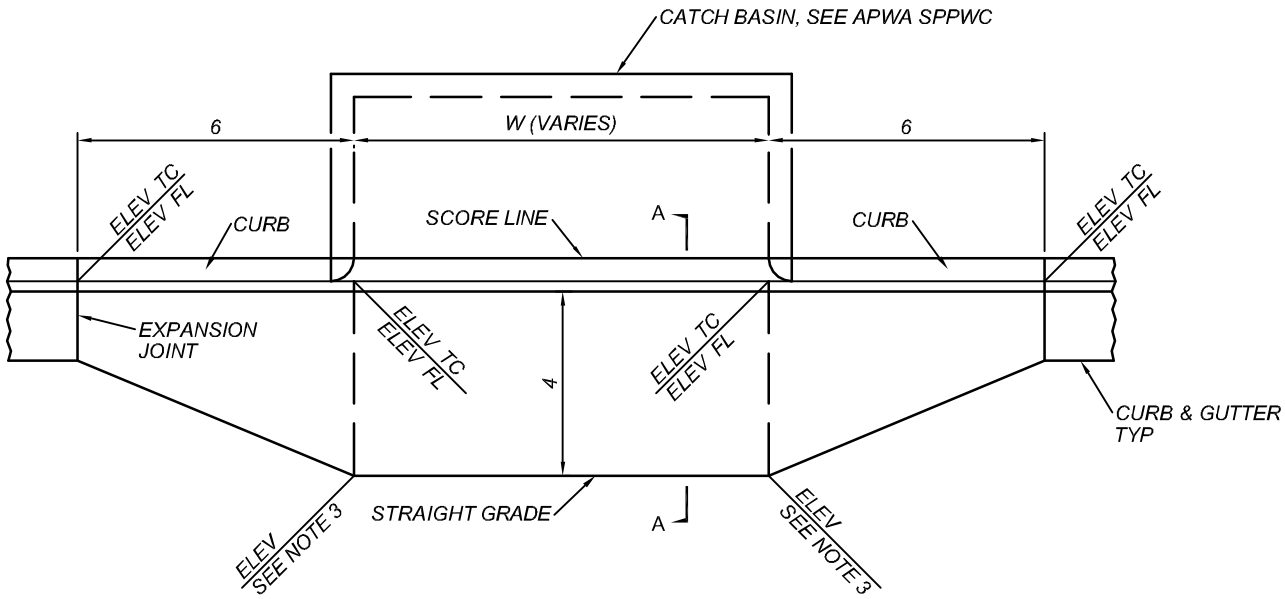
CITY ENGINEER

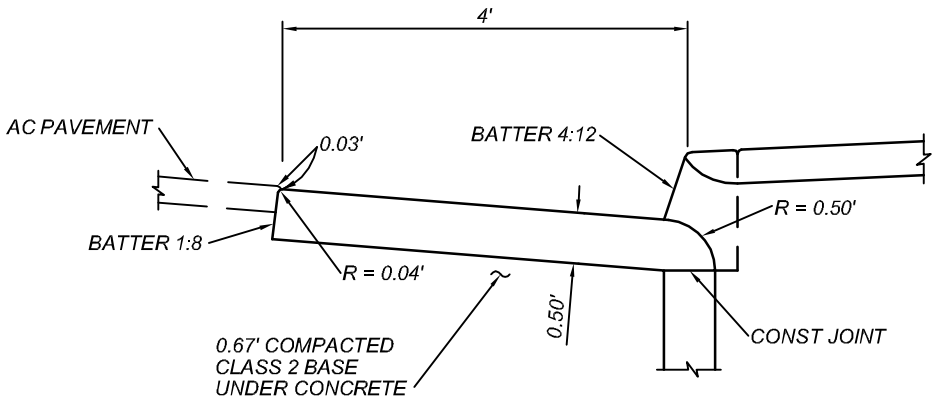
CITY OF MONTCLAIR

STREET LIGHT INSTALLATION DETAILS

NO SCALE	STD. PLAN NO. 118	SHEET 2 of 2



PLAN



SECTION A-A

NOTES:

1. CLASS 560-C-3250 PCC SHALL BE USED UNLESS OTHERWISE SPECIFIED.
2. ALL NECESSARY CONTROL ELEVATIONS SHALL BE SHOWN ON THE CONSTRUCTION PLANS.
3. TOP OF LOCAL DEPRESSION ELEVATIONS SHALL CONFORM TO STREET SECTION.
4. FOR ADDITIONAL LOCAL DEPRESSION CONFIGURATIONS, SEE APWA SPPWC PLAN 313.

REGISTERED CIVIL ENGINEER
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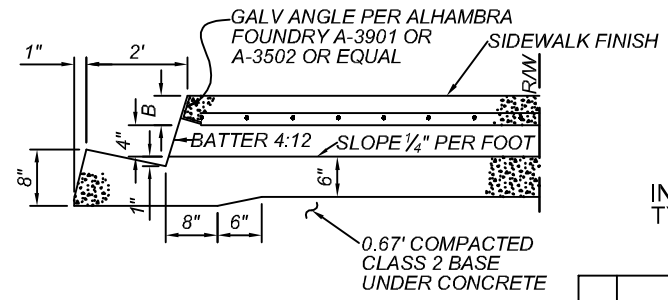
CITY ENGINEER

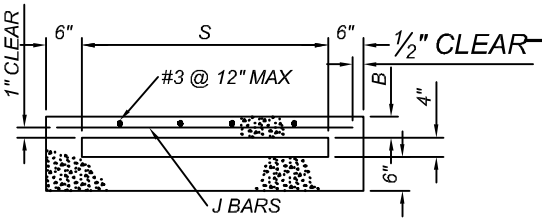
CITY OF MONTCLAIR

LOCAL DEPRESSION

NO SCALE	STD. PLAN NO. 201	SHEET 1 of 1

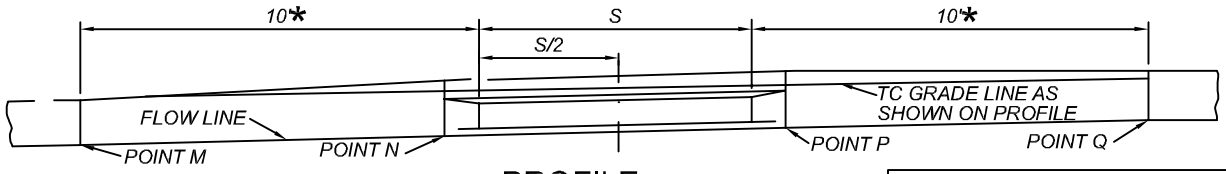


SECTION A-A



SECTION B-B

PLAN

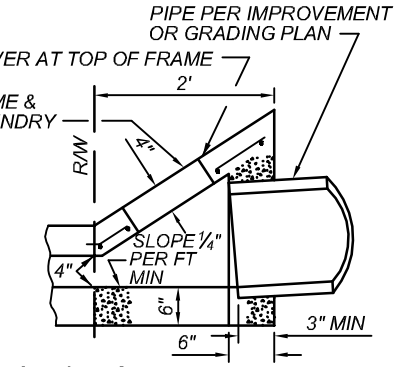


PROFILE

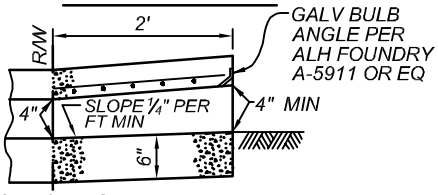
* TRANSITION SHALL BE MEASURED ALONG BACK OF SIDEWALK

* TRANSITION IS NOT REQUIRED WHEN CURB FACE = 5" + B OR GREATER

* TRANSITION SHALL NOT BE WITHIN DRIVEWAY OR CURB RETURNS



SECTION-INLET TYPE I SECTION C-C



SECTION-INLET TYPE II SECTION D-D

* PIPE DRAIN THRU CURB

CURB FACE	MAX PIPE DIA
6"	3"
8"	4"
10"	6"

*PIPE SHALL BE DI, STEEL OR SCH 80 PVC

NOTES:

1. FLOOR OF BOX TO BE TROWELED SMOOTH.
2. WHEN THE TOE OF SLOPE IS WITHIN THE R/W, INLET TYPE I BEGINS AT THE TOE RATHER THAN AT THE R/W LINE.
3. FOR OPEN DITCH APPROACH (TYPE II) THE 2' EXTENSION IS NOT REQUIRED WHEN THE BACK OF WALK IS 2' OR MORE FROM THE R/W LINE.
4. TOP OF INLET STRUCTURE (TYPE I & II) TO BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICABLE.
5. A HEADED STEEL STUD 5/8" x 6 3/8" WITH HEAD D=1" ATTACHED BY A FULL PENETRATION BUTT WELD MAY BE USED AS AN ALTERNATE ANCHOR.
6. NORMAL CURB FACE AT POINT M AND Q, B+5" AT POINT N AND P.
7. CLASS 560-C-3250 PCC SHALL BE USED.

STEEL LIST

S	B	GALVANIZED STEEL ANGLE	ANCHOR	J BAR SIZE	J BAR SPACING	J BAR LENGTH
1'-0"	3"	2½"x2"x⅜"	2	#3	7"	1'-9"
1'-6"	"	"	"	"	"	2'-3"
2'-0"	"	"	"	"	"	2'-9"
2'-6"	"	"	"	"	"	3'-3"
3'-0"	"	"	3	"	"	3'-9"
3'-6"	"	"	"	"	6"	4'-3"
4'-0"	"	"	"	"	5"	4'-9"
4'-6"	4"	3½"x3"x½"	"	"	6½"	5'-3"
5'-0"	"	"	"	"	5"	5'-9"
5'-6"	"	"	"	"	4"	6'-3"
6'-0"	"	"	"	"	3½"	6'-9"

REGISTERED CIVIL ENGINEER
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No. C 56547
CIVIL
STATE OF CALIFORNIA

APPROVED BY:

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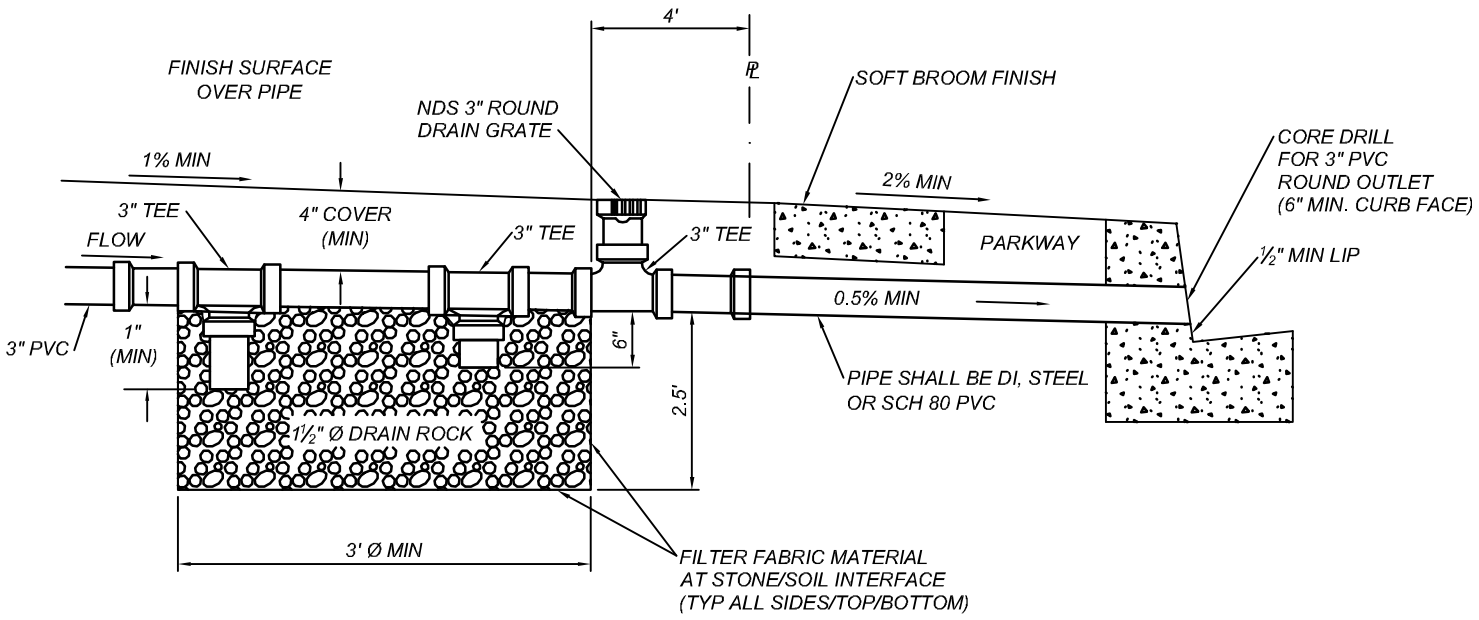
CITY ENGINEER

05-14-24
DATE

CITY OF MONTCLAIR

SIDEWALK DRAIN OUTLET AND PIPE DRAIN THRU CURB

NO SCALE | STD. PLAN NO. 202 | SHEET 1 of 1



NOTES:

1. A CONSTRUCTION PERMIT MUST BE OBTAINED FOR ANY WORK DONE IN THE CITY RIGHT OF WAY. PERMITS ARE ISSUED THROUGH THE ENGINEERING DIVISION. CALL (909) 625-9440 FOR ADDITIONAL INFORMATION.

2. REMOVE SIDEWALK PANEL FROM JOINT TO JOINT OR SCORE LINES BEFORE CORING CURB. REPLACEMENT CONCRETE SHALL BE CLASS 560-C-3250.

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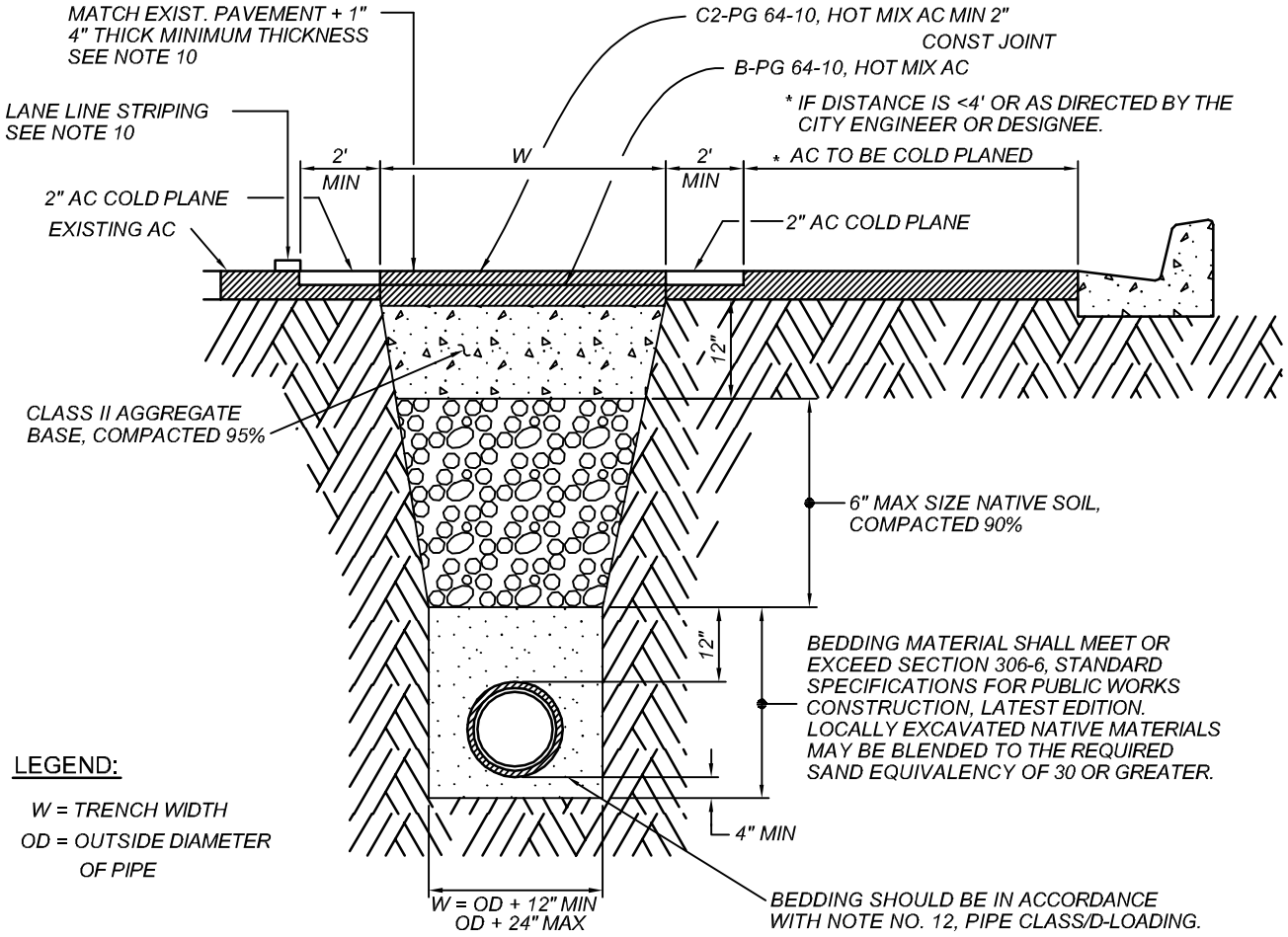
DATE

CITY OF MONTCLAIR

WQMP GRAVEL FILTER DETAIL

NO SCALE	STD. PLAN NO. 203	SHEET 1 of 1



GENERAL NOTES:

1. ALL EXCAVATION WITHIN THE CITY OF MONTCLAIR RIGHT-OF-WAY REQUIRES AN EXCAVATION PERMIT FROM THE ENGINEERING DIVISION.
2. UNDERGROUND SERVICE ALERT SHALL BE NOTIFIED 2 WORKING DAYS PRIOR TO START OF WORK 811.
3. ALL PUBLIC WORKS INSPECTION REQUESTS WILL BE MADE 2 WORKING DAYS AHEAD OF SCHEDULED WORK.
4. COMPACTION OF BACKFILL SHALL BE VERIFIED BY REGISTERED GEOTECHNICAL ENGINEERING AND A COMPACTION REPORT SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO THE PLACING OF THE PERMANENT PAVEMENT. IN LIEU OF COMPACTION TESTING CONTRACTOR MAY USE 2-SACk PCC SLURRY.
5. ALL EXCAVATION SHALL BE MADE, PROTECTED AND SUPPORTED AS REQUIRED FOR SAFETY AND IN A MANNER SET FORTH IN OPERATIONS, RULES, ORDERS, AND REGULATIONS PRESCRIBED BY THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY. A COPY OF THE CAL OSHA EXCAVATION PERMIT, IF APPLICABLE, SHALL BE FURNISHED TO THE PROJECT INSPECTOR PRIOR TO BEGINNING THE WORK. STEEL PLATE BRIDGING SHALL BE IN ACCORDANCE WITH CITY STD. PLAN NO. 302.
6. PERMANENT PAVEMENT SHALL BE REPLACED WITHIN 30 DAYS OF EXCAVATION, A MINIMUM 2-INCH THICKNESS OF TEMPORARY ASPHALT PAVING SHALL BE PLACED WITHIN THE TRENCH AREA UNTIL PERMANENT REPAIR IS COMPLETED OR AS DIRECTED BY THE CITY ENGINEER OR DESIGNEE. THE TEMPORARY ASPHALT PAVING SHALL BE FLUSH WITH EXISTING PAVEMENT.
   THE TEMPORARY PAVING SHALL BE PLACED AND COMPACTED IN SUCH A MANNER AS TO PROVIDE A SAFE AND SMOOTH TRAVELED SURFACE. PERMITTEE SHALL MAINTAIN THE TEMPORARY PAVEMENT IN A SAFE AND SMOOTH CONDITION UNTIL PERMANENT PAVING IS IN PLACE.

REGISTERED CIVIL ENGINEER
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CIVIL
STATE OF CALIFORNIA

APPROVED BY:

09-20-19
NOEL A. CASTILLO — DATE
CITY ENGINEER

CITY OF MONTCLAIR

STANDARD PAVING AND TRENCH REPAIR

NO SCALE	STD. PLAN NO. 301	SHEET 1 of 2

GENERAL NOTES: Continued

7. PRIOR TO PLACEMENT OF PERMANENT PAVING, EXISTING PAVEMENT SHALL BE CUT TO A NEAT STRAIGHT LINE. ALL PAVEMENT JOINTS OR CRACKS WITHIN 2 FEET OF TRENCH IN ALL DIRECTIONS, OR AS DIRECTED BY THE CITY ENGINEER OR DESIGNEE, SHALL BE REMOVED AND REPLACED.

8. ALL EDGES OF EXISTING PAVEMENT BEING JOINED AND SURFACE BEING OVERLAID SHALL RECEIVE A TACK COAT OF ASPHALT EMULSION.

9. ANY STREET PAVED OR RESURFACED IN THE PREVIOUS 60 MONTHS SHALL BE SUBJECT TO SPECIAL PAVING REQUIREMENTS.

10. ANY TRENCH EXTENDING FROM THE CURB INTO PARKING LANE, SHALL REQUIRE A COMPLETE COLD PLANE AND OVERLAY OF THE PARKING LANE. ALL TRENCHES EXTENDING LONGITUDINALLY IN THE DRIVING LANE SHALL REQUIRE THAT THE ENTIRE LANE BE COLD PLANED AND OVERLAID. ALL TRENCHES EXTENDING INTO THE TRAVELED LANE TRANSVERSELY WILL REQUIRE THE ENTIRE LENGTH OF THE TRENCH UP TO THE NEAREST LANE LINE BE COLD PLANED AND OVERLAID 10 FEET IN BOTH DIRECTIONS FROM THE CENTERLINE OF THE TRENCH.

11. IF TRENCH FAILURE SHOULD OCCUR, THE PERMITTEE/DEVELOPER WILL BE NOTIFIED OF SUCH DEFICIENCIES AND DIRECTED TO REMOVE, REPLACE, REMEDY THIS WORK. UPON FAILURE OF THE CONTRACTOR TO PROMPTLY COMPLY AND UNDER ORDER OF THE CITY ENGINEER, TRENCH SHALL BE REMEDIED, REMOVED, REPLACED AT PERMITTEE/ DEVELOPER'S SOLE EXPENSE.

12. BEDDING MATERIAL SHALL BE SAND, GRAVEL, CRUSHED MISCELLANEOUS BASE OR NATIVE FREE-DRAINING GRANULAR MATERIAL. HAVING A SAND EQUIVALENT OF NOT LESS THAN 30, AND SHALL HAVE A PERCENTAGE COMPOSITION BY WEIGHT WHICH CONFORMS TO THE FOLLOWING GRADING:

SIEVE SIZES	% PASSING SIEVES
1 - ½"	-
1"	-
¾"	100
½"	90 - 100
⅜"	20 - 60
No. 4	0 - 15
No. 8	0 - 5

13. THE CONTRACTOR/PERMITEE SHALL BE REQUIRED TO FOLLOW THE WORK AREA TRAFFIC CONTROL HANDBOOK ("WATCH" MANUAL) OR AS DIRECTED BY THE CITY TRAFFIC ENGINEER OR DESIGNEE.

14. FULL STREET CLOSURES REQUIRE CITY TRAFFIC ENGINEER APPROVAL AND REQUEST FOR SUCH CLOSURES SHALL BE SUBMITTED 20 DAYS IN ADVANCE OF CLOSURE.

15. THE WORKING HOURS ON ARTERIAL AND MAJOR STREETS, SCHOOLS, HOSPITALS, AND FREEWAY RAMPS SHALL BE SUBJECT TO APPROVAL BY CITY TRAFFIC ENGINEER'S OFFICE.

16. ALL STRIPING AND MARKINGS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND AS DIRECTED BY THE CITY ENGINEER OR DESIGNEE.

17. ALL POTHOLES/SERVICE CUTS/ETC. SHALL BE BACKFILLED WITH A 2-SACK SLURRY OR AS SPECIFIED BY THE CITY ENGINEER OR DESIGNEE.

18. SOIL-STERILANT IS REQUIRED PRIOR TO PLACEMENT OF PERMANENT PAVING.

19. CONTRACTOR/PERMITTEE SHALL CLEAN UP TRACKING BY ANY MEANS NECESSARY.

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
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CIVIL
STATE OF CALIFORNIA

APPROVED BY:

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NOEL A. CASTILLO — DATE
CITY ENGINEER

CITY OF MONTCLAIR

STANDARD PAVING AND TRENCH REPAIR

NO SCALE	STD. PLAN NO. 301	SHEET 2 of 2

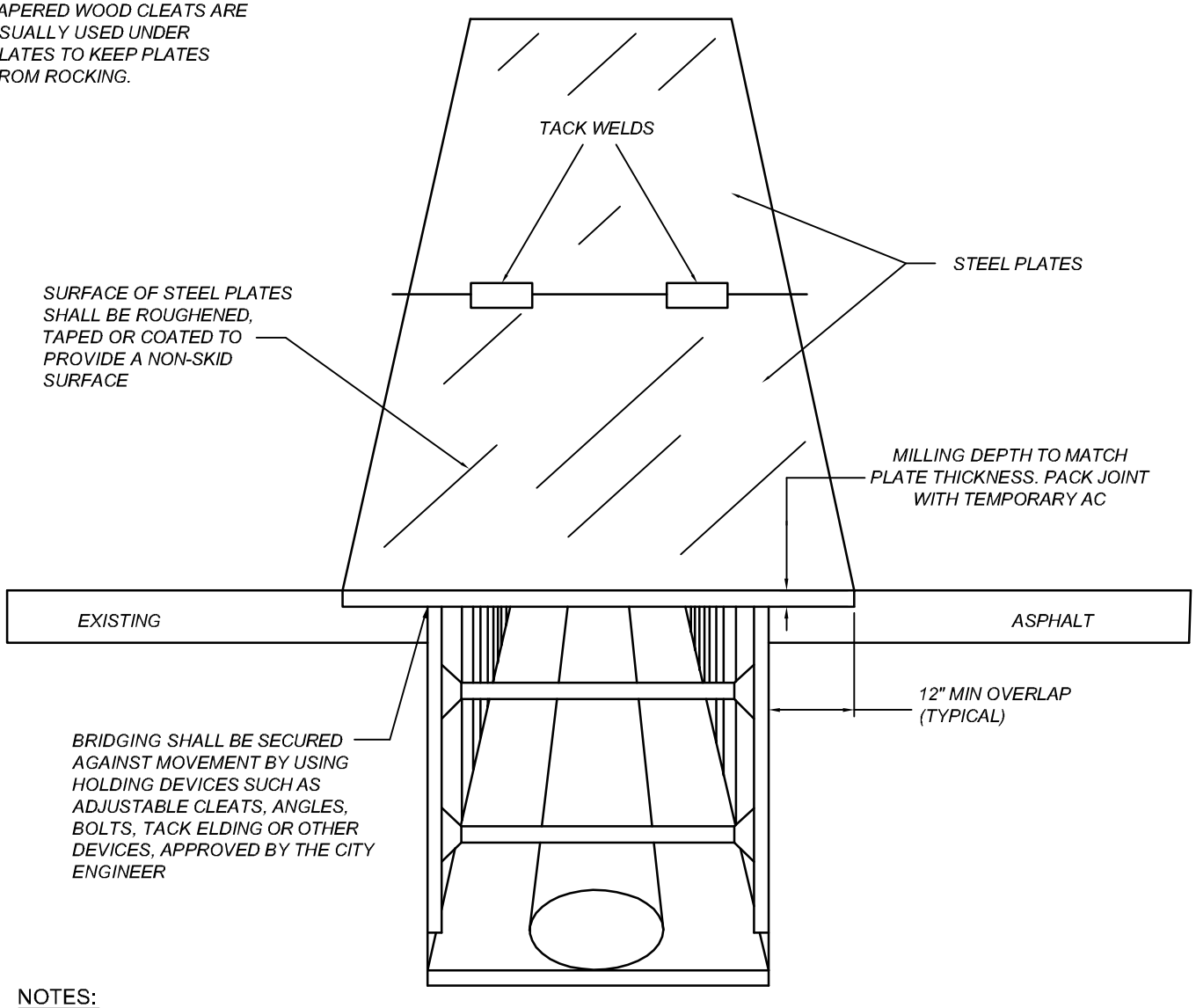
PLATE BRIDGING

WIDTH OF TRENCH	MINIMUM PLATE THICKNESS
1.0 FOOT TO 3 FOOT	1 INCH
4.0 FEET	1 -¼ INCH

FOR SPANS GREATER THAN 4 FEET, A STRUCTURAL DESIGN SHALL BE PREPARED BY A REGISTERED CIVIL ENGINEER AND APPROVED BY CITY ENGINEER.

NOTE:

TAPERED WOOD CLEATS ARE USUALLY USED UNDER PLATES TO KEEP PLATES FROM ROCKING.



NOTES:

1. TRENCH WALLS AND ADJACENT SOIL SHALL BE SUFFICIENTLY STABLE FOR THE USE OF THE ABOVE PLATE.
2. CONTRACTOR/PERMITTEE SHALL BE RESPONSIBLE AT ALL TIMES FOR MAINTENANCE OF THE PLATES FOR THE SAFE OPERATION OF TRAFFIC AND PEDESTRIAN SAFETY.
3. CONTRACTOR/PERMITTEE SHALL COLD PLANE TO RECESS PLATES.
4. MINIMUM PLATE DIMENSION SHALL BE 8' X 10'.

REGISTERED CIVIL ENGINEER
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APPROVED BY:

09-20-19

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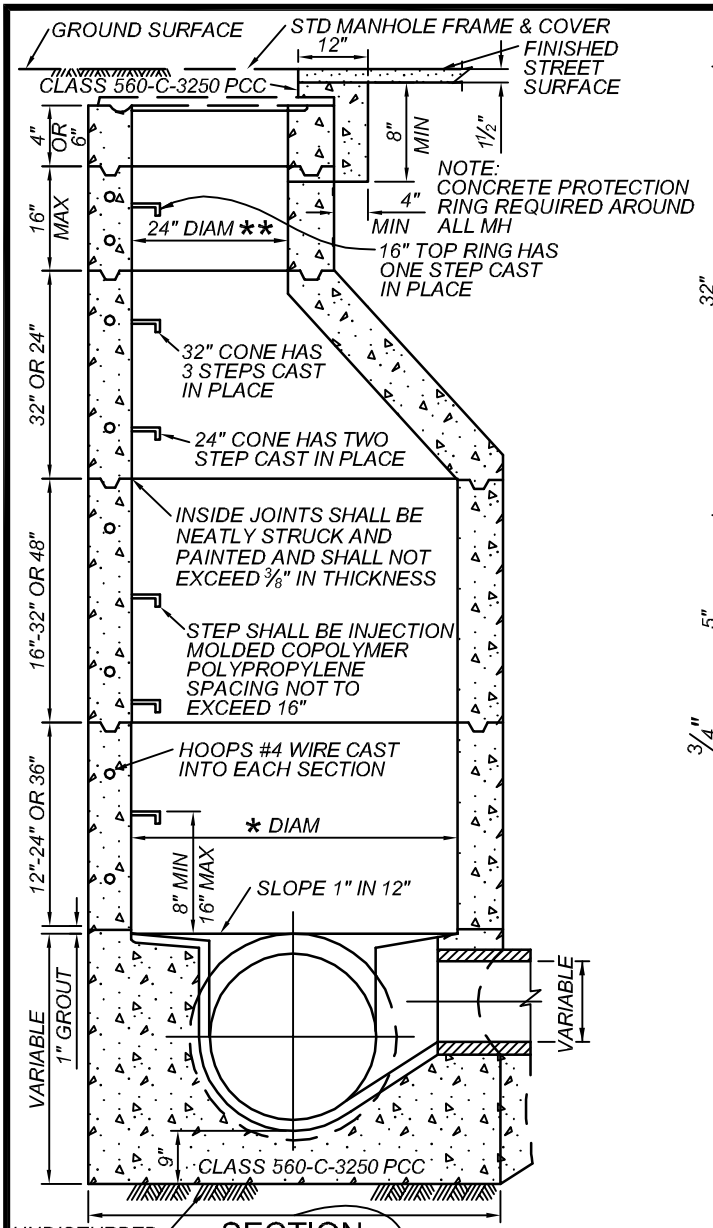
CITY ENGINEER

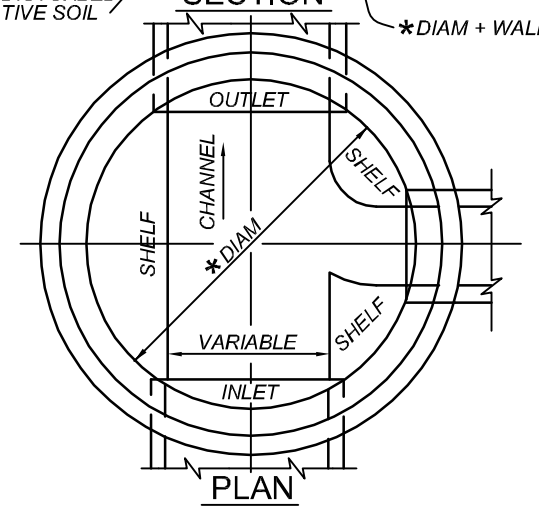
DATE

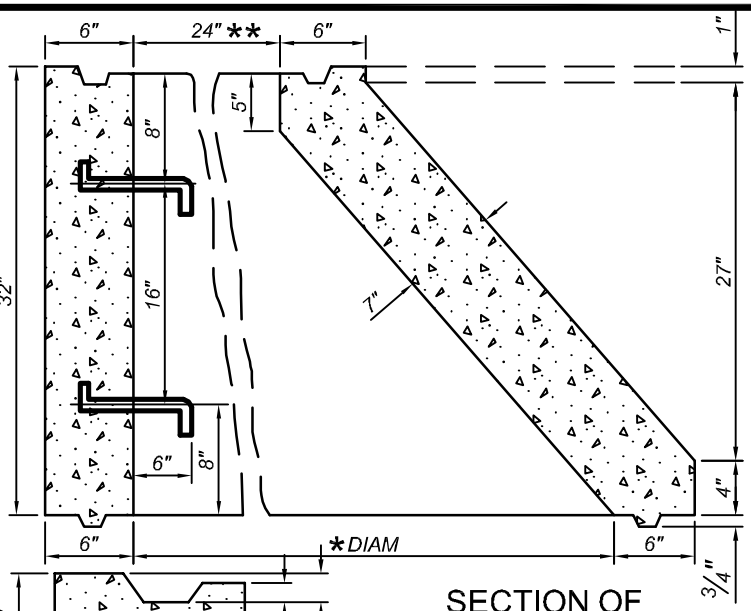
CITY OF MONTCLAIR

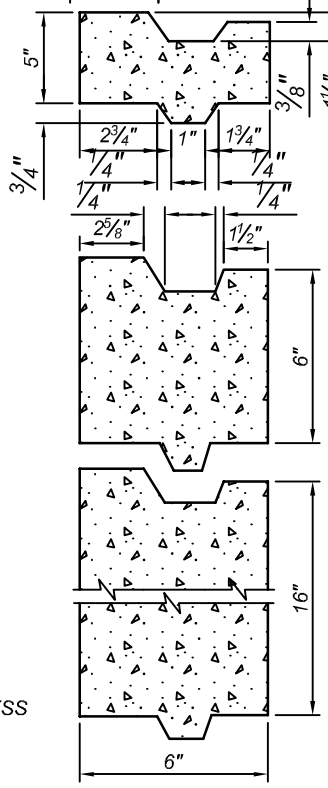
PLATE BRIDGING

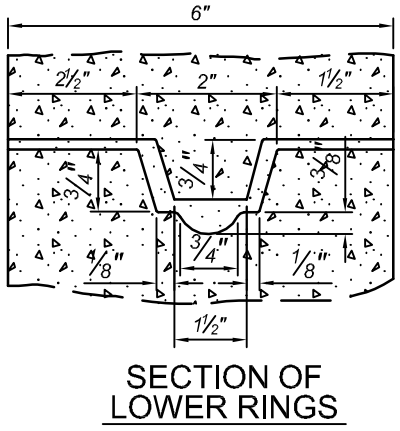
NO SCALE	STD. PLAN NO. 302	SHEET 1 of 1











NOTES:

1. CRADLE FIRST LENGTH OF PIPE AT ALL INLETS AND OUTLETS WITH CLASS 450-C-2000 PCC ON UNDISTURBED NATIVE SOIL.
2. NON-REINFORCED PRECAST MANHOLES SHALL BE 560-C-3250 PCC. REINFORCED PRECAST MANHOLES SHALL BE PER ASTM C-478 SPECIFICATIONS.
3. * 48" I.D. MANHOLE TO BE USED ON SEWERS WITH A DIAMETER OF 18" OR LESS AND A DEPTH OF 12' OR LESS UNLESS OTHERWISE DIRECTED.
4. * 60" I.D. MANHOLE TO BE USED ON SEWERS WITH A DIAMETER OF 20" OR MORE OR WITH A DEPTH GREATER THAN 12' UNLESS OTHERWISE DIRECTED.
5. * 72" I.D. MANHOLE TO BE USED ON SEWERS WITH A DIAMETER OF 30" OR LARGER.
6. ** A 24" FRAME AND COVER SHALL BE USED ON 48" I.D. MANHOLES.
7. ** A 30" FRAME AND COVER SHALL BE USED ON 60" I.D. MANHOLES.
8. ** A 36" FRAME AND COVER SHALL BE USED ON 72" I.D. MANHOLES.
9. STEPS SHALL BE INJECTION MOLDED COPOLYMER POLYPROPYLENE, MAXIMUM SPACING 16".

REGISTERED CIVIL ENGINEER
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STATE OF CALIFORNIA

APPROVED BY:

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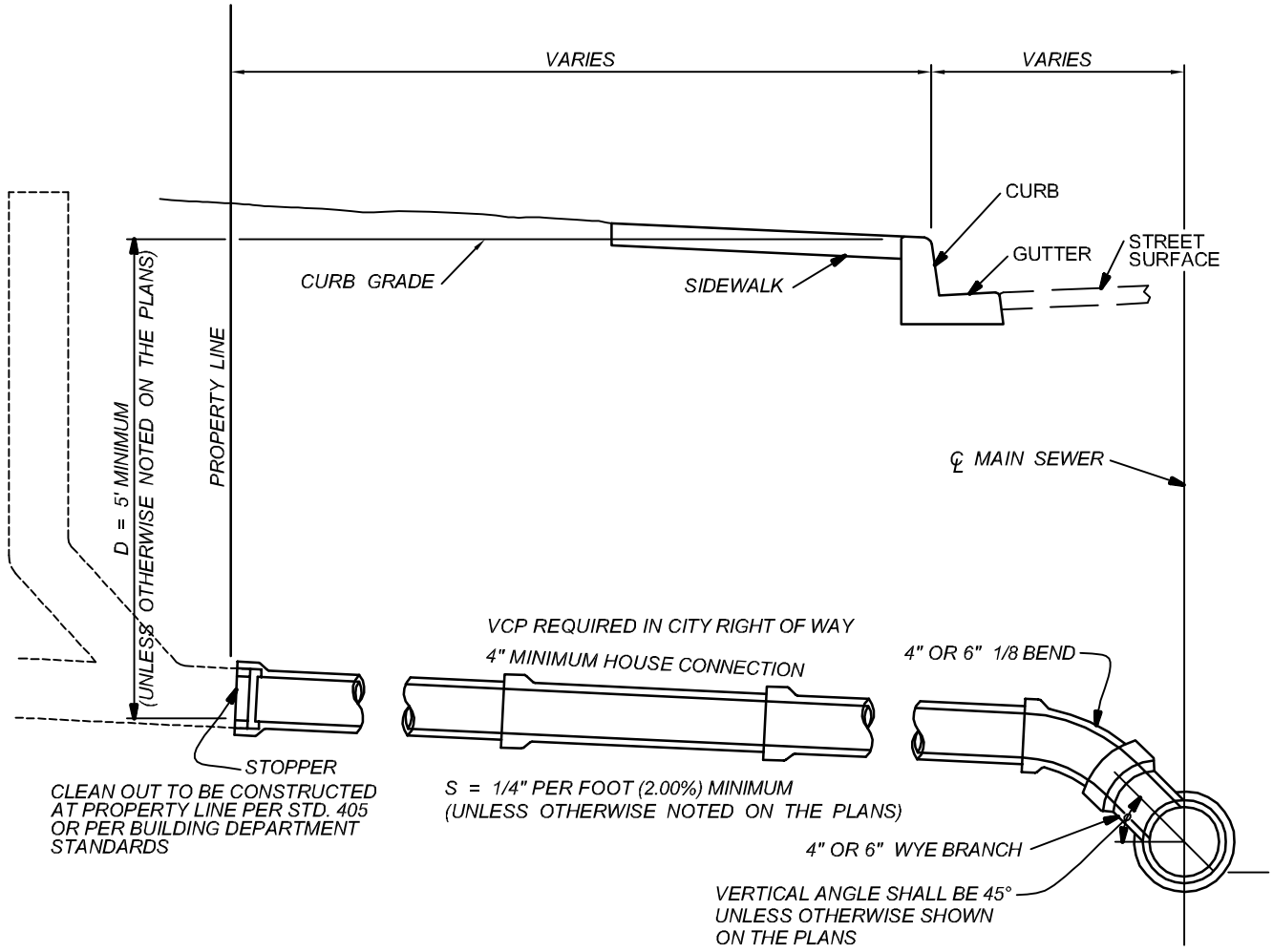
05-14-24
DATE

CITY OF MONTCLAIR

ECCENTRIC CONE PRECAST CONCRETE MANHOLE

NO SCALE	STD. PLAN NO. 401	SHEET 1 of 1



REGISTERED CIVIL ENGINEER
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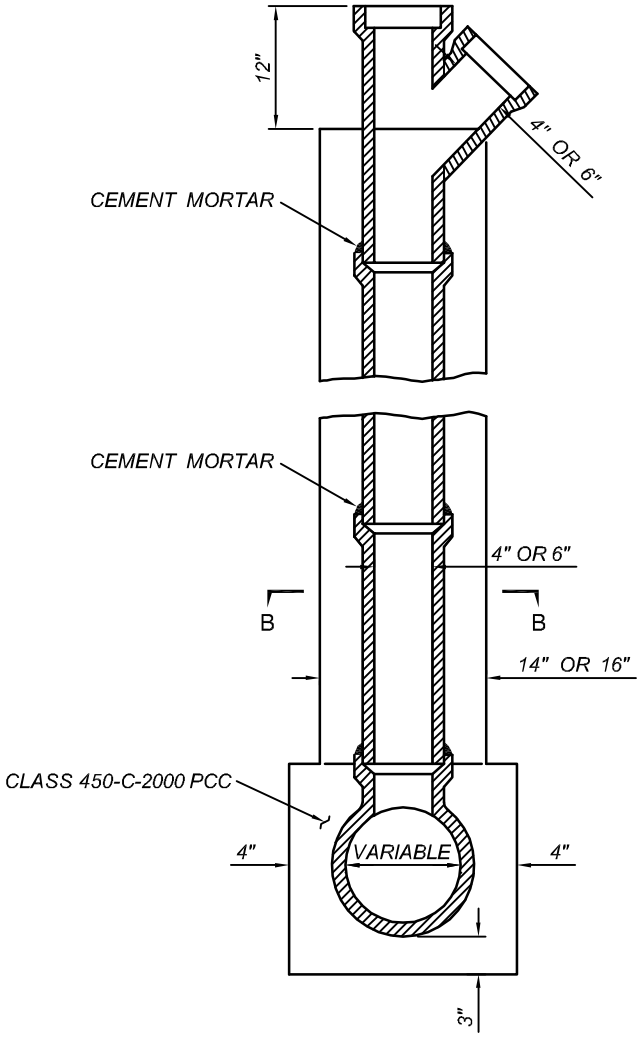
05-14-24
DATE

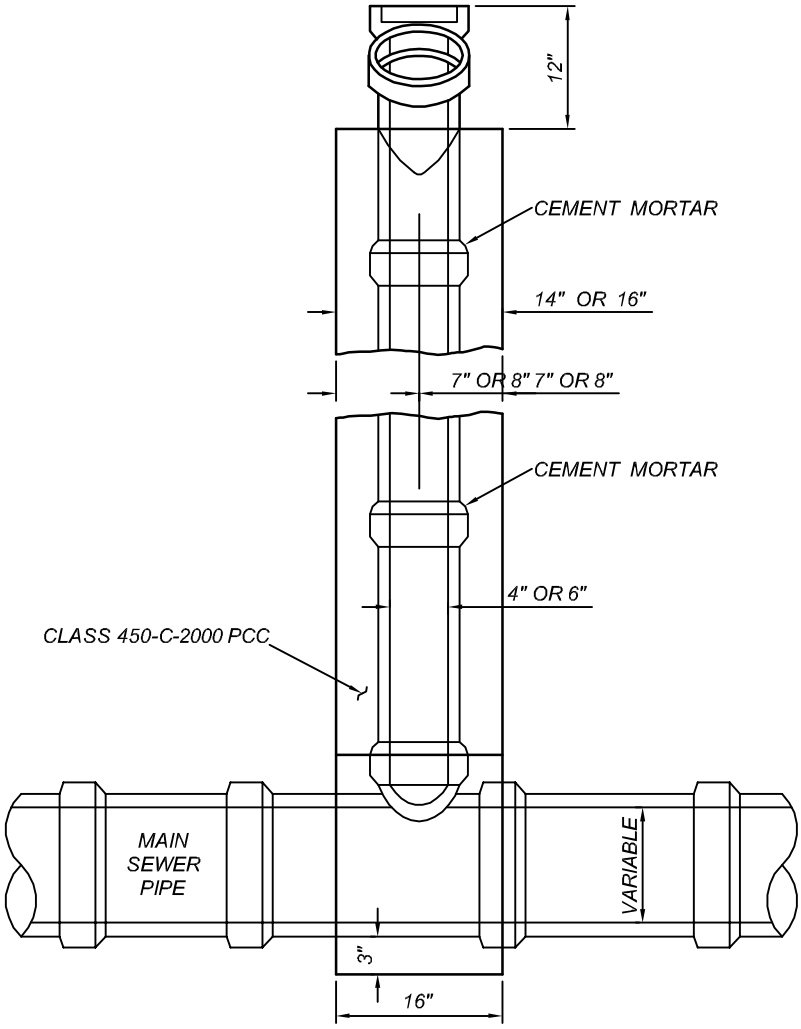
CITY OF MONTCLAIR

SEWER LATERAL

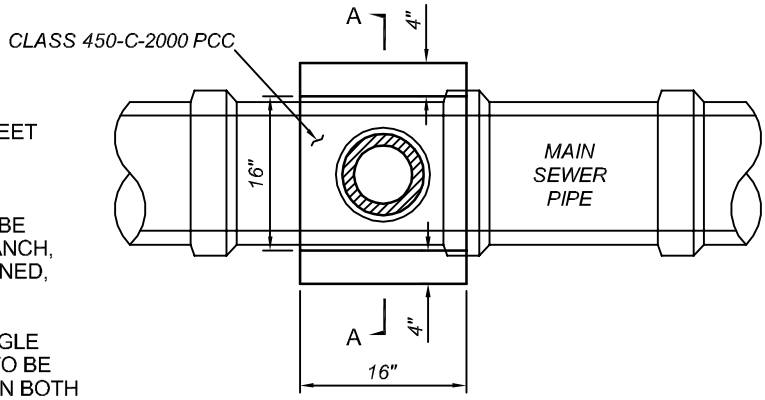
NO SCALE	STD. PLAN NO. 402	SHEET 1 of 1



SECTION A-A



ELEVATION



SECTION PLAN B-B

NOTES:

1. THE UPPER END OF THE CHIMNEY PIPE SHALL BE 8 FEET BELOW THE GRADE OF THE LOWER CURB, UNLESS OTHERWISE SPECIFIED.
2. WHERE ONE OR TWO HOUSE CONNECTIONS ARE TO BE JOINED TO THE CHIMNEY PIPE, USE A SINGLE "Y" BRANCH, WHERE THREE HOUSE CONNECTIONS ARE TO BE JOINED, USE A DOUBLE "Y" BRANCH.
3. WHERE THE CHIMNEY PIPE IS TO BE USED FOR A SINGLE HOUSE CONNECTION FACE "Y" TOWARD PROPERTY TO BE SERVED; WHERE USED FOR HOUSE CONNECTIONS ON BOTH SIDES OF THE SEWER, THE HOUSE CONNECTION ON THE RIGHT SIDE OF THE SEWER (LOOKING UP GRADE), SHALL BE CONNECTED TO THE "Y" BRANCH BY A 1/8 BEND AND THE HOUSE CONNECTION ON THE LEFT SIDE SHALL BE CONNECTED TO THE UPPER END OF THE CHIMNEY BY A 4" OR 6" 1/4 BEND UNLESS OTHERWISE NOTED.

REGISTERED CIVIL ENGINEER
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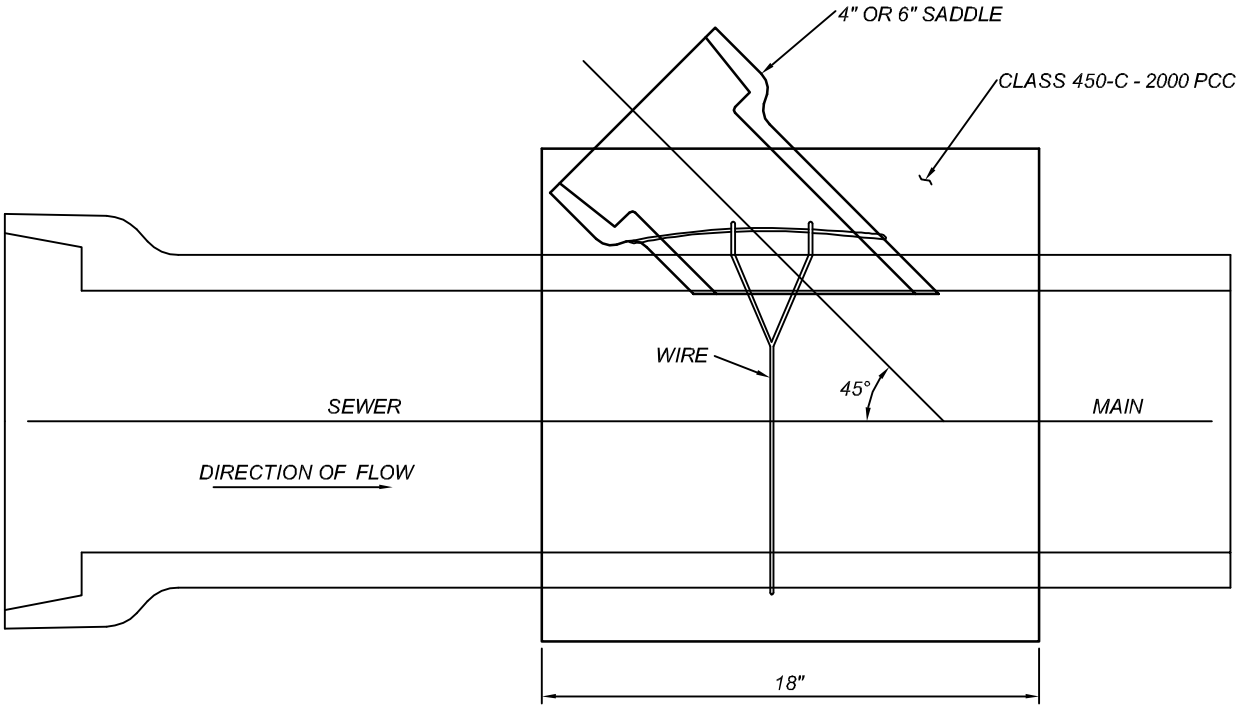
CITY ENGINEER

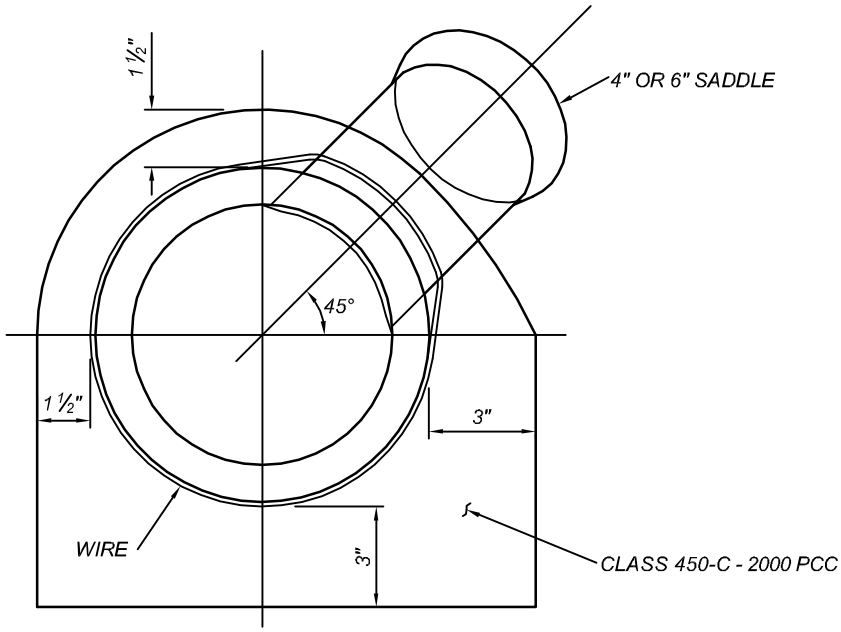
CITY OF MONTCLAIR

STANDARD CHIMNEY PIPE

NO SCALE	STD. PLAN NO. 403	SHEET 1 of 1



PLAN VIEW



SECTION

NOTES:

1. INSPECTION MUST BE OBTAINED FOR SADDLE PRIOR TO PLACING PCC AND AGAIN BEFORE BACKFILLING OVER LATERAL.
2. TIE WIRE SHALL BE 12 GA GALVANIZED WIRE.

REGISTERED CIVIL ENGINEER
NOEL CASTILLO
No. C 78044
CIVIL
STATE OF CALIFORNIA

APPROVED BY:

09-20-19
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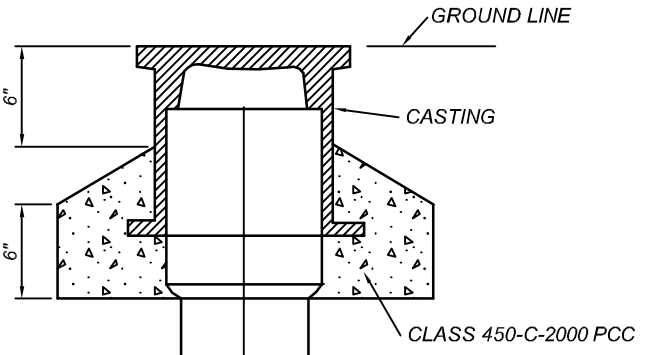
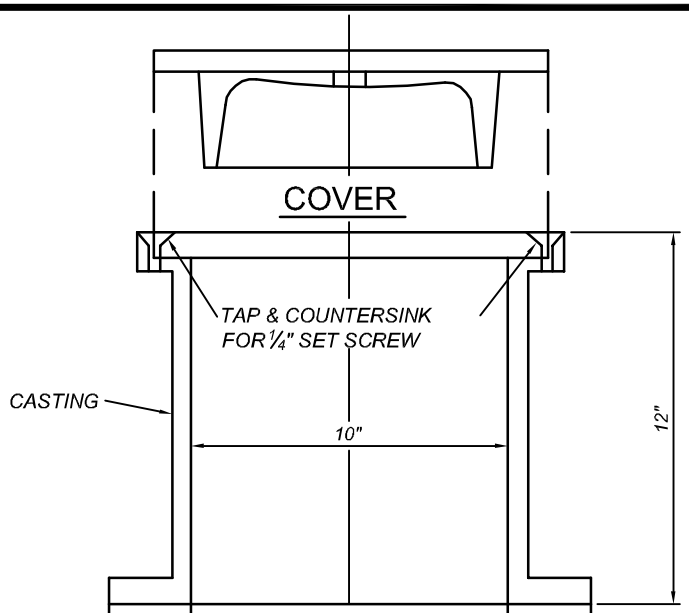
CITY ENGINEER

CITY OF MONTCLAIR

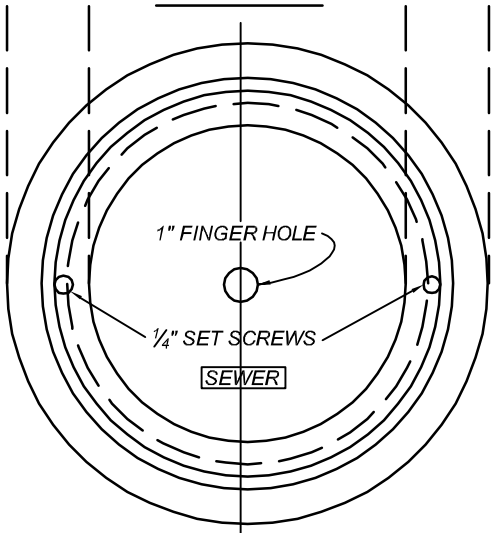
SEWER SADDLE

NO SCALE	STD. PLAN NO. 404	SHEET 1 of 1

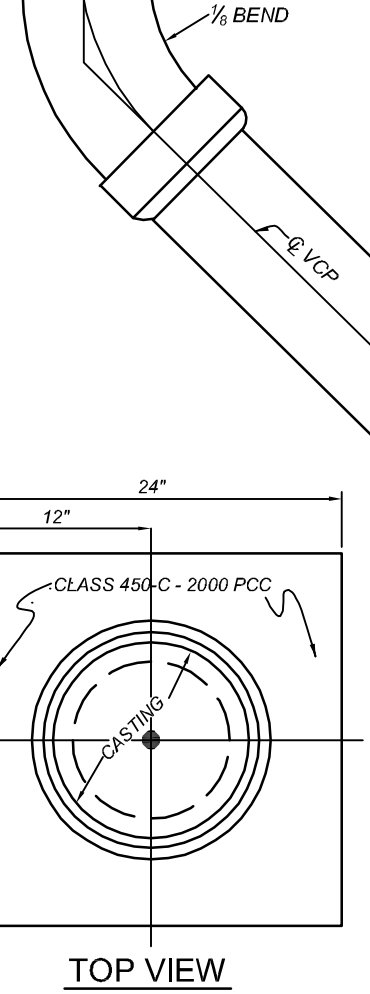




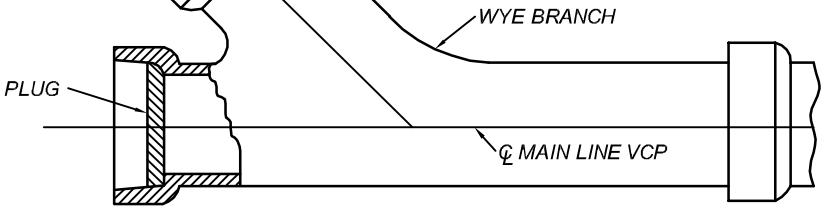
SIDE VIEW



TOP VIEW



TOP VIEW



NOTES:

1. CLEAN-OUT PIPE MUST BE SAME DIAMETER AS MAIN LINE SEWER.
2. CASTING MAY BE: ALHAMBRA FOUNDRY A-1240, EJ 3510, SOUTH BAY FOUNDRY A-1240 OR NEENAH FOUNDRY R-1976

REGISTERED CIVIL ENGINEER
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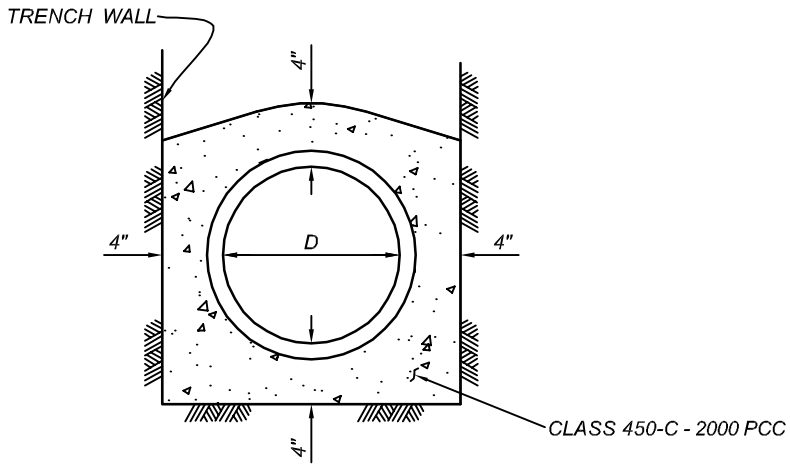
CITY ENGINEER

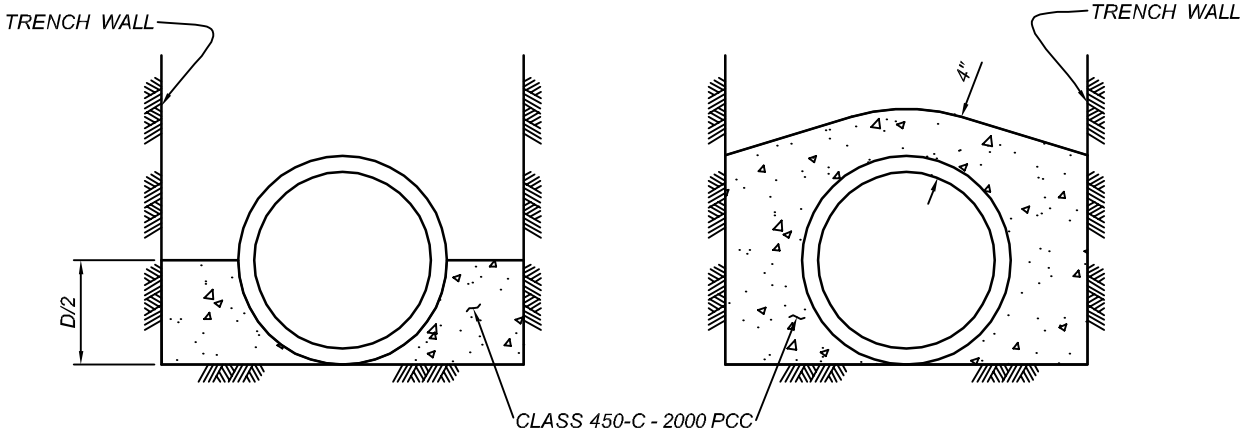
CITY OF MONTCLAIR

SEWER TERMINAL CLEAN-OUT

NO SCALE	STD. PLAN NO. 405	SHEET 1 of 1



NO. 1
CONCRETE ENCASEMENT



CONCRETE CRADLE

NO. 2
CONCRETE ENCASEMENT

NOTE:

1. WHERE TRENCH WIDTH EXCEEDS THE WIDTH SPECIFIED IN THE SPECIFICATIONS, CONTRACTOR SHALL FURNISH AND PLACE AT HIS OWN EXPENSE, CRADLE AS SHOWN ABOVE.

REGISTERED CIVIL ENGINEER
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STATE OF CALIFORNIA

APPROVED BY:

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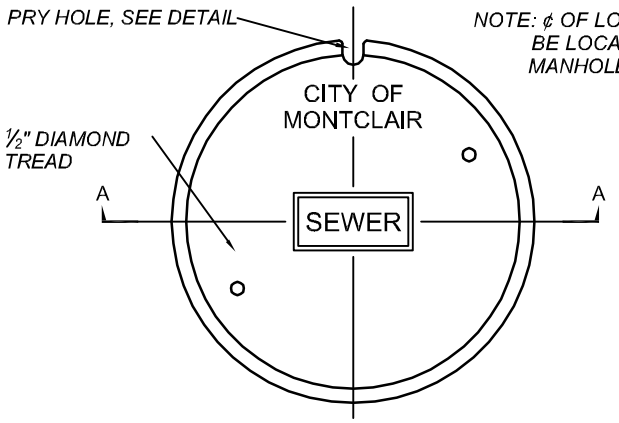
MONICA HEREDIA
CITY ENGINEER

CITY OF MONTCLAIR

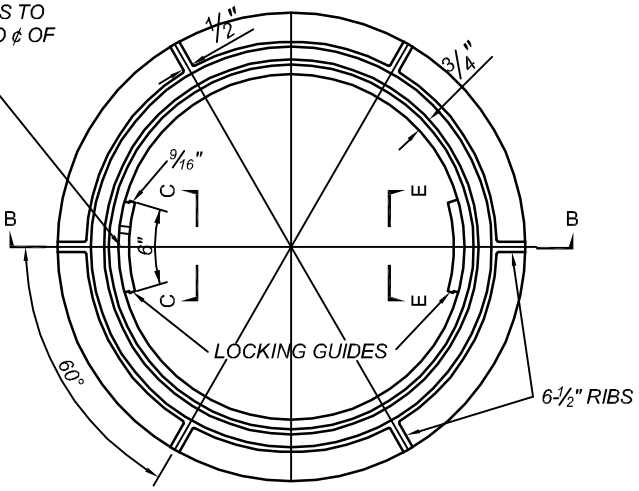
CONCRETE CRADLE & ENCASEMENT

NO SCALE	STD. PLAN NO. 406	SHEET 1 of 1

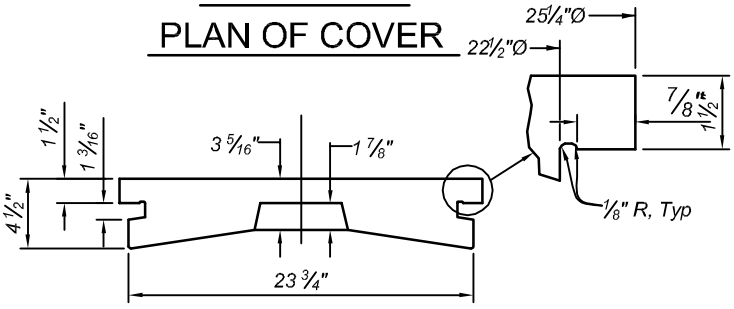


TOP VIEW

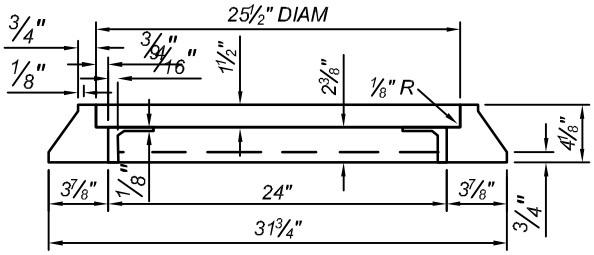
PLAN OF COVER



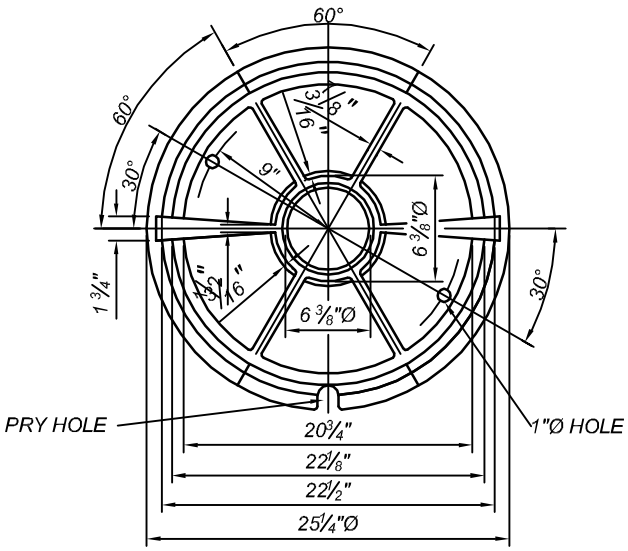
PLAN OF FRAME



SECTION A-A

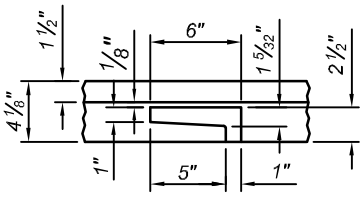


SECTION B-B



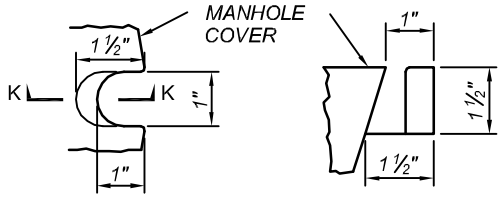
BOTTOM VIEW

PLAN OF COVER



SIDE VIEW C-C AND E-E

LOCKING GUIDE



PLAN TOP VIEW SECTION K-K

PRY HOLE DETAIL

NOTES:

MACHINE SEATS AND GRIND LUGS SMOOTH.
PERIMETER OF COVER SHALL BE GROUND SMOOTH, DIAMETER TOLERANCE ± 1⁄16"
WEIGHT OF MANHOLE FRAME = 150 LBS.
WEIGHT OF MANHOLE COVER = 215 LBS.
THE CAST IRON USED SHALL HAVE A TENSILE STRENGTH OF 50,000 LBS. PER SQ. IN.
ALHAMBRA FOUNDRY NO. A 1175 OR EQUAL

MANUFACTURER	24" COVER	30" COVER	36" COVER
ALHAMBRA FOUNDRY	A-1495	A-1252	A-1251
EJ	3160	3163	3106
SOUTH BAY FOUNDRY	A-1176	A-1252	A-1251
NEENAH FOUNDRY	1574	1577	1578

REGISTERED CIVIL ENGINEER
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APPROVED BY:

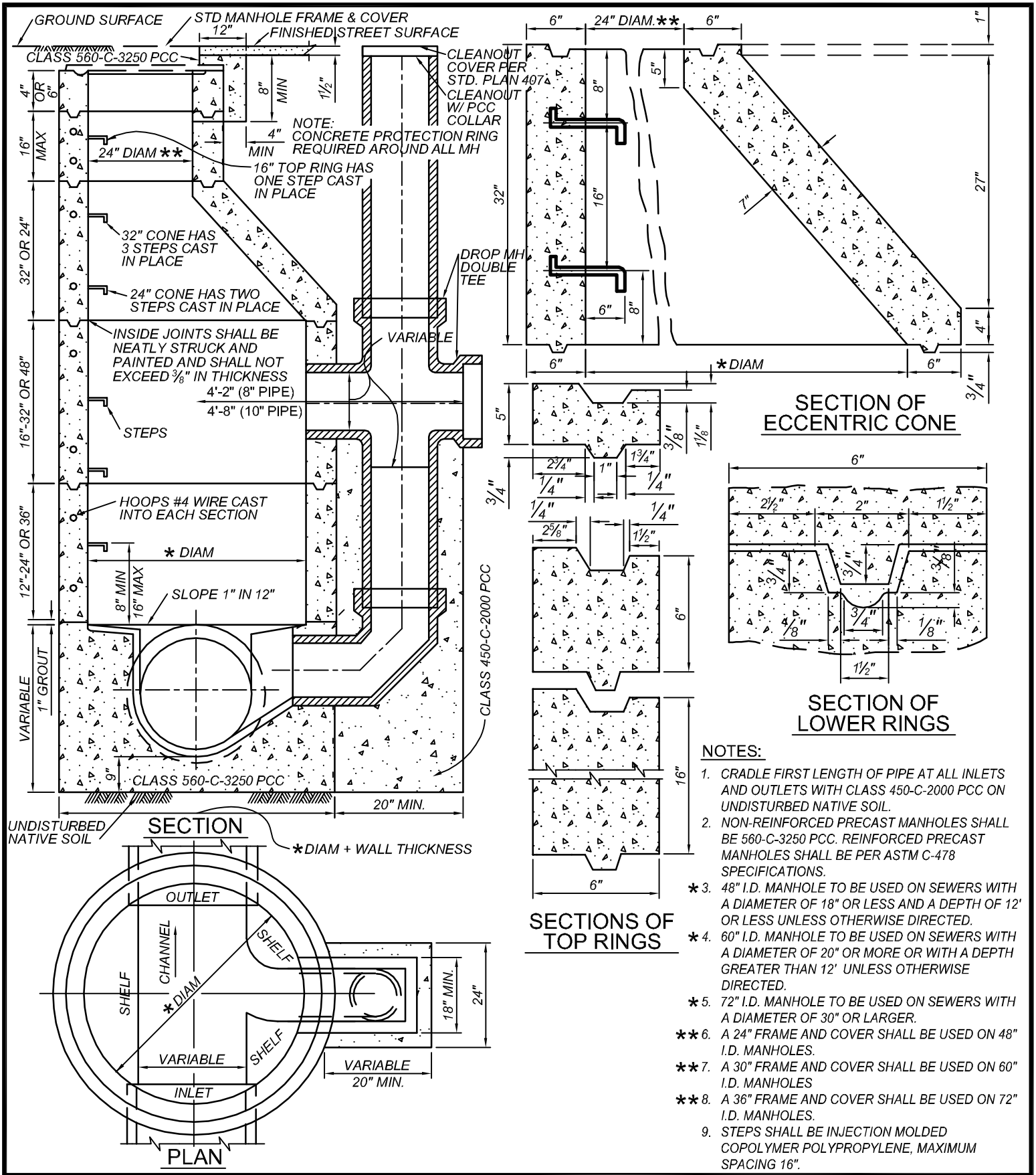
MONICA HEREDIA
CITY ENGINEER

05-14-24
DATE

CITY OF MONTCLAIR

MANHOLE FRAME & COVER

NO SCALE	STD. PLAN NO. 407	SHEET 1 of 1



NOTES:

1. CRADLE FIRST LENGTH OF PIPE AT ALL INLETS AND OUTLETS WITH CLASS 450-C-2000 PCC ON UNDISTURBED NATIVE SOIL.
2. NON-REINFORCED PRECAST MANHOLES SHALL BE 560-C-3250 PCC. REINFORCED PRECAST MANHOLES SHALL BE PER ASTM C-478 SPECIFICATIONS.
- * 3. 48" I.D. MANHOLE TO BE USED ON SEWERS WITH A DIAMETER OF 18" OR LESS AND A DEPTH OF 12' OR LESS UNLESS OTHERWISE DIRECTED.
- * 4. 60" I.D. MANHOLE TO BE USED ON SEWERS WITH A DIAMETER OF 20" OR MORE OR WITH A DEPTH GREATER THAN 12' UNLESS OTHERWISE DIRECTED.
- * 5. 72" I.D. MANHOLE TO BE USED ON SEWERS WITH A DIAMETER OF 30" OR LARGER.
- ** 6. A 24" FRAME AND COVER SHALL BE USED ON 48" I.D. MANHOLES.
- ** 7. A 30" FRAME AND COVER SHALL BE USED ON 60" I.D. MANHOLES
- ** 8. A 36" FRAME AND COVER SHALL BE USED ON 72" I.D. MANHOLES.
9. STEPS SHALL BE INJECTION MOLDED COPOLYMER POLYPROPYLENE, MAXIMUM SPACING 16".

REGISTERED CIVIL ENGINEER
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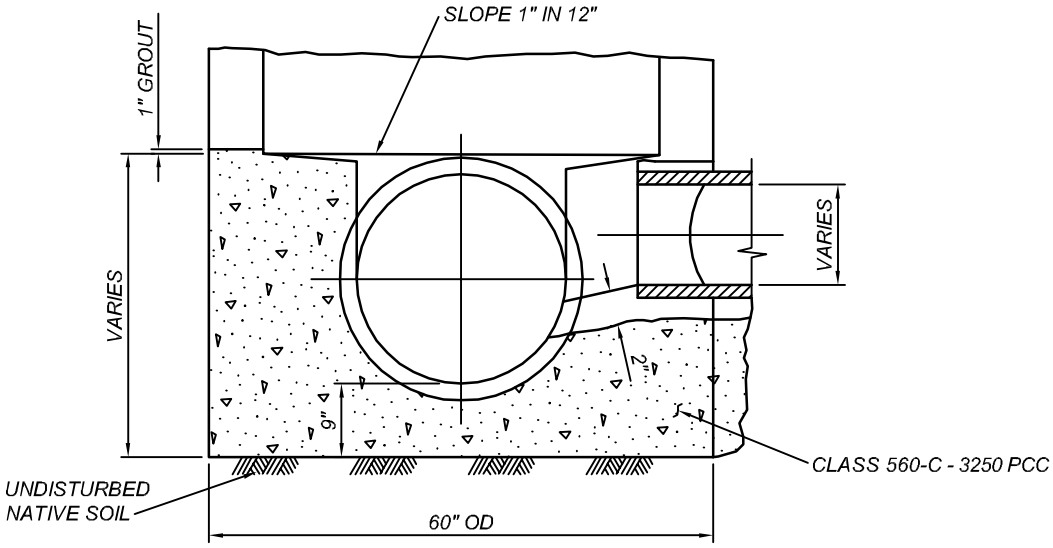
DATE

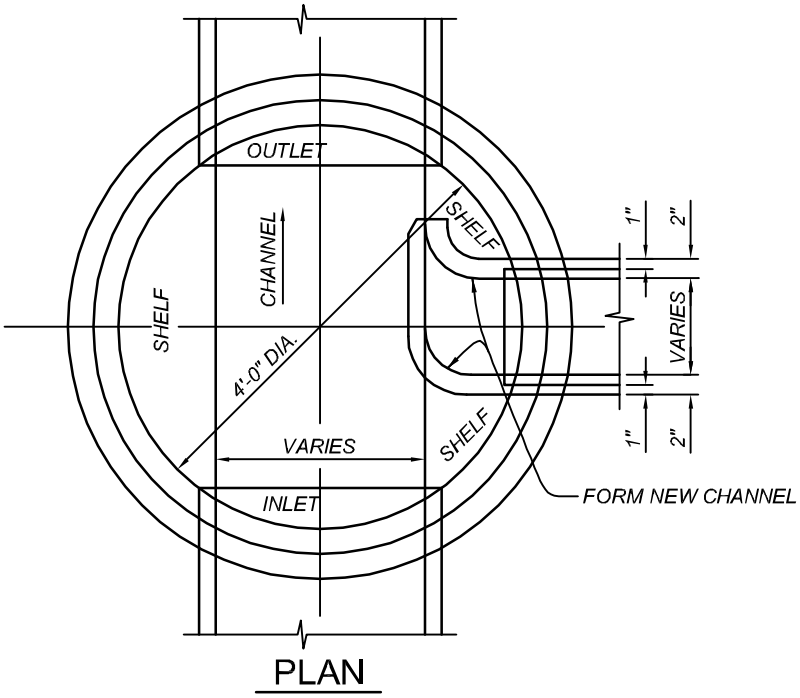
CITY OF MONTCLAIR

STANDARD PLAN DROP MANHOLE

NO SCALE	STD. PLAN NO. 408	SHEET 1 of 1



SECTION



PLAN

NOTES:

1. CORE DRILL THROUGH EXISTING MANHOLE WALL AND OPEN CIRCULAR HOLE TO PROVIDE 1" CLEAR AROUND PIPE INLET TO BE INSTALLED.
2. BREAK OUT CHANNEL TO 2" BELOW PROPOSED FLOWLINE.
3. PAINT EXISTING EXPOSED CONCRETE SURFACES WITH EPOXY RESIN BOND AS RECOMMENDED BY THE MANUFACTURER AND TO SATISFACTION OF THE CITY ENGINEER.
4. SEAL PIPE STUB AND FORM NEW CHANNEL WITH CONCRETE MORTAR AND EPOXY RESIN MIXED AS DIRECTED BY THE CITY ENGINEER.

REGISTERED CIVIL ENGINEER
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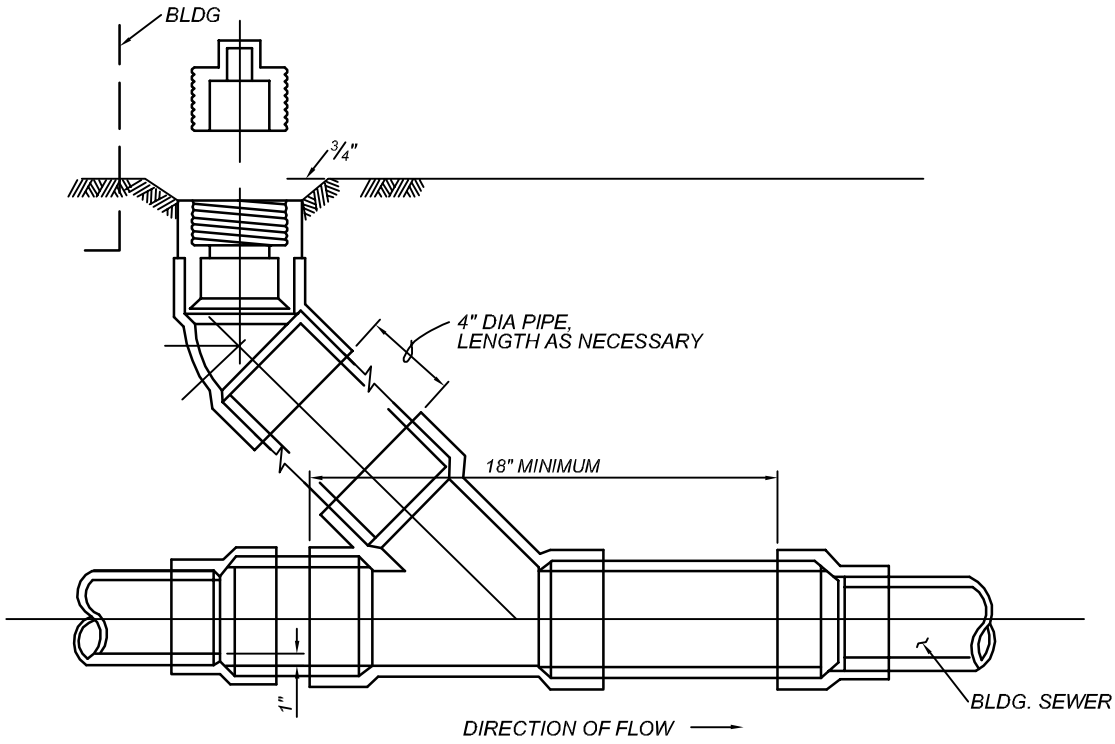
MONICA HEREDIA
CITY ENGINEER

DATE

CITY OF MONTCLAIR

BREAK INTO AND RECHANNEL AN EXISTING MANHOLE

NO SCALE	STD. PLAN NO. 409	SHEET 1 of 1



NOTES:

1. BARREL DIAMETER OF SAMPLING WYE TO BE A MINIMUM OF 2" LARGER THAN BLDG. DISCHARGE LINE.
2. DIAMETER OF RISER PIPE TO BE 4".
3. MUST BE ACCESSIBLE AT ALL TIMES TO CITY PERSONNEL.
4. NOT FOR USE IN TRAVELED WAYS.
5. IF NECESSARY TO PLACE CAP IN SIDEWALK, USE FLUSH CAP.

REGISTERED CIVIL ENGINEER
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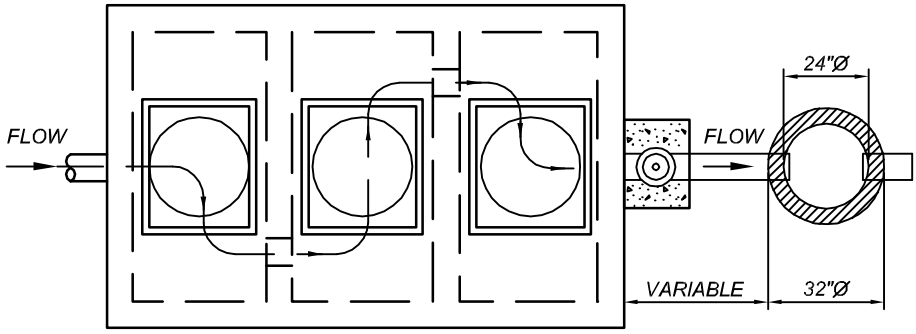
CITY ENGINEER

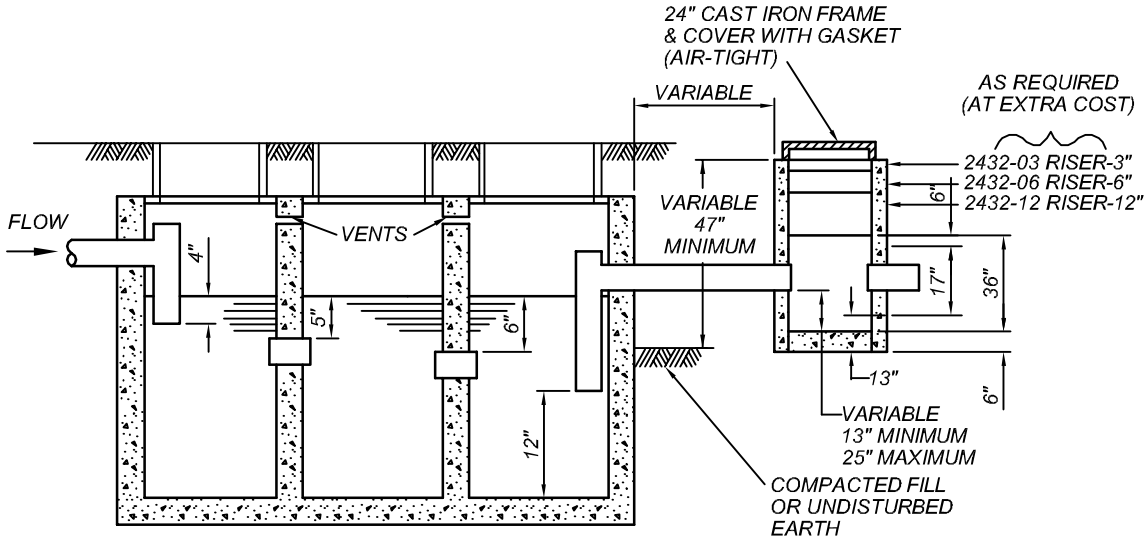
CITY OF MONTCLAIR

SAMPLING STATION

NO SCALE	STD. PLAN NO. 410	SHEET 1 of 1



PLAN



SECTION

NOTES:

1. THIS INSTALLATION SHALL BE ACCESSIBLE FOR MAINTENANCE AND INSPECTION AT ALL TIMES.
2. WHERE SUBJECT TO VEHICLE LOADING, DESIGN ADEQUACY SHALL BE VERIFIED.
3. THE PERIMETER SHALL SLOPE AWAY FROM THE INTERCEPTOR. FLOW SHALL NOT INCLUDE SANITARY SEWAGE OR SURFACE DRAINAGE.
4. EACH INSTALLATION SHALL BE SUBJECT TO REVIEW FOR ADEQUATE CAPACITY PRIOR TO CONSTRUCTION. MINIMUM CAPACITY SHALL BE 750 GALLONS.
5. A SAMPLING BOX IS REQUIRED IN ADDITION TO INTERCEPTOR.
6. A TWO COMPARTMENT INTERCEPTOR IS THE MINIMUM STANDARD.
7. EACH COMPARTMENT SHALL HAVE A SEPARATE RING AND COVER.

REGISTERED CIVIL ENGINEER
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CIVIL
STATE OF CALIFORNIA

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09-20-19
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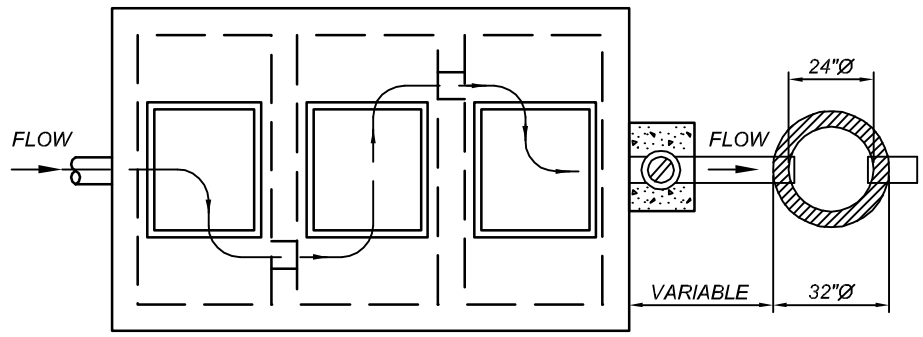
CITY ENGINEER

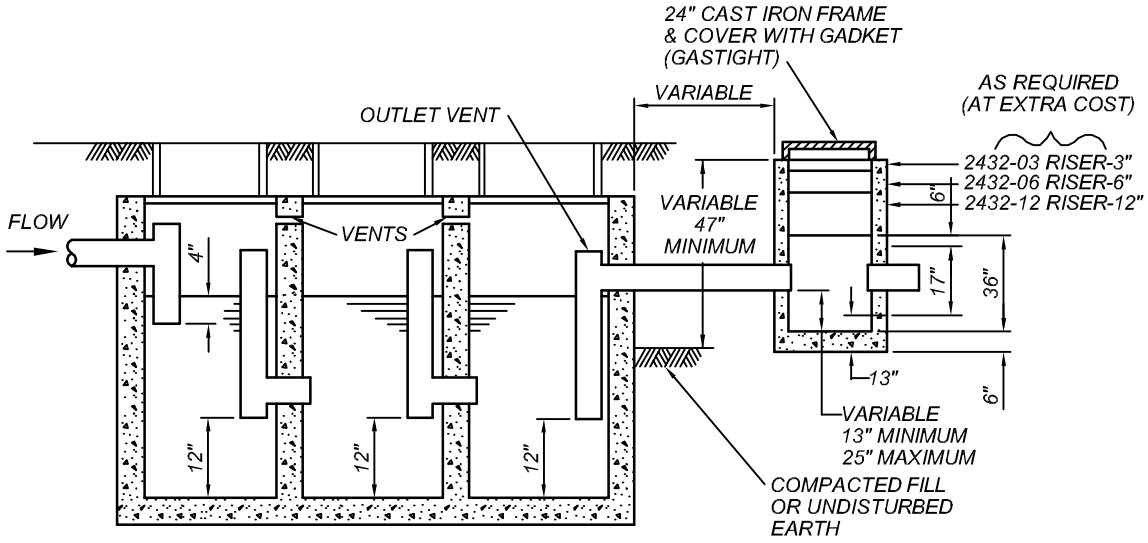
CITY OF MONTCLAIR

SAND INTERCEPTOR

NO SCALE	STD. PLAN NO. 411	SHEET 1 of 1



PLAN



SECTION

NOTES:

1. THIS INSTALLATION SHALL BE ACCESSIBLE FOR MAINTENANCE AND INSPECTION AT ALL TIMES.
2. WHERE SUBJECT TO VEHICLE LOADING, DESIGN ADEQUACY SHALL BE VERIFIED.
3. THE PERIMETER SHALL SLOPE AWAY FROM THE INTERCEPTOR. FLOW SHALL NOT INCLUDE SANITARY SEWAGE OR SURFACE DRAINAGE.
4. EACH INSTALLATION SHALL BE SIZED BY THE CITY FOR ADEQUATE CAPACITY PRIOR TO CONSTRUCTION. MINIMUM CAPACITY SHALL BE 750 GALLONS.
5. A SAMPLING BOX IS REQUIRED IN ADDITION TO INTERCEPTOR.
6. A TWO COMPARTMENT INTERCEPTOR IS THE MINIMUM STANDARD.
7. EACH COMPARTMENT SHALL HAVE A SEPARATE RING AND COVER.

REGISTERED CIVIL ENGINEER
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No. C 78044
CIVIL
STATE OF CALIFORNIA

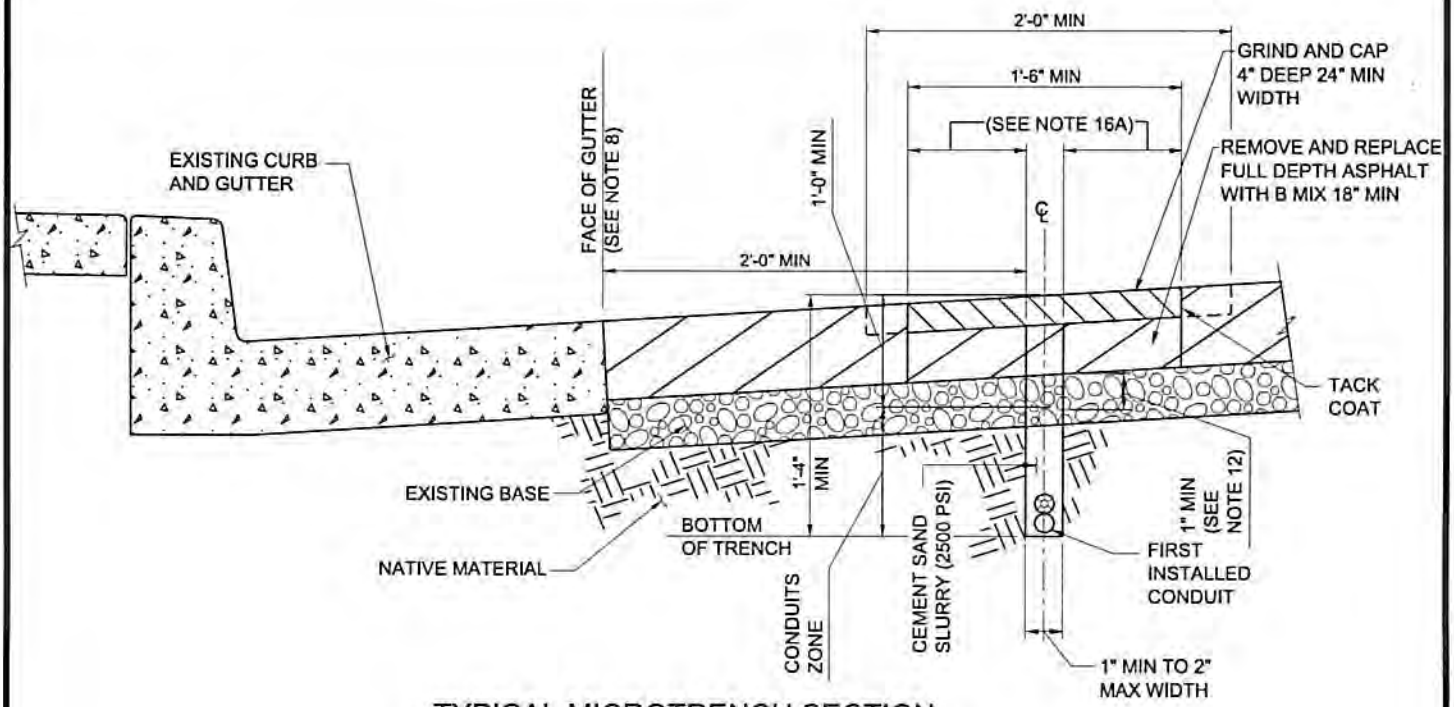
APPROVED BY:

09-20-19
NOEL A. CASTILLO — DATE
CITY ENGINEER

CITY OF MONTCLAIR

GREASE INTERCEPTOR

NO SCALE	STD. PLAN NO. 412	SHEET 1 of 1



TYPICAL MICROTRENCH SECTION

(INTEGRAL CURB AND GUTTER SHOWN)

NOTES:

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) "GREENBOOK" ADOPTED BY THE CITY OF MONTCLAIR.

GENERAL:

1. MICRO-TRENCHING SHALL ONLY BE USED TO INSTALL TELECOMMUNICATION CONDUITS.
2. MICRO-TRENCHING SHALL NOT BE ALLOWED IN CONCRETE PAVED STREETS, NOR SIDEWALKS, PARKWAYS, CURBS AND GUTTERS.
3. THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES, INCLUDING SERVICE CONNECTIONS IN THE FIELD. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT LEAST 48 HOURS PRIOR TO START OF WORK AT 8-1-1, OR TOLL-FREE AT 1-800-422-4133. THE CONTRACTOR SHALL FURTHER SUPPLEMENT THE FINDINGS OF U.S.A. TO DETERMINE THE EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES BY USING A MOBILE GROUND PENETRATING RADAR SYSTEM. THE CONTRACTOR SHALL POTHOLE ALL CROSSING UTILITIES AND PARALLEL UTILITIES WITHIN 18-INCHES OF THE PROPOSED ALIGNMENT TO A DEPTH OF 6-INCHES BELOW THE BOTTOM OF THE MICRO-TRENCH, TO DETERMINE THE EXISTING UTILITY ALIGNMENT AND ELEVATION. POTHOLES SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS OR RESTORED AS DIRECTED BY THE ENGINEER.
4. IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE INSPECTOR, ENGINEER AND UTILITY OWNER TO PERFORM THE REPAIRS PROMPTLY ACCORDING TO THEIR REQUIREMENTS AND PER ASSOCIATED CITY PERMITS.
5. THE FOLLOWING ITEMS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL:
   - A. PROVIDE A DETAILED SITE PLAN INCLUDING EXISTING CONDITIONS AND PROPOSED SCOPE OF WORK IN DETAIL.
   - B. A STREET CROSS-SECTION THAT INCLUDES THE FOLLOWING INFORMATION:
     - (1) THE CURB AND GUTTER, ASPHALT CONCRETE (AC) ROADWAY APPROXIMATE THICKNESS, BASE, DEPTH AND WIDTH OF MICRO-TRENCH, DEPTH OF TOPMOST CONDUIT, DISTANCES OF MICRO-TRENCH TO FACE OF GUTTER, CURB, CONCRETE PAVEMENT OR STRUCTURE AS APPLICABLE, AND BACKFILL MATERIAL.
     - (2) AC REINSTATEMENT INCLUDING WIDTH AND DEPTH OF GRIND AND CAP, STARTING FROM GUTTER FACE, CURB, SLAB OR STRUCTURE AS APPLICABLE.
   - C. DETAIL SHOWING CONDUIT FROM MAIN MICRO-TRENCH ALIGNMENT TO LATERAL SURFACE CONNECTIONS INCLUDING TO ANY JUNCTION/PULL BOX. INCLUDE SPECIFIC INFORMATION OF DEPTH, SIZE, AND METHOD OF EXCAVATION BELOW EXISTING CURB AND GUTTER.
   - D. CUT SHEETS OF THE PROPOSED EQUIPMENT PARTICULARLY SUITABLE FOR MICRO-TRENCHING, INCLUDING:
     - (1) MICRO-TRENCHER CAPABLE OF MEETING TARGET DEPTH AND WIDTH IN A SINGLE PASS WITH AN INTEGRAL HOOD AND ASSOCIATED VACUUM SYSTEM. SELECTION OF CUTTING WHEEL SHALL BE SUCH THAT IT MINIMIZES DAMAGE TO THE ADJACENT AC SURFACE.
     - (2) MOBILE CONCRETE/SLURRY PLACEMENT WITH AN ON-BOARD VIBRATOR AND NARROW TROUGH TO MATCH MICRO-TRENCH WIDTH.
     - (3) MOBILE GROUND PENETRATING RADAR SYSTEM THAT IS CAPABLE OF LOCATING BOTH METALLIC AND NON-METALLIC PIPES AND CABLES TO A DEPTH OF 24-INCHES.
   - E. OTHER SITE SPECIFIC ITEMS AS REQUIRED BY THE ENGINEER.

REGISTERED CIVIL ENGINEER
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CIVIL
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APPROVED BY:

3/9/2021

NOEL A. CASTILLO
CITY ENGINEER

DATE

CITY OF MONTCLAIR

MICROTRENCHING DETAIL

NO SCALE	STD. DETAIL A	SHEET 1 of 2

LIMITS OF REMOVALS, TRENCH WIDTH, AND LOCATION

6. THE MICRO-TRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.
7. MICRO-TRENCH ALIGNMENTS SHALL CONSIST OF RUNS PARALLEL TO THE CENTERLINE OF THE STREET. STREET CROSSING MAY BE DONE PROVIDED THE ALIGNMENT IS PERPENDICULAR TO THE STREET CENTERLINE TO THE EXTENT POSSIBLE.
8. THE EDGE OF THE MICRO-TRENCH SHALL BE A MINIMUM OF 24-INCHES FROM THE EXISTING FACE OF THE GUTTER, EXISTING CONCRETE STRUCTURE, OR CURB IF GUTTER IS NOT PRESENT.
9. THE MICRO-TRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM OF 2-INCHES.
10. MICRO-TRENCHING MAY BE PERMITTED UPON THE ENGINEER'S DISCRETION ON SPECIAL PAVEMENTS SUCH AS DECORATIVE ASPHALT PAVING, AND THROUGH EXISTING IMPROVEMENTS SUCH AS PERPENDICULAR TO SPEED BUMPS. SPECIAL PAVEMENTS AND EXISTING IMPROVEMENTS SHALL BE RESTORED IN KIND AS APPROVED BY THE ENGINEER. HOWEVER, MICRO-TRENCHING THROUGH EXISTING CURB, GUTTER, CROSS GUTTER, BUS PAD, SIDEWALK, FLOATING CURB EXTENSION, BUS BULB, TRUCK PILLOW, RAISED CROSSWALK, ISLAND, MINI-ROUNDABOUT, OR SIMILAR ELEMENTS IS NOT PERMITTED.
11. UP TO TWO (2) VERTICALLY STACKED CONDUITS CAN BE PLACED WITHIN A MICRO-TRENCH.
12. THE CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 24 INCHES BELOW THE EXISTING AC PAVEMENT SURFACE, AND THE BOTTOM OF THE MICRO-TRENCH SHALL BE AT A MINIMUM DEPTH OF 24 INCHES BELOW THE EXISTING AC PAVEMENT SURFACE.
13. ANCHORS/SPACERS SHALL BE PLACED AT A MAXIMUM OF 10-FEET APART ALONG THE ALIGNMENT TO ENSURE THE CONDUIT DOES NOT RISE FROM THE BOTTOM OF THE MICRO-TRENCH AND DOES NOT TOUCH THE WALLS OF THE MICRO-TRENCH DURING INSTALLATION.

BACKFILL

14. ALL MICRO-TRENCHES SHALL BE COMPLETELY BACKFILLED WITH A CEMENT SAND SLURRY 2500 PSI TO FINISH GRADE BY THE END OF THE WORK DAY.

GRIND AND RESURFACE SECTION

15. COMMENCEMENT OF SURFACE PREPARATION SUCH AS GRINDING/CHIPPING FOR ASPHALT CONCRETE PAVING REPLACEMENT WILL OCCUR NO SOONER THAN 48 HOURS AFTER SLURRY BACKFILL OF TRENCH. FIELD CONDITIONS OR MATERIAL USED MAY NECESSITATE A LONGER WAIT AS DETERMINED BY THE INSPECTOR.
16. AS SOON AS BACKFILL HAS CURED, NOT TO EXCEED 30 CALENDAR DAYS, ASPHALT CONCRETE SHALL BE GROUND AND CAPPED AS FOLLOWS:
    A. EXISTING AC AND SLURRY BACKFILL SHALL BE GROUND DOWN FULL DEPTH OF EXISTING ASPHALT FOR A WIDTH OF 18-INCHES FROM BOTH EDGES OF THE MICRO-TRENCH AND RESURFACED WITH CLASS B ASPHALT AND BINDER GRADE PER GREENBOOK.
    B. TACK COAT ALL EDGES WITH EITHER SS-1H EMULSIFIED ASPHALT OR PG 64-10 PAVING ASPHALT IMMEDIATELY BEFORE THE ADJOINING ASPHALT CONCRETE IS PLACED. "NO TRAK TAC".
    C. CAP COURSE SHALL BE GROUND 4" DEEP AT MIN 24" WIDE.
    D. WHERE ANGULAR CROSSING OR ANY LENGTH-WISE CUTS OF A BIKE LANE OCCUR BY MICROTRENCHING, THE CAPPING LIMITS SHALL EXTEND THE FULL WIDTH OF THE BIKE LANE. PERPENDICULAR CROSSINGS MAY RECEIVE TYPICAL CAPPING WIDTH PER NOTE 16.A. ABOVE. PAVEMENT MARKINGS SHALL BE RESTORED IN KIND. WHERE NO BIKE LANE MARKINGS EXIST, CONTRACTOR SHALL CONSULT WITH THE ENGINEER TO DETERMINE LOCATION OF ANY PLANNED BIKE LANES SO THAT IMPACT OF PAVEMENT SURFACE MAY BE AVOIDED.
    E. PAVEMENT SHALL BE LEVEL WITH ADJACENT ROADWAY ELEVATIONS AND SHALL PROVIDE A SMOOTH SURFACE PER GREENBOOK SECTION 302-5 AND SUBJECT TO ACCEPTANCE BY THE INSPECTOR.

VAULTS AND SERVICE CONNECTIONS

17. CONNECTION TO SERVICE LATERALS, JUNCTION BOXES, ETC., SHALL BE DONE SUCH THAT CURB AND GUTTER IS NOT DISTURBED, SETTLED OR DAMAGED. REMOVAL LIMITS OF SIDEWALK SHALL FOLLOW APPLICABLE STANDARDS AND REQUIREMENTS AS APPROVED BY THE ENGINEER.
18. THE USE OF HYDRO-JETTING IS NOT PERMITTED. TRENCHLESS METHODS SHALL NOT CREATE A VOID TWO TIMES GREATER THAN CONDUIT. VOID SHALL BE COMPACTED AND BACKFILLED WITH APPROVED CONTROLLED LOW-STRENGTH MATERIAL (CLSM).

IDENTIFICATION

19. SHALL INCLUDE TRACKER WIRE FROM VAULT TO VAULT.



APPROVED BY:

3/9/2021

NOEL A. CASTILLO
CITY ENGINEER

DATE

CITY OF MONTCLAIR

MICROTRENCHING DETAIL

NO SCALE	STD. DETAIL A	SHEET 2 of 2

SECTION 5

- Sanitary Sewer Spill/Backup Response Packet
- Inland Empire Utilities Agency Overflow Emergency Response Plan

Sanitary Sewer Spill/Backup Response Packet

- □ **If this is a Category 1 or 2 Spill greater than or equal to 1,000 gallons, advise contacts below to make the 2-hour CalOES notification.**
- □ **If this is a backup into a residence or business, request that the customer cease all activities contributing to the backup.**

Notifications Trigger:	**Contact Public Works Assistant Manager at (909) 762-1372** (unless listed below)
For Category 1 & 2 Spill greater than or equal to 1,000 gallons contact CalOES within 2 hours	CALOES at 800-852-7550
For all backups into/onto private property possibly due to problems in the public sewer	Public Works Operations Assistant Manager 909-762-1372

Sewer Crew:

□ Follow the instructions on the Sewer Overflow/Backup Response Flowchart
Note:

Print Name: _____

Date: _____

Time: _____

Environmental Program Supervisor:

□ Review the enclosed forms for accuracy and completeness.

□ Complete the Chain of Custody record (right) and forward this packet to the Public Works Operations Assistant Manager.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Maintenance Sewer Leadworker:

□ Complete the Regulatory Notifications Packet.

□ Complete the Chain of Custody record (right) and forward this packet to the Public Works Operations Assistant Manager.

□ Debrief using the Collection System Failure Analysis Form.

Print Name: _____

Date: _____

Time: _____

Sewer Spill/Backup Response Packet
Start Time Determination Form

Spill Start Date: _____ Location: _____

Accurate start time determination is an essential part of Sewer Spill volume estimation. Depending on the flow rate, being even one minute off can have a huge impact on the volume estimation. Be as precise as possible. Do not round to quarter hour increments. Start time must be based on all available information (interviews with neighbors, emergency responders, etc.)

What time was the Agency notified of the Spill? _____ ☐ AM ☐ PM

Who notified the Agency? _____

Did they indicate what time they noticed the Spill? ☐ YES ☐ NO If yes, what time? _____ ☐ AM ☐ PM

Who at the Agency received the notification? _____

What time did the crew arrive at the site of the Spill? _____ ☐ AM ☐ PM

Who was interviewed regarding the start time of the Spill? Include their name, contact information, and the statement they provided:

Name Contact Information Statement

_____

_____

_____

_____

Describe in detail how you determined the start time for this particular Sewer Spill:

Spill Start Date: _____ Spill Start Time: _____ ☐ AM ☐ PM

Spill End Date: _____ Spill End Time: _____ ☐ AM ☐ PM

Spill Duration: _____ **minutes**

This form completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

Sewer Spill/Backup Response Packet
Volume Estimation: Eyeball Estimation Method

Use this method only for small Sewer Spills of less than 50 gallons.

Spill Date: _____ Location: _____

STEP 1: Position yourself so that you have a vantage point where you can see the entire Spill.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the Spill, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent Sewer Spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

	A	B	C
Size of bucket(s) or barrel(s)	**How many of this size?**	**Multiplier**	**Estimated Spill Volume (gallons)**
1 gallon water jug		x 1 gallons	
5 gallon bucket		x 5 gallons	
32 gallon trash can		x 32 gallons	
55 gallon drum		x 55 gallons	
Other: _____ gallons		x _____ gallons	
Estimated Total Sewer Spill Volume:			

STEP 5: Is rainfall a factor in the Spill? ☐Yes ☐No

If yes, what volume of the observed spill volume do you estimate is rainfall? _____ gallons

If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated Spill volume by subtracting the rainfall from the Spill volume:

_____ gallons − _____ gallons − _____ gallons

Estimated Spill Volume — Rainfall — **Total Estimated Spill Volume**

Do you believe that this method has estimated the entire Spill? ☐Yes ☐No

If no, you MUST use additional methods to estimate the entire Spill. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire Spill:

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

Sewer Spill/Backup Response Packet
Volume Estimation: Area/Volume Estimation Method

Spill Date:_____ Location: _____

STEP 1: Describe spill area surface: ☐Asphalt ☐Concrete ☐Dirt ☐Landscape ☐Inside Building
☐Other: _____

STEP 2: Draw/sketch the outline (footprint) of the spill. Then break the footprint down into recognizable shapes.

STEP 3: Calculate the area of the footprint by completing the table below for each shape in Step 2.
If two shapes overlap, select one of the two shapes and estimate the percentage of that shape that does not overlap. Enter that percentage in the % Not Overlapping column. This will ensure that the overlap area is only counted once.

Rectangles	Length	X	Width	X	% Not Overlapping*	=	Area
	ft	X	ft	X	%	=	ft^2
	ft	X	ft	X	%	=	ft^2
	ft	X	ft	X	%	=	ft^2

Triangles	Base	X	Height	Multiplier	X	% Not Overlapping*	=	Area
	ft	X	ft	÷ 2	X	%	=	ft^2
	ft	X	ft	÷ 2	X	%	=	ft^2
	ft	X	ft	÷ 2	X	%	=	ft^2

Circles	π	X	Radius	X	Radius	X	% Not Overlapping*	=	Area
	3.14	X	ft	X	ft	X	%	=	ft^2
	3.14	X	ft	X	ft	X	%	=	ft^2
	3.14	X	ft	X	ft	X	%	=	ft^2

Total Spill Area (sum of all three tables above): _____ ft^2

Volume Estimation: Area Volume Estimation Method

STEP 4: Calculate the volume of the spill that **was NOT absorbed** into the ground. If the entire spill was absorbed, skip to Step 5.

a. If the Spill is of varying depths, take several measurements at different depths and find the average.

_____ inches ÷ _____ = _____ inches ÷ 12 = _____ feet
sum of measurements | # of measurements | average depth in inches | average depth in feet of ponded sewage

b. Calculate Spill volume of ponded sewage in cubic feet by multiplying the Total Spill Area in Step 3 by the average depth calculated in Step 4a. Convert from cubic feet to gallons by multiplying by 7.48.

_____ ft^2 x _____ ft = _____ ft^3 x 7.48 gal = _____ gallons
spill area (Step 3) | average depth (Step 4a) | spill volume in cubic feet | estimated volume of ponded sewage

STEP 5: Calculate the volume of the spill that **was absorbed** into the ground. If only a wet stain is observed, use the guidelines on Page 3 for the average depth. When estimating the volume that was absorbed, take into consideration:

- How long the sewage has been sitting
- The air temperature on the day of the Spill
- Soil type for the area (e.g., hard-packed clay vs. loose or gravely soil)

When estimating the volume of the spill that was absorbed into the ground, it is also advisable to dig down far enough to reach dry soil and take the depth of the wet soil into consideration.

Estimated volume that was absorbed into the soil: _____ gallons

Explain how this estimation was determined:

STEP 6: Add the volume not absorbed (Step 4) plus the volume absorbed (Step 5) to get the total estimated volume:

_____ gallons + _____ gallons = _____ gallons
volume not absorbed | volume absorbed | **Total Estimated Spill Volume**

Do you believe that this method has estimated the entire Spill? ☐ Yes ☐ No

If no, you MUST use additional methods to estimate the entire Spill. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire Spill:

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

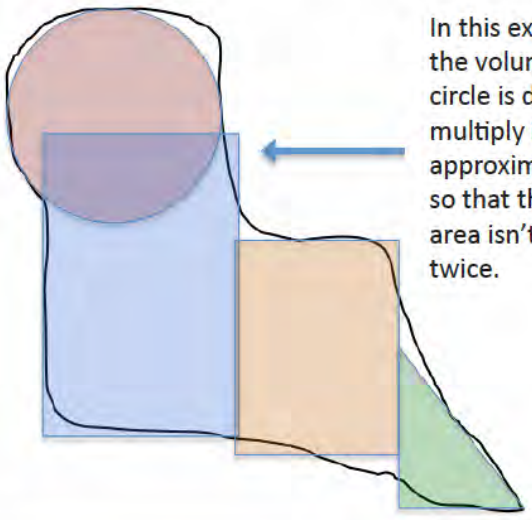
Sewer Spill / Backup Response Packet
Volume Estimation: Area Volume Estimation Method

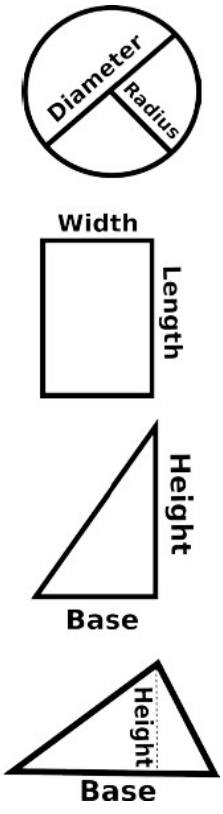
Miscellaneous Computations

To convert inches to feet	Divide the inches by 12 or use the chart on the bottom right of this page.
Volume of one cubic foot	7.48 gallons of water
Area: Two-dimensional measurement represented in square feet	Square/rectangle: Area = Length x Width Circle: Area = πr^2 (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle: Area = ½ (Base x Height)
Volume: Three-dimensional measurement represented in cubic feet	Rectangle/square footprint: Volume = Length x Width x Depth Circle footprint (cylinder): Volume = πr^2 x Depth (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle footprint: Volume = ½ (Base x Height) x Depth
Depth: Contained or "Ponded" sewage	Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. Add the depth of the sample points and then divide that total by the number of sample points. If the depth is not measurable because it is only a wet stain, consider using the following estimated depths: • Depth of a wet stain on concrete surface: 0.0026' (1/32") • Depth of a wet stain on asphalt surface: 0.0013' (1/64")

Example of how to draw/sketch the outline (footprint) of the spill for Step 2:

1. Sketch the outline of the spill (black line).
2. Break the sketch down into recognizable shapes (circles, squares, etc.) as well as you can.





Convert Inches to Feet	
Inches	**Feet**
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

Sewer Spill/Backup Response Packet
Volume Estimation: Upstream Lateral Connections Method

Spill Date: _____ Location: _____

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this Spill: _____ EDUs
NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to agency documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the Spill was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated Spill Volume per EDU.

	Flow Rate Per EDU				**Spill**	
	A	**B**	**C**	**D**	**E**	**F**
Time Period	Gallons per Period	Hours per period	A÷B = Gallons per Hour	C÷60 = Gallons per Minute	Minutes Spill was active during period	D x E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
Total Estimated Spill Volume per EDU:						

STEP 3: Multiply the Estimated Spill Volume per EDU from Step 2 by the number of EDUs from Step 1.
_____ gallons X _____ = _____ gallons
Volume per EDU # of EDUs Estimated Spill Volume

STEP 4: Adjust Spill volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted Spill estimate (attach a separate page if necessary):

Estimated Spill Volume: _____ gallons

Do you believe that this method has estimated the entire Spill? ☐ Yes ☐ No
If no, you MUST use additional methods to estimate the entire Spill. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire Spill:

This worksheet completed by:
Name: _____ Signature: _____
Job Title: _____ Date: _____

Sewer Spill / Backup Response Packet
Sanitary Sewer Overflow Report

CIWQS Assigned Number: _____

Spill Category *(check one*):

☐ Category 1: Discharge of untreated or partially treated wastewater of resulting from a sanitary sewer system failure or flow condition that either (1) Reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly; or (3) spills of 1000 gallons or greater discharging to the surface water.

☐ Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire Spill discharged to the storm drain system was fully recovered and disposed of properly.

☐ Category 3: Discharge of a spill equal to or greater that 50 gallons and less than 1000 gallons that does not discharge to a surface water.

☐ Category 4: Discharge of less than 50 gallons that does not discharge to a surface water.

☐ Spill from Private Lateral (specify): ☐ Single Family Home ☐ Multi-Family Home ☐ High Density Residential (5+ units)
☐ Food Service Establishment (FSE) ☐ Mixed Use Property ☐ Industrial Property ☐ Commercial Property
☐ Public quasi-public institution (hospital, schools, fire department, etc.)

IMMEDIATE NOTIFICATION: If this is a Category 1 or 2 Spill ≥1,000 gallons, contact CalOES within 2 hours at (800) 852-7550.

A. Spill LOCATION		
Spill Location Name:		
Latitude Coordinates*:	Longitude Coordinates:	
Street Name and Number:		
Nearest Cross Street:	City:	Zip Code:
County:	Spill Location Description:	

B. Spill DESCRIPTION (Complete Volume Estimation Worksheets and/or refer to Field Guide as needed for estimations.)			
Spill Appearance Point (check one or more): ☐ Combined Sewer D.I. (Combined CS Only) ☐ Force Main ☐ Gravity Mainline ☐ Lateral Cleanout (Private) ☐ Lateral Cleanout (Public) ☐ Inside Building or Structure ☐ Manhole ☐ Pump Station ☐ Lower Lateral (Private) ☐ Lower Lateral (Public) ☐ Upper Lateral (Private) ☐ Upper Lateral (Public) ☐ Other Sewer System Structure (specify):			
Were there multiple appearance points? ☐ No ☐ Yes, number of appearance points:			
Did the Spill reach a drainage channel and/or surface water? ☐ Yes (*Category 1)* ☐No			
If the Spill reached a storm sewer, was it fully captured and returned to the Sanitary Sewer? ☐ Yes ☐No (*Category 1 or 2)*			
Was this spill from a private lateral? ☐ Yes ☐No If YES, name of responsible party:			
Final Spill Destination: ☐ Ocean/ocean beach* ☐ Surface waters other than ocean ☐ Drainage channel ☐ Building/structure ☐ Separate Storm drain ☐ Combined storm drain ☐ Paved surface ☐ Unpaved surface ☐ Street/curb/gutter ☐ Other: *Provide name(s) of affected drainage channels, beach, etc.:			
Total Estimated Spill volume *(in gallons – 1,000gal or more = Category 1or 2)*:			gallons
Est. volume that reached a separate storm drain that flows to a surface water body:	gal	Recovered:	gal
Est. volume that reached a drainage channel that flows to a surface water body:	gal	Recovered:	gal
Est. volume discharged directly to a surface water body:	gal	Recovered:	gal
Est. volume discharged to land:	gal	Recovered:	gal
Calc. Methods: ☐Eyeball ☐Photo Comparison ☐Upstream Lat. Connections ☐Area/Volume (include sketch/photo with dimensions) ☐Other (describe):			

C. Spill OCCURRING TIME (complete Start Time Determination Form and then complete information below)	
Estimated Spill start date:	Estimated Spill start time:
Date Spill reported to sewer crew:	Time Spill reported to sewer crew:
Date sewer crew arrived:	Time sewer crew arrived:
Who was interviewed to help determine start time?	
Estimated Spill end date:	Estimated Spill end time:

* If multiple appearance points, use the GPS coordinates for the location of the Spill appearance point closest to the failure point/blockage.

Sewer Spill / Backup Response Packet
Sanitary Sewer Overflow Report

D. CAUSE OF SPILL

Where did failure occur? (Check all that apply): ☐ Air Relief or Blow-Off Valve ☐ Force Main ☐ Gravity Mainline ☐ Siphon
☐ Lower Lateral (public) ☐ Lower Lateral (private) ☐ Manhole ☐ Pump Station (specify): ○Controls ○Mechanical ○Power
☐ Upper Lateral (public) ☐ Upper Lateral (private) Other:

Spill cause *(check all that apply)*: ☐ Air Relief or Blow-Off Valve Failure ☐ Construction Diversion Failure ☐ CS Maintenance
☐ Damage by others ☐ Debris (specify): ○from Construction ○from Lateral ○General ○Rags ☐ Flow Exceeded Capacity
☐ FOG (Fats, oil, and grease) ☐ Inappropriate Discharge ☐ Natural Disaster ☐ Operator Error ☐ Root Intrusion
☐ Pipe Structural Problem/Failure ☐ Pipe Structural Problem/Failure (Installation) ☐ Rainfall Exceeded Design
☐ Pump Station Failure (specify): ☐Controls ☐Mechanical ☐Power ☐ Siphon Failure ☐ Vandalism
☐ Surcharged Pipe ☐ Non - Dispersible Wipes ☐ Other (specify):

Diameter (in inches) of pipe at point of blockage/spill cause (if applicable):

Sewer pipe material at point of blockage/spill cause (if applicable):

Estimated age of sewer asset at the point of blockage or failure (if applicable):

Description of terrain surrounding point of blockage/spill cause: ☐ Flat ☐ Mixed ☐ Steep

E. SPILL RESPONSE

Spill response activities (check all that apply): ☐ Cleaned-Up ☐ Mitigated Effects of Spill ☐ Contained All or Portion of Spill
☐ Restored Flow ☐ Returned All Spill to Sanitary Sewer System ☐ Returned Portion of Spill to Sanitary Sewer System
☐ Property Owner Notified ☐ Other Enforcement Agency Notified (specify) ☐ Other (specify):

Spill response completed (date & time):

Visual inspection result of impacted waters (if applicable):

Any fish killed? ☐ Yes ☐ No Any ongoing investigation? ☐ Yes ☐ No

Were health warnings posted? ☐ Yes ☐ No If yes, provide health warning/beach closure posting/details:
If yes, take photographs of sign placement.

Was there a beach closure? ☐ Yes ☐ No If yes, name of closed beach(es):

Were samples of impacted waters collected? ☐ Yes ☐ No
If YES, select the analyses: ☐ DO ☐ Ammonia ☐ Bacteria ☐ pH ☐ Temperature ☐ Other:

Recommended corrective actions: (check all that apply and provide detail)
☐ Add sewer to preventive maintenance program
☐ Adjust schedule/method of preventive maintenance
☐ Enforcement action against FROG source
☐ Inspect Sewer Using CCTV to Determine Cause
☐ Plan rehabilitation or replacement of sewer
☐ Repair Facilities or Replace Defect
☐ Other (specify)

What major equipment was used in the response?

List all agency personnel involved in the response including name, title and their role in the response:

F. NOTES

G. NOTIFICATION DETAILS

CalOES contacted date and time (if applicable):

CalOES Control Number (if applicable): Spoke to:

This form prepared by: NAME:	TITLE:	DATE:
This form reviewed by: NAME:	TITLE:	DATE:

Sewer Spill/Backup Response Packet

Lateral CCTV Report

PLEASE COMPLETE AS THOROUGHLY AS POSSIBLE

PERSON COMPLETING THIS FORM: DATE:
PHONE:

CAMERA TYPE:

LOCATION OF CAMERA ENTRY:

AFFECTED PROPERTY STREET ADDRESS:

LOCATION OF CAMERA STOP:

CITY, STATE AND ZIP:

DESCRIBE AREA TV'd:

PHONE:

UPSTREAM MANHOLE #:

WEATHER AT TIME OF CCTV WORK:

PLEASE CHECK ALL THAT WERE DISCOVERED – *Describe Extent & Location Using Camera Entry Point As Reference*:

- ☐ Broken Lateral – Describe:
  Depth:
- ☐ Roots – Severity: ☐ Light ☐ Moderate ☐ Heavy
- ☐ Grease – Severity: ☐ Light ☐ Moderate ☐ Heavy
- ☐ Sag – Describe:
  Depth:
- ☐ Backflow Prevention Device – Describe:
  Location:
- ☐ Cleanout – Describe:
  Location:
- ☐ Joint/Junction – Describe:
  Depth
- ☐ Grade – Describe:
- ☐ Grit – Severity: ☐ Light ☐ Moderate ☐ Heavy
- ☐ Other – Describe:

TIME OF OVERFLOW:

TIME BLOCKAGE RELIEVED:

TIME LATERAL TV'd:

DEPTH OF LATERAL:

RECOMMENDED FOLLOW UP WORK ACTIONS:

Mark for USA location? ☐ Yes ☐ No

Lateral Locations Marked in Green Paint? ☐ Yes ☐ No

SIGNATURE OF EMPLOYEE PERFORMING CCTV WORK:

DATE

Sewer Spill/Backup Response Packet
Bubbled Toilets Letter

Dear City of Montclair Customer,

Thank you for informing us that your toilet bubbled while our crews were working in proximity of your property. We apologize for the inconvenience and hope that this letter will answer some of your questions about bubbling toilets.

1. **Is this a health risk?**
   The water that came out of your toilet is potable water from the toilet bowl. Unless your toilet was in use when this occurred, this water is no different than that encountered while cleaning your toilet.

2. **What is the City of Montclair doing in the street?**
   In order to insure reliable sewer service, the City of Montclair inspects, cleans, and repairs its sewer system on a continuous basis.

3. **How does sewer cleaning cause my toilet to bubble?**
   Typical industry cleaning equipment uses high-pressure water to clean sewers. The first step is to use the high-pressure water jets to propel the hose and cleaning nozzle upstream as far as 800 feet. During this process, air within the main pipe is displaced and sometimes goes up the private lateral pipe and releases though the toilet. This can also happen during the cleaning phase, when high-pressure water is pulled downstream to the cleaning truck.

4. **What causes the air to come from my toilet?**
   Over the years, the City of Montclair crews have found that the bubbling of toilets has many causes, some of which are:
   - Obstructed vent pipes;
   - Vent pipes that are positioned too far from the toilet;
   - Lateral pipes that may be in use as the crew is cleaning (e.g. draining washing machine, draining bathtub, etc.);
   - Lateral pipes that may have obstructions that are causing them to hold water (e.g. roots, grease, etc.).

5. **What does the City of Montclair staff do, once informed of a bubbling toilet?**
   Once notified of a bubbling toilet, the crew leader explains to you what has happened, and checks to see if there is a clean-out in your yard that could be opened in the future during cleaning.

6. **What can I do to prevent my toilet from bubbling?**
   When a sewer begins to drain slowly, it may be a sign that it needs to be cleaned or repaired. Trees and shrubs may have root structures that are entering the lateral pipe. The homeowner needs to make sure to have a clean-out for accessing the line. Unless there is a cleanout on the property line, it is the homeowner's responsibility to keep the sewer lateral pipe in good working condition. **The City of Montclair also recommends the homeowner install a back-flow prevention device to prevent bubbling or sewer back-ups into the home.**

It is always a good idea to keep the toilet lid down when not in use, and not install carpets in the bathroom unless they can be easily removed and cleaned. For more information, please call the City of Montclair at (909) 625-9467.

Sincerely,

City of Montclair

Sewer Spill / Backup Response Packet

Collection System Failure Analysis

To be completed by the Public Works Operations Assistant Manager

Incident Report #		Prepared By	
Spill/Backup Information			
Event Date/Time	Address		
Volume Spilled	Volume Recovered		
Cause			
Summary of Historical Spills/Backups/Service Calls/Other Problems			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
Summary of CCTV Information			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Sewer Spill/Backup Response Packet

Collection System Failure Analysis

Recommendations					
✓	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Reviewed by:			Review Date:		

Customer Service Packet

Contents:

Form	Form Number
Customer Information Letter	CS-1
Sewer Spill Reference Guide	pamphlet

Instructions:

1. Review the Customer Information letter to determine actions that need to be taken immediately.
2. Review the Sewer Spill Reference Guide pamphlet.

This packet provided by:

Name: _____

Title: _____

Telephone: _____

If you have any questions call (909) 625-9440 and speak with: Public Works Operations Assistant Manager regarding sewer backup issues.

Print on 6" x 9" envelope

Sewer Spill/Backup Response Packet
Customer Information Regarding Sewer Backup

Dear Property Owner:

We recognize that sewer backup incidents can be stressful and require immediate response while all facts concerning how an incident occurred are still unknown. Rest assured that we do all we can to prevent this type of event from occurring in the first place. Nevertheless, occasionally tree roots or other debris in the sewer lines causes a backup into homes immediately upstream of the blockage. At this time the City of Montclair is investigating the cause of this incident.

What you need to do now:

The City of Montclair has prepared this brief set of instructions to help you minimize the impact of the loss by responding promptly to the situation.

- Do not attempt to clean the area yourself, let the cleaning and restoration company handle this.
- Keep people and pets away from the affected area(s).
- Turn off any appliances that use water.
- Turn off heating/air conditioning systems.
- Do not remove items from the area – the cleaning and restoration company will handle this.
- If you had recent plumbing work done, contact your plumber or contractor and inform them of this incident.

Inland Empire Utilities Agency

A MUNICIPAL WATER DISTRICT

Overflow Emergency Response Plan



Approved by: Kenneth Monfore #1383

Position: Deputy Manager of Collections

Approved Date: 7/3/2018

Revision Date: 3/6/2019

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Sanitary Sewer Overflow Emergency Response Plan

1. Purpose

The purpose of the Inland Empire Utilities Agency's (IEUA) Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The OERP provides guidelines for IEUA personnel to follow in responding to, cleaning up, and reporting SSOs that may occur within IEUA's service area. Provision D.13vi of State Water Resources Control Board Order No. 2006-0003-DWQ requires wastewater collection agencies to have an Overflow Emergency Response Plan (OERP). This OERP satisfies the requirement.

2. Policy

IEUA employees are required to report all wastewater overflows found and to take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. IEUA's goal is to respond to sewer system overflows as soon as possible following notification. IEUA will follow reporting procedures in regards to sewer spills as set forth by the Santa Ana Regional Water Quality Control Board (*SARWQCB)* and the California State Water Resources Control Board (*SWRCB)*.

3. Definitions As Used In This OERP

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.

FOG – Fats, Oils, and Grease: FOG refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.

LEGALLY RESPONSIBLE OFFICIAL (LRO): Refers to an individual who has the authority to certify reports and other actions that are submitted through CIWQS.

MAINLINE SEWER: Refers to wastewater collection system piping that is not a private lateral connection to a user.

MAINTENANCE HOLE OR MANHOLE: Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

NOTIFICATION OF AN SSO: Refers to the time at which IEUA becomes aware of an SSO event through observation or notification by the public or other source.

NUISANCE: California Water Code section 13050, subdivision (m), defines nuisance as anything that meets all of the following requirements:

a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

c. Occurs during, or as a result of, the treatment or disposal of wastes.

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PREVENTATIVE MAINTENANCE: Refers to maintenance activities intended to prevent failures of the wastewater collection system facilities (e.g. cleaning, CCTV, inspection).

PRIVATE LATERAL SEWAGE DISCHARGES – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SANITARY SEWER OVERFLOW (SSO) - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;

(ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and

(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS.

NOTE: Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned are not SSOs.

SSO Categories:

Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either:

- Reaches surface water and/or drainage channel tributary to a surface water; or
- Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.

SANITARY SEWER SYSTEM: Any publicly-owned 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 (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

SENSITIVE AREA: Refers to areas where an SSO could result in a fish kill or pose an imminent or substantial danger to human health (e.g. parks, aquatic habitats, etc.)

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SEWER SERVICE LATERAL: Refers to the piping that conveys sewage from the building to IEUA's wastewater collection system.

UNTREATED OR PARTIALLY TREATED WASTEWATER: Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

WATERS OF THE STATE*:* Waters of the State (or waters of the United States) means any surface water, including saline waters, within the boundaries of California. In case of a sewage spill, storm drains are considered to be waters of the State unless the sewage is completely contained and returned to the wastewater collection system and that portion of the storm drain is cleaned.

4. State Regulatory Requirements for Element 6, Overflow Emergency Response Plan

State Water Resources Control Board Order No. 2006-0003-DWQ outlines requirements for an Overflow Emergency Response Plan that is a mandatory element of the Sewer System Management Plan. The collection system agency 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:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
(b) A program to ensure appropriate response to all overflows;
(c) 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 SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System (NPDES) permit requirements. The Sewer System Management Plan should identify the officials who will receive immediate notification;
(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
(f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to Waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The Sewer System Management Plan and critical supporting documents are available to the public at www.ieua.org.

5. Goals

IEUA's goals with respect to responding to SSOs are as follows:

- Work safely;
- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Prevent sanitary sewer overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO;

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- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain SSOs; and
- Revise response procedures resulting from the debrief and failure analysis of SSOs as appropriate.

6. SSO Detection and Notification

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(a)

The processes that are employed to notify IEUA of the occurrence of an SSO include: observation by the public, receipt of an alarm, or observation by IEUA staff or other public employees during the normal course of their work.

IEUA operates five wastewater lift stations. In the event of any pump failure, the high-level sensor activates the SCADA alarm system and IEUA is contacted. To prevent overflow, wastewater from the wet well can either be pumped into a vacuum truck for disposal to a nearby sanitary sewer manhole, or bypassed around the station into the sanitary sewer system.

6.1 PUBLIC OBSERVATION

Public observation is the most common way that IEUA is notified of blockages and overflows. Contact numbers and information for reporting sewage overflows and backups are in the phone book and on IEUA's website: http://www.ieua.org. IEUA's telephone number for reporting sewer problems is (909) 993-1600. After hours callers are given instructions for contacting the On-Call Employee.

Normal Work Hours
When a report of a sewage overflow or backup is made during normal work hours, the front reception desk staff answers the call and forwards it to the Manager of Operations and Maintenance or their designee who determines if the problem is within the agency's service area. If it is not, they will refer the caller to the appropriate agency and notify that agency and offer mutual aid support. If it is, they will determine if the problem is with the agency's sewer system. If it is, or if it is questionable, they will dispatch a Collections Crew.

After Hours
After hours calls are forwarded to the Manager of Operations and Maintenance who will dispatch the On-Call Operator or other appropriate personnel.

When the Agency is notified of a potential sewer problem, the Incident Report Form is completed. The individual receiving the call will collect the following information:

- Time and date of call
- Specific location of potential problem
- Nature of call
- In case of SSO, estimated start time of overflow
- Caller's name and telephone number
- Caller's observation (e.g., odor, duration, location on property, known impacts, indication if surface water impacted, appearance at cleanout or manhole)
- Other relevant information

The following is an overview of receiving a report of sewage overflow or backup report:

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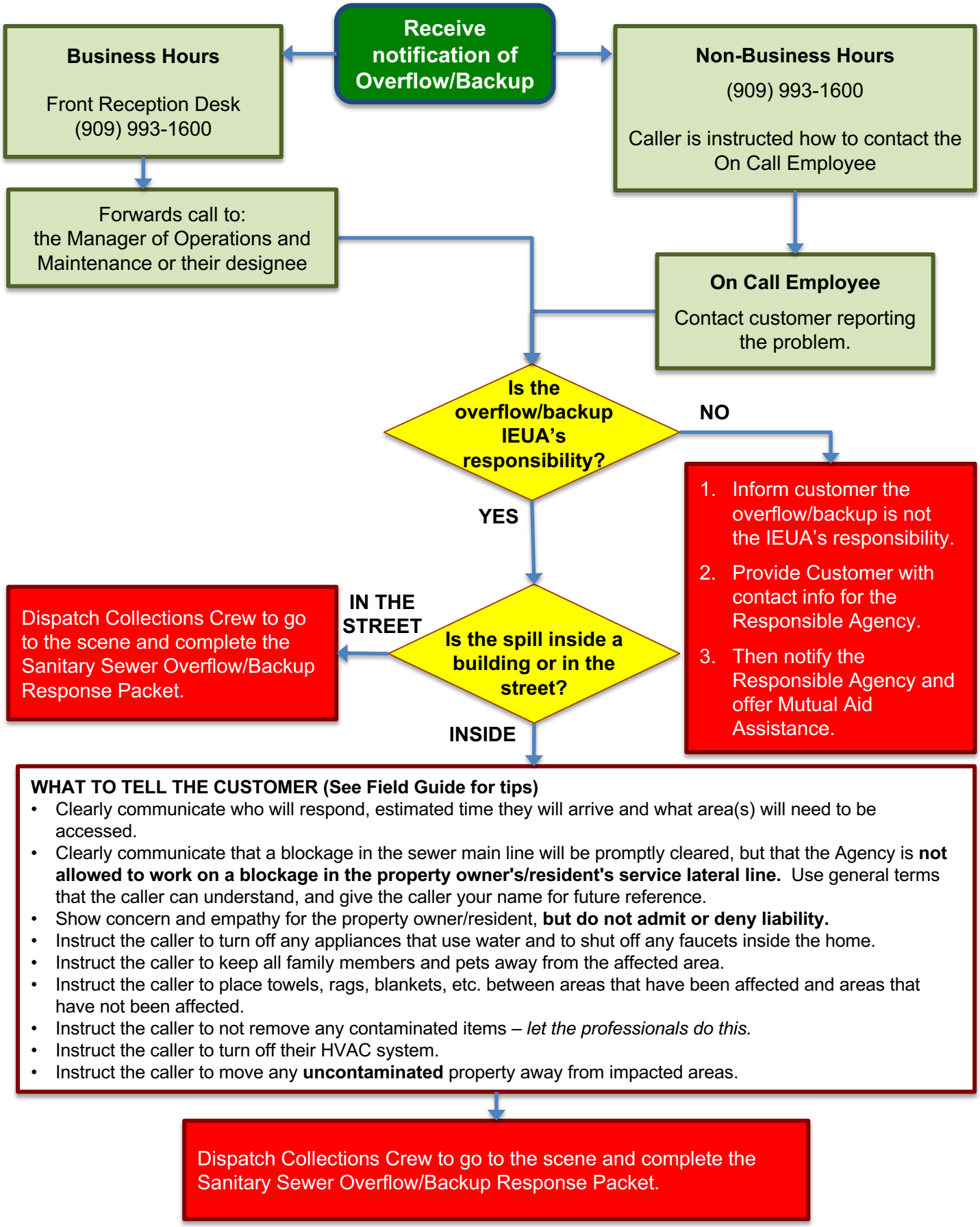
Figure 6.1 Overview of Receiving a Sewage Overflow or Backup Report Procedure



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6.2 AGENCY STAFF OBSERVATION

City staff conducts periodic inspections of its sewer system facilities as part of their routine activities. Any problems noted with the sewer system facilities are reported to appropriate City staff that, in turn, responds to emergency situations. Work orders are issued to correct non-emergency conditions.

6.3 CONTRACTOR OBSERVATION

The following procedures are to be followed in the event that a contractor causes or witnesses a Sanitary Sewer Overflow. If the contractor causes or witnesses an SSO they should:

1. Immediately notify the IEUA by calling (909) 993-1600. After hours callers to this number will instructed how to contact the On-Call Employee.
2. Protect storm drains
3. Protect the public.
4. Provide information to the IEUA Collections Crew such as start time, appearance point, suspected cause, weather conditions, etc.
5. Direct ALL media and public relations requests to the Executive Manager of External Affairs and Policy Development/AGM at (909) 993-1600.

This OERP contains a Contractor Orientation flowchart (Appendix E) and flyer to educate and inform contractors and their employees about the procedures to follow in the event of an SSO.

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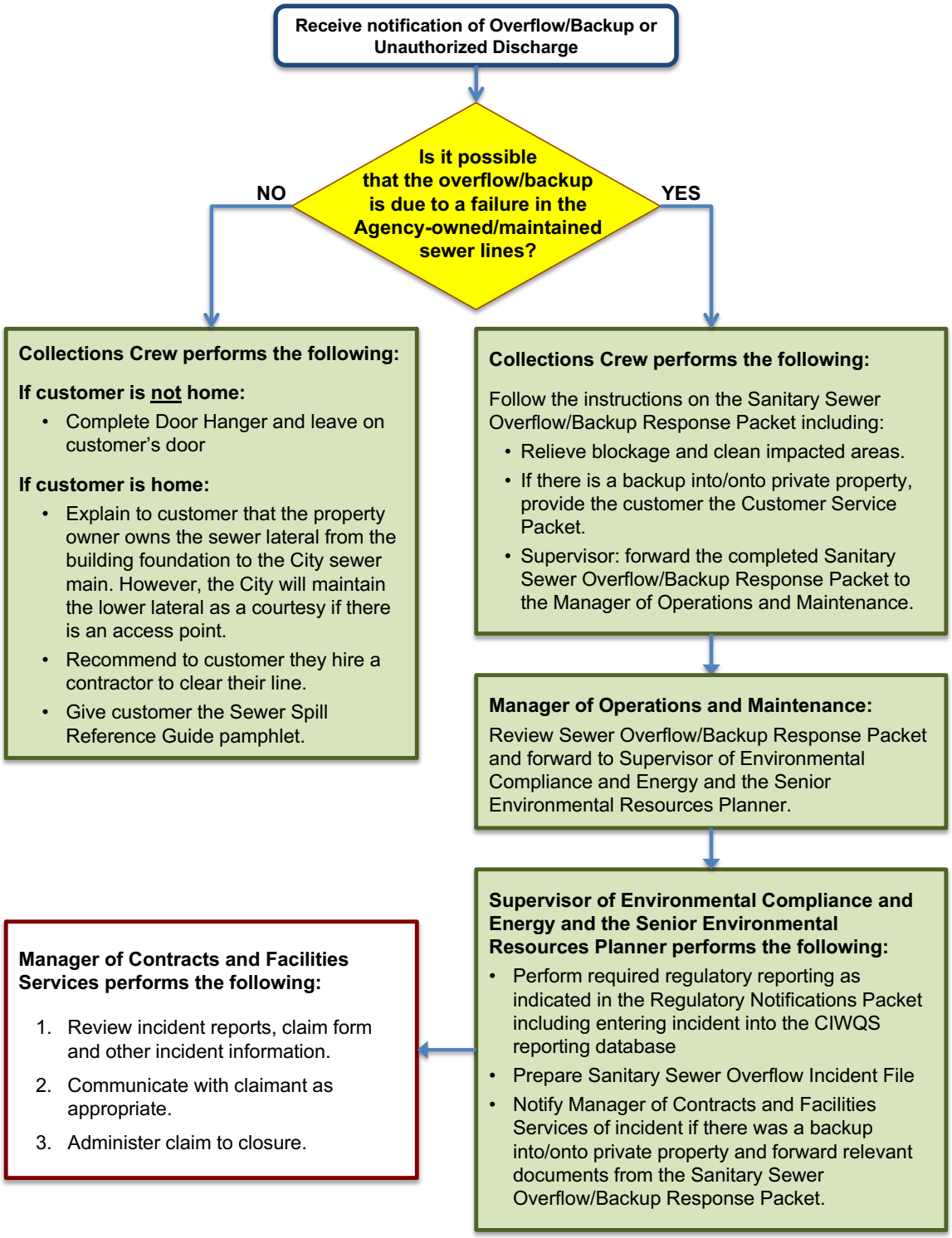
7. SSO Response Procedures

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(b)

7.1 Sewer Overflow/Backup Response Summary

IEUA will respond to SSOs as soon as feasible following notification of an overflow/backup or unauthorized discharge. The following (Figure 7.1) is an overview of the response activities.

Figure 7.1 Overview of SSO/Backup Response



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7.2 First Responder Priorities

The first responder's priorities are:

- To follow safe work practices.
- To respond promptly with the appropriate and necessary equipment.
- To contain the spill wherever feasible.
- To restore the flow as soon as practicable.
- To minimize public access to and/or contact with the spilled sewage.
- To promptly notify the Manager of Operations and Maintenance, Supervisor of Environmental Compliance and Energy, and Senior Environmental Resources Planner in event of major SSO.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible).
- To photograph and document affected and unaffected areas from a spill.

7.3 Safety

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. There may be times when IEUA personnel responding to a sewer system event are not familiar with potential safety hazards peculiar to sewer work. In such cases it is appropriate to take the time to discuss safety issues, consider the order of work, and check safety equipment before starting the job. This includes use of gas monitoring detectors for air quality in manholes and traffic controls at the site.

7.4 Initial Response

The first responder must respond to the reporting party/problem site and visually check for potential sewer stoppages or overflows.

The first responder will:

- Note arrival time at the site of the overflow/backup.
- Verify the existence of a public sewer system spill or backup.
- Determine if the overflow or blockage is from a public or private sewer.
- Identify and assess the affected area and extent of spill.
- Contact caller if time permits.
- If the spill is large or in a sensitive area, document conditions upon arrival with photographs. Decide whether to proceed with clearing the blockage to restore the flow or to initiate containment measures. The guidance for this decision is:
    - Small spills (i.e., spills that are easily contained) – proceed with clearing the blockage.
    - Moderate or large spill where containment is anticipated to be simple – proceed with the containment measures.
    - Moderate or large spills where containment is anticipated to be difficult – proceed with clearing the blockage; however, whenever deemed necessary, call for additional assistance and implement containment measures.
- Take steps to contain the SSO. For detailed procedures refer to the Sanitary Sewer Overflow/Backup Response Packet.

7.5 Initiate Spill Containment Measures

The first responder will attempt to contain as much of the spilled sewage as possible using the following steps:

- Determine the immediate destination of the overflowing sewage.

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- Plug storm drains using air plugs, sandbags, and/or plastic mats to contain the spill, whenever appropriate. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drainage facilities.
- Contain/direct the spilled sewage using dike/dam or sandbags.
- Pump around the blockage/pipe failure.

For detailed procedures refer to the Sanitary Sewer Overflow/Backup Response Packet (Appendix B).

7.6 Restore Flow

Using the appropriate cleaning equipment, set up downstream of the blockage and hydro-clean upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not reoccur downstream. If the blockage cannot be cleared within a reasonable time from arrival, or sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If assistance is required, immediately contact other employees, contractors, and equipment suppliers. For detailed procedures refer to the Sanitary Sewer Overflow/Backup Response Packet.

7.7 Equipment

This section provides a list of specialized equipment that is used to support this Overflow Emergency Response Plan. Standard Operating Procedures (SOPs) have been developed for all equipment requiring specialized knowledge that may be deployed as part of an emergency SSO response. The SOPs are located either with the equipment or IEUA's intranet.

- *Closed Circuit Television (CCTV) Inspection Unit* – A CCTV Inspection Unit is used to determine the root cause for all SSOs from gravity sewers.
- *Camera* -- A digital or disposable camera is used to record the conditions upon arrival, during clean up, and upon departure.
- *Emergency Response Trucks* -- A utility body pickup truck, or open bed is used to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools include containment and clean up materials.
- *Portable Generators, Portable Pumps, Piping, and Hoses* – This equipment is used to bypass pump, divert, or power equipment to mitigate an SSO.
- *Combination Sewer Cleaning Trucks* -- Combination high velocity sewer cleaning trucks with vacuum tanks are used to clear blockages in gravity sewers, vacuum spilled sewage, and wash down the impacted area following the SSO event.
- *Air plugs, sandbags and plastic mats*
- *SSO Sampling Kits*
- *By-pass Hose Trailer*—This is a specialized trailer built specifically to store by-pass hoses, discharge/suction hose, gaskets, and trash pump in the event of larger SSOs in need of by-pass pumping.
- *Portable Lights*

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8. Recovery and Cleanup

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(e)

The recovery and cleanup phase begins immediately after the flow has been restored and the spilled sewage has been contained to the extent possible. The SSO recovery and cleanup procedures are as follows:

8.1 Estimate the Volume of Spilled Sewage

Use the methods outlined in the Sanitary Sewer Overflow/Backup Response Packet and/or the SMART Field Guide to estimate the volume of the spilled sewage. Wherever possible, document the estimate using photos and/or video of the SSO site before and during the recovery operation.

8.2 Recovery of Spilled Sewage

Vacuum up and/or pump the spilled sewage and rinse water, and discharge it back into the sanitary sewer system.

8.3 Clean-up and Disinfection

Implement clean up and disinfection procedures to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and will be modified as required for wet weather conditions. In the event that an overflow occurs at night, the location will be inspected first thing the following day. The field crew will look for any signs of sewage solids and sewage-related materials that may warrant additional cleanup activities. Where cleanup of public property is beyond the capabilities of IEUA staff, a cleanup contractor will be used.

Private Property

Affected property owners may call a water damage restoration contractor to complete the cleanup and restoration. If the overflow into private property is the definite result of IEUA system failure, the property owner may call out a water damage restoration contractor to complete the cleanup and restoration. IEUA claim forms will be issued if requested by the property owners.

Hard Surface Areas

Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water and/or deozyme or similar non-toxic biodegradable surface disinfectant until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Take reasonable steps to contain and vacuum up the wastewater. Allow area to dry. Repeat the process if additional cleaning is required.

Landscaped and Unimproved Natural Vegetation

Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Either contain or vacuum up the wash water so that none is released. Allow the area to dry. Repeat the process if additional cleaning is required.

Natural Waterways

The Department of Fish and Wildlife will be notified by CalOES for SSOs greater than or equal to 1,000 gallons.

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Wet Weather Modifications
Omit flushing and sampling during heavy storm events (i.e., sheet of rainwater across paved surfaces) with heavy runoff where flushing is not required and sampling would not provide meaningful results.

8.4 Public Notification

Signs will be posted and barricades put in place to keep vehicles and pedestrians away from contact with spilled sewage. County Environmental Health instructions and directions regarding placement and language of public warnings will be followed as appropriate or as directed. Additionally, the Manager of Operations and Maintenance or designee will use his/her best judgment regarding supplemental sign placement in order to protect the public and local environment. Signs will not be removed until directed by County Environmental Health, Manager of Operations and Maintenance, or designee. Photographs of sign placement will be taken.

Creeks, streams and beaches that have been contaminated as a result of an SSO will be posted at visible access locations until the risk of contamination has subsided to acceptable background bacteria levels. The warning signs, once posted, will be checked at least every day to ensure that they are still in place. Photographs of sign placement will be taken.

When contact with the local media is deemed necessary, the Executive Manager of External Affairs and Policy Development/AGM or designee will provide the media with all revelvant information.

9. Water Quality

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(f)

9.1 Waters of the State

The following Waters of the State are in the Inland Empire Utilities Agency's service area:

- San Antonio Creek Channel
- Cucamonga Creek
- Deer Creek
- Etiwanda Creek
- Lower Etiwanda Creek
- Chino Creek
- San Sevaine Creek
- West Cucamonga Creek
- Day Creek
- Declez Creek
- Magnolia Channel
- Cypress Channel
- Prado Lake
- Cucamonga-Guasti Park
- Hickory Basin (on West Fontana Channel)
- Unnamed Tributary south of Ontario Airport (drains to Prado Lake)

In the event that these waters are impacted by a sanitary sewer overflow, the equipment identified in Section 7.7 is available for response based on the specific SSO conditions.

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9.2 Water Quality Sampling and Testing

Water quality sampling and testing will be performed as appropriate to determine the extent and impact of the SSO when spilled sewage enters a water body. The water quality sampling procedures (see Appendix D) will be implemented within 48 hours and include the following:

- The first responders will consider the need to sample surface waters the SSO may have reached. If preliminary volume estimates of the SSO are 50,000 gallons or greater, the first responders will begin collecting as soon as possible but no later than 48 hours after becoming aware of the SSO.
- The water quality samples will be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. creeks). The water quality samples will be collected near the point of entry of the spilled sewage.
- The samples will then be brought to the IEUA Lab.

9.3 Water Quality Monitoring Plan

The IEUA Water Quality Monitoring Plan will be implemented immediately upon discovery of any Category 1 SSO of 50,000 gallons or more in order to assess impacts from SSOs to surface waters. The SSO Water Quality Monitoring Plan will:

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 (e.g. safety, access restrictions, etc.)
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 IEUA becoming aware of the SSO, require water quality sampling for ammonia and fecal coliform.
6. Observe proper chain of custody procedures.

9.4 SSO Technical Report

IEUA will submit an SSO Technical Report to the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. The Manager of Planning and Environmental Resources will supervise the preparation of this report and will certify this report. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

<u>Causes and Circumstances of the SSO:</u>

- Complete and detailed explanation of how and when the SSO was discovered.
- Diagram showing the SSO failure point, appearance point(s), and final destination(s).
- Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.

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- Detailed description of the cause(s) of the SSO.
- Copies of original field crew records used to document the SSO.
- Historical maintenance records for the failure location.

IEUA's Response to SSO:

- Chronological narrative description of all actions taken by IEUA to terminate the spill.
- Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.
- Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

Water Quality Monitoring:

- Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
- Detailed location map illustrating all water quality sampling points.

10. Sewer Backup Into/Onto Private Property Claims Handling Policy

It is the policy of IEUA that a claims form will be offered to anyone wishing to file a claim. The following procedures will be observed for all sewer overflows/backups into/onto private property:

- IEUA staff will offer an IEUA claim form irrespective of fault whenever a property owner requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate IEUA was not at fault.

- It is the responsibility of the Collections Crew to gather information regarding the incident and notify the Manager of Operations and Maintenance or designee.

- It is the responsibility of the IEUA Manager of Contracts and Facilities Services to review all claims and to oversee the adjustment and administration of the claim to closure.

11. Notification, Reporting, Monitoring and Recordkeeping Requirements

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(c)

In accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS GWDRs), the Inland Empire Utilities Agency maintains records for each sanitary sewer overflow. Records include:

- Documentation of response steps and/or remedial actions
- Photographic evidence to document the extent of the SSO, field crew response operations, and site conditions after field crew SSO response operations have been completed. The date, time, location, and direction of photographs taken will be documented.
- Documentation of how any estimations of the volume discharged and/or volume recovered were calculated including all assumptions made.

Regulator required notifications are outlined in Section 11.1 on the following page.

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11.1 Regulator Required Notifications

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION	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, IEUA will notify the California Office of Emergency Services (CalOES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
REPORTING	• Category 1 SSO: IEUA will 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: IEUA will 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: IEUA will submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: IEUA will 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: IEUA will 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: IEUA will update and certify every 12 months	Enter data into the CIWQS Online SSO Database[1] (http://ciwqs.waterboards.ca.gov/) certified by the Legally Responsible Official(s)[2]. All information required by CIWQS will be captured in the Sanitary Sewer Overflow Report. Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the State SSO Program Manager must be contacted to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days.
WATER QUALITY MONITORING	IEUA will 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 waters.	Water quality results will be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING	IEUA will maintain the following records: • SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate SSO Volume.	Self-maintained records shall be available during inspections or upon request.

[1] In the event that the CIWQS online SSO database is not available, the Supervisor of Environmental Compliance and Energy or the Senior Environmental Resources Planner will notify SWRCB by phone in accordance with the time schedules identified above. In such an event, IEUA will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO file.

[2] IEUA always has at least one LRO. Any change in the LRO(s) including deactivation or a change to contact information, will be submitted to the SWRCB within 30 days of the change by calling (866) 792-4977 or emailing help@ciwqs.waterboards.ca.gov.

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For reporting purposes, if one SSO event of whatever category results in multiple appearance points in a sewer system, a single SSO report is required in CIWQS that 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 descriptions of the locations of all other discharge points associated with the single SSO event.

11.2 Complaint Records

IEUA maintains records of all complaints received whether or not they result in sanitary sewer overflows using the Customer Complaint Record (Appendix F) including the following information:

- Date, time, and method of notification
- Date and time the complainant or informant first noticed the SSO
- Narrative description describing the complaint
- A statement from the complainant or informant, if they know, of whether or not the potential SSO may have reached waters of the state
- Name, address, and contact telephone number of the complainant or informant reporting the potential SSO (if not reported anonymously)
- Follow-up return contact information for each complaint received (if not reported anonymously)
- Final resolution of the complaint
- Documentation of all feasible and remedial actions taken

Complaint records will be maintained for a minimum of five years whether or not they resulted in an SSO.

12. Post SSO Event Debriefing

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

Every SSO event is an opportunity to evaluate the IEUA response and reporting procedures. Each overflow event is unique, with its own elements and challenges including volume, cause, location, terrain, climate, and other parameters.

As soon as possible after Category 1 and Category 2 SSO events, all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or responding to and mitigating future SSO events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

13. Failure Analysis Investigation

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

The objective of the failure analysis investigation is to determine the “root cause” of the SSO and to identify corrective action(s) needed that will reduce or eliminate future potential for the SSO to recur or for other SSOs to occur.

The investigation will include reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will include:

- Reviewing and completing the Sanitary Sewer Overflow Report and any other documents related to the incident

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- Reviewing the incident timeline and other documentation regarding the incident
- Reviewing communications with the reporting party and witness
- Reviewing volume estimate, volume recovered estimate, volume estimation assumptions and associated drawings
- Reviewing available photographs
- Interviewing staff that responded to the spill
- Reviewing past maintenance records
- Reviewing past CCTV records,
- Conducting a CCTV inspection to determine the condition of all line segments immediately following the SSO and reviewing the video and logs,
- Reviewing any Fats, Oils, and Grease (FOG) related information or results
- Posting SSO debrief records
- Conducting interviews with the public at the SSO location

The product of the failure analysis investigation will be the determination of the root cause and the identification and scheduling of the corrective actions. The Collection System Failure Analysis Form will be used to document the investigation.

14. SSO Response Training

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

This section provides information on the training that is required to support this Overflow Emergency Response Plan.

14.1 Initial and Annual Refresher Training

All IEUA personnel who may have a role in responding to, reporting, and/or mitigating a sewer system overflow will receive training on the contents of this OERP. All new employees will receive training before they are placed in a position where they may have to respond. Current employees will receive annual refresher training on this plan and the procedures to be followed. IEUA will document all training.

Affected employees will receive annual training on the following topics by knowledgeable trainers:

- IEUA's Overflow Emergency Response Plan and Sanitary Sewer Management Plan
- Sanitary Sewer Overflow Volume Estimation Techniques
- Researching and documenting Sanitary Sewer Overflow Start Times
- Impacted Surface Waters: Response Procedures
- State Water Resources Control Board Employee Knowledge Expectations
- Employee Core Competency Evaluations on Sanitary Sewer Operations
- Water Quality Sampling Plan

IEUA will verify that annual safety training requirements are current for each employee, and that employees are competent in the performance of all core competencies. This will be verified through means such as electronic testing, interviews and observations. IEUA will address, through additional training/instruction, any identified gaps in required core competencies.

Through SWRCB Employee Knowledge Expectations training the employee will be able to answer the

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following:

1. Please briefly describe your name and job title.
2. Please describe for us approximately when you started in this field and how long you have worked for your agency.
3. Please expand on your current position duties and role in responding in the field to any SSO complaints.
4. Please describe your SOPs used to respond/mitigate SSOs when they occur.
5. Describe any training your agency provides or sends you to for conducting spill volume estimates.
6. We are interested in learning more about how your historical SSO response activities have worked in the field. We understand from discussions with management earlier that you use the OERP from the SSMP. Please elaborate on how you implement and utilize the procedures in the plan.
7. Historically, before any recent changes, can you please walk us through how you would typically receive and respond to any SSO complaints in the field?
8. Can you tell us who is responsible for estimating SSO volumes discharged? If it is you, please describe how you go about estimating the SSO volume that you record on the work order/service request forms?
9. What other information do you collect or record other than what is written on the work order form?
10. Describe if and when you ever talk with people that call in SSOs (either onsite or via telephone) to further check out when the SSO might have occurred based on what they or others know? If you do this, can you tell us where this information is recorded?
11. We understand you may be instructed to take pictures of some sewer spills/backups into structures. Other than these SSOs, when else would you typically take any pictures of an SSO?
12. Please walk us through anything else you'd like to add to help us better understand how your field crews respond and mitigate SSO complaints.

14.2 SSO Response Drills

Periodic training drills or field exercises will be held to ensure that employees are up to date on these procedures, equipment is in working order, and the required materials are readily available. The training drills will cover scenarios typically observed during sewer related emergencies (e.g. mainline blockage, mainline failure, and lateral blockage). The results and the observations during the drills will be recorded and action items will be tracked to ensure completion.

14.3 SSO Training Record Keeping

Records will be kept of all training that is provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event will include date, time, place, content, name of trainer(s), and names and titles of attendees.

14.4 Contractors Working On Agency Sewer Facilities

All construction contractors working on IEUA sewer facilities will be required to develop a project-specific OERP, provide project personnel with training regarding the content of the contractor's OERP and their role in the event of an SSO, and follow that OERP in the event that they cause or observe an SSO. Emergency response procedures shall be discussed at project pre-construction meetings, regular project meetings and after any contractor involved incidents.

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All service contractors will be required to observe contractor procedures. See Appendix E: Contractor Orientation.

15. Authority

- Health & Safety Code Sections 5410-5416
- CA Water Code Section 13271
- Fish & Wildlife Code Sections 5650-5656
- State Water Resources Control Board Order No. 2006-0003-DWQ
- State Water Resources Control Board Order No. WQ 2013-0058-EXEC effective September 9, 2013

16. References

- Sanitary Sewer Overflow and Backup Response SMART Field Guide, 2013, DKF Solutions Group, LLC
- Appendix A: Regulatory Notifications Packet
- Appendix B: Sanitary Sewer Backup Packet
- Appendix C: Sanitary Sewer Overflow Packet
- Appendix D: Field Sampling Kit
- Appendix E: Contractor Orientation

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Appendix A

REGULATORY NOTIFICATIONS PACKET

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Instructions:

1. Receive notification of a Sanitary Sewer Overflow.
2. Open this packet.
3. Refer to the Regulatory Reporting Guide (A-1) for instructions.
4. Use the SSO Reporting Checklist for the appropriate category of spill (A-2a or A-2b) to document that all notifications are made according to the reporting schedule.

Contents:

Form	Page Number
Regulatory Reporting Guide	A-1
Reporting Checklist: Category 1	-2a
Reporting Checklist: Categories 2 and 3	-2b

Print on 6”x9” envelope

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Reporting Instructions				
Deadline	**See reverse side for contact information and definitions of the categories** of spills of untreated or partially treated wastewater from publicly owned sanitary sewer system			**Spill from Private Lateral**
	Category 1	**Category 2**	**Category 3**	
2 hours after awareness of SSO	• If the SSO is greater than or equal to 1,000 gallons, call CalOES at (800) 852-7550 • Consider notifying the County Health Department and/or Local Flood Control District as a courtesy if the SSO may impact their operations.	Consider notifying the County Health Department and/or Local Flood Control District as a courtesy if the SSO may impact their operations.	Consider notifying the County Health Department and/or Local Flood Control District as a courtesy if the SSO may impact their operations.	-
48 Hours after awareness of SSO	If 50,000 gal or more will likely reach receiving waters, begin water quality sampling and initiate impact assessment	-	-	-
3 Days after awareness of SSO	Submit Draft Spill Report in the CIWQS* database	Submit Draft Spill Report in the CIWQS* database	-	-
15 Days after SSO end date	Certify Spill Report in CIWQS*. Update as needed until 120 days after SSO end date	Certify Spill Report in the CIWQS* database. Update as needed until 120 days after SSO end date	-	-
30 Days after end of calendar month in which SSO occurred	-	-	Certify Spill Report in the CIWQS* database. Update as needed until 120 days after SSO end date	-
45 days after SSO end date	If 50,000 gal or more were spilled to surface waters, submit SSO Technical Report using CIWQS*	-	-	-

* In the event that the CIWQS online SSO database is not available, notify the State Water Resources Control Board (SWRCB) by phone or email until the CIWQS online SSO database becomes available. See contact information on Side B.

Note: For reporting purposes, if one SSO event results in multiple appearance points, complete one SSO report in the CIWQS SSO Online Database, and report the location of the SSO failure point, blockage or location of the flow condition that caused the SSO, in the CIWQS SSO Online Database, including all the discharge points associated with the SSO event.

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Contact Information

Contact	Telephone/Email
CalOES *(California Governor's Office of Emergency Services)*	(800) 852-7550
San Bernardino County Environmental Health Services	Business Hours: (800) 782-4264 After Hours: (800) 472-2376
Flood Control Districts	cms.sbcounty.gov/dpw/FloodControl/DistrictZones.aspx
Santa Ana Regional Water Quality Control Board (SARWQCB)	(951) 782-4130 spillreportR8@waterboards.ca.gov
State Water Resources Control Board (SWRCB): Permit/Reporting Information: Armando Martinez Inspection/Enforcement Information: Jim Fischer	 (916) 341-5586 Armando.Martinez@waterboards.ca.gov (916) 341-5548 Jim.Fischer@waterboards.ca.gov

Authorized Personnel:

The following are authorized to perform regulatory reporting of SSOs:

- Supervisor of Environmental Compliance and Energy
- Manager of Planning and Environmental Resources (LRO*)
- Executive Manager of Engineering/AGM (LRO*)

*IEUA's Legally Responsible Officials (LROs) are authorized to electronically sign and certify SSO reports in CIWQS.

Definitions of SSO Categories

The response crew will complete the SSO Report form in the SSO Packet to document how the category was determined.

Category	Definition
Category 1:	Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either: • Reaches surface water and/or drainage channel tributary to a surface water; or • Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.
Category 2:	Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either: • Does not reach surface water, a drainage channel, or an MS4, or • The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.
Category 3:	All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition

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Regulatory Notifications Packet
Category 1 SSO Reporting Checklist

A-2a

Use this Checklist for Category 1 SSOs only

STEP 1: Receive notification of Sanitary Sewer Overflow.

STEP 2: 2-hour Notification

If the spill is greater than or equal to 1,000 gallons and reaches surface water, or will probably be discharged to surface water, notify CalOES within 2 hours of the time IEUA was notified of the SSO.

☐ **Notify CalOES** at (800) 852-7550:

- Date Called: _____
- Time called: _____ : _____ ☐AM ☐PM
- CalOES Control number: _____

City personnel making notifications: Name: _____ Title: _____

STEP 3: Within 48-Hours after awareness of SSO

☐ Only if 50,000 gallons or more spilled to surface waters, implement Water Quality Monitoring Plan.

STEP 4: Within 3 Days after awareness of SSO

☐ Submit a Draft Spill Report using the CIWQS online reporting database.

STEP 5: Within 15 Days after response conclusion

☐ LRO certify the Spill Report using the CIWQS online reporting database.

☐ Updates to the Spill Report may be made for up to 120 days following the conclusion of the SSO Response.

STEP 6: Within 45 Days after SSO end date

☐ If 50,000 gallons or more spilled to surface waters, submit an SSO Technical Report using the CIWQS online reporting database.

This form completed by: _____ _____ _____

Name *Title* *Date*

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Regulatory Notifications Packet
Category 2 & 3 SSO Reporting Checklist

A-2b

Use this Checklist for Category 2 and 3 SSOs only

STEP 1: Receive notification of Sanitary Sewer Overflow

STEP 2: Submit Draft Spill Report (Category 2 only)

☐ Submit a Draft Spill Report using the CIWQS online reporting database within 3 days after awareness of Category 2 SSO.

STEP 3: Certify Spill Report

☐ LRO certify the Spill Report using the CIWQS online reporting database:
- Category 2 SSO: Within 15 days after the conclusion of the response
- Category 3 SSO: Within 30 days after the end of the calendar month in which the SSO occurred

☐ Updates to the Spill Report may be made for up to 120 days following the conclusion of the SSO Response.

This form completed by: _____ _____ _____
Name *Title* *Date*

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Appendix B

SANITARY SEWER OVERFLOW/BACKUP RESPONSE PACKET

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Sanitary Sewer Overflow/Backup Response Packet
Table of Contents

Form	Form Number
Response Instructions	Packet Envelope
Sanitary Sewer Overflow/Backup Response Flowchart	-1
Start Time Determination Form	-2
Volume Estimation Methods	
Eyeball Estimation	-3a
Duration and Flow Rate Photo Comparison	-3b
Upstream Lateral Connections	-3c
Sewer Overflow Report	-4
Lateral CCTV Report	-5
Bubbled Toilets Letter	-6
Declination of Cleaning Services (3-copy NCR)	-7
First Responder Form	-8
Lodging Authorization Form (3-copy NCR)	-9
Rejection of Relocation Recommendation (3-copy NCR)	-10
Claims Submittal Checklist	-11
Collection System Failure Analysis Form	-12

Customer Service Packet

Instructions	packet envelope
Customer Information	CS-1
Claim Form	-2
Sewer Spill Reference Guide	pamphlet

Regulatory Notifications Packet

Instructions	envelope
Regulatory Reporting Guide	A-1
Category 1 SSO Reporting Checklist	-2a
Category 2 & 3 SSO Reporting Checklist	-2b

Print Instructions/Chain of Custody on 9” x 12” envelope.

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Sanitary Sewer Overflow/Backup Response Packet

- ❑ **If this is a Category 1 SSO greater than or equal to 1,000 gallons, advise contacts below to make the 2-hour CalOES notification.**
- ❑ **If this is a backup into a residence or business, request that the customer cease all activities contributing to the backup.**

Notifications Trigger:	**Contact Immediately at (909) 993-1600** (unless listed below)
For Category 1 SSO greater than or equal to 1,000 gallons contact CalOES within 2 hours	Supervisor of Environmental Compliance and Energy
	Manager of Planning and Environmental Resources
For all backups into/onto private property possibly due to problems in the public sewer	Manager of Operations and Maintenance
For any media requests	Executive Manager of External Affairs and Policy Development/AGM
For cleaning services (restoration/remediation)	SERVPRO of Chino / Chino Hills: (909) 548-3191
	SERVPRO of Northeast Ontario / Kaiser: (909) 390-0238

Collections Crew:

- ❑ Follow the instructions on the Sewer Overflow/Backup Response Flowchart (B-1). Note: If multiple dwelling units are affected, use one packet per unit and check here: ☐
- ❑ If indicated on the flowchart, give the customer the Bubbled Toilets Letter and/or the Customer Service Packet and have them initial here:
  Customer acknowledgement of receipt of Bubbled Toilets Letter: _____
  Customer acknowledgement of receipt of Customer Service Packet: _____
- ❑ **Supervisor**: Place completed forms in this envelope, complete the Chain of Custody record (right) and forward this packet to the Manager of Operations and Maintenance.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Manager of Operations and Maintenance:

- ❑ Review the enclosed forms for accuracy and completeness.
- ❑ Complete the Chain of Custody record (right) and forward this packet to the Supervisor of Environmental Compliance and Energy and the Senior Environmental Resources Planner.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Supervisor of Environmental Compliance and Energy and the Senior Environmental Resources Planner:

- ❑ Complete the Regulatory Notifications Packet.
- ❑ Complete the Claims Submittal Checklist.
- ❑ Complete the Chain of Custody record (right) and forward this packet to the Manager of Contracts and Facilities Services.
- ❑ Debrief using the Collection System Failure Analysis Form.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Manager of Contracts and Facilities Services: Refer to the Claims Submittal Checklist.

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Overflow/Backup Response Flowchart

B-1 Side A

Print on 8.5" x 14" paper

Start Here

Take necessary measures to prevent sewage from entering storm drains.

If the SSO/PLSD is entering an area where public contact may occur, post warning signs in immediate areas and document how many signs were posted and where they were posted. Consider isolating the affected area to prevent access by vehicles/pedestrians. Photograph/videotape areas where warnings/barricades are posted, as appropriate.

Does the SSO/backup appear to be due to a problem in the **IEUA-owned/maintained** sewer line?

NO

1. Determine whether IEUA should clear the stoppage/blockage or have the property owner/manager use a private contractor. Be sure to document IEUA staff time and equipment used for potential billing purposes. Always notify the property owner/manager/resident of the Private Lateral Sewage Discharge (PLSD) and any agency actions taken.
2. Photograph and document **all** evidence that this SSO is from private property.
3. If tenant or property owner is unable or unwilling to address the cause of the overflow, immediately contact your supervisor and discuss whether Code Enforcement, the County Department of Environmental Health or Regional Water Quality Control Board should be notified.

YES

Consider the need to call out additional staff, contractor or mutual aid assistance or to notify upstream users to curtail water use.

Was there a backup into the customer's residence?

NO

1. **Document the service call according to agency procedures.**
2. **STOP. Do not continue to PAGE 2**

YES

If customer is not home:

- Contact the Manager of Operations and Maintenance to discuss contacting the property owner/manager (using customer billing information) to gain entry if necessary.
- Complete Door Hanger and leave on customer's door.
- Leave a message on the customer's voicemail.

If customer is home:

- Recommend the customer shut off any appliances using water.
- Explain to customer that the blockage is in their lateral and that IEUA does not have legal authority to maintain or perform work on privately owned laterals. Consider showing the customer the unobstructed flow in the public sewer to help explain that the blockage is in their lateral.
- Consider cleaning the IEUA-owned/maintained line manhole to manhole and other lines that may tie in to the main line.
- Recommend to customer they hire a contractor to clear their line.
- Give customer the Sewer Spill Reference Guide pamphlet.

If preliminary volume estimates indicate it is a Category 1 SSO greater than or equal to 1,000 gallons, immediately call one of the individuals on the front of the Sewer Overflow/Backup Response Packet envelope to make the 2-hour notification to CalOES.

BEGIN DIVERSION AND CONTAINMENT

1. **DIVERT AWAY FROM SENSITIVE AREAS:**
   a. Cover unplugged storm drains w/mats, or use dirt/other material to divert sewage away from sensitive areas (e.g., schools, playgrounds, intersections, etc.)
   b. ENSURE PUBLIC CONTACT DOES NOT OCCUR. Use cones/barricades to isolate area.
2. **CONTAIN SSO & RETURN TO SYSTEM, IF POSSIBLE:**
   a. Plug storm drain catch basins or use rubber mats to cover basin inlet and divert flow to catch basin
   b. Build/excavate a berm to channel flow to downstream sanitary sewer manhole (*barricade manhole if left open)*
   c. Use bypass pumps to pump around blockage until it can be removed
   d. Divert to low area of ground where it can be collected later
3. **PHOTOGRAPH HOW THE SSO WAS DIVERTED/CONTAINED, AS APPROPRIATE**

NO

Has the SSO reached surface waters?

YES

Consider the need to sample surface waters the SSO may have reached. If preliminary volume estimates of the SSO are 50,000 gallons or greater, begin collecting as soon as possible but no later than 48 hours after becoming aware of the SSO.

Collect surface water samples. Refer to the Field Sampling Kit for procedures.

ADDRESS CAUSE OF SSO/BACKUP

For pump station-related SSO/Backups contact the Manager of Operations and Maintenance for assistance, and refer to the Pump Station Emergency Response Plan.

Overflow/Backup Response Flowchart

B-1 Side B

Print on 8.5" x 14" paper

Continue Here From Page 1

Were storm drains impacted?

YES

STORM DRAIN CLEANING

1. Seal or berm the storm drain immediately downstream of point the SSO reached
2. Photograph impacted storm drain catch basins before cleaning
3. Vacuum any visible sewage – *Record the volume of sewage recovered*
4. Using dechlorinated water, flush impacted sections of storm drain with 3X amount of SSO, if possible – *Record volume of flush water*
5. Ensure all visible signs of sewage have been removed
6. Return flush water to sanitary sewer – *Record volume of flush water recovered*
7. Photograph storm drain catch basins after cleaning is completed

NO

IMPACTED AREA CLEANUP, AS NECESSARY

1. **Assign staff to begin cleanup**
   NOTE: If SSO was caused by a failure in a private service line, clean up impacted public areas & document staff time, equipment used & expenses incurred
2. **Remove all signs of visible pollution**
   (toilet paper, solids, grease, etc.)
3. **Flush area with water – Unless raining**
   (*3X amount of SSO, if possible)*
   a. Setup berm/other means to contain all water so it can be returned to sewer
   b. Don't use disinfectants if they may enter storm drain system and not be fully recovered or if they may enter a water body
4. **Address saturated soil** with removal and/or in-place treatment, depending on the extent of the contamination. Take measures to prevent accidental contact by the public. NOTE: addressing saturated soil may involve returning to the site one or more days after the SSO event.
5. **Photograph the area when cleanup operations are complete**

Did this SSO cause a sewer backup impacting private property?

NO

DETERMINE START TIME AND ESTIMATE SSO VOLUME

Complete the Start Time Determination form. Remember – the SSO was <u>probably</u> occurring for a period of time before it was reported.

1. Estimate and document SSO volume using two or more of the worksheets provided in the Sewer Overflow/Backup Response Packet .
2. Complete the Start Time and Volume Estimation sections on the Sanitary Sewer Overflow Report.

YES

Was this a toilet burp or similar due to IEUA activities?

NO

YES

Provide Customer with the Bubbled Toilets Letter and have Customer initial the front of the Sewer Overflow/Backup Response Packet envelope.

Give customer the Customer Service Packet. Ask the customer to initial the front of the SSO/Backup Response Packet envelope, as appropriate.

Does the customer want cleaning service?

NO

1. Have Customer sign the Cleaning Declination form.
2. Ask permission to photograph the affected area. If they decline, note on the Cleaning Declination form.

YES

1. Call for a restoration/remediation team. See SSO/Backup Response Packet Envelope for contact information.
2. Wait for restoration team to arrive, if possible.

DOCUMENTATION AND REPORTING

1. Complete the Sanitary Sewer Overflow Report.
2. Make notifications indicated on the Sanitary Sewer Overflow/Backup Response Packet envelope.
3. If the overflow is due to a problem in the lateral, determine if CCTV is warranted. If so, complete the Lateral CCTV Report.

Place in Sewer Overflow Packet envelope and follow paperwork routing instructions indicated on the front of the envelope:

1. **All completed forms**
2. **Digital or disposable camera**
3. **All notes/documentation made**

Sanitary Sewer Overflow/Backup Response Packet

Start Time Determination Form

B-2

SSO Start Date: _____ Location: _____

Accurate start time determination is an essential part of SSO volume estimation. Depending on the flow rate, being even one minute off can have a huge impact on the volume estimation. Be as precise as possible. Do not round to quarter hour increments. Start time must be based on all available information (interviews with neighbors, emergency responders, etc.)

What time was the Agency notified of the SSO? _____ ☐ AM ☐ PM

Who notified the Agency? _____

Did they indicate what time they noticed the SSO? ☐ YES ☐ NO If yes, what time? _____ ☐ AM ☐ PM

Who at the Agency received the notification? _____

What time did the crew arrive at the site of the SSO? _____ ☐ AM ☐ PM

Who was interviewed regarding the start time of the SSO? Include their name, contact information, and the statement they provided:

Name	Contact Information	Statement

Describe in detail how you determined the start time for this particular SSO:

SSO Start Date: _____ SSO Start Time: _____ ☐ AM ☐ PM

SSO End Date: _____ SSO End Time: _____ ☐ AM ☐ PM

SSO Duration: _____ **minutes**

This form completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

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Sanitary Sewer Overflow/Backup Response Packet

Volume Estimation: Eyeball Estimation Method

B-3a

Use this method only for small SSOs of less than 200 gallons.

SSO Date: _____ Location: _____

STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

	A	B	C
Size of bucket(s) or barrel(s)	**How many of this size?**	**Multiplier**	**Estimated SSO Volume (gallons)**
1 gallon water jug		x 1 gallons	
5 gallon bucket		x 5 gallons	
32 gallon trash can		x 32 gallons	
55 gallon drum		x 55 gallons	
Other: _____ gallons		x _____ gallons	
Estimated Total SSO Volume:			

STEP 5: Is rainfall a factor in the SSO? ☐Yes ☐No

If yes, what volume of the observed spill volume do you estimate is rainfall? _____ gallons

If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:

_____ gallons – _____ gallons = _____ gallons

Estimated SSO Volume — Rainfall — **Total Estimated SSO Volume**

Do you believe that this method has estimated the entire SSO? ☐Yes ☐No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

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Sanitary Sewer Overflow/Backup Response Packet

Volume Estimation: Area/Volume Estimation Method

Note: Refer to form B-3b Page 3 for computation formulas and guides

SSO Date: _____ Location: _____

STEP 1: Describe spill area surface: □Asphalt □Concrete □Dirt □Landscape □Inside Building □Other: _____

STEP 2: Draw/sketch the outline (footprint) of the spill. Then break the footprint down into recognizable shapes. Refer to the example on form B-3b Page 3.

STEP 3: Calculate the area of the footprint by completing the table below for each shape in Step 2. If two shapes overlap, select one of the two shapes and estimate the percentage of that shape that does not overlap. Enter that percentage in the % Not Overlapping column. This will ensure that the overlap area is only counted once. Refer to the example on form B-3b Page 3.

Rectangles	Length	X	Width	X	% Not Overlapping*	=	Area
	ft	X	ft	X	%	=	ft^2
	ft	X	ft	X	%	=	ft^2
	ft	X	ft	X	%	=	ft^2

Triangles	Base	X	Height	Multiplier	X	% Not Overlapping*	=	Area
	ft	X	ft	÷ 2	X	%	=	ft^2
	ft	X	ft	÷ 2	X	%	=	ft^2
	ft	X	ft	÷ 2	X	%	=	ft^2

Circles	π	X	Radius	X	Radius	X	% Not Overlapping*	=	Area
	3.14	X	ft	X	ft	X	%	=	ft^2
	3.14	X	ft	X	ft	X	%	=	ft^2
	3.14	X	ft	X	ft	X	%	=	ft^2

Total Spill Area (sum of all three tables above): _____ ft^2

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STEP 4: Calculate the volume of the spill that **was NOT absorbed** into the ground. If the entire spill was absorbed, skip to Step 5.

a. If spill is of varying depths, take several measurements at different depths and find the average.

_____ inches ÷ _____ = _____ inches ÷ 12 = _____ feet
sum of measurements | # of measurements | average depth in inches | average depth in feet of ponded sewage

b. Calculate spill volume of ponded sewage in cubic feet by multiplying the Total Spill Area in Step 3 by the average depth calculated in Step 4a. Convert from cubic feet to gallons by multiplying by 7.48.

_____ ft^2 x _____ ft = _____ ft^3 x 7.48 gal = _____ gallons
spill area (Step 3) | average depth (Step 4a) | spill volume in cubic feet | estimated volume of ponded sewage

STEP 5: Calculate the volume of the spill that **was absorbed** into the ground. If only a wet stain is observed, use the guidelines on B-3b Page 3 for the average depth. When estimating the volume that was absorbed, take into consideration:

- How long the sewage has been sitting
- The air temperature on the day of the SSO
- Soil type for the area (e.g., hard-packed clay vs. loose or gravely soil)

When estimating the volume of the spill that was absorbed into the ground, it is also advisable to dig down far enough to reach dry soil and take the depth of the wet soil into consideration.

Estimated volume that was absorbed into the soil: _____ gallons
Explain how this estimation was determined:

STEP 6: Add the volume not absorbed (Step 4) plus the volume absorbed (Step 5) to get the total estimated volume:

_____ gallons + _____ gallons = _____ gallons
volume not absorbed | volume absorbed | **Total Estimated Spill Volume**

Do you believe that this method has estimated the entire SSO? ☐Yes ☐No
If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:
Name: _____ Signature: _____
Job Title: _____ Date: _____

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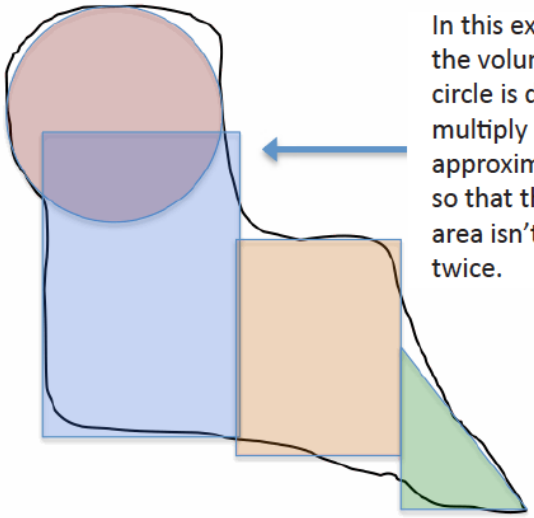
Miscellaneous Computations

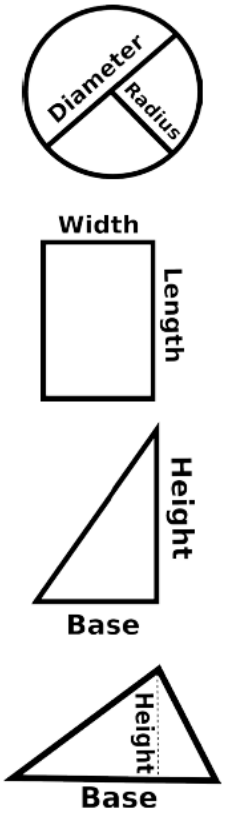
To convert inches to feet	Divide the inches by 12 or use the chart on the bottom right of this page.
Volume of one cubic foot	7.48 gallons of water
Area: Two-dimensional measurement represented in square feet	Square/rectangle: Area = Length x Width Circle: Area = πr^2 (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle: Area = ½ (Base x Height)
Volume: Three-dimensional measurement represented in cubic feet	Rectangle/square footprint: Volume = Length x Width x Depth Circle footprint (cylinder): Volume = πr^2 x Depth (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle footprint: Volume = ½ (Base x Height) x Depth
Depth: Contained or "Ponded" sewage	Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. Add the depth of the sample points and then divide that total by the number of sample points. If the depth is not measurable because it is only a wet stain, consider using the following estimated depths: • Depth of a wet stain on concrete surface: 0.0026' (1/32") • Depth of a wet stain on asphalt surface: 0.0013' (1/64")

Example of how to draw/sketch the outline (footprint) of the spill for Step 2:

1. Sketch the outline of the spill (black line).
2. Break the sketch down into recognizable shapes (circles, squares, etc.) as well as you can.



In this example, after the volume of the circle is determined, multiply it by approximately 65% so that the overlap area isn't counted twice.



Convert Inches to Feet

Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

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Sanitary Sewer Overflow/Backup Response Packet

Volume Estimation: Upstream Lateral Connections Method

B-3c

SSO Date: _____ Location: _____

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this SSO: _____ EDUs
NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to agency documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the SSO was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated SSO Volume per EDU.

	Flow Rate Per EDU				SSO	
	A	**B**	**C**	**D**	**E**	**F**
Time Period	Gallons per Period	Hours per period	A ÷ B = Gallons per Hour	C ÷ 60 = Gallons per Minute	Minutes SSO was active during period	D × E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
Total Estimated SSO Volume per EDU:						

STEP 3: Multiply the Estimated SSO Volume per EDU from Step 2 by the number of EDUs from Step 1.

_____ gallons X _____ = _____ gallons
Volume per EDU # of EDUs Estimated SSO Volume

STEP 4: Adjust SSO volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted SSO estimate (attach a separate page if necessary):

Estimated SSO Volume: _____ gallons

Do you believe that this method has estimated the entire SSO? ☐Yes ☐No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

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Sanitary Sewer Overflow/Backup Response Packet
Sanitary Sewer Overflow Report

B-4
Side A

CIWQS Assigned Number: _____

SSO Category *(check one)*:

☐ Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either (1) Reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

☐ Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

☐ Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition

☐ Spill from Private Lateral (specify): ☐ Single Family Home ☐ Multi-Family Home ☐ High Density Residential (5+ units) ☐ Food Service Establishment (FSE) ☐ Mixed Use Property ☐ Industrial Property ☐ Commercial Property ☐ Public quasi-public institution (hospital, schools, fire department, etc.)

IMMEDIATE NOTIFICATION: If this is a Category 1 SSO ≥1,000 gallons, contact CalOES within 2 hours at (800) 852-7550.

A. SSO LOCATION		
SSO Location Name:		
Latitude Coordinates*:	Longitude Coordinates:	
Street Name and Number:		
Nearest Cross Street:	City:	Zip Code:
County:	SSO Location Description:	

B. SSO DESCRIPTION (Complete Volume Estimation Worksheets and/or refer to Field Guide as needed for estimations.)

SSO Appearance Point (check one or more): ☐ Combined Sewer D.I. (Combined CS Only) ☐ Force Main ☐ Gravity Mainline ☐ Lateral Cleanout (Private) ☐ Lateral Cleanout (Public) ☐ Inside Building or Structure ☐ Manhole ☐ Pump Station ☐ Lower Lateral (Private) ☐ Lower Lateral (Public) ☐ Upper Lateral (Private) ☐ Upper Lateral (Public) ☐ Other Sewer System Structure (specify):

Were there multiple appearance points? ☐ No ☐ Yes, number of appearance points:

Did the SSO reach a drainage channel and/or surface water? ☐ Yes (*Category 1)* ☐No

If the SSO reached a storm sewer, was it fully captured and returned to the Sanitary Sewer? ☐ Yes ☐No (*Category 1)*

Was this spill from a private lateral? ☐ Yes ☐No If YES, name of responsible party:

Final Spill Destination: ☐ Ocean/ocean beach* ☐ Surface waters other than ocean ☐ Drainage channel ☐ Building/structure ☐ Separate Storm drain ☐ Combined storm drain ☐ Paved surface ☐ Unpaved surface ☐ Street/curb/gutter ☐ Other:
*Provide name(s) of affected drainage channels, beach, etc.:

Total Estimated SSO volume *(in gallons – 1,000gal or more = Category 1)*:			gallons
Est. volume that reached a separate storm drain that flows to a surface water body:	gal	Recovered:	gal
Est. volume that reached a drainage channel that flows to a surface water body:	gal	Recovered:	gal
Est. volume discharged directly to a surface water body:	gal	Recovered:	gal
Est. volume discharged to land:	gal	Recovered:	gal

Calc. Methods: ☐Eyeball ☐Photo Comparison ☐Upstream Lat. Connections ☐Area/Volume (include sketch/photo with dimensions) ☐Other (describe):

C. SSO OCCURRING TIME (complete Start Time Determination Form and then complete information below)	
Estimated SSO start date:	Estimated SSO start time:
Date SSO reported to sewer crew:	Time SSO reported to sewer crew:
Date sewer crew arrived:	Time sewer crew arrived:
Who was interviewed to help determine start time?	
Estimated SSO end date:	Estimated SSO end time:

* If multiple appearance points, use the GPS coordinates for the location of the SSO appearance point closest to the failure point/blockage.

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Sanitary Sewer Overflow/Backup Response Packet

Sanitary Sewer Overflow Report

B-4
Side B

D. CAUSE OF SSO

Where did failure occur? (Check all that apply): ☐ Air Relief or Blow-Off Valve ☐ Force Main ☐ Gravity Mainline ☐ Siphon
☐ Lower Lateral (public) ☐ Lower Lateral (private) ☐ Manhole ☐ Pump Station (specify): ○Controls ○Mechanical ○Power
☐ Upper Lateral (public) ☐ Upper Lateral (private) Other:

SSO cause *(check all that apply)*: ☐ Air Relief or Blow-Off Valve Failure ☐ Construction Diversion Failure ☐ CS Maintenance
☐ Damage by others ☐ Debris (specify): ○from Construction ○from Lateral ○General ○Rags ☐ Flow Exceeded Capacity
☐ FOG (Fats, oil, and grease) ☐ Inappropriate Discharge ☐ Natural Disaster ☐ Operator Error ☐ Root Intrusion
☐ Pipe Structural Problem/Failure ☐ Pipe Structural Problem/Failure (Installation) ☐ Rainfall Exceeded Design
☐ Pump Station Failure (specify): ○Controls ○Mechanical ○Power ☐ Siphon Failure ☐ Vandalism
☐ Surcharged Pipe ☐ Non - Dispersible Wipes ☐ Other (specify):

Diameter (in inches) of pipe at point of blockage/spill cause (if applicable):

Sewer pipe material at point of blockage/spill cause (if applicable):

Estimated age of sewer asset at the point of blockage or failure (if applicable):

Description of terrain surrounding point of blockage/spill cause: ☐ Flat ☐ Mixed ☐ Steep

E. SSO RESPONSE

SSO response activities (check all that apply): ☐ Cleaned-Up ☐ Mitigated Effects of Spill ☐ Contained All or Portion of Spill
☐ Restored Flow ☐ Returned All Spill to Sanitary Sewer System ☐ Returned Portion of Spill to Sanitary Sewer System
☐ Property Owner Notified ☐ Other Enforcement Agency Notified (specify) ☐ Other (specify):

SSO response completed (date & time):

Visual inspection result of impacted waters (if applicable):

Any fish killed? ☐ Yes ☐ No Any ongoing investigation? ☐ Yes ☐ No

Were health warnings posted? ☐ Yes ☐ No If yes, provide health warning/beach closure posting/details:
If yes, take photographs of sign placement.

Was there a beach closure? ☐ Yes ☐ No If yes, name of closed beach(es):

Were samples of impacted waters collected? ☐ Yes ☐ No
If YES, select the analyses: ☐ DO ☐ Ammonia ☐ Bacteria ☐ pH ☐ Temperature ☐ Other:

Recommended corrective actions: (check all that apply and provide detail)
☐ Add sewer to preventive maintenance program
☐ Adjust schedule/method of preventive maintenance
☐ Enforcement action against FROG source
☐ Inspect Sewer Using CCTV to Determine Cause
☐ Plan rehabilitation or replacement of sewer
☐ Repair Facilities or Replace Defect
☐ Other (specify)

What major equipment was used in the response?

List all agency personnel involved in the response including name, title and their role in the response:

F. NOTES

G. NOTIFICATION DETAILS

CalOES contacted date and time (if applicable):

CalOES Control Number (if applicable): Spoke to:

This form prepared by: NAME:	TITLE:	DATE:
This form reviewed by: NAME:	TITLE:	DATE:

Place completed form in the Sanitary Sewer Overflow/Backup Response Packet Envelope and follow routing instructions.

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Sanitary Sewer Overflow/Backup Response Packet

Lateral CCTV Report

B-5

PLEASE COMPLETE AS THOROUGHLY AS POSSIBLE

PERSON COMPLETING THIS FORM:

DATE:
PHONE:

CAMERA TYPE:

LOCATION OF CAMERA ENTRY:

AFFECTED PROPERTY STREET ADDRESS:

LOCATION OF CAMERA STOP:

CITY, STATE AND ZIP:

DESCRIBE AREA TV'd:

PHONE

UPSTREAM MANHOLE #:

WEATHER AT TIME OF CCTV WORK:

PLEASE CHECK ALL THAT WERE DISCOVERED – *Describe Extent & Location Using Camera Entry Point As Reference*:

- ❒ Broken Lateral – Describe:
  Depth:
- ❒ Roots – Severity: ☐ Light ☐ Moderate ☐ Heavy
- ❒ Grease – Severity: ☐ Light ☐ Moderate ☐ Heavy
- ❒ Sag – Describe:
  Depth:
- ❒ BPD – Describe:
  Location:
- ❒ Cleanout – Describe:
  Location:
- ❒ Joint/Junction – Describe:
  Depth
- ❒ Grade – Describe:
- ❒ Grit – Severity: ☐ Light ☐ Moderate ☐ Heavy
- ❒ Other – Describe:

TIME OF OVERFLOW:

TIME BLOCKAGE RELIEVED:

TIME LATERAL TV'd:

DEPTH OF LATERAL:

RECOMMENDED
FOLLOW UP WORK ACTIONS:

Mark for USA location? ☐ Yes ☐ No

Lateral Locations Marked in Green Paint? ☐ Yes ☐ No

SIGNATURE OF EMPLOYEE PERFORMING CCTV WORK:

DATE

Place completed form in the Sanitary Sewer Overflow/Backup Response Packet Envelope and follow routing instructions.

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Dear Inland Empire Utilities Agency (IEUA) Customer,

Thank you for informing us that your toilet bubbled while our crews were working in proximity of your property. We apologize for the inconvenience and hope that this letter will answer some of your questions about bubbling toilets.

1. **Is this a health risk?**
   The water that came out of your toilet is potable water from the toilet bowl. Unless your toilet was in use when this occurred, this water is no different than that encountered while cleaning your toilet.

2. **What is IEUA doing in the street?**
   In order to insure reliable sewer service, IEUA inspects, cleans, and repairs its sewer system on a continuous basis.

3. **How does sewer cleaning cause my toilet to bubble?**
   Typical industry cleaning equipment uses high-pressure water to clean sewers. The first step is to use the high-pressure water jets to propel the hose and cleaning nozzle upstream as far as 800 feet. During this process, air within the main pipe is displaced and sometimes goes up the private lateral pipe and releases though the toilet. This can also happen during the cleaning phase, when high-pressure water is pulled downstream to the cleaning truck.

4. **What causes the air to come from my toilet?**
   Over the years, IEUA crews have found that the bubbling of toilets has many causes, some of which are:
   - Obstructed vent pipes;
   - Vent pipes that are positioned too far from the toilet;
   - Lateral pipes that may be in use as the crew is cleaning (e.g. draining washing machine, draining bathtub, etc.);
   - Lateral pipes that may have obstructions that are causing them to hold water (e.g. roots, grease, etc.).

5. **What does IEUA staff do, once informed of a bubbling toilet?**
   Once notified of a bubbling toilet, the crew leader explains to you what has happened, and checks to see if there is a clean-out in your yard that could be opened in the future during cleaning.

6. **What can I do to prevent my toilet from bubbling?**
   When a sewer begins to drain slowly, it may be a sign that it needs to be cleaned or repaired. Trees and shrubs may have root structures that are entering the lateral pipe. The homeowner needs to make sure to have a clean-out for accessing the line. Unless there is a cleanout on the property line, it is the homeowner's responsibility to keep the sewer lateral pipe in good working condition. **IEUA also recommends the homeowner install a back-flow prevention device to prevent bubbling or sewer back-ups into the home.**

It is always a good idea to keep the toilet lid down when not in use, and not install carpets in the bathroom unless they can be easily removed and cleaned. For more information, please call the IEUA office at (909) 993-1600.

Sincerely,

Inland Empire Utilities Agency

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Sanitary Sewer Overflow/Backup Response Packet
Declination of Sewage Cleaning Services

B-7

Customer Information		
NAME:	ADDRESS:	TELEPHONE:

ON (date)	**AT** (time)	**Approximately** (quantity)	**GALLONS OF:** ☐ Sewage ☐ Grey Water ☐ Toilet Bowl Water ☐ Odor ☐ Other (describe):

Overflowed from (or odor emanating from)
- ☐ Toilet
- ☐ Shower/Tub
- ☐ Washer
- ☐ Other (describe):

The overflow affected the following areas *(check one):*
- ☐ Bathroom ☐ Bedroom
- ☐ Hallway ☐ Garage
- ☐ Kitchen ☐ Crawlspace
- ☐ Other (specify):

The overflow affected the following flooring: **and/or additional materials:**
- ☐ Tile ☐ Wood Flooring ☐ Area Rugs ☐ Towels
- ☐ Linoleum ☐ Carpet ☐ Clothing ☐ Other (specify):
- ☐ Other (specify):

Were photos taken?: ☐ Yes ☐ No If yes, where are photos stored?

This Form Completed By: Name: **Date:**

(Write legibly) Title: **Time:**

CUSTOMER, please read the following and sign below. Please refer to the Customer Service Packet for whom to contact if you have any questions.
I/We acknowledge that Inland Empire Utilities Agency, CA (IEUA) has offered to provide professional cleaning and decontamination services to remediate the sewage backup and/or overflow described above and that we declined the offer. We further understand and acknowledge that because we have declined, any necessary remediation activities will be conducted without IEUA assistance, and that IEUA will not accept responsibility for work performed by persons other than those engaged by IEUA. IEUA will also not accept responsibility for any charges related to this incident that are not usual and customary.

Customer Signature*:		**Date:**
The information above was explained to the customer by the following employee:	**Name:**	**Title:**
	Signature:	**Date:**

**Note to responders: if customer declines to sign this form, then have a co-worker sign here as a witness:*

Name: _____ *Signature:* _____ *Date:* _____

Recommendations to customer to clean up the spill:

- Keep pets and children out of the affected area
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Remove and discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow water to cool before washing your hands.) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash all clothes worn during the cleanup in hot water and detergent (wash separately from uncontaminated clothes).
- Wash clothes contaminated with flood or sewage water in hot water and detergent. Use a laundromat for washing large quantities of clothes and linens until your onsite wastewater system has been professionally inspected and services.
- Seek immediate attention if you become injured or ill.

Distribution Instructions: Top Copy to IEUA records; Middle Copy to IEUA Manager of Contracts and Facilities Services; Bottom Copy to Customer

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Sanitary Sewer Overflow/Backup Response Packet
First Responder Form

B-8
Side A

Fill out this form as completely as possible.
Ask customer if you may enter the home. If so, take photos of all damaged and undamaged areas.

PERSON COMPLETING THIS FORM: Name: _____ Title: _____	PHONE: DATE: TIME:
TIME STAFF ARRIVED ON-SITE:	
WAS A CLEANING CONTRACTOR CALLED? ☐ Yes ☐ No If YES, name of contractor:	
RESIDENT NAME: ☐ Owner ☐ Renter	IF RENT, PROPERTY MANAGER(S): OWNER:
STREET ADDRESS: CITY, STATE AND ZIP: PHONE:	STREET ADDRESS: CITY, STATE AND ZIP: PHONE:
Is nearest upstream manhole visibly higher than the drain/fixture that overflowed? ☐ Yes ☐ No	
# OF PEOPLE LIVING AT RESIDENCE:	

Approximate Age of Home:	# of Bathrooms:	# of Rooms Affected:
Approximate Amount of Spill (gallons):	Approximate Time Sewage Has Been Sitting (hrs/days):	
Numbers of Photographs or Videos Taken: ☐ Photographs ☐ Video	Where are photos/video stored?	

Does property have a Property Line Cleanout or BPD?	☐ YES ☐ NO ☐ Unknown
If yes, was the Property Line Cleanout/BPD operational at the time of the overflow?	☐ YES ☐ NO ☐ Unknown
Have there ever been any previous spills at this location?	☐ YES ☐ NO ☐ Unknown
Has the resident had any plumbing work done recently? ☐ YES ☐ NO *If YES, please describe:*	

GO TO SIDE B

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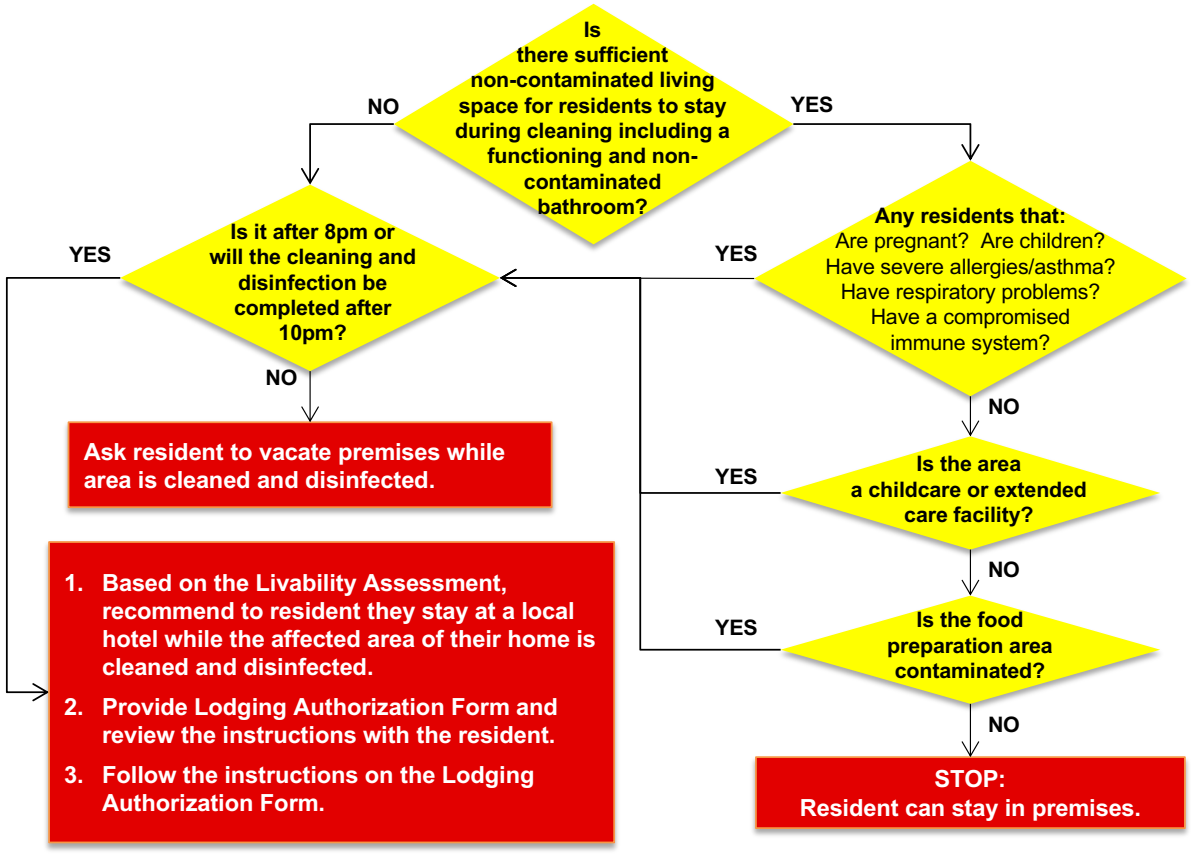
Sanitary Sewer Overflow/Backup Response Packet
First Responder Form

B-8
Side B

LIVABILITY ASESSMENT



SANITARY SEWER LINE BLOCKAGE LOCATION

PLEASE CHECK THE BOXES THAT DESCRIBE YOUR OBSERVATIONS:

Customer Cleanout Was:	Public Cleanout was:
☐ Non-Existent	☐ Non-Existent
☐ Full	☐ Full
☐ Empty	☐ Empty

On the diagram below, indicate the location of the sewer line and where the problem occurred.

Affected House

Upstream House

Recommended Follow-Up Action(s):

Did sewage go under buildings? ☐ Yes ☐ No ☐ Unsure

Place completed form in the Sanitary Sewer Overflow/Backup Response Packet Envelope and follow routing instructions.

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Sanitary Sewer Overflow/Backup Response Packet
Lodging Authorization Form

B-9

INSTRUCTIONS TO EMPLOYEE:

1. If the Livability Assessment indicates that a hotel is needed, offer alternate lodging to the customer. If they agree, ask the customer which hotel identified below they prefer.
2. Contact the Supervisor or their designee who will pay for one (1) night's lodging with an IEUA credit card.
3. Review this form with the customer and instruct them to read the Instructions to Resident section below.
4. Instruct the customer that this emergency authorization is for LODGING ONLY – NO FOOD, MINIBAR, MOVIE, PHONE or Other Charges).
5. Explain to customer that if circumstances require additional nights' lodging and other incidentals, the IEUA Manager of Contracts and Facilities Services will address them.
6. Have the customer sign the Acknowledgement section of this form.
7. Complete this Authorization Form and sign.
8. Give the bottom copy of this form to the customer.
9. If the customer declines the offer of temporary relocation, complete the Rejection of Relocation Recommendation form.

INSTRUCTIONS TO RESIDENT: Inland Empire Utilities Agency, CA recommends that you temporarily relocate to one of the hotels listed below for your safety and convenience while your residence is being cleaned. Please note that this emergency authorization is granted under the following conditions:

1. This authorization provides for one (1) night's lodging at one of the hotels listed below.
2. The authorization is good for **room and tax ONLY**. Phone, food, mini-bar and other incidental charges will be your responsibility.
3. Additional nights/other allowances/incidentals may be discussed by contacting the IEUA Manager of Contracts and Facilities Services at (909) 993-1600 Monday through Friday.

CUSTOMER ACKNOWLEDGEMENT:

I/we have read and understood the terms and conditions governing this offer of temporary relocation and agree to abide by them as described above.

Customer Name (please print): _____

Customer Address: _____

Phone # where customer may be reached: _____

Customer Signature: _____ Date: _____

❖ If you wish to decline this offer of temporary relocation, sign the Rejection of Relocation Recommendation form.

Good for one (1) night's stay on (date): _____ Number of affected residents: _____

Field Supervisor's Name: _____ Phone Number: _____

HOTEL OPTION 1: La Quinta Inn and Suites
3555 Inland Empire Boulevard, Ontario, CA 91764-4908
Telephone: (909) 476-1112
Pets allowed. Some rooms have microwaves and mini refrigerators.

HOTEL OPTION 2: Comfort Suites
1811 East Holt Boulevard., Ontario, CA, 91761
Telephone: (909) 605-0700
Only service animals allowed. Smoke free hotel. Rooms have microwaves and mini refrigerators.

HOTEL OPTON 3: Azure Hotel and Suites
1945 E. Holt Boulevard, Ontario, CA 91761
Telephone: (909) 284-8670
Some rooms have microwaves and mini refrigerators.

Distribution: Top Copy to: City records Middle Copy to: IEUA Manager of Contracts and Facilities Services Bottom Copy to Customer

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Sanitary Sewer Overflow/Backup Response Packet
Rejection of Relocation Recommendation Form

B-10

On _____, a backup into structure occurred at _____
(date) (address)

Property Owner: _____

Resident: _____

Due to a backup into the structure, the above listed property has sewage to be cleaned up/mitigated, which may also include remediation of part of the structure. It is recommended by Inland Empire Utilities Agency, CA that the residents of the above listed property relocate until the cleanup/mitigation and any required remediation is completed. City staff provided the information to the resident: "Your Responsibilities as a Private Property Owner."

Resident(s) determined that they did not want to relocate and will remain in the structure.

PROPERTY OWNER/RESIDENT RELEASE OF LIABILITY AND ASSUMPTION OF RISK

I have decided that I do not want to relocate from the address listed above during any cleanup/mitigation and/or remediation. I have received all the materials listed above from Inland Empire Utilities Agency, CA. I understand that there are inherent risks with exposure to sewage that may contain pathogens and the associated cleanup/mitigation and/or remediation process due to the potential for coming into contact with sewage through breathing, swallowing, or cuts and abrasions in the skin. Risks may range from (1) minor temporary discomfort and illness, (2) more serious illness that may require medical treatment, (3) very serious illness that could result in life threatening conditions, including death. I know, understand, and appreciate these and other risks inherent in being exposed to sewage. I knowingly assume all such risks which may result from my own actions, inactions, or negligence of others, and the condition of the structure during the cleanup/mitigation and/or remediation process.

I, for myself, my heirs, personal representative or assigns, hereby release, discharge and hold harmless Inland Empire Utilities Agency, CA, its respective Boards, officers, employees, agents and contractors from any and all claims, actions, causes of action, demands, rights, damages, costs, loss of service, expenses, legal expenses, including subrogation or liens or damage caused by or related to my remaining in the structure while cleanup/mitigation and/or remediation is performed as a result of the sewer backup.

_____ _____
Resident Signature Date

_____
Inland Empire Utilities Agency, CA Witness

Comments: _____

_____

_____

_____

_____

_____

_____

Distribution Instructions: Top Copy to City records; Middle Copy to IEUA Manager of Contracts and Facilities Services; Bottom Copy to Customer

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Complete this form if there is a Sanitary Sewer Backup into/onto Private Property

Supervisor of Environmental Compliance and Energy and Senior Environmental Resources Planner

1. **Complete the following information:**

   Title: _____

   Name: _____

   Phone: _____

   Today's Date: _____

2. **Copy the items listed below and retain the originals for internal archiving purposes.**

3. **Place the originals back in the Sanitary Sewer Overflow/Backup Response Envelope:**

   - ☐ **Form B-7: Declination of Cleaning Services**
   - ☐ **Form B-8: First Responder Form**
   - ☐ **Form B-9: Lodging Authorization Form**
   - ☐ **Form B-10: Rejection of Relocation Recommendation**
   - ☐ **Form B-11: Claims Submittal Checklist** *(this form)*
   - ☐ **Any other information you feel is important in this claim**

4. **Verify claims packet is complete.**

5. **Notify Manager of Contracts and Facilities Services of incoming claim and forward the completed claims packet to them.**

Manager of Contracts and Facilities Services

1. **Review incident reports, claim form and other incident information.**

2. **Communicate with claimant as appropriate.**

3. **Administer claim to closure.**

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Sanitary Sewer Overflow/Backup Response Packet
Collection System Failure Analysis

B-12
Side A

To be completed by the Supervisor of Environmental Compliance and Energy and Senior Environmental Resources Planner

Incident Report #		Prepared By	
SSO/Backup Information			
Event Date/Time	Address		
Volume Spilled	Volume Recovered		
Cause			
Summary of Historical SSOs/Backups/Service Calls/Other Problems			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
Summary of CCTV Information			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Go to Side B

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Sanitary Sewer Overflow/Backup Response Packet
Collection System Failure Analysis

B-12
Side B

Recommendations					
✓	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Reviewed by:			Review Date:		

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Customer Service Packet

Contents:

Form	Form Number
Customer Information Letter	CS-1
Claim Form	CS-2
Sewer Spill Reference Guide	pamphlet

Instructions:

1. Review the Customer Information letter to determine actions that need to be taken immediately.
2. See the Customer Information letter for information about filing a claim.
3. Review the Sewer Spill Reference Guide pamphlet.

Cleaning Contractor:

- ☐ SERVPRO of Chino / Chino Hills: (909) 548-3191, OR
- ☐ SERVPRO of Northeast Ontario / Kaiser: (909) 390-0238

This packet provided by:

Name: _____

Title: _____

Telephone: _____

If you have any questions call (909) 993-1600 and speak with:
Manager of Operations and Maintenance regarding sewer backup issues
Manager of Contracts and Facilities Services regarding claim issues

Print on 6" x 9" envelope

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Sanitary Sewer Overflow/Backup Response Packet

Customer Information Regarding Sewer Backup Claims

CS-1

Dear Property Owner:

We recognize that sewer backup incidents can be stressful and require immediate response while all facts concerning how an incident occurred are still unknown. Rest assured that we do all we can to prevent this type of event from occurring in the first place. Nevertheless, occasionally tree roots or other debris in the sewer lines causes a backup into homes immediately upstream of the blockage. At this time Inland Empire Utilities Agency (IEUA) is investigating the cause of this incident.

If IEUA is found to be responsible for the incident, we are committed to cleaning and restoring your property, and to protecting the health of those affected during the remediation process.

The cleaning contractor provided by IEUA has been selected because of their adherence to established protocols that are designed to assure to all parties thorough, cost-effective and expeditious cleaning services. You also have the right to select your own cleaning contractor, but IEUA does not guarantee payment of fees/expenses incurred and reserves the right to dispute fees/expenses deemed not usual and customary.

The IEUA Manager of Contracts and Facilities Services has the responsibility for processing any claims for damages that are submitted. If you wish to discuss this matter, or submit a claim for damages, please contact the IEUA Manager of Contracts and Facilities Services at (909) 993-1600.

What you need to do now:

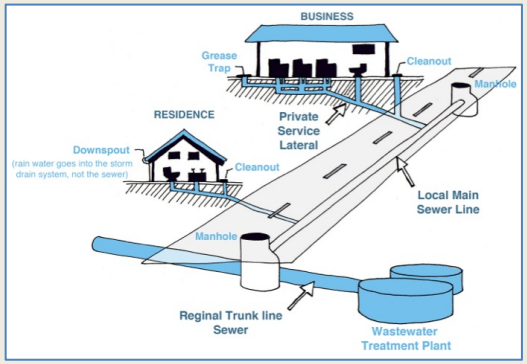
IEUA has prepared this brief set of instructions to help you minimize the impact of the loss by responding promptly to the situation.

- Do not attempt to clean the area yourself, let the cleaning and restoration company handle this.
- Keep people and pets away from the affected area(s).
- Turn off any appliances that use water.
- Turn off heating/air conditioning systems.
- Do not remove items from the area – the cleaning and restoration company will handle this.
- If you had recent plumbing work done, contact your plumber or contractor and inform them of this incident.
- If you intend to file a claim, do so as soon as practical in order to have your claim considered. Submit your completed claim form to the IEUA Manager of Contracts and Facilities Services, 6075 Kimball Avenue, Chino, CA 91708. They can be reached at (909) 993-1600 Monday through Friday.

INSERT CLAIM FORM

How a Sewer System Works

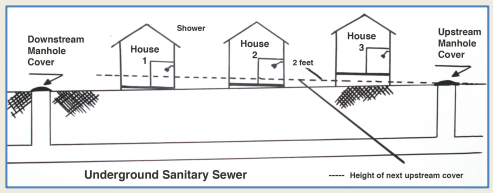
A property owner's sewer pipes are called ***service laterals*** and are connected to larger local main and regional trunk lines.
Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.



Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: *"Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping* ***shall*** *be protected from backflow of sewage by installing an approved type of backwater valve."* The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: *"Backwater valves* ***shall*** *be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."*



If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:

Inland Empire Utilities District
(909) 993-1600

San Bernardino County Environmental Health
Business Hours: (800) 782-4264
After Hours: (800) 472-2376
California Health and Safety Code, Sections 5410-5416 requires:

- No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or a nuisance.
- Any person who causes or permits a sewage discharge to any state waters:
  - Must immediately notify the local health agency of the discharge.
  - Shall reimburse the local health agency for services that protect the public's health and safety.
  - Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine (between $500–$1,000) and/or imprisonment for less than one year.

Santa Ana Regional Water Quality Control Board
(951) 782-4130
Requires the prevention, mitigation, response to, and reporting of sewage spills.

California Governor's Office of Emergency Services (CalOES)
(800) 852-7550
California Water Code, Article 4, Chapter 4, Sections 13268-13271 & California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require:

- Any person who causes or permits sewage in excess of 1,000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.
- Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine (less than $20,000) and/or imprisonment for not more than one year.

Sewer Spill Reference Guide

Your Responsibilities as a Private Property Owner

Provided to you by:

Inland Empire Utilities District
6075 Kimball Avenue
Chino, CA 91708
(909) 993-1600

www.ieua.org

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How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

CAUTION!

When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.

Common causes of sewage spills

- Grease build-up
- Tree roots
- Broken/cracked pipes
- Missing or broken cleanout caps
- Undersized sewers
- Groundwater/rainwater entering the sewer system through pipe defects and illegal connections

Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Protect the environment!

If you let sewage from your property discharge to a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. A property owner may be charged for costs incurred by agencies responding to spills from private properties.

What to look for:

Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas. Look for:

- Drain backups inside the building.
- Wet ground and/or water leaking around manhole lids onto your street.
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls, ground/landscape around a building.

The following are indicators of a possible obstruction in your sewer line:

- Water comes up in floor drains, showers or toilets.
- Toilets, showers or floor drains below ground level drain very slowly.

What to do if there is a spill:

Immediately notify IEUA. Our crews locate the blockage and determine if it is in the public sewer. If it is, the crew removes the blockage and arranges for cleanup.
If the backup is in your private internal plumbing or in the private service laterals, you are required to immediately:

- Control and minimize the spill by shutting off or not using the water
- Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under "Plumbing Drain & Sewer Cleaning" or "Plumbing Contractors."
- Always notify your sewer/public works department or public sewer district of sewage spills.

Spill cleanup inside the home:

For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas, You can locate local firms by looking in the Yellow Pages under "Water Damage" or "Fire Damage." If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

Other Tips:

- Keep children and pets out of the affected area until cleanup has been completed.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.

Spill cleanup outside the home:

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solutions, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
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- Seek immediate attention if you become injured/ill.

Appendix C
Service Vehicle Documents

Overflow Emergency Response Plan
Public Posting

DANGER

RAW SEWAGE • AVOID CONTACT



PELIGRO

AGUA CONTAMINADA • EVITE TODO CONTACTO

Inland Empire Utilities Agency, CA

Business Hours: (909) 993-1600

After Hours follow instructions to contact the On-Call Employee

Inland Empire Utilities Agency (IEUA)

On (date) _____, at (location)

_____,
we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:

- ☐ The sanitary sewer main and cleared the line
- ☐ The IEUA-maintained portion of your sanitary sewer lateral and cleared the line.
- ☐ Your portion of the sanitary sewer lateral, which is your responsibility to maintain. We also found IEUA's portion of the lateral and the main to be flowing normally.

If you require assistance to clear your portion of the lateral you can look in the Yellow Pages of your telephone book or on the Internet for "Sewer Contractors" or "Plumbing Drains & Sewer Cleaning." If you plan to hire a contractor we recommend getting estimates from more than one company.

IEUA representative notes: _____

_____

_____

IEUA representative:

_____

For questions or comments, please call
Inland Empire Utilities Agency, CA

Business Hours: (909) 993-1600
After Hours:
Follow instructions to contact the On-Call Employee

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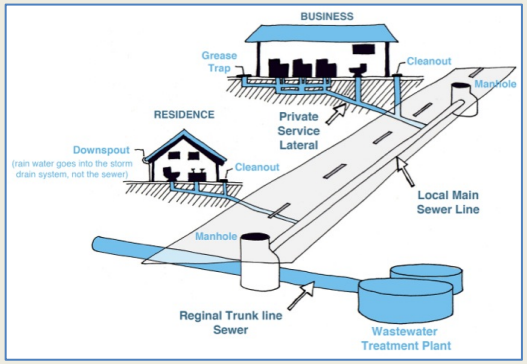

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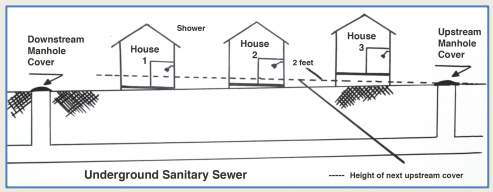

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The following are indicators of a possible obstruction in your sewer line:

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What to do if there is a spill:

Immediately notify IEUA. Our crews locate the blockage and determine if it is in the public sewer. If it is, the crew removes the blockage and arranges for cleanup.
If the backup is in your private internal plumbing or in the private service laterals, you are required to immediately:

- Control and minimize the spill by shutting off or not using the water
- Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under "Plumbing Drain & Sewer Cleaning" or "Plumbing Contractors."
- Always notify your sewer/public works department or public sewer district of sewage spills.

Spill cleanup inside the home:

For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas, You can locate local firms by looking in the Yellow Pages under "Water Damage" or "Fire Damage." If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

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Other Tips:

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- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
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- Seek immediate attention if you become injured or ill.

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- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solutions, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured/ill.

Appendix D

FIELD SAMPLING KIT

Field Sampling Kit
Table of Contents

Form	Form Number
Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill	D-1
Sample Collection Chain of Custody Record	-2

Go to Lab and get the following:

- Ice pack
- Ice
- Sample pole
- Latex gloves
- Long rubber gloves
- Safety glasses
- Waterproof Pen (i.e. Sharpie®)
- Chain of Custody form

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Field Sampling Kit
Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill

D-1
Side A

Get Field Sampling Kit → Get ice pack or ice and place in cooler → Determine point spill entered waterway – photograph this location (*include a reference point in the photo)* → Don the PPE from the Sampling Kit

- Collect all samples against the direction of the water flow! (face upstream)
- Collect upstream sample first!
- Collect samples well away from the bank (preferably where water is visibly flowing) and 6" below the surface
- Avoid sampling debris or scum layer from the surface.
- Photograph evidence of dead fish!

SAMPLING STEPS

Move far enough upstream of point where spill entered waterway to ensure the waters have not been impacted by the SSO (reference sample)

Remove the seal from the fecal coliform sample container (100ml) just prior to collecting your sample. A chemical has been added to the sample container. Leave the chemical in the bottle and do not rinse.

1. Remove the cap immediately before collecting each sample.
2. Avoid allowing the inside of the cap to touch anything.
3. Holding the bottle in one hand, face upstream and lower the bottle 6" below the water surface. Then sweep the bottle upstream and out of the water. Be careful not to disturb the bottom sediment. Pour a little water out so that bottle is filled to the line. Immediately replace the cap.

Open the ammonia-nitrogen sample container and follow collection process above (steps 1-3) to fill to just below the neck of the jar. NOTE: The ammonia-nitrogen sample bottle contains sulfuric acid – LEAVE THE ACID IN THE BOTTLE AND DO NOT ALLOW IT TO TOUCH YOUR SKIN!

Label all of the samples with their location and note the date and time collected → Place samples in cooler on the ice pack → Take a photo of this sample location (*include a reference point in the photo)*

Move at least 10' downstream of point where spill entered waterway and repeat sampling steps (red boxes)

Complete the Chain of Custody form from the Sampling Kit.

Contact Supervisor to contact the IEUA lab and inform them that the following samples require processing: Ammonia-Nitrogen and fecal coliform.

Take cooler containing the samples and completed chain of custody to IEUA Lab at 6075 Kimball Avenue in Chino within 6 hours of collection time.

Post warning signs as directed by the County Environmental Health Department or the Manager of Operations and Maintenance. (Remove Warning Signs and lift restrictions when authorized by County Environmental Health or the Manager of Operations and Maintenance.)

Repeat sampling daily from time the spill is known until the results of two consecutive sets of samples indicate the return to the normal level or cessation of monitoring is authorized by the County Environmental Health Department.

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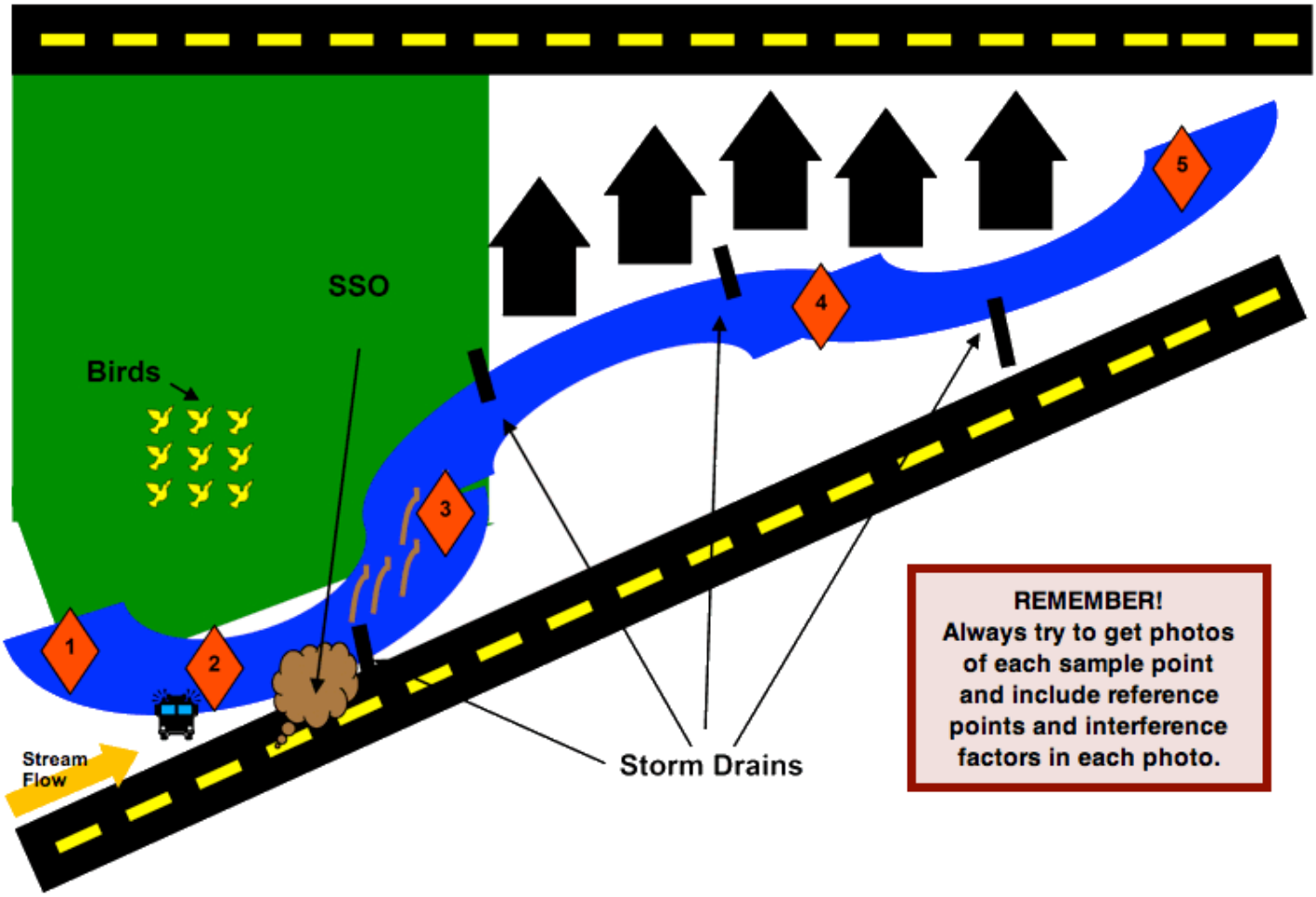
Field Sampling Kit
Procedures for Sampling Receiving Waters after a Sewage Spill

D-1
Side B

This example is provided for illustrative purposes *only!* Base each sampling event on the geography, drainage and interference factors (*i.e. birds, animals, runoff, etc.*) of the area impacted. Consult Manager of Operations and Maintenance or IEUA Lab as needed.



1. **Sample Location 1: Baseline Sample, no observable interference from birds, animals, runoff, etc.**
2. **Sample Location 2: Baseline Sample, observable interference from birds, animals, runoff, etc. NOTE: Only collect this sample if you observe any possible interfering factors upstream from the spill location.**
3. **Sample Location 3: Immediately (but at least 10 feet) downstream of any SSO entry point.**
4. **Sample Location 4: Further downstream of any SSO entry point - note any possible interfering factors.**
5. **Sample Location 5: Further downstream of any SSO entry point - note any possible interfering factors.**

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Field Sampling Kit
Sample Collection Chain of Custody Record

D-2

Customer Name				☐	**Hazardous Waste**	**PO#**	
Customer Address				☐	**Unknown Material**	**WO#**	
Customer Telephone		**Mail Code**		**LAB INFORMATION**		**Turnaround Requirement**	
Program Name				Ship to:		☐ Normal (21 days)	
Lab Program Coordinator		**Phone #**		Ship Date:		☐ Rush: _____	
Sampled By				Courier:		☐ Other:	

LIMS# (Issued by Lab)	**SAMPLE COLLECTION INFORMATION**									**Analysis Requested**					**QA/QC Requirements**	
	Date	**Time**	**Type**		**Sample Location**	**Field pH**	**Field Temp**	**# Containers**	**Matrix***	Ammonia	Enterococcus				☒	Lab Standard
			Composite	Grab											☐	Special (see attached)
																Remarks/Notes
			☐	☒	Upstream			2	A	☒	☒	☐	☐	☐		
			☐	☒	Entry Point			2	A	☒	☒	☐	☐	☐		
			☐	☒	Downstream			2	A	☒	☒	☐	☐	☐		
			☐	☐				2		☐	☐	☐	☐	☐		
			☐	☐				2		☐	☐	☐	☐	☐		
			☐	☐				2		☐	☐	☐	☐	☐		
			☐	☐				2		☐	☐	☐	☐	☐		

*Matrix: P = Potable Water, W = Wastewater, A = Ambient Water, G = Groundwater, S = Soil, B = Biosolids, I = Industrial, O = Other (specify in remarks)

Relinquished	**Date**	**Time**

Relinquished to	**Date**	**Time**

Transport/Shipping Information		
☐ USPS	☐ UPS	☐ FedEx
Tracing #:		
☐ Other:		

Sample Receiving Documentation

Container intact? ☐ Yes ☐ No	Correct container? ☐ Yes ☐ No	Field preserved? ☐ Yes ☐ No	Custody tape intact? ☐ Yes ☐ No
Cooled? ☐ Yes ☐ No	Temp. Blank? ☐ Yes ☐ No (°C)	Comments:	
Sample distribution: ☐ Lab bench ☐ Ice chest ☐ Walk-in cooler shelf #		Disposal Date:	Disposed by: (inits.)
C-O-C Distribution Date: By:		☐ Lab Admin File ☐ Prog/proj Mgr. ☐ Lab Prog. Coord.	☐ Delivery courier ☐ Pick-up courier

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Appendix E

CONTRACTOR ORIENTATION

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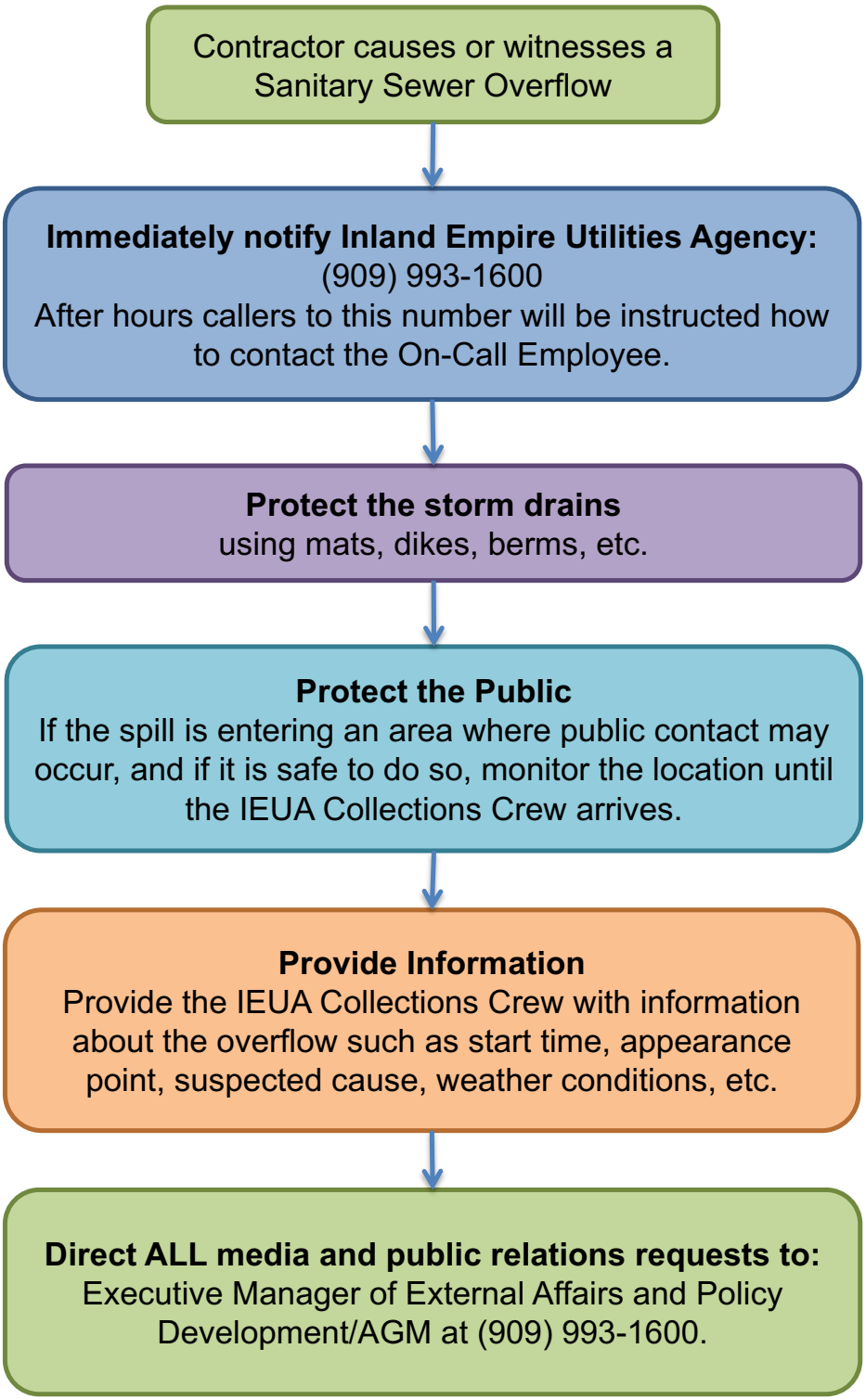
Inland Empire Utilities Agency: Overflow Emergency Response Plan

CONTRACTOR ORIENTATION

The following procedures are to be followed in the event that you cause or witness a Sanitary Sewer Overflow.



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What to do if you cause or witness a Sanitary Sewer Overflow

What?

A sanitary sewer overflow (SSO) is a discharge of untreated human and industrial waste from the sanitary sewer system before it reaches the wastewater treatment facility.

Where?

SSOs usually occur through manholes, plumbing fixtures and service cleanouts.

Why?

SSOs are usually caused by grease, debris, root balls, or personal hygiene products blocking the sewer lines, or by unusually high flow volume.

How to prevent SSOs:

…when clearing plugged sewer laterals:

- Remove root balls, grease blockages and any other debris from the sewer
- If you can't prevent root balls, grease or debris from entering the sewer main, call us at (909) 993-1600, so we can work with you to remove the blockage and prevent blockages further downstream
- Use plenty of water to flush lines.

…when constructing or repairing sewer laterals:

- Contact the Department Manager of Engineering at (909) 993-1600 for a permit and lateral specifications.
- Check your work area. Make sure there is no debris left in the sewer line before you backfill.
- Avoid offset joints, which may make sewer lines vulnerable to root intrusion and grease or debris accumulation. Properly bed your joints and don't hammer tap.

If you cause or witness an SSO, immediately contact:

Inland Empire Utilities Agency

(909) 993-1600

After Hours: follow instructions to contact the On-Call Employee

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

6075 Kimball Avenue
Chino, CA 91708

www.ieua.org

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Appendix F

CUSTOMER COMPLAINT RECORD

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Customer Complaint Record

NOTIFICATION

Date: _____

Time: _____ ☐ AM ☐ PM

Method: ☐ Telephone ☐ Email ☐ Other: _____

COMPLAINANT (check here if reported anonymously ☐)

Name: _____

Address: _____

_____

Telephone: _____

REPORTED COMPLAINT

When did the complainant first notice the SSO? Date: _____ Time: _____ ☐ AM ☐ PM

Did the SSO reach Waters of the State? ☐ Yes ☐ No ☐ Unknown

Description of the complaint:

RESOLUTION OF THE COMPLAINT:

FEASIBLE AND REMEDIAL ACTIONS TAKEN:

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SECTION 6

- City of Montclair Fats, Oils, and Grease (FOG) Program
- List of Food Service Establishments
- Blank Restaurant - Environmental Compliance Report
- Environmental Compliance Interceptor Evaluation Report
- FOG Commercial Public Outreach Information
- Household Hazardous Waste Collection Facility Locations

City of Montclair

Fats, Oils, and Grease
(FOG)
Program

Background

The discharge of fats, oils, and grease (FOG) from animal and vegetable sources can created sewer line stoppages that result in sanitary sewer overflows (SSOs). Two main sources of FOG discharges are from the restaurant industry and similar facilities (e.g. cafegerias, penal institutions, schools, colleges, and universities with food services, and commercial kitchens) and residential users. The FOG discharges may be a result of poor housekeeping practices at restaurants and from poorly informed decisions by residential users. The potential result of these discharges are SSOs.

The FOG discharges start in a liquid, semi-liquid, or solid stated due to temperature or hydrogenation state. Fats, oils, and greases all have fatty acid components. Palmitic acid is the most widely occurring saturated fatty acid and is found in beef tallow (32%), lard (30%) and cottonseed oil (21%). Oleic acid is the most widely occurring unsaturated fatty acid and is found in olive oil (83%) and peanut oil (60%).

Two conditions of common fats are saturated and unsaturated. The saturated fats are solids at room temperature, while the unsaturated fats are either liquid or semi solid at room temperature. Many unsaturated fats are hydrogenated to make the fat solid at room temperatures. The hydrogenation process breaks the double carbon bonds of an unsaturated fat and replaces hydrogen molecules in place of the double bond. This hydrogenation process created a saturated fat. The more hydrogenated a vegetable oil the more solid the oil is at room temperature. Vegetable shortenings that are solid at room temperature are vegetable oils that have been completely hydrogenated.

Examples of animal saturated fats are beef, chicken, and pork. An example of a plant saturated fat is found in avocadoes. Many forms of these fats are liquefied by increasing the temperature of the fat as in the case of a deep fat fryer. Some are liquefied when exposed to certain bacteria, biological, or chemical enzymes, chemical agents, or solvents.

The discharge of hot or warm FOG materials to the sewer causes the quickest stoppage problems due to the receiving environment. The sewer line temperatures typically range from 70-80 degrees Fahrenheit. At this temperature, the hot or warm FOGs that are discharged to the sewer cool off, adhere to the interior surfaces of a sewer line, and then harden in place once completely cooled. The adhesion sites become future sites for additional adhesions similar to the process by which a candle is made. A source discharge of FOG will create a blockage pattern in the sewer line characteristic of the material discharged and the frequency of discharge. The blockage tends to increase in size downstream of the user's lateral connection to the sewer.

Many FOGs accumulate on the upper surfaces of sewer lines due to the floating properties of FOGs and the non-miscibility of FOGs in water. The depositions of the

FOGs on the upper surfaces of a sewer line are exacerbated by increases in the wastewater level caused by FOG obstructions that restrict the sewer flows.

Grease interceptors are gravity separation devices to separate FOGs and solids from the wastewater discharge. The use of biological or chemical agents in grease interceptors to liquefy FOGs prior to discharge is problematic. Bacteria and enzymes act by reducing the long chain fatty acids into smaller chain molecules. A bacteriological system would need 24-72 hours to completely aerobically metabolize the FOGs to carbon dioxide and water. A gravity separation interceptor has about 30-120 minutes of detention time. The result of bacterial or enzymatic product usage is a liquefaction or emulsification of the FOGs in the interceptor. This liquefied FOG is subsequently discharged to the sewer where any further degradation of the FOG by the bacteria or enzyme is prevented due to the dilution of the material and other interferences in the receiving sewage. The liquefied FOGs begin to adhere to sewer line interior walls like an epoxy material, and deplete the oxygen content of the wastewater due to the natural degradation microbes present in the wastewater. Odor problems are also created as a result of the depleted oxygen content.

The City of Montclair's FOG program is focused on preventing the discharge of FOGs to the sewer system and educating the restaurant community and homeowners about good FOG best management practices.

FOG Program Elements

The City of Montclair has over 120 restaurants and similar sites. Several of these sites have grease interceptors ranging in size from 750 to 2500 gallons. The City uses many elements to control and prevent the discharge of FOG to the sewer collection system. These elements include:

1. Site inspections
2. Public education and outreach
3. Collection system cleaning and assessments
4. Collection system and sewer lateral closed circuit television (CCTV) inspection
5. Enforcement actions by the Environmental Compliance Section (ECS)
6. Grease interceptor retrofits
7. Training

Site Inspections

Inspections of restaurants and similar sites enable the City of Montclair to determine what sites may be problematic to the collection system. The City's ECS is responsible for inspecting all restaurants and similar facilities within City limits minimally once per year, with many being inspected two to four times per year. The increase in inspection frequency is determined by the history of the site, the type of restaurant, proximity to a "hot spot" in the collection system, whether or not the facility has a grease interceptor, compliance history, sewer line blockage history, or SSO history. The site inspections are maintained in a computer relational database in the ECS that has the ability to provide the inspector with an inspection and enforcement history for the site. Paper copies of the site inspection reports and supporting documentation is also maintained by the City ECS (Section A).

The site inspection will reveal if any bacterial, enzymatic, or chemical agents are used to dissolve, emulsify or suspend FOGs. The bacterial, enzymatic, or chemical agents may be found in products used for cleaning silverware, pots and pans, drain cleaning, and floor cleaning. Some products are specifically designed as a grease interceptor additive and are used to liquefy the FOGs in the grease interceptor with the idea that the grease interceptor may be pumped less frequently with the regular application of the product.

The site inspection will also evaluate the grease interceptor for performance and integrity. (Section B). By City of Montclair standards, a grease interceptor's performance will be negatively impacted once the operational fluid capacity reached 25%. The performance will also be affected by structural factors including missing elbows or mid-wall tees, or influent tee extentions that are too long. The integrity of the interceptor is often affected by anaerobic conditions that generate hydrogen sulfide gas, which can also cause corrosion of concrete surfaces. Once the concrete begins to corrode, plumbing connections (tees) are compromised and, in some extreme cases, the structural integrity of the interceptor is in question.

The ECS also works with the San Bernardino County Department of Environmental Health to share information gained during restaurant inspections. The San Bernardino County Department of Environmental Health is also notified if a SSO has occurred at a restaurant, or as a result of wastewater discharge by a restaurant to the collection system. If extreme violations of Health and Safety Code are observed, a phone call is placed to the Health Department to have the area inspector respond and take appropriate enforcement actions.

Public Education and Outreach

The City of Montclair uses the site inspections as the principle education and outreach method to contact the restaurant community. Residents are primarily contacted through public education and outreach events. Ocassionally the ECS will participate in outreach efforts sponsored by other agencies, e.g. The Water Fair sponsored by the Monte Vista Water District, and Inland Empire Utilities Agency. During an inspection of a restaurant, the inspector will use the opportunity to inform and educate the owner or manager about the various laws and regulations that affect their business. Subject areas include stormwater BMPs, product usage and substitution, good housekeeping practices, grease interceptor evaluation, and Montclair Municipal Code (MMC) applicability. The San Bernardino County Department of Environmental Health and the San Bernardino County Flood Control District supply some of the information materials distributed.

Sewer Line Cleaning and Assessments

The City of Montclair has approximately 90 miles of gravity draining sewer lines. A large percentage of the lines are eight inches in diameter. The City's Collections and Maintenance staff is scheduled to clean a certain amount of sewer line weekly to insure that the system's operational capacity is realized.

All the attention to line cleaning is focused on collection system integrity. This includes evaluation of the structural aspects of the pipe (i.e. necessity of rehabilitation or replacement, offsets, cracks), as well as evaluation of the accumulation of excessive roots and FOG. A two-inch thick deposit of FOG on the sidewalls of an eight-inch sewer line can lead to an SSO in a short time period. Scheduled cleaning can prevent most of these SSOs from occurring. In addition to routine cleaning, known problem areas or "hot-spots" throughout the City of Montclair are given extra attention and are cleaned more

frequently. These additional cleanings are for sewer lines with a history of excessive roots, grease, solids or all three.

Records of all sewer cleaning activities are maintained by the Collections and Maintenance staff. These reports provide the details of the condition of the sewer line and any problems that were encountered. When heavy or excessive FOG is found, the ECS is notified to investigate the source of the issue.

Sewer and Lateral CCTV Inspections

The most effective tool used by the Collections and Maintenance staff to evaluate the condition of the sewer system is closed circuit television (CCTV) inspection. The City of Montclair has one CCTV equipped vehicle that is used weekly to inspect the City's sewers and storm drains. The goal is to create a video library of every sewer line within the City, and to be able to create a rehabilitation/replacement schedule based upon the structural condition as visible through the video inspection. The CCTV inspections are also used to provide information about sewer line blockages. Since these CCTV inspections are recording actual events and existing sewer conditions at the time of the video inspection, the CCTV records can be used as evidence in an enforcement action. Sewer and lateral CCTV inspections are a necessary component for the ECS to bring an enforcement action against a business or company that has caused or has the potential to cause a sewer line blockage and/or SSO.

Enforcement

The discharge of wastewater by a user that causes a sewer line obstruction or blockage is prohibited by the Federal Clean Water Act, 40 CFR 403.5 (b)(3) and Montclair Municipal Code (MMC) Section 9.20.580(B)2. The ECS is empowered to take enforcement actions against any user that causes a sewer line obstruction and/or SSO. In order for the enforcement action(s) to be successful, a firm foundation of court admissible evidence must be obtained. This evidence must be objective and devoid of personal opinions. The use of CCTV evidence is a critical component of an enforcement action taken against a user for causing a sewer line blockage and/or SSO. Once all the evidence is collected, the information is reviewed and the enforcement strategy is planned.

The enforcement will always be commensurate with the degree of the violation found and will follow the procedures and requirements of the City's Municipal Code (and Enforcement Response Plan). If the sewer line debris accumulation has just begun and no SSO or sewer obstruction has occurred, then a correction notice may be issued to improve housekeeping practices and evaluate business practices that may lead to the discharge of materials that caused the sewer line debris accumulations. If the sewer line debris accumulations are significant and/or and SSO has occurred, then more severe enforcement actions may be taken. A Notice of Violation (NOV) or a Cease and Desist Order (CDO) may be issued with a compliance schedule to mitigate the conditions that caused the sewer line blockage and/or SSO to occur. The NOV or CDO will require that the discharges causing the sewer line blockage and/or SSO must stop immediately and

the user shall take all actions necessary to prevent any future discharges that would cause a sewer line blockage or SSO. These actions are required to be submitted in writing and the user is held accountable for the correction actions submitted. If the user fails to achieve compliance or is unresponsive to the requirements of the correction orders, then additional civil and/or criminal actions may be taken.

MMC Section 9.20.580(B)13 prohibits the use of any chemical or material that will emulsify, suspend, or dissolve oil and grease and the use of any microbiological product to metabolize FOG. The ECS inspection staff is constantly looking for these products during every restaurant inspection. When a prohibited product is discovered being used, the user is ordered to immediately stop the use of the product and have the product removed from the premises. Failure to comply with these administrative orders may result in further enforcement actions, including civil and/or criminal actions.

Grease Interceptor Retro Fits

One of the main enforcement tools used by the ECS for restaurant and similar facilities is the required installation of a grease interceptor where required. For new construction and tenant improvement projects, this action is accomplished through the City's plan check process. Planning Division Conditional Use permits and Building permits cannot be obtained if the user has not agreed to the ECS requirements for the project. If an existing restaurant or similar facility has been proved to be the cause of a sewer line blockage and/or SSO and does not have a grease interceptor, then the user is required to install an appropriately sized grease interceptor within 90 days. This enforcement action may also include the installation of trench drains at the trash enclosure drive thru, and rear door areas of the facility to prevent wastewater discharges from entering the storm drain system. If the existing restaurant or similar facility has a grease trap (smaller interior device) but the devise is poorly maintained or is inadequate to treat the type and volume of wastewater from the facility, then the user will be required to replace the existing grease interceptor with a one that is adequate for the intended application.

If the restaurant or similar facility is found responsible for the sewer line blockage and/or SSO, then the costs of cleanup and/or repairs necessary to remove the blockage and/or SSO will be invoiced to the facility.

Training

The ECS inspector has knowledge, skills, and abilities that are constantly being challenged and improved. Training of the inspector for FOG issues is critical to insure that the inspector is adequately equipped to respond to restaurant inspection and SSO investigation findings. This training includes:

1. Laws and regulations

2. Cleaning, degreasing, and microbiological product identification and use

3. New technology and equipment

4. New pretreatment methodology

5. Inspection practices

6. Enforcement actions

The City of Montclair uses a variety of means to train the ECS inspector in these areas. These are:

1. ECS Phase Training and Inspections

2. Cal State Sacramento Pretreatment Facility Inspector Courses

3. Specialty conferences and events

4. Specialty schools and training events

5. Meetings, discussions, and field training exercises with more experienced ECS inspectors.

Summary

The City of Montclair's ECS and Collection and Maintenance sections work closely together to find, investigate, and correct problems caused by the discharge of FOG to the City's sewer system. Preventive rather than reactive sewer cleaning and inspections in combination with ECS inspections are critical to insure the integrity of the City's collection system. Prompt responses to SSOs are necessary to quickly mitigate the effects to the SSO on the community. Enlisting the services of Inland Empire Utilities Agency's Member Agencies and the Mutual Aid Agreement, as well as the services and resources of the County and the California Regional Water Quality Control Board enhance the performance of the City of Montclair's FOG program.

City of Montclair FSEs FOG

1. 1st Dumpling N Noodle
2. 3.99 Pizza Co 4 Inc.
3. 7-Eleven
4. 7-Eleven
5. 7-Eleven
6. Alberto's Mexican Food
7. AMC
8. Antojitos La Poblanita
9. Applebee's Neighborhood Grill & Bar
10. Auntie Anne's Pretzels
11. Barnes & Noble/Café
12. Bee & Tea
13. Black Angus Steakhouse
14. Boba World
15. Bowlium
16. Buffalo Wild Wings #3833
17. Burger King # 2893
18. Cafe Moderno
19. Camilas Jazz Club
20. Cardenas
21. Carl's Jr.
22. Carl's Jr. # 1100137
23. Charleys Cheesesteaks
24. Chester's Chicken
25. Chili's Bar & Grill
26. Chipotle Mexican Grill #1512
27. Chuy's Cocina
28. Cinnabon
29. Clyde's Hot Chicken
30. Coffee Bar Montclair, LLC
31. Costco
32. Dairy Queen
33. Domino's Pizza # 7739
34. Dos Amigos Birrieria
35. Double or Nothin Pizza & Pasta
36. El Pollo Loco #5634
37. Farmer Boys # 1031
38. Fiesta Mexicana Family Restaurant
39. Flaming Buffet
40. Frappe & Boba
41. Good Life Nutrition
42. Habachihana Grill
43. Hercules Burgers # 5
44. Jack In The Box
45. Jack In The Box #5315
46. Jersey Mike's Subs
47. John's Incredible Pizza Company
48. Juice n Bowls

City of Montclair FSEs FOG

49. Kotsu Ramen & Gyoza
50. La Bufadora Baja Grill
51. La Carniceria Meat Market
52. La Michoacana Patzcuaro
53. La Poblanita
54. La Tia Mexican Restaurant Y Taqueria
55. La Victoria Mexican Food
56. Lazy Dog Restaurant & Bar
57. Liberty Bell Restaurant #2
58. Little Caesars
59. Los Portales Mexican Restaurant
60. Mariscos Licenciado
61. Mariscos Los Culichis
62. McDonald's
63. McDonald's #10992
64. Mi Taqueria
65. Montclair Starbucks, LLC
66. Mr. You Chinese Food
67. Muscle Bar, LLC
68. Noodle World Jr
69. Oli's Tacos
70. Ovni-Juice
71. Pancakes R Us
72. Panda Express # 2755
73. Panda Express #1470
74. Panera Bread
75. Paradise Buffet
76. Paradise Nutrition
77. Pier 88 Boiling Seafood & Bar
78. Pokeway
79. Pola's Mariscos, LLC
80. Popular Café
81. Potato Corner
82. Presotea
83. Prime Time Meat Market
84. Ramen Ichiraku
85. Ramiro's Mexican Food
86. Rio Grande Night Club
87. Rocky Mountain Chocolate Factory, Montclair
88. Rocky’s New York Style Pizzeria
89. Rodrigo's Mexican Grill
90. Rumble Fish Sushi Restaurant
91. San Antonio Bakery
92. SED Cocina
93. Shakey's Pizza
94. Starbelly Asain Kitchen
95. Starbucks Coffee #24325
96. Starbucks Coffee #47250

City of Montclair FSEs FOG

97. Stater Bros.
98. Subway
99. Super Taco
100. Sushi One Spot
101. Sushi VIP
102. Szechuwan Garden
103. Taco Bell #39821
104. Tacos Los Carnales
105. Tamales Jalisco
106. Taqueria 2 Potrillos
107. Target/Starbucks
108. Tasty Goody Express, Inc.
109. Tepeques Mexican Restaurant, LLC
110. That 80's Bar
111. The Best Taco
112. The Boba Kafe, LLC
113. The Canyon
114. The Kickin' Crab
115. The Olive Garden #1089
116. The Sandbar & Grill
117. Tokyo Kitchen
118. Tommy's Original World Famous Hamburgers
119. Traviezos Antro Bar and Grill, LLC
120. Tutti Fruitti Montclair
121. Waba Grill Montclair
122. Wendy’s
123. Wetzel's Pretzels
124. Wetzel's Pretzels
125. Wienerschnitzel #333
126. Win Wings
127. Wingstop #144
128. Yum Yum Donuts

City of Montclair
Engineering Division
5111 Benito Street
Montclair, CA 91763
(909) 625-9446

Environmental Compliance Inspection Report

BUSINESS NAME _____ DATE _____

ADDRESS _____ TIME _____

CITY **Montclair** ZIP CODE **91763** DISCHARGE NO. _____

FACILITY CONTACT _____ NAICS/SIC _____

PHONE # _____ EMAIL _____

INSPECTION TYPE: ☐ ROUTINE ☐ FOLLOW-UP ☐ COMPLAINT ☐ BUSINESS LICENSE

☐ **INTERCEPTOR EVALUATED** Refer to attached Interceptor Evaluation Report for additional details.

☐ **CORRECTION** ☐ **VIOLATION** Refer to MMC Section and Inspection Findings & Summary for corrective actions.

MONTCLAIR MUNICIPAL CODE (MMC) CHAPTER 9.20

- ☐ 580 - General Discharge Prohibitions
  - ☐ B 13 - Emulsifying Agents
- ☐ 670 - Inspection
- ☐ 810 - Record Keeping
- ☐ 690 D - Interceptor Requirements
  - ☐ 1 - Accessibility
  - ☐ 2 - Effectiveness
  - ☐ 3 - Structural Deficiencies
- ☐ 690 E - Interceptor Design 690
- ☐ F - Interceptor Maintenance
  - ☐ >25% Capacity
  - ☐ Maintenance

MONTCLAIR MUNICIPAL CODE (MMC) CHAPTER 9.24

- ☐ 060 - Spill Containment
- ☐ 070 - Compliance with Best Management Practices (BMPS)
- ☐ 230 - Prohibited Discharges

MONTCLAIR MUNICIPAL CODE CHAPTER 9.24

- ☐ 020 A - License and Fee Required

OTHER

INSPECTION FINDINGS & SUMMARY

☐ Follow-up inspection required. Follow-up inspection scheduled for _____

Inspector _____

Signature _____

Phone # _____

Email _____

INSPECTION REPORT RECEIVED BY

Print Title _____

Print Name _____

Signature _____

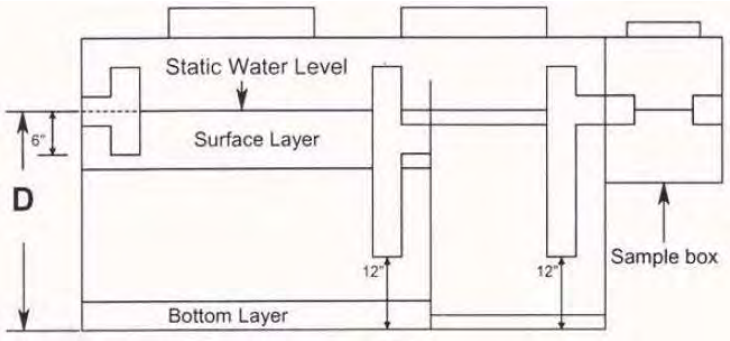
City of Montclair
Engineering Division
5111 Benito Street
Montclair, CA 91763
(909) 625-9446

Environmental Compliance Interceptor Evaluation Report

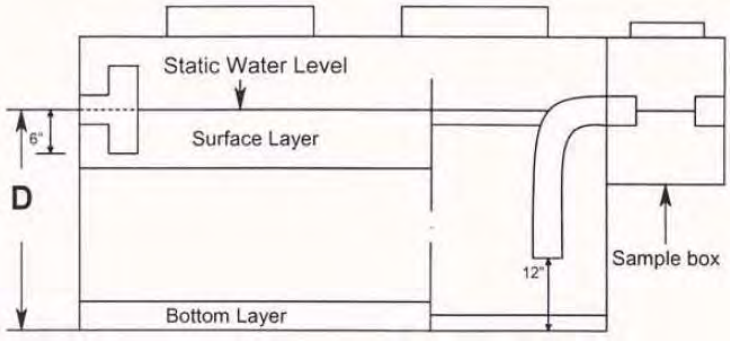
BUSINESS NAME _____ DATE _____

ADDRESS _____

☐ Typical Two Chamber Grease Interceptor



☐ Typical Two Chamber Sand-Oil Interceptor



	Good	Condition
Inlet	☐	_____
#1 Midwall	☐	_____
#2 Midwall	☐	_____
#3 Midwall	☐	_____
Outlet	☐	_____
Sample Box	☐	_____

Depth (D)= _____ inches

% of Total Capacity	**Surface (S) Layer (inches)**	**Bottom (B) Layer (inches)**
1st Chamber = **0.66**	_____	_____
2nd Chamber = **0.33**	_____	_____
3rd Chamber = _____	_____	_____
4th Chamber = _____	_____	_____
5th Chamber = _____	_____	_____

	%	**Condition**	**Pump Requirements**
☐	0 - 5	Good	Not required
☐	5.1 - 10	Fair	Not required
☐	10.1 - 15	Marginal	Not required, but advise to pump soon
☐	15.1 - 20	Poor	Shall pump within 7 calendar days
☐	20.1 - 25	Poorer	Shall pump within 2-3 calendar days
☐	>25	Poorest	Shall pump within 24 hrs.

% Capacity (S+B)/D x 100	**Proportioned Capacity % Capacity x % of Total Capacity**
1st Chamber = _____	1st Chamber = _____
2nd Chamber = _____	2nd Chamber = _____
3rd Chamber = _____	3rd Chamber = _____
4th Chamber = _____	4th Chamber = _____
5th Chamber = _____	5th Chamber = _____

Total Occupied Capacity = _____

Inspector _____

Signature _____

EVALUATION REPORT RECEIVED BY

Print Title _____

Print Name _____

Signature _____

Managing FATS, OIL and GREASE

"It's Easier than YOU Think!"

THE WRONG WAY
La Forma Incorrecta



1

Do not pour cooking residue directly into the drain.

No vierta residuos de cocinar directamente en el desague.



2

Do not dispose of food waste into the garbage disposal.

No ponga desperdicios de comida en el triturador de comida.



3

Do not pour waste oil directly into the drain.

No ponga desperdicio de aceite directamente en el desague.



4

Do not wash floor mats where water will run off directly into the storm drain.

No lave tapetes de piso en un lugar donde el agua corra hacia el desague.

THE RIGHT WAY
La Forma Correcta



1

Wipe pots, pans, and work areas prior to washing.

Limpie con una toallita las ollas, cazuelas, y areas de trabajo antes de lavarlos.



2

Dispose of food waste directly into the trash.

Deseche los desperdicios de comida en el bote de basura.



3

Collect waste oil and store for recycling.

Junte el desperdicio de aceite y guardelo para que sea reciclado.



4

Clean mats inside over a utility sink.

Limpie los tapetes de piso detro de un lavabo o fregador.

Inland Empire Utilities Agency, Cucamonga Valley Water District, Fontana Water Company, Monte Vista Water District, San Antonio Water Company, the Cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga and Upland

HESPERIA

HESPERIA FIRE STATION
17443 Lemon Street, Hesperia, CA 92345

Thur, 9:00–1:00
Sat, 9:00–2:00

Also accepts:
E-waste & sharps



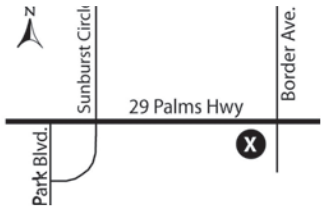
JOSHUA TREE

WEST OF TRANSPORTATION/ FLOOD CONTROL BUILDING
62499 29 Palms Hwy, Joshua Tree, CA 92252

3rd Sat
9:00–1:00

Also accepts:
Sharps

No e-waste



NEEDLES

NEEDLES CITY YARD
112 Robuffa Street, Needles, CA 92363

Call to verify dates and hours

Also accepts:
E-waste & sharps



Report Illegal Dumping Anonymously, Call 1-800-33-TOXIC



12-21528-638 Rev. 7/22

What We Accept

- antifreeze
- auto & household batteries
- chemical cleaners
- cooking oil
- fertilizers
- household generated motor oil & oil filters
- paint products
- personal medications (excluding controlled substances; must separate solids & liquids)
- pesticides
- pool supplies

What We Do Not Accept

- appliances and furniture
- asbestos
- business wastes (see VSQG, below)
- containers larger than 5-gallons
- remediation waste
- explosives
- medical wastes
- radioactive wastes
- reactives
- solid waste
- tires
- yard wastes

Antifreeze, Auto & Household Batteries, Motor Oil, Filters and Latex Paint (ABOP) Only Collection Facility

LUCERNE VALLEY, CA 92356
33269 Old Woman Springs Road, *behind Fire Station*

Call to verify date, 9:00–12:00

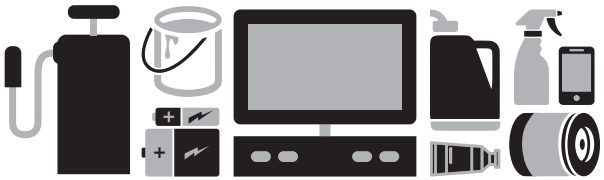
Also accepts: E-waste & sharps

HAVASU LAKE, CA 92363 – COUNTY FIRE STATION 18
148808 Havasu Lake Road

Call to verify date, 1st Saturday, 8:00–12:00

Very Small Quantity Generator (VSQG)

This fee-based program is available for small businesses that generate a maximum of 27 gallons or 220 pounds of hazardous waste or 2.2 pounds of extremely hazardous waste per month.
Call 1-800-OILY CAT to receive a copy of the brochure outlining the program and cost.



Household Hazardous Waste Collection Facility Locations

14 Collection Facilities throughout San Bernardino County

Serving Only
San Bernardino County Residents
—Please Bring ID—

Transport No More Than 15 Gallons or 125 Pounds in Containers No Larger Than 5 Gallons

1-800-OILY CAT (645-9228)

www.sbcfire.org/hhw

APPLE VALLEY

THE TOWN OF APPLE VALLEY HHW FACILITY
13450 Nomwaket Road, Apple Valley, CA 92308

Sat, 10:00–2:00

Also accepts:
E-waste & sharps



BARSTOW

CITY OF BARSTOW CORPORATION YARD
900 South Avenue H, Barstow, CA 92311

Sat, 9:00–2:00

Also accepts:
Sharps

No e-waste



CHINO

CHINO CITY PUBLIC WORKS SERVICES CENTER
5050 Schaefer Avenue, Chino, CA 91710

2nd & 4th Sat
8:00–1:00

Also accepts:
E-waste

No sharps



BIG BEAR LAKE

PUBLIC SERVICE YARD
42040 Garstin Drive, Big Bear Lake, CA 92315

Sat, 9:00–2:00

Also accepts:
Sharps

No e-waste



ONTARIO

HOUSEHOLD HAZARDOUS WASTE COLLECTION CENTER
1430 South Cucamonga Ave, Ontario, CA 91761

Fri & Sat, 9:00–2:00

Also accepts:
E-waste & sharps



RANCHO CUCAMONGA

HOUSEHOLD HAZARDOUS WASTE FACILITY
8794 Lion St, Rancho Cucamonga, CA 91730

Sat, 8:00–12:00

Also accepts:
E-waste

No sharps

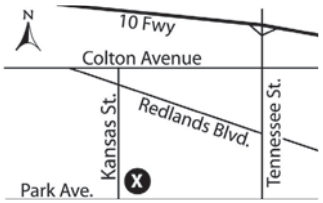


REDLANDS

REDLANDS CITY YARD
500 Kansas St at Park Ave, Redlands, CA 92374

Sat, 9:00–2:00

Also accepts:
E-waste & sharps

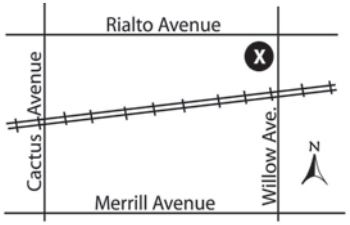


RIALTO

CITY MAINTENANCE YARD
246 South Willow Avenue, Rialto, CA 92376
2nd & 4th Fri & Sat,
8:00–12:00

Also accepts:
Sharps

No e-waste

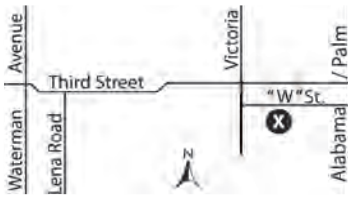


SAN BERNARDINO

SAN BERNARDINO INTERNATIONAL AIRPORT
2824 East "W" Street, Bldg. 302,
San Bernardino, CA 92408

Mon–Fri, 9:00–4:00

Also accepts:
E-waste & sharps

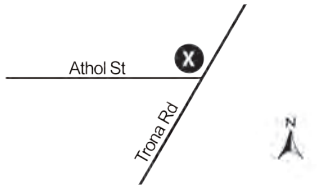


TRONA

COUNTY FIRE STATION
83732 Trona Road, Trona, CA 93562

2nd Sat in Mar, Jun,
& Dec, 8:00–12:00
(call for Sept)

Also accepts:
E-waste & sharps

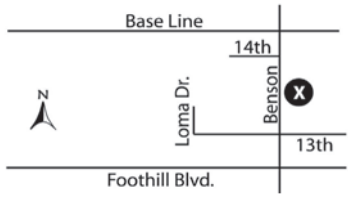


UPLAND

UPLAND CITY YARD
1370 North Benson, Upland, CA 91786

Sat, 7:30–12:30

Also accepts:
E-waste and sharps

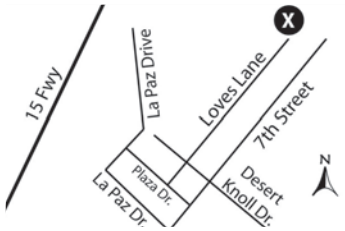


VICTORVILLE

SAN BERNARDINO COUNTY FAIRGROUNDS
East of Desert Knoll Drive on Loves Lane
Victorville, CA 92392

Wed & Sun
9:00–4:00

Also accepts:
E-waste & sharps







Recycling Used Motor Oil and Oil Filters Is the Right Thing to Do

- Dumping used oil (or any chemical) is a crime – legally and environmentally.
- Dumped oil contaminates ground water – our drinking water source.
- Used oil is insoluble and can contain toxic chemicals and kills plant and aquatic life.
- One pint of used oil can create an acre-sized oil slick on surface waters.



Facts to Remember When Recycling Oil and Oil Filters

- Properly and completely drain oil filters and oil from cars, trucks, motorcycles, boats, recreational vehicles, lawnmowers, etc., into a reusable and resealable container before transporting them.
- Do not dump oil on the ground, in the gutter or storm drain, or throw in the trash.
- Do not mix anything with the oil (water, paint, pesticides, solvents, diesel, antifreeze or gasoline).

RECYCLE USED OIL

Funded By CalRecycle

Transport Guidelines

Before transporting hazardous waste to a collection facility, be sure that:

- The amount of waste transported does not exceed 15 gallons or 125 pounds per visit in containers no larger than 5-gallons.
- The containers are sound, not leaking, and sealed.
- The waste is in its original container or is properly labeled as to its contents.
- Wastes are placed securely in the vehicle for safe transport.
- Recycle your Used Oil and Oil Filters for FREE at any of our 14 San Bernardino County Fire Household Hazardous Waste collection sites- or at any Certified Collection Center
- To find Certified Collection Centers that only accept used oil and oil filters, go to: **https://www2.calrecycle.ca.gov/UsedOil/CertifiedCenters/**



Call us today to find out how to get a free used oil and oil filter container at the next Oil Filter Exchange Event near your City/Town!

1-800-OILY CAT
(645-9228)

Produced by the San Bernardino County Fire Protection District, Household Hazardous Waste Section

Information Sources

FOR COUNTY SOLID WASTE DISPOSAL site information, call: **1.800.722.8004**

FOR TIRE DISPOSAL, special or hard-to-handle wastes, call: Solid Waste Management Division at **909.386.8701**

FOR ASBESTOS DISPOSAL, call Azusa Land Reclamation: **866.909.4458**

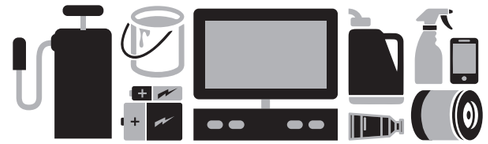
Contacts for Non-San Bernardino County residents:

Riverside County: **1.800.304.2226**

Fontana residents only, call City of Fontana: **909.350.6789**

Los Angeles County: **1.888.253.2652**

Orange County: **714.834.4000**



Important Tips & Facts

- Household hazardous waste is any chemical-based material discarded from homes which may threaten human health or the environment when disposed of improperly.
- Always read and follow product labels in regard to preparation, usage, ventilation, personal protection, clean up, storage, first aid, and disposal.
- POISON means highly toxic and may also be flammable and corrosive. WARNING indicates a less severe hazard. CAUTION means less dangerous than WARNING.
- Store solvents in closed containers and away from heat or flame.
- Store all hazardous products away from the reach of children. Choose child-resistant packages.
- Store each flammable, oxidizer and poisonous product separately—do not store incompatible products together (i.e., acids with caustics or alkalines; or flammables with oxidizers).
- If you spill a hazardous chemical on yourself, wash clothes separately, follow labeling directions and seek medical attention.
- Always call a medical professional or the Drug and Poison Information Center for advice on poisoning at 1-800-222-1222. Know your Poison Control Center phone number.
- If you spill a chemical on the ground: Contain and cover the spill with an absorbent material (kitty litter, saw dust), sweep and scoop absorbent and container into a plastic bag, and take to a permanent household hazardous waste collection facility.
- Contact the Household Hazardous Waste Section at (909) 382-5401 or 1-800-OILY CAT for large spills and proper disposal of explosive, radioactive or infectious materials.

Be a part of the team that makes San Bernardino County GREEN!

Please visit sbcfire.org/hhw

Reduce Your Waste by Using Safer Alternatives

CLEANING:	Use non-toxic/biodegradable soaps or baking soda.
AUTOMOTIVE:	Buy re-refined motor oil.
HEALTH:	Use pump-type sprays instead of aerosol sprays.
GARDENING:	For pest control, remove food/water sources, clear harborages, cover holes and drains, use mechanical or sticky traps.
PAINTING:	Use latex or water-based paints and stains.



Waste Minimization Is Pollution Prevention

- Buy only what you need, in the smallest amounts available. Use it all or share with neighbors.
- Choose “ready-to-use” products instead of more toxic concentrated products.
- Rinse the container, use the rinsed product from the container and recycle the empty container.
- Use broad spectrum products which work on more than one pest, e.g., boric acid kills both ants and roaches.
- Never dump hazardous products down the toilet, drain, on the ground or in the trash.

Buy less, use less & pollute less!

Material Reuse

FREE Material Reuse Products available at the San Bernardino Household Hazardous Waste Collection Facility Monday through Friday, 1–3:30 p.m. Product availability not guaranteed.

SECTION 7

- 2022 Sewer Master Plan (SMP) Update)
- FY 2024/2029 Capital Improvement Plan Sewer Projects

CITY OF MONTCLAIR

Sewer Master Plan Update

Final Report

DECEMBER 2022



Prepared by
David Evans and Associates, Inc.
17542 E. 17th Street, Suite 150
Tustin, CA 92780

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EXECUTIVE SUMMARY

In 2017, David Evans and Associates, Inc. (DEA) developed a Sewer Master Plan (2017 SMP) for the City of Montclair (City). The 2017 SMP provided the following:

- An analysis of the hydraulic capacity of the City's sewer collection system under both existing and future conditions;
- Recommended capital improvements required to address the hydraulic capacity deficiencies, if any, as a result of the prior objectives and based upon the future growth and development as anticipated by the General Plan.

Recently, DEA was contracted to provide a Sewer Master Plan Update due to the City's development updates, additional proposed developments, and constructed sewer improvements in the past 5 years. These updates include the following areas:

- North Montclair Downtown Specific Plan
- Montclair Place
- Arrow Highway Mixed-Use District (AHMUD)
- SP 81-2
- Installing new pipe, 15" diameter in Monte Vista Avenue, between South of San Jose Street and Palo Verde Street

A hydraulic analysis using Innovyze's InfoSewer software was used to evaluate adequacies of the City's sewer collection system for conveying peak flows and to determine optimal improvements based on the effects of the proposed additional flows. Extended period simulations were conducted to mimic hydraulic conditions in the field. The sewer network created for the 2017 SMP was used and updated to reflect the constructed sewer pipes and proposed loadings.

Model runs were performed to simulate peak dry weather flow conditions and the model results were used to identify hydraulic capacity deficiencies within the City sewer collection system. The hydraulic capacity deficiencies were evaluated using depth to diameter ratios (d/D) criteria under peak dry weather flows. For evaluating existing sewer capacity, the maximum allowable d/D ratios to convey peak dry weather flows were set to 0.75 for all sewers. For sizing new proposed sewers, the maximum allowable d/D ratios were set to 0.5 for sewer with 12 inches in diameter or smaller and 0.75 for sewer with 15 inches in diameter or larger. The remaining capacity of the evaluated sewers is reserved for potential infiltration and inflow during rain events and potential variations in flow under dry weather conditions.

Four hydraulic models were used for this analysis, which included the base sewer model, and CIP Alternatives 1, 2 and 3. The base sewer model that was used for this study was the scenario from the 2017 SMP that included the buildout and CIP recommendations. The constructed pipe improvements in Monte Vista Avenue and the revised/additional sewer loadings calculated for the proposed developments were included in this simulation. The hydraulic model identified 42 deficient sewer line segments totaling approximately 10,919 feet with diameters ranging from 8" to 24". Considering the recommended CIPs identified in the 2017 SMP, there are a total of 83 segments proposed for improvement, equating to approximately 21,963 feet with diameters ranging from 8" to 24". A majority of the deficient segments are along Monte Vista Avenue from San Bernardino Street to Benito Street, Benito Street from Monte Vista Avenue to Ramona Avenue, Ramona Avenue from Benito Street to State Street, and State Street from Ramona Avenue to Silicon Avenue. The newly constructed 15" sewer pipe in Monte Vista Avenue between south of San Jose Street and Palo Verde Street) exceeded d/D

capacity due to a flatter slope, however, due to constructability restrictions, installing a steeper pipe is not feasible at this location. Additionally, the upstream piping can alleviate some of the flows during its peak time; therefore, no improvements at this time are recommended.

To mitigate the sewer capacity deficiencies, three Capital Improvement Program alternatives are presented for the City's consideration. All 3 alternatives include the same pipe upgrades upstream of the intersection of Monte Vista Avenue and Benito Street; however, they provide different construction options downstream of this intersection.

- Alternative 1 includes upsizing the existing deficient pipes to meet the d/D requirements. CIP Nos. 1-1, 1-4a, 1-4b, and 1-5 through 1-7 remain the same from the 2017 SMP. CIP Nos. 1-2, 1-3, 1-8 through 1-20 have been revised or added. The construction cost for Alternative 1 is estimated to be $22,951,858.
- Alternative 2 includes paralleling the deficient pipes with the same size pipe in Benito Street, Ramona Street, and State Street. These CIP No. are identified as 2-2, 2-3, 2-8 through 2-21. CIP No. 1-1, 1-4a, 1-4b, 1-5 through 1-7 remain the same as the 2017 SMP. The construction cost for Alternative 2 is estimated to be $17,831,538.
- Alternative 3 includes building a new 15" pipe along Monte Vista Avenue from Benito Street to Holt Boulevard and upsizing the existing 8" pipe in Holt Boulevard to an 18-inch where it connects to the manhole in Ramona Avenue and Holt Boulevard. CIP No. 1-1, 1-4a, 1-4b, 1-5 through 1-7 remain the same from the 2017 SMP. CIP No. 1-2, 1-3, 1-8, 1-9, 1-20, and 3-10 through 3-16 have been revised or added. The construction cost for Alternative 3 is estimated to be $20,590,673.

The following are summary cost-estimates for each alternative.

Table 1- Alternatives Cost-Estimate Summary

Alternative 1		Alternative 2		Alternative 3	
CIP No.	Total Capital Cost	CIP No.	Total Capital Cost	CIP No.	Total Capital Cost
1-1	$101,628	1-1	$101,628	1-1	$101,628
1-2	$2,166,132	2-2	$1,012,270	1-2	$2,166,132
1-3	$1,162,006	2-3	$735,604	1-3	$1,162,006
1-4a	$995,431	1-4a	$995,431	1-4a	$995,431
1-4b	$4,594,105	1-4b	$4,594,105	1-4b	$4,594,105
1-5	$1,313,074	1-5	$1,313,074	1-5	$1,313,074
1-6	$632,033	1-6	$632,033	1-6	$632,033
1-7	$957,972	1-7	$957,972	1-7	$957,972
1-8	$735,752	2-8	$552,555	1-8	$735,752
1-9	$707,533	2-9	$447,411	1-9	$707,533
1-10	$807,136	2-10	$501,085	3-10	$877,226
1-11	$915,903	2-11	$567,172	3-11	$859,271
1-12	$688,127	2-12	$428,776	3-12	$926,433
1-13	$533,878	2-13	$329,718	3-13	$840,569
1-14	$964,184	2-14	$602,836	3-14	$916,707
1-15	$979,915	2-15	$619,652	3-15	$697,741
1-16	$901,792	2-16	$570,251	3-16	$1,095,774
1-17	$903,546	2-17	$571,360	1-20	$1,011,285
1-18	$948,714	2-18	$611,252	**Total**	**$20,590,673**
1-19	$931,712	2-19	$567,827		
1-20	$1,011,285	2-20	$357,860		
Total	**$22,951,858**	2-21	$761,667		
		Total	**$17,831,538**		

These alternatives are presented for the City's consideration. Alternative 1 proposes only replacement projects. Alternative 2 includes parallel pipe projects, which allows the City to keep the existing pipes in service during the construction. Alternatives 3 includes projects that would lessen the burden on existing pipes by building a new bypass pipe. Alternatives 2 and 3 may provide less impacts to the existing sewer flows during construction, but their feasibility shall be further evaluated during the engineering design phase, due to possible conflicts with the existing utilities. It is recommended that the City consider concurrent construction opportunities such a street paving projects or adjacent infrastructure work to implement the proposed pipeline projects.

1.0 Introduction

The City of Montclair (City) is located within the Pomona valley and is a part of the Inland Empire region in southwestern San Bernardino County. The City is bordered by Pomona to the west, Claremont to the northwest, Upland to the northeast, Ontario to the east and Chino to the south. The previous sewer master plan (known as the 2017 SMP) was developed by David Evans and Associates in 2017. Since then, there has been new planned developments and updates to the previous ones in the City that affect the City's sewer system. Innovyze's Infosewer, a hydraulic modeling software, was used to incorporate the City's updated sewer generation loadings and recently constructed sewer projects, and to review and analyze the City's existing sewer system. The hydraulic model was used to analyze alternative projects to mitigate sewer pipeline deficiencies as part of the review. This report will provide an update to the City's 2017 Sewer Master Plan which includes an updated hydraulic analysis based on the City's proposed changes to the sewer system. The hydraulic analysis includes updated sewer generation loads from the proposed development changes and will provide an updated Capital Improvement Program (CIP) list.

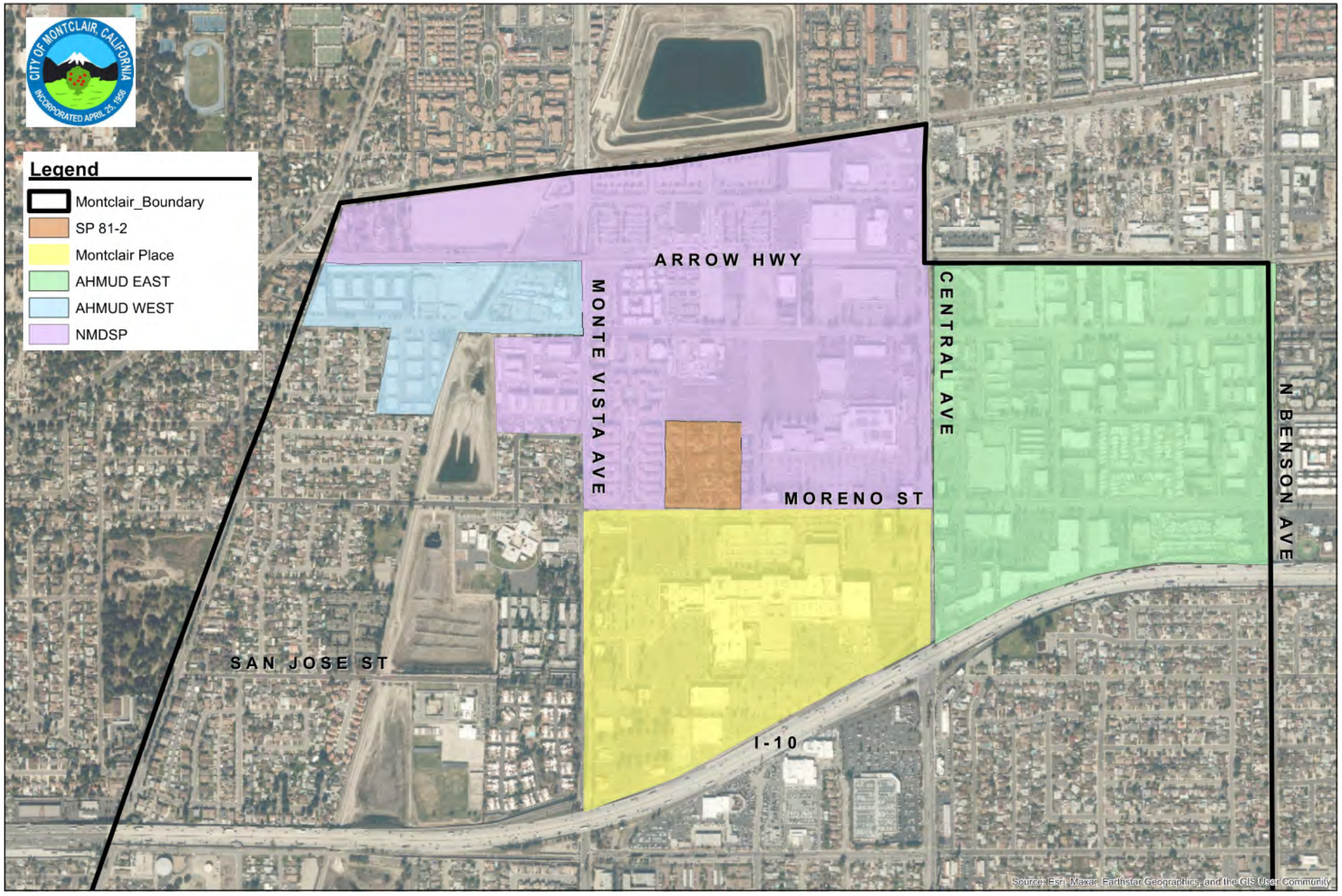
2.0 Reviewed Changes

Since the 2017 SMP, there has been development updates, additional proposed developments, and constructed sewer improvements. These updates include the following:

- North Montclair Downtown Specific Plan
- Montclair Place
- Arrow Highway Mixed-Use District (AHMUD)
- SP 81-2
- Installing new pipe, 15" diameter in Monte Vista Avenue, between south of San Jose Street and Palo Verde Street

The included developments are shown in Figure 1. The new 15" sewer pipe as-builts and the updates to the North Montclair Downtown Specific Plan (NMDSP) units (provided by the City) can be found in Attachment A. The approved specific plans for Montclair Place, AHMUD, and SP 81-2 can be found on the City's website at https://www.cityofmontclair.org/general-and-specific-plans/. The sewer generation loadings were calculated using the 2017 SMP calibrated unit flow factors for Montclair Place, AHMUD, and SP 81-2. The sewer generation loading for NMDSP used a different unit flow factor specific to the NMDSP, as specified in the 2017 SMP. This analysis used the 2017 SMP generation rates as described in the following section.

Figure 1 - Proposed Developments



North Montclair Downtown Specific Plan

The NMDSP was considered in the 2017 SMP as part of the buildout, however, the units of the development have been updated since then. NMDSP is located in the northern part of the City and occupies approximately 150 acres. The area is planned for mixed-use developments including residential units and retail spaces. The sewer generation flow was calculated using the same unit factors listed for the NMDSP in the 2017 SMP:

- Residential: 200 gpd/DU
- Commercial: 2,800 gpd/ac or 160 gpd/tsf

The unit factor of 200 gpd/DU for residential developments in the NMDSP area was determined based on an average population density of 3 people living in a dwelling unit and the calibrated per capital flow of 61 gpd, as discussed in Table 3-4 in the 2017 SMP. The commercial unit flow factor of 2,800 gpd/ac or 160 gpd/tsf were calibrated averaged unit flow factors for the entire City, as discussed in the 2017 SMP. The unit flow factors used in this report stays consistent with what was done in the 2017 SMP.

Figure 2 shows the locations of the projected NMDSP development projects and Table 2 summarizes the estimated average wastewater flows that are included in the future buildout.

Figure 2 - NMDSP Development Projects



Table 2 - Updated NMDSP Development Projects and Wastewater Flow Estimate

Project No. [1]	Descriptions	Land Use	Unit	Unit Factor (gpd/unit)	Quantity	Estimated Average Wastewater Flow (gpd)
1*	Paseos	Residential	Dwelling Units	200	408	81,600
2	Courtyard Housing/Live-Work Lofts	Residential	Dwelling Units	200	185	37,000
	Retail	Commercial	Thousand Square Foot	160	25	4,000
3	Townhouses/Courtyard Housing	Residential	Dwelling Units	200	67	13,400
4	Courtyard Housing/Live-Work Lofts	Residential	Dwelling Units	200	55	11,000
	Retail	Commercial	Thousand Square Foot	160	13.5	2,160
5	Courtyard Housing/Live-Work Lofts	Residential	Dwelling Units	200	90	18,000
6*	Arrow Station	Residential	Dwelling Units	200	129	25,800
7*	Village Partners	Residential	Dwelling Units	200	350	70,000
	Village Partners	Commercial	Thousand Square Foot	160	25	4,000
8	Courtyard Housing/Live-Work Lofts	Residential	Dwelling Units	200	80	16,000
	Retail	Commercial	Thousand Square Foot	160	27	4,320
9	Retail	Commercial	Thousand Square Foot	160	60	9,600
10	Live-Work Lofts/Townhouses/Apartments	Residential	Dwelling Units	200	250	50,000
	Retail	Commercial	Thousand Square Foot	160	22.5	3,600
11	Townhouses/Courtyard Housing	Residential	Dwelling Units	200	315	63,000
12*	Courtyard Housing/Live-Work Lofts	Residential	Dwelling Units	200	302	60,400
13	Courtyard Housing/Live-Work Lofts	Residential	Dwelling Units	200	400	80,000
	Retail	Commercial	Thousand Square Foot	160	110	17,600
15*	Kendry	Residential	Dwelling Units	200	348	69,600
					Total	**641,080**

[1] Project numbering is the same as the 2017 SMP. The updated NMDSP does not include Project No. 14 because it is a part of Montclair Place.

* Completed or entitled as part of this revision

The 2017 SMP estimated an average flow of 781,040 gpd and the updated NMDSP flow is estimated to be 641,080 gpd, producing a net decrease of 139,960 gpd.

Montclair Place

Montclair Place is proposed to encompass approximately 104.4 acres and is bounded by Monte Vista Avenue to the west, I-10 freeway to the south, and Central Avenue on the east. The northern boundary of the area meets the NMDSP southern boundary at Moreno Street. The area is planned for a mix of commercial, retail, and residential uses. The total number of units for residential and non-residential buildout was obtained from the Montclair Place Specific Plan Draft EIR, dated July 2020. Note that the total units quantified in the Draft EIR consider certain existing buildings to remain. The 2017 SMP estimated an average flow of 265,389 gpd, where the updated flow estimated for Montclair Place is 1,537,795 gpd, producing a net increase of 1,273,406 gpd. Table 3 summarizes the estimated average wastewater flows for Montclair Place that are included in the future buildout.

Table 3 - Montclair Place Wastewater Flow Estimate

Description	Land Use	Unit	Unit Factor (gpd/unit)	Quantity	Estimated Average Wastewater Flow (gpd)
Residential Units	High Density Residential	Dwelling Units	191	6,321	1,207,311
Commercial/Retail	Commercial	Thousand Square Foot	161	2,059	331,484
				Total	**1,538,795**

Arrow Highway Mixed-Use District

Arrow Highway Mixed-Use District (AHMUD) is comprised of two areas in the far northwest and northeast corners of the City of Montclair, known as the West AHMUD and East AHMUD, respectively. The area is located along the south side of Arrow Highway corridor and is developed with a variety of commercial and light industrial uses. Proposed land use changes will alter sewer flows within and downstream of the AHMUD. Per the ADMUD specific plan, the proposed development will produce a net increase of 122,650 gpd to the existing system based on the calculated new flows. Table 4 summarizes the estimated average wastewater flows for AHMUD that are included in the future buildout.

Table 4 - AHMUD Wastewater Flow Estimate

Area	Descriptions	Land Use	Unit	Unit Factor (gpd/unit)	Quantity	Estimated Wastewater Flow (gpd)
West	Residential Units	High Density Residential	Dwelling Units	191	100	19,100
	Commercial	Commercial	Thousand Square Foot	161	5	805
East	Residential Units	High Density Residential	Dwelling Units	191	400	76,400
	Hotel	High Density Residential	Rooms	191	100	19,100
	Commercial	Commercial	Thousand Square Foot	161	45	7,245
					Total	**122,650**

SP 81-2

SP 81-2 is approximately 10 acres bounded on the north by Olive Street, on the south by Moreno Street, approximately 600' to the west is Monte Vista Avenue, and on the east by Fremont Avenue. The existing properties are divided into forty separate assessor parcels averaging 7,200 square feet each. It is proposed to convert this single-family residential area to a commercial/medium density residential, however, the details and timing have yet to be determined. For the purpose of this study and per the direction by the City, the estimated sewer flow was calculated conservatively for 500 new units and summarized in Table 5. The 2017 SMP estimated an average flow of 5,576 gpd for the existing development and the flow estimated for SP 81-2 is estimated to be 95,500 gpd, producing a net increase of 89,924 gpd.

Table 5 - SP 81-2 Wastewater Flow Estimate

Descriptions	Land Use	Unit	Unit Factor (gpd/unit)	Quantity	Estimated Wastewater Flow (gpd)
Residential Units	High Density Residential	Dwelling Units	191	500	95,500

3.0 Wastewater System Hydraulic Capacity Analysis

Criteria were established to determine adequacy of existing sewers and to size new sewer pipes in terms of their hydraulic capacity while minimizing the likelihood of a sewer overflow. The hydraulic capacity criteria were developed based on the peak depth to diameter (d/D) ratios under peak dry weather flow conditions, similar to the 2017 SMP.

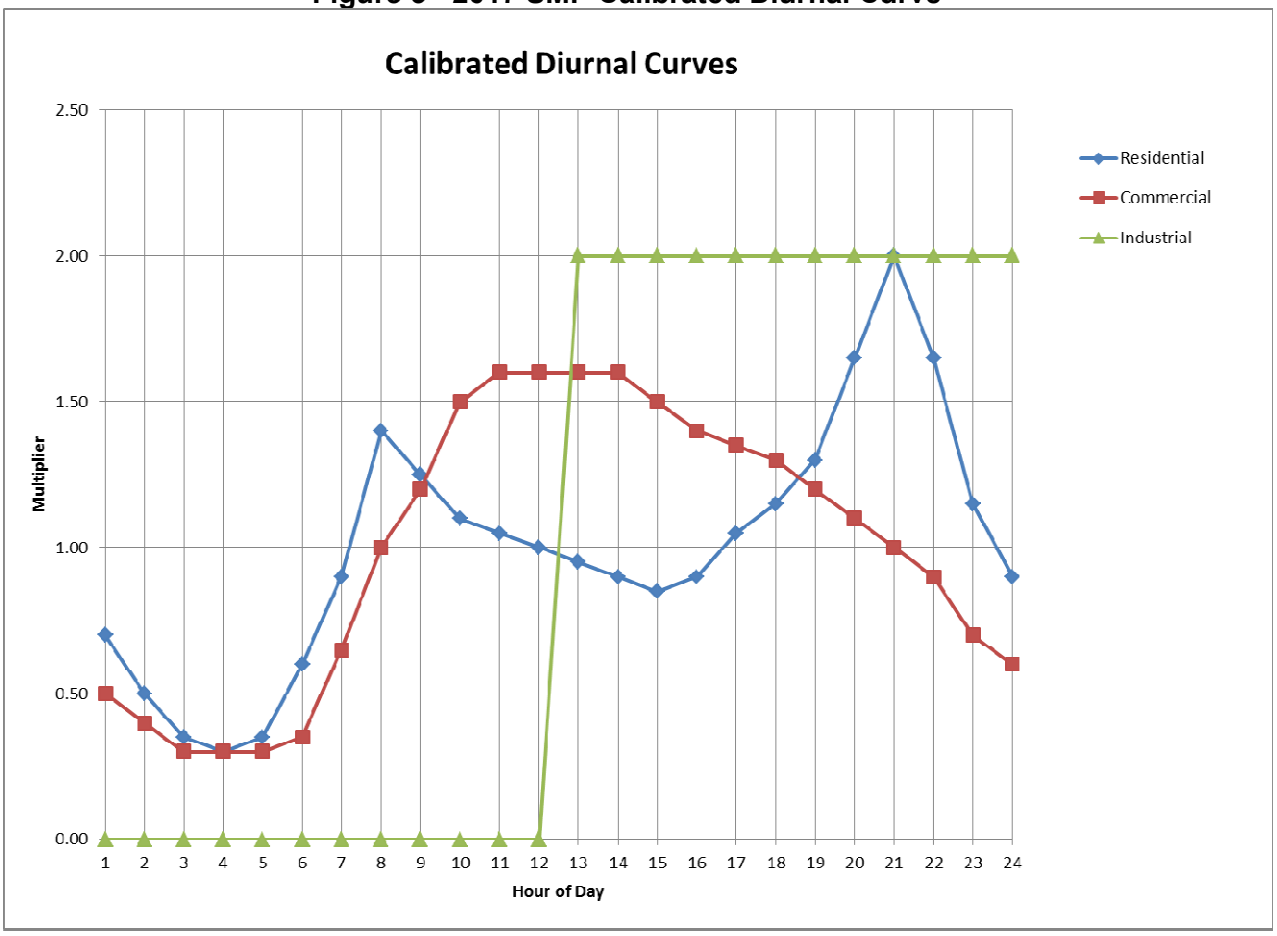
The capacity criteria used to analyze the results of the hydraulic model is the same as the 2017 SMP. Table 6 summarizes the capacity criteria and is consistent with industry standards.

Table 6 - Capacity Criteria

Purpose	Pipe Size	Maximum Allowable d/D
Evaluation of Existing Sewer Capacity	8" to 12"	0.75
	15" and Larger	0.75
Sizing of Proposed Sewers	8" to 12"	0.50
	15" and Larger	0.75

The Innovyze's InfoSewer software was used to analyze the City's sewer hydraulic capacity. Simulations were performed to identify locations of hydraulic capacity deficiencies in the system. The extended period simulation (EPS) scenario was used to simulate the peak dry weather flow while including the future buildout condition and CIP pipe recommendations stated in the 2017 SMP. The diurnal curves from the 2017 SMP were used and shown in Figure 3. The peaking factor for residential, commercial, and industrial are 2.00. 1.50, and 2.00, respectively. Four model scenarios were used to simulate the base sewer condition, and the three alternatives to mitigate sewer capacity issues found in the base sewer condition.

Figure 3 - 2017 SMP Calibrated Diurnal Curve



2017 CIP + Revised Buildout Scenario

The base sewer model that was used in this study was the scenario from the 2017 SMP that included the buildout and CIP recommendations. The constructed pipe improvements in Monte Vista Avenue and the revised/additional sewer loadings calculated in Section 2 were included in this simulation. The NDMSP flows were adjusted according to the updated flows. It is understood that the existing sewer collection system within the Montclair Place will be re-configured once the new development is constructed. Therefore, for the purpose of this study, the existing pipes were removed from the model and the wastewater generations were loaded into the point of connection to the main sewer line in Monte Vista Avenue. SP 81-2's existing flows in the model were replaced with the proposed flows. AHMUD had a net increase in flows, for which the loadings were distributed evenly in its respective area. This scenario provides a general overview of the proposed sewer loadings and it is recommended a separate sewer study analyzing the proposed specific plans improvements be conducted.

Under the 2017 CIP + Revised Buildout Scenario, the hydraulic model identified 42 deficient sewer line segments totaling approximately 10,919 feet with diameters ranging from 8" to 24". Considering the recommended CIPs identified in the 2017 SMP, there are a total of 83 segments proposed for improvement, equating to approximately 21,963 feet with diameters ranging from 8" to 24". A majority of the deficient segments are along Monte Vista Avenue from San Bernardino Street to Benito Street, Benito Street from Monte Vista Avenue to Ramona Avenue, Ramona Avenue from Benito Street to State Street, and State Street from Ramona

Avenue to Silicon Avenue. The newly constructed 15” sewer pipe (identified as pipes NEW_302, NEW_304, NEW_306) exceeds d/D capacity due to a flatter slope; however, the upstream piping can alleviate some of the flows during its peak time, by providing additional storage in the pipe. See Figure 4 for the deficient pipes identified in the 2017 SMP buildout and Figure 5 for the additional deficient pipes identified in this study. The manhole exhibit, pipe exhibit, and full results of the simulation are included in Attachment B.

Figure 4 - 2017 Deficient Line Segments

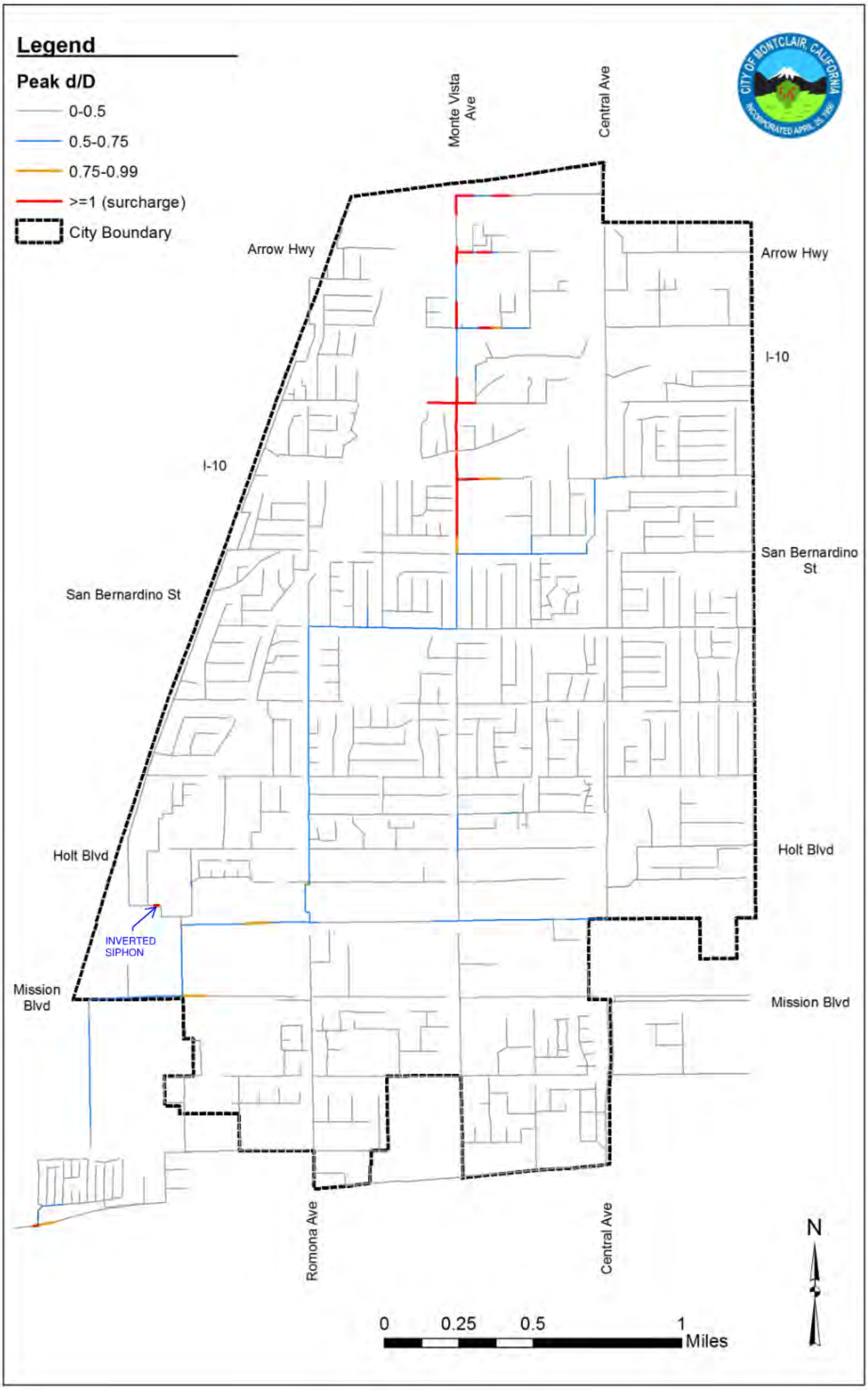
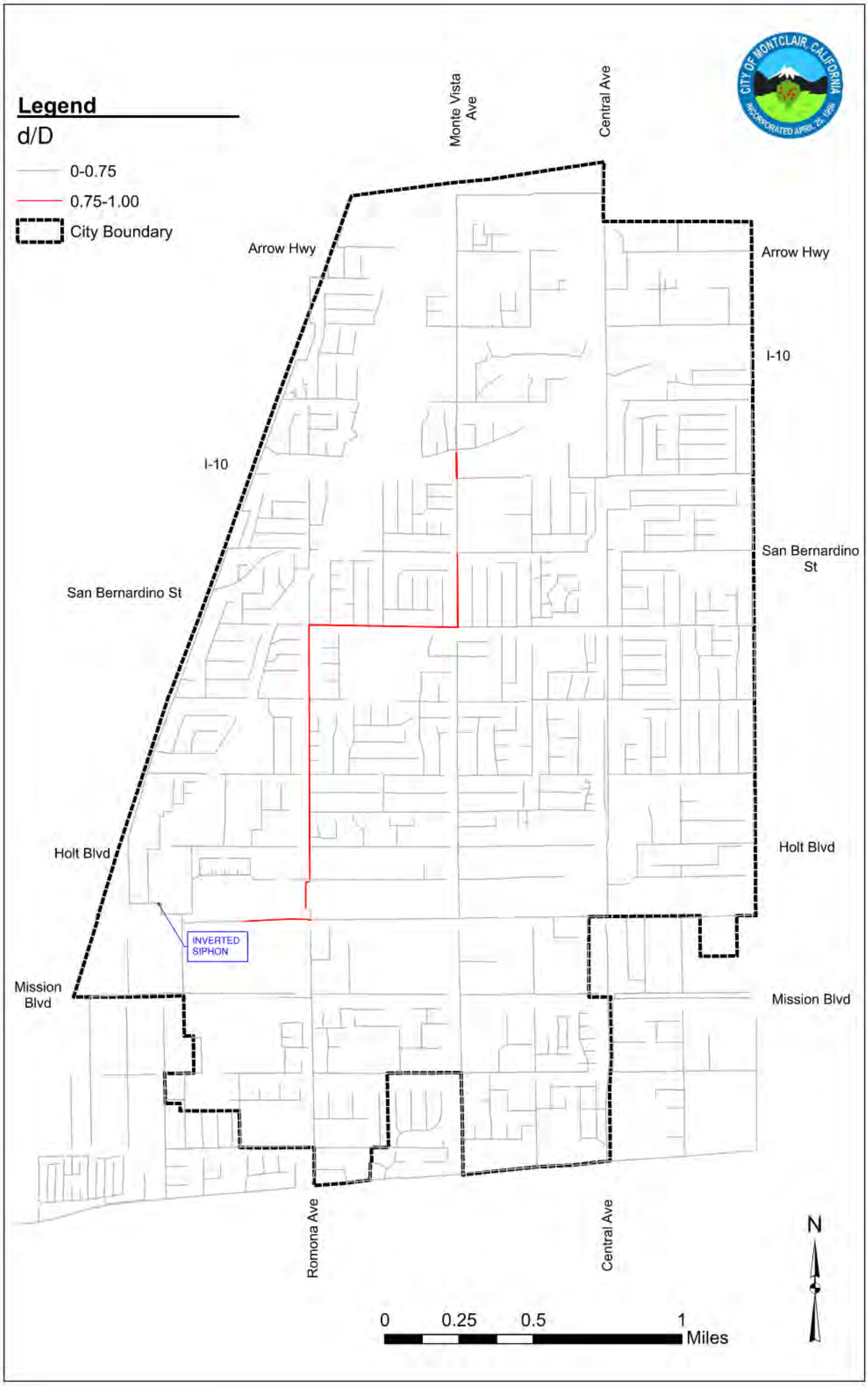


Figure 5 - Additional Deficient Line Segments (2017 CIP plus Revised Buildout Scenario – This Study)



4.0 Updated Capital Improvement Program

A Capital Improvement Program (CIP) is a planning tool which normally includes a description of the proposed improvement projects, an estimate of project costs and a year-by-year schedule of expected project funding. This section provides an update to the 2017 SMP CIP.

To estimate the capital improvement costs for each project, the estimated construction unit costs have been updated to account for price changes since the 2017 SMP, as well as the current supply chain issues. Table 6 presents the construction unit costs that were used in the cost estimates. Note that the presented construction costs include traffic control, pavement replacement, mobilization, demobilization, sewer bypassing and lateral reconnection, where applicable. It shall be noted that a deduction of $200/LF was applied to projects that do not require sewer bypassing (such as new pipes on Monte Vista Avenue, and parallel pipe constructions).

Table 7 Estimated Construction Unit Costs

Item	Estimated Construction Unit Cost
8-inch Sewer Open Cut Replacement	$490/LF
10-inch Sewer Open Cut Replacement	$535/LF
12-inch Sewer Open Cut Replacement	$585/LF
15-inch Sewer Open Cut Replacement	$630/LF
18-inch Sewer Open Cut Replacement	$680/LF
21-inch Sewer Open Cut Replacement	$745/LF
24-inch Sewer Open Cut Replacement	$790/LF
27-inch Sewer Open Cut Replacement	$850/LF
Existing Manhole Rechanneling and Rehabilitation	$8,000/EA
New 48" Precast Manhole	$8,500/EA

Similar to the 2017 SMP, Table 8 shows the capital cost factor breakdown utilized in the planning-level cost estimates. As a result, the capital cost was calculated as 160% of the total construction cost of each project.

Table 8 - Capital Cost Factors

Cost Item	Cost Factor (% of Construction Costs)
Construction Contingency	30%
Administration	10%
Design	10%
Construction Management	10%
Total	60%

The hydraulic model was used to analyze three alternative CIP's to mitigate the deficient sewer pipes. The proposed alternatives ensured proper upsizing and/or adding new pipes to convey peak dry weather flows while providing reserve capacity for potential inflow and infiltration during wet weather flow conditions. These alternatives are described below:

Alternative 1

Alternative 1 includes upsizing the deficient pipes to a size where each pipe segment meets the capacity criteria. Some pipe segments may not have had a capacity deficiency, possibly due to their steeper slope; however, they have been included in the CIP pipes grouped by street segments, to have the same pipe sizes in between manhole junctions that were receiving flows from two or more sources at major street intersections. See Figure 6 for Alternative 1 CIP map and Table 9 for Alternative 1 CIP recommendations and cost estimate. CIP Project Nos. 1-1, 1-4a, 1-4b, 1-5, 1-6 and 1-7 remain the same from the 2017 SMP. CIP Project Nos. 1-2, 1-3 and 1-8 through 1-20 have been revised or added. Alternative 1 CIP cost is estimated to be $22,951,858.

Figure 6 - Alternative 1 CIP Map (Replacement)

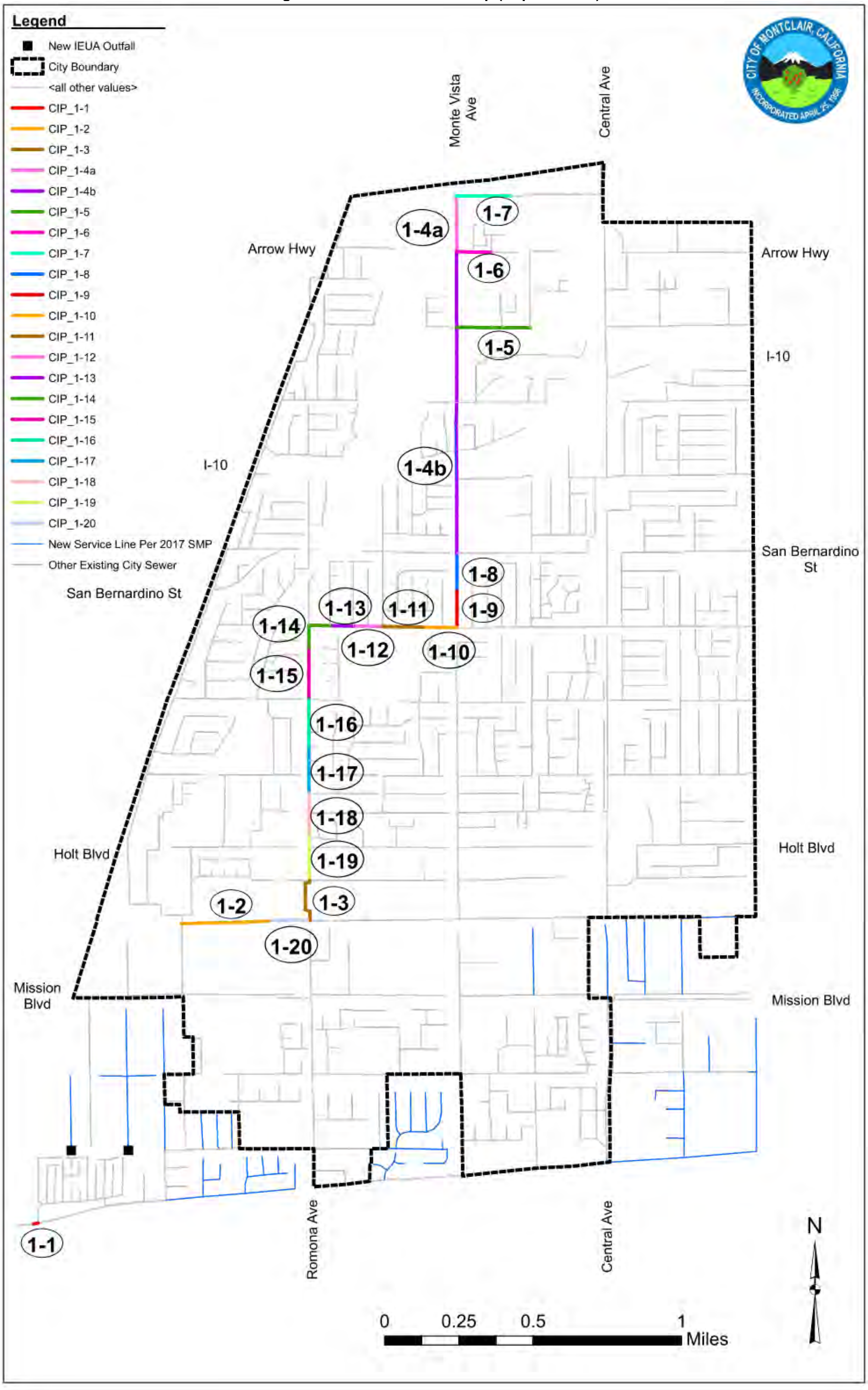


Table 9 - Alternative 1 CIP -Replacement

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-1	11311	Phillips Boulevard	East End Avenue and Phillips Boulevard	114	2171	8	15	15	75	630	47,518	2	8,000	63,518	101,628
1-2	10780	State Street	Ramona Avenue and State Street	1802	1803	21	24	27	429	850	364,533	2	8,000	380,533	608,852
1-2	14112	State Street	Ramona Avenue and State Street	1803	1804	21	24	27	380	850	323,000	1	8,000	331,000	529,600
1-2	14113	State Street	Silicon Avenue and State Street	1804	2194	21	24	27	380	850	323,000	1	8,000	331,000	529,600
1-2	14114	State Street	Silicon Avenue and State Street	2194	1614	21	24	27	357	850	303,300	1	8,000	311,300	498,079
1-3	12512	Ramona Avenue	Brooks Street and Ramona Avenue	1880	2076	18	21	21	34	745	25,330	1	8,000	33,330	53,328
1-3	2496	Ramona Avenue	Brooks Street and Ramona Avenue	2076	2077	18	21	24	80	790	63,161	1	8,000	71,161	113,857
1-3	11307	Ramona Avenue	Brooks Street and Ramona Avenue	2077	2073	18	21	24	158	790	124,434	1	8,000	132,434	211,894
1-3	2494	Ramona Avenue	Brooks Street and Ramona Avenue	2073	2074	18	21	24	312	790	246,630	2	8,000	262,630	420,208
1-3	2495	Ramona Avenue	Brooks Street and Ramona Avenue	2074	2075	18	21	24	89	790	70,160	1	8,000	78,160	125,056
1-3	12513	Ramona Avenue	State Street and Ramona Avenue	2075	1276	18	21	24	161	790	127,504	1	8,000	135,504	216,807
1-3	2498	Ramona Avenue	State Street and Ramona Avenue	1276	2125	18	18	24	6	790	4,535	1	8,500	13,035	20,857
1-4a	889	Monte Vista Avenue	Monte Vista Avenue and Richton Street	2031	2041	8	12	12	345	585	201,803	1	8,000	209,803	335,685
1-4a	890	Monte Vista Avenue	Monte Vista Avenue and Richton Street	2041	2042	8	12	12	253	585	148,084	1	8,000	156,084	249,734
1-4a	891	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2042	2043	8	12	12	304	585	177,855	1	8,000	185,855	297,367
1-4a	892	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2043	2038	8	12	12	93	585	54,403	2	8,000	70,403	112,644

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-4b	7158	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2038	2050	8	15	15	203	630	127,790	1	8,000	135,790	217,265
1-4b	7157	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2050	2051	8	15	15	244	630	153,421	1	8,000	161,421	258,274
1-4b	7156	Monte Vista Avenue	Monte Vista Avenue and Olive Street	2051	2052	8	15	15	449	630	283,005	1	8,000	291,005	465,608
1-4b	10939	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2052	2053	8	15	15	451	630	284,135	1	8,000	292,135	467,416
1-4b	5578	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2053	NJ_33	10	15	15	20	630	12,730	1	8,000	20,730	33,169
1-4b	8938	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	NJ_33	2103	10	15	15	418	630	263,458	1	8,000	271,458	434,332
1-4b	9744	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2103	889	10	15	15	27	630	16,984	1	8,000	24,984	39,975
1-4b	9745	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	889	890	10	15	15	424	630	267,305	1	8,000	275,305	440,488
1-4b	9746	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	890	891	10	15	15	450	630	283,366	1	8,000	291,366	466,186
1-4b	9735	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	891	885	10	15	15	374	630	235,410	1	8,000	243,410	389,456
1-4b	9736	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	885	371	12	--	--	474	--	--	--	--	--	--
1-4b	10979	Monte Vista Avenue	I-10 and Monte Vista Avenue	371	884	12	--	--	37	--	--	--	--	--	--
1-4b	9737	Monte Vista Avenue	I-10 and Monte Vista Avenue	884	261	12	--	--	478	--	--	--	--	--	--
1-4b[2]	NEW_296	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	885	NEW_238	12	15	15	92	--	--	--	--	--	--
1-4b[2]	NEW_298	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	NEW_238	NEW_240	12	15	15	380	--	--	--	--	--	--
1-4b[2]	NEW_300	Monte Vista Avenue	I-10 and Monte Vista Avenue	NEW_240	NEW_242	12	15	15	349	--	--	--	--	--	--
1-4b[2]	NEW_302	Monte Vista Avenue	I-10 and Monte Vista Avenue	NEW_242	NEW_244	12	15	15	115	--	--	--	--	--	--
1-4b[2]	NEW_304	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	NEW_244	NEW_246	12	15	15	49	--	--	--	--	--	--

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-4b[2]	NEW_306	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	NEW_246	261	12	15	15	6	--	--	--	--	--	--
1-4b	9145	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	261	262	10	15	15	310	630	195,112	1	8,000	203,112	324,980
1-4b	9148	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	262	263	10	15	15	345	630	217,327	1	8,000	225,327	360,523
1-4b	9147	Monte Vista Avenue	Monte Vista Avenue and Harvard Street	263	264	10	15	15	337	630	212,447	1	8,000	220,447	352,715
1-4b	9146	Monte Vista Avenue	Monte Vista Avenue and San Bernardino Street	264	253	10	15	15	328	630	206,824	1	8,000	214,824	343,718
1-5	7145	Moreno Street	Fremont Avenue and Moreno Street	2069	2070	8	12	12	241	585	141,128	1	8,000	149,128	238,604
1-5	7144	Moreno Street	Fremont Avenue and Moreno Street	2070	2078	8	12	12	252	585	147,239	1	8,000	155,239	248,382
1-5	631	Moreno Street	Lindero Avenue and Moreno Street	2078	3023	8	12	12	187	585	109,410	2	8,000	125,410	200,656
1-5	10961	Moreno Street	Olive Street and Moreno Street	3023	2079	8	12	12	228	585	133,367	1	8,000	141,367	226,187
1-5	14118	Moreno Street	Monte Vista Avenue and Moreno Street	2079	3021	8	12	12	304	585	177,808	1	8,000	185,808	297,293
1-5	14119	Moreno Street	Monte Vista Avenue and Moreno Street	3021	2053	8	12	12	95	585	55,719	1	8,000	63,719	101,950
1-6	13329	Arrow Hwy	Maple Ave and Arrow Hwy	3006	2037	8	12	12	260	585	152,177	1	8,000	160,177	256,284
1-6	13328	Arrow Hwy	Ash Avenue and Arrow Hwy	2037	3014	8	12	12	74	585	43,423	1	8,000	51,423	82,277
1-6	13327	Arrow Hwy	Monte Vista Avenue and Arrow Hwy	3014	2038	8	12	12	286	585	167,420	2	8,000	183,420	293,472
1-7	10946	Richton Street	Monte Vista Avenue and Richton Street	2028	2029	8	12	12	324	585	189,627	1	8,000	197,627	316,203
1-7	10945	Richton Street	Monte Vista Avenue and Richton Street	2029	2030	8	12	12	325	585	189,878	1	8,000	197,878	316,605
1-7	10933	Richton Street	Monte Vista Avenue and Richton Street	2030	2031	8	12	12	320	585	187,227	2	8,000	203,227	325,164
1-8	9057	Monte Vista Avenue	Monte Vista Avenue and San Bernardino Street	253	254	15	15	18	352	680	239,371	0	8,000	239,371	382,993

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-8	9058	Monte Vista Avenue	Monte Vista Avenue and Rosewood Street	254	255	15	15	18	324	680	220,474	0	8,000	220,474	352,759
1-9	9059	Monte Vista Avenue	Monte Vista Avenue and Rosewood Street	255	256	15	15	18	321	680	218,517	0	8,000	218,517	349,628
1-9	9060	Monte Vista Avenue	Monte Vista Avenue and Benito Street	256	626	15	15	18	329	680	223,691	0	8,000	223,691	357,905
1-10	9345	Benito Street	Monte Vista Avenue and Benito Street	626	464	18	18	24	264	790	208,729	1	8,500	217,229	347,566
1-10	9346	Benito Street	Greenwood Avenue and Benito Street	464	465	18	18	24	353	790	278,731	1	8,500	287,231	459,570
1-11	9347	Benito Street	Greenwood Avenue and Benito Street	465	466	18	18	24	350	790	276,572	1	8,500	285,072	456,115
1-11	9348	Benito Street	Helena Avenue and Benito Street	466	282	18	18	24	353	790	278,868	1	8,500	287,368	459,788
1-12	7120	Benito Street	Galena Avenue and Benito Street	282	360	18	18	24	263	790	207,436	1	8,500	215,936	345,497
1-12	7121	Benito Street	Felipe Avenue and Benito Street	360	192	18	18	24	260	790	205,643	1	8,500	214,143	342,629
1-13	7122	Benito Street	Camulos Avenue and Benito Street	192	299	18	18	24	412	790	325,173	1	8,500	333,673	533,878
1-14	7123	Benito Street	Ramona Avenue and Benito Street	299	184	18	18	24	379	790	299,614	1	8,500	308,114	492,982
1-14	6337	Ramona Avenue	Ramona Avenue and Benito Street	184	1011	15	15	18	433	680	294,501	0	8,000	294,501	471,202
1-15	6338	Ramona Avenue	Denver Street and Ramona Avenue	1011	1012	15	15	18	450	680	306,320	0	8,000	306,320	490,111
1-15	6339	Ramona Avenue	El Morado Street and Ramona Avenue	1012	1085	15	15	18	450	680	306,127	0	8,000	306,127	489,803
1-16	10692	Ramona Avenue	Orchard Street and Ramona Avenue	1085	1719	15	15	18	414	680	281,532	0	8,000	281,532	450,450
1-16	10693	Ramona Avenue	Canary Court and Ramona Avenue	1719	1569	15	15	18	163	680	110,746	0	8,000	110,746	177,194
1-16	10822	Ramona Avenue	Canary Court and Ramona Avenue	1569	1720	15	15	18	252	680	171,342	0	8,000	171,342	274,148
1-17	10694	Ramona Avenue	Flora Court and Ramona Avenue	1720	1900	15	15	18	261	680	177,205	0	8,000	177,205	283,528

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-17	10695	Ramona Avenue	Evart Street and Ramona Avenue	1900	1702	15	15	18	251	680	170,600	0	8,000	170,600	272,960
1-17	10669	Ramona Avenue	Kinglsey Street and Ramona Avenue	1702	1703	15	15	18	319	680	216,911	0	8,000	216,911	347,058
1-18	10670	Ramona Avenue	Canoga Street and Ramona Avenue	1703	1704	18	18	21	352	745	262,011	0	8,000	262,011	419,218
1-18	10671	Ramona Avenue	Bandera Street and Ramona Avenue	1704	1705	18	18	21	304	745	226,135	0	8,000	226,135	361,816
1-18	10672	Ramona Avenue	Bandera Street and Ramona Avenue	1705	1977	18	18	21	141	745	104,800	0	8,000	104,800	167,680
1-19	10921	Ramona Avenue	Holt Boulevard and Ramona Avenue	1977	1706	18	18	21	170	745	126,879	0	8,000	126,879	203,006
1-19	1921	Ramona Avenue	Holt Boulevard and Ramona Avenue	1706	1878	18	18	21	62	745	45,960	0	8,000	45,960	73,536
1-19	10814	Ramona Avenue	Holt Boulevard and Ramona Avenue	1878	1879	15	15	21	278	745	207,451	1	8,500	215,951	345,522
1-19	10815	Ramona Avenue	Brooks Street and Ramona Avenue	1879	1880	15	15	21	248	745	185,030	1	8,500	193,530	309,649
1-20	2499	State Street	Ramona Avenue and State Street	2125	2126	24	24	27	26	850	22,372	0	8,000	22,372	35,795
1-20	2500	State Street	Ramona Avenue and State Street	2126	2127	24	24	27	22	850	18,794	0	8,000	18,794	30,070
1-20	12514	State Street	Ramona Avenue and State Street	2127	1694	24	24	27	312	850	264,845	0	8,000	264,845	423,752
1-20	10661	State Street	Ramona Avenue and State Street	1694	1802	24	24	27	384	850	326,043	0	8,000	326,043	521,669
													Total	**14,344,911**	**22,951,858**

[1] For original CIPs, # of MHs were taken from 2017 SMP, Table 8-3 Capital Cost Estimates for Capacity Improvement Projects, for the rehab/rechannel cost.
[2] Existing pipes remained in service in parallel to the new pipe

Alternative 2

Alternative 2 includes paralleling the existing deficient pipes with the same size pipe. This alternative analyzes parallel pipes with the same size pipe for a few reasons. The original pipe might be old and structurally deficient. A smaller parallel pipe than the original would not be able to handle flows if the original pipe is out of service. Additionally, if the originally pipe was rehabilitated, it would result in a smaller capacity than the original. Also, the minimum parallel pipe size to handle ultimate sewer capacities is either one pipe size below or the same pipe size, and the cost difference is minimal.

The parallel piping would occur on Benito Street, Ramona Street and State Street and are identified as CIP Project Nos. 2-2, 2-3, 2-8 through 2-21. This alternative would minimize disruption to the existing sewer system flows and eliminating a need for sewer bypassing by building a new pipe while keeping existing pipes in service. CIP Project Nos. 1-1, 1-4a, 1-4b, 1-5, 1-6 and 1-7 remain the same as the 2017 SMP. See Figure 7 for Alternative 2 CIP map. See Table 10 for Alternative 2 CIP recommendations and estimate. Alternative 2 CIP cost is estimated to be $17,831,538.

Figure 7- Alternative 2 CIP Map (Parallel)

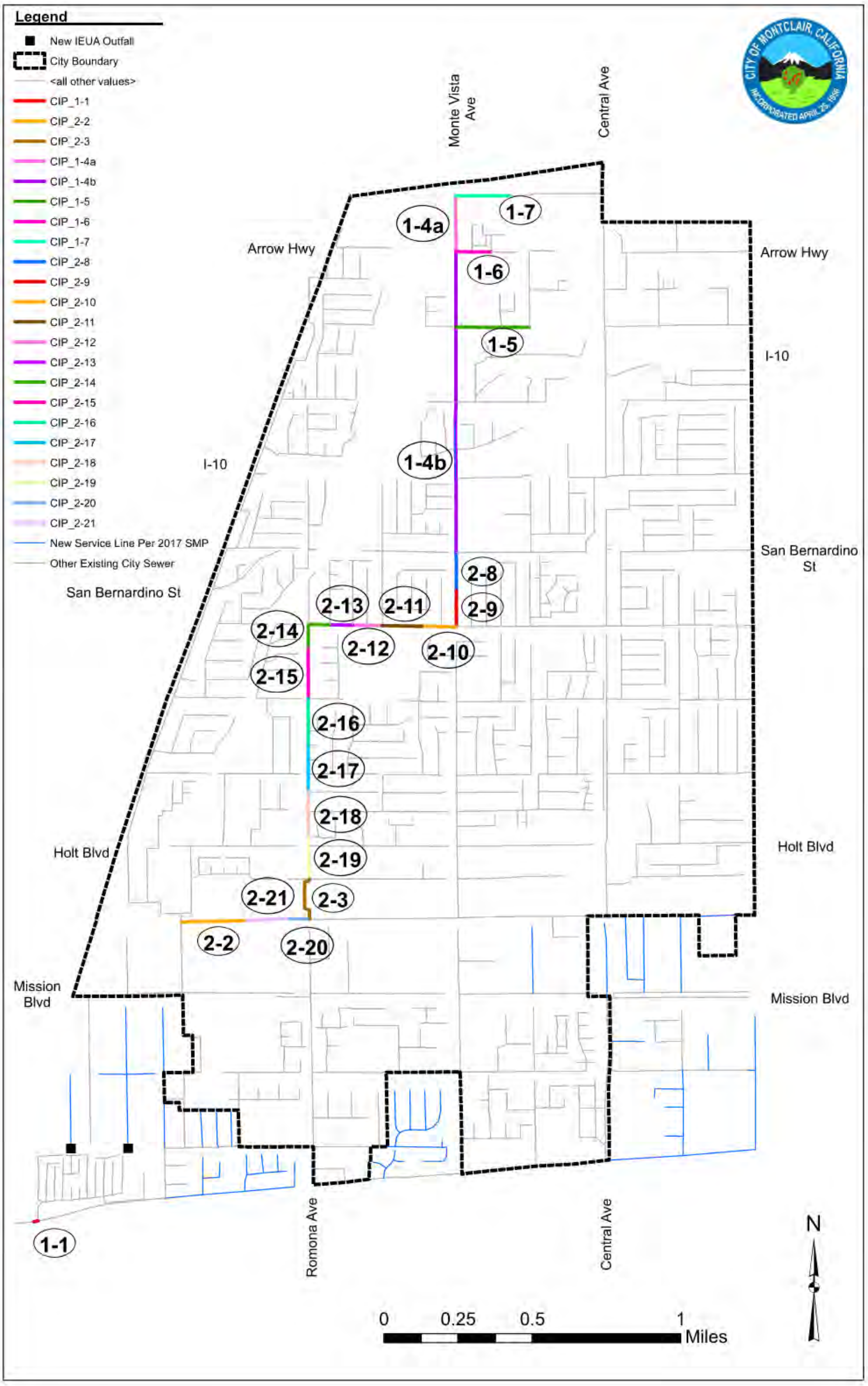


Table 10-Alternative 2 CIP -Parallel

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size/Parallel	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes[1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-1	11311	Phillips Boulevard	East End Avenue and Phillips Boulevard	114	2171	8	15	15	75	630	47,518	2	8,000	63,518	101,628
2-2	14112	State Street	Ramona Avenue and State Street	1803	1804	21	24	21" Parallel Pipe	380	545	207,100	1	8,000	215,100	344,160
2-2	14113	State Street	Silicon Avenue and State Street	1804	2194	21	24	21" Parallel Pipe	380	545	207,100	1	8,000	215,100	344,160
2-2	14114	State Street	Silicon Avenue and State Street	2194	1614	21	24	21" Parallel Pipe	357	545	194,469	1	8,000	202,469	323,950
2-3	12512	Ramona Avenue	Brooks Street and Ramona Avenue	1880	2076	18	21	18" Parallel Pipe	34	480	16,320	1	8,500	24,820	39,712
2-3	2496	Ramona Avenue	Brooks Street and Ramona Avenue	2076	2077	18	21	18" Parallel Pipe	80	480	38,376	1	8,500	46,876	75,002
2-3	11307	Ramona Avenue	Brooks Street and Ramona Avenue	2077	2073	18	21	18" Parallel Pipe	158	480	75,605	1	8,500	84,105	134,568
2-3	2494	Ramona Avenue	Brooks Street and Ramona Avenue	2073	2074	18	21	18" Parallel Pipe	312	480	149,851	2	8,500	166,851	266,962
2-3	2495	Ramona Avenue	Brooks Street and Ramona Avenue	2074	2075	18	21	18" Parallel Pipe	89	480	42,629	1	8,500	51,129	81,806
2-3	12513	Ramona Avenue	State Street and Ramona Avenue	2075	1276	18	21	18" Parallel Pipe	161	480	77,471	1	8,500	85,971	137,554
1-4a	889	Monte Vista Avenue	Monte Vista Avenue and Richton Street	2031	2041	8	12	12	345	585	201,803	1	8,000	209,803	335,685
1-4a	890	Monte Vista Avenue	Monte Vista Avenue and Richton Street	2041	2042	8	12	12	253	585	148,084	1	8,000	156,084	249,734
1-4a	891	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2042	2043	8	12	12	304	585	177,855	1	8,000	185,855	297,367
1-4a	892	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2043	2038	8	12	12	93	585	54,403	2	8,000	70,403	112,644
1-4b	7158	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2038	2050	8	15	15	203	630	127,790	1	8,000	135,790	217,265
1-4b	7157	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2050	2051	8	15	15	244	630	153,421	1	8,000	161,421	258,274
1-4b	7156	Monte Vista Avenue	Monte Vista Avenue and Olive Street	2051	2052	8	15	15	449	630	283,005	1	8,000	291,005	465,608

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size/Parallel	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes[1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-4b	10939	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2052	2053	8	15	15	451	630	284,135	1	8,000	292,135	467,416
1-4b	5578	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2053	NJ_33	10	15	15	20	630	12,730	1	8,000	20,730	33,169
1-4b	8938	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	NJ_33	2103	10	15	15	418	630	263,458	1	8,000	271,458	434,332
1-4b	9744	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2103	889	10	15	15	27	630	16,984	1	8,000	24,984	39,975
1-4b	9745	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	889	890	10	15	15	424	630	267,305	1	8,000	275,305	440,488
1-4b	9746	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	890	891	10	15	15	450	630	283,366	1	8,000	291,366	466,186
1-4b	9735	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	891	885	10	15	15	374	630	235,410	1	8,000	243,410	389,456
1-4b[2]	9736	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	885	371	12	--	--	474	--	--	--	--	--	--
1-4b[2]	10979	Monte Vista Avenue	I-10 and Monte Vista Avenue	371	884	12	--	--	37	--	--	--	--	--	--
1-4b[2]	9737	Monte Vista Avenue	I-10 and Monte Vista Avenue	884	261	12	--	--	478	--	--	--	--	--	--
1-4b[2]	NEW_296	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	885	NEW_238	12	15	15	92	--	--	--	--	--	--
1-4b[2]	NEW_298	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	NEW_238	NEW_240	12	15	15	380	--	--	--	--	--	--
1-4b[2]	NEW_300	Monte Vista Avenue	I-10 and Monte Vista Avenue	NEW_240	NEW_242	12	15	15	349	--	--	--	--	--	--
1-4b[2]	NEW_302	Monte Vista Avenue	I-10 and Monte Vista Avenue	NEW_242	NEW_244	12	15	15	115	--	--	--	--	--	--
1-4b[2]	NEW_304	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	NEW_244	NEW_246	12	15	15	49	--	--	--	--	--	--
1-4b[2]	NEW_306	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	NEW_246	261	12	15	15	6	--	--	--	--	--	--
1-4b	9145	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	261	262	10	15	15	310	630	195,112	1	8,000	203,112	324,980
1-4b	9148	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	262	263	10	15	15	345	630	217,327	1	8,000	225,327	360,523

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size/Parallel	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes[1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-4b	9147	Monte Vista Avenue	Monte Vista Avenue and Harvard Street	263	264	10	15	15	337	630	212,447	1	8,000	220,447	352,715
1-4b	9146	Monte Vista Avenue	Monte Vista Avenue and San Bernardino Street	264	253	10	15	15	328	630	206,824	1	8,000	214,824	343,718
1-5	7145	Moreno Street	Fremont Avenue and Moreno Street	2069	2070	8	12	12	241	585	141,128	1	8,000	149,128	238,604
1-5	7144	Moreno Street	Fremont Avenue and Moreno Street	2070	2078	8	12	12	252	585	147,239	1	8,000	155,239	248,382
1-5	631	Moreno Street	Lindero Avenue and Moreno Street	2078	3023	8	12	12	187	585	109,410	2	8,000	125,410	200,656
1-5	10961	Moreno Street	Olive Street and Moreno Street	3023	2079	8	12	12	228	585	133,367	1	8,000	141,367	226,187
1-5	14118	Moreno Street	Maple Avenue and Moreno Street	2079	3021	8	12	12	304	585	177,808	1	8,000	185,808	297,293
1-5	14119	Moreno Street	Monte Vista Avenue and Moreno Street	3021	2053	8	12	12	95	585	55,719	1	8,000	63,719	101,950
1-6	13329	Arrow Hwy	Ash Avenue and Arrow Hwy	3006	2037	8	12	12	260	585	152,177	1	8,000	160,177	256,284
1-6	13328	Arrow Hwy	Monte Vista Avenue and Arrow Hwy	2037	3014	8	12	12	74	585	43,423	1	8,000	51,423	82,277
1-6	13327	Arrow Hwy	Monte Vista Avenue and Arrow Hwy	3014	2038	8	12	12	286	585	167,420	2	8,000	183,420	293,472
1-7	10946	Richton Street	Monte Vista Avenue and Richton Street	2028	2029	8	12	12	324	585	189,627	1	8,000	197,627	316,203
1-7	10945	Richton Street	Monte Vista Avenue and Richton Street	2029	2030	8	12	12	325	585	189,878	1	8,000	197,878	316,605
1-7	10933	Richton Street	Monte Vista Avenue and Richton Street	2030	2031	8	12	12	320	585	187,227	2	8,000	203,227	325,164
2-8	9057	Monte Vista Avenue	Monte Vista Avenue and San Bernardino Street	253	254	15	15	15" Parallel Pipe	352	585	205,929	0	8,000	205,929	329,487
2-8	9058	Monte Vista Avenue	Monte Vista Avenue and Rosewood Street	254	255	15	15	15" Parallel Pipe	324	430	139,418	0	8,000	139,418	223,068
2-9	9059	Monte Vista Avenue	Monte Vista Avenue and Rosewood Street	255	256	15	15	15" Parallel Pipe	321	430	138,180	0	8,000	138,180	221,088
2-9	9060	Monte Vista Avenue	Monte Vista Avenue and Benito Street	256	626	15	15	15" Parallel Pipe	329	430	141,452	0	8,000	141,452	226,322

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size/Parallel	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes[1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
2-10	9345	Benito Street	Monte Vista Avenue and Benito Street	626	464	18	18	18" Parallel Pipe	264	480	126,823	1	8,500	135,323	216,516
2-10	9346	Benito Street	Greenwood Avenue and Benito Street	464	465	18	18	18" Parallel Pipe	353	480	169,356	1	8,500	177,856	284,569
2-11	9347	Benito Street	Greenwood Avenue and Benito Street	465	466	18	18	18" Parallel Pipe	350	480	168,044	1	8,500	176,544	282,470
2-11	9348	Benito Street	Helena Avenue and Benito Street	466	282	18	18	18" Parallel Pipe	353	480	169,439	1	8,500	177,939	284,702
2-12	7120	Benito Street	Galena Avenue and Benito Street	282	360	18	18	18" Parallel Pipe	263	480	126,037	1	8,500	134,537	215,259
2-12	7121	Benito Street	Felipe Avenue and Benito Street	360	192	18	18	18" Parallel Pipe	260	480	124,948	1	8,500	133,448	213,517
2-13	7122	Benito Street	Camulos Avenue and Benito Street	192	299	18	18	18" Parallel Pipe	412	480	197,574	1	8,500	206,074	329,718
2-14	7123	Benito Street	Ramona Avenue and Benito Street	299	184	18	18	18" Parallel Pipe	379	480	182,044	1	8,500	190,544	304,870
2-14	6337	Ramona Avenue	Ramona Avenue and Benito Street	184	1011	15	15	15" Parallel Pipe	433	430	186,229	0	8,000	186,229	297,966
2-15	6338	Ramona Avenue	Denver Street and Ramona Avenue	1011	1012	15	15	15" Parallel Pipe	450	430	193,702	0	8,000	193,702	309,923
2-15	6339	Ramona Avenue	El Morado Street and Ramona Avenue	1012	1085	15	15	15" Parallel Pipe	450	430	193,580	0	8,000	193,580	309,729
2-16	10692	Ramona Avenue	Orchard Street and Ramona Avenue	1085	1719	15	15	15" Parallel Pipe	414	430	178,027	0	8,000	178,027	284,844
2-16	10693	Ramona Avenue	Canary Court and Ramona Avenue	1719	1569	15	15	15" Parallel Pipe	163	430	70,031	0	8,000	70,031	112,049
2-16	10822	Ramona Avenue	Canary Court and Ramona Avenue	1569	1720	15	15	15" Parallel Pipe	252	430	108,349	0	8,000	108,349	173,358
2-17	10694	Ramona Avenue	Flora Court and Ramona Avenue	1720	1900	15	15	15" Parallel Pipe	261	430	112,056	0	8,000	112,056	179,290
2-17	10695	Ramona Avenue	Evart Street and Ramona Avenue	1900	1702	15	15	15" Parallel Pipe	251	430	107,879	0	8,000	107,879	172,607
2-17	10669	Ramona Avenue	Kinglsey Street and Ramona Avenue	1702	1703	15	15	15" Parallel Pipe	319	430	137,164	0	8,000	137,164	219,463
2-18	10670	Ramona Avenue	Canoga Street and Ramona Avenue	1703	1704	18	18	18" Parallel Pipe	352	480	168,813	0	8,000	168,813	270,100

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size/Parallel	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes[1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
2-18	10671	Ramona Avenue	Bandera Street and Ramona Avenue	1704	1705	18	18	18" Parallel Pipe	304	480	145,698	0	8,000	145,698	233,116
2-18	10672	Ramona Avenue	Bandera Street and Ramona Avenue	1705	1977	18	18	18" Parallel Pipe	141	480	67,522	0	8,000	67,522	108,035
2-19	10921	Ramona Avenue	Holt Boulevard and Ramona Avenue	1977	1706	18	18	18" Parallel Pipe	170	480	81,747	0	8,000	81,747	130,796
2-19	1921	Ramona Avenue	Holt Boulevard and Ramona Avenue	1706	1878	18	18	18" Parallel Pipe	62	480	29,612	0	8,000	29,612	47,379
2-19	10814	Ramona Avenue	Holt Boulevard and Ramona Avenue	1878	1879	15	15	15" Parallel Pipe	278	430	119,737	1	8,500	128,237	205,179
2-19	10815	Ramona Avenue	Brooks Street and Ramona Avenue	1879	1880	15	15	15" Parallel Pipe	248	430	106,796	1	8,500	115,296	184,474
2-20	2498	Ramona Avenue	State Street and Ramona Avenue	1276	2125	18	18	18" Parallel Pipe	6	480	2,756	1	8,500	11,256	18,009
2-20	2499	State Street	Ramona Avenue and State Street	2125	2126	24	24	24" Parallel Pipe	26	590	15,529	0	8,000	15,529	24,846
2-20	2500	State Street	Ramona Avenue and State Street	2126	2127	24	24	24" Parallel Pipe	22	590	13,045	0	8,000	13,045	20,872
2-20	12514	State Street	Ramona Avenue and State Street	2127	1694	24	24	24" Parallel Pipe	312	590	183,833	0	8,000	183,833	294,133
2-21	10661	State Street	Ramona Avenue and State Street	1694	1802	24	24	24" Parallel Pipe	384	590	226,312	0	8,000	226,312	362,100
2-21	10780	State Street	Ramona Avenue and State Street	1802	1803	21	24	21" Parallel Pipe	429	545	233,730	2	8,000	249,730	399,568
												Total		**11,144,711**	**17,831,538**

[1] For original CIPs, # of MHs were taken from 2017 SMP, Table 8-3 Capital Cost Estimates for Capacity Improvement Projects, for the rehab/rechannel cost.
[2] Existing pipes will remain in service in parallel to the new pipe during construction

Alternative 3

Alternative 3 includes a combination of upsizing the deficient pipes to a size where the pipe meets capacity criteria and constructing a new pipe to alleviate some of the existing sewer pipes that are above capacity. Instead of upsizing the pipes in Benito Street and Ramona Avenue, this alternative suggests building a new 15" sewer pipe along Monte Vista Avenue from the Monte Vista Avenue and Benito Street intersection, connecting to the existing manhole on Monte Vista Avenue and Holt Boulevard, and upsizing the existing 8" pipe in Holt Boulevard to an 18" where it connects to the existing manhole in Ramona Avenue and Holt Boulevard. This portion of the proposed improvements can be constructed at the same time as the scheduled pavement restoration project in Monte Vista Avenue. This alternative would minimize disruption to the existing sewer system flow by building a new pipe; however, further investigation such as existing utility presence and topography would need to be done to confirm feasibility. Pipe upsizing is also recommended in other areas where the pipe sizes are deficient. Alternative 3 is not recommended for consideration due to the fact that it will require significantly larger effort to verify if an open corridor is available for the construction of new pipes as opposed to Alternatives 1 and 2 which are using an existing open corridor for construction. Additionally, this alternative while resolving the deficiencies in a portion of the existing system, does not eliminate the maintenance needs for these existing pipes, and therefore will increase the long-term maintenance cost for the City. See Figure 8 for Alternative 3 CIP map and Table 11 for Alternative 3 CIP recommendations and estimate. CIP Project Nos. 1-1, 1-4a, 1-4b, 1-5, 1-6, 1-7 remain the same from the 2017 SMP. CIP Project Nos. 1-2, 1-3 and 1-8, 1-9, 1-20, 3-10 through 3-17 have been revised or added. Alternative 3 CIP cost is estimated to be $20,590,673.

Figure 8- Alternative 3 CIP Map (Replacement and Bypass)

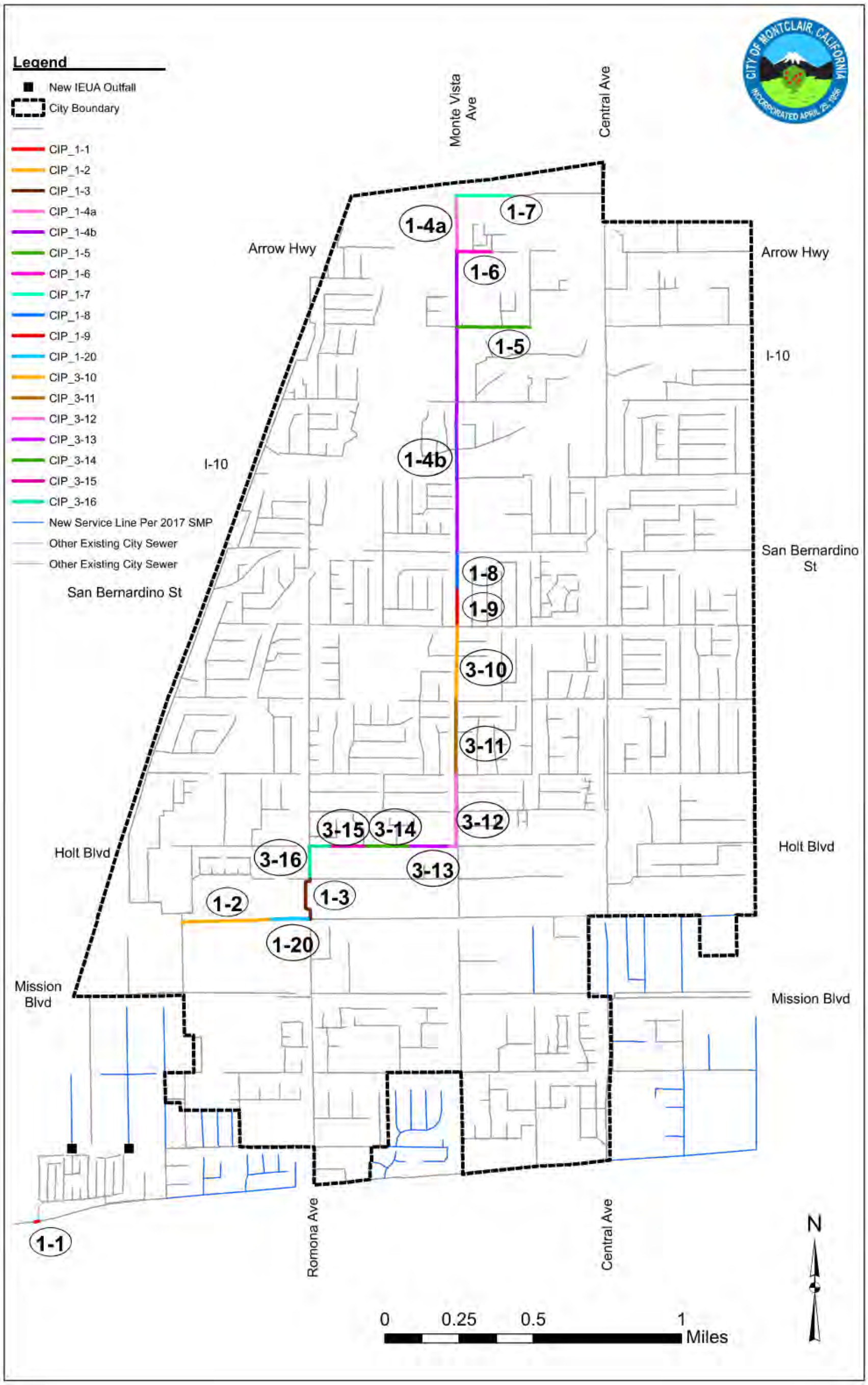


Table 11- Alternative 3 CIP – Replacement and Bypass

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-1	11311	Phillips Boulevard	East End Avenue and Phillips Boulevard	114	2171	8	15	15	75	630	47,518	2	8,000	63,518	101,628
1-2	10780	State Street	Ramona Avenue and State Street	1802	1803	21	24	27	429	850	364,533	2	8,000	380,533	608,852
1-2	14112	State Street	Ramona Avenue and State Street	1803	1804	21	24	27	380	850	323,000	1	8,000	331,000	529,600
1-2	14113	State Street	Silicon Avenue and State Street	1804	2194	21	24	27	380	850	323,000	1	8,000	331,000	529,600
1-2	14114	State Street	Silicon Avenue and State Street	2194	1614	21	24	27	357	850	303,300	1	8,000	311,300	498,079
1-3	12512	Ramona Avenue	Brooks Street and Ramona Avenue	1880	2076	18	21	21	34	745	25,330	1	8,000	33,330	53,328
1-3	2496	Ramona Avenue	Brooks Street and Ramona Avenue	2076	2077	18	21	24	80	790	63,161	1	8,000	71,161	113,857
1-3	11307	Ramona Avenue	Brooks Street and Ramona Avenue	2077	2073	18	21	24	158	790	124,434	1	8,000	132,434	211,894
1-3	2494	Ramona Avenue	Brooks Street and Ramona Avenue	2073	2074	18	21	24	312	790	246,630	2	8,000	262,630	420,208
1-3	2495	Ramona Avenue	Brooks Street and Ramona Avenue	2074	2075	18	21	24	89	790	70,160	1	8,000	78,160	125,056
1-3	12513	Ramona Avenue	State Street and Ramona Avenue	2075	1276	18	21	24	161	790	127,504	1	8,000	135,504	216,807
1-3	2498	Ramona Avenue	State Street and Ramona Avenue	1011	1012	15	15	24	6	790	4,535	1	8,500	13,035	20,857
1-4a	889	Monte Vista Avenue	Monte Vista Avenue and Richton Street	2031	2041	8	12	12	345	585	201,803	1	8,000	209,803	335,685
1-4a	890	Monte Vista Avenue	Monte Vista Avenue and Richton Street	2041	2042	8	12	12	253	585	148,084	1	8,000	156,084	249,734
1-4a	891	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2042	2043	8	12	12	304	585	177,855	1	8,000	185,855	297,367
1-4a	892	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2043	2038	8	12	12	93	585	54,403	2	8,000	70,403	112,644

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-4b	7158	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2038	2050	8	15	15	203	630	127,790	1	8,000	135,790	217,265
1-4b	7157	Monte Vista Avenue	Monte Vista Avenue and Arrow Hwy	2050	2051	8	15	15	244	630	153,421	1	8,000	161,421	258,274
1-4b	7156	Monte Vista Avenue	Monte Vista Avenue and Olive Street	2051	2052	8	15	15	449	630	283,005	1	8,000	291,005	465,608
1-4b	10939	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2052	2053	8	15	15	451	630	284,135	1	8,000	292,135	467,416
1-4b	5578	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2053	NJ_33	10	15	15	20	630	12,730	1	8,000	20,730	33,169
1-4b	8938	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	NJ_33	2103	10	15	15	418	630	263,458	1	8,000	271,458	434,332
1-4b	9744	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	2103	889	10	15	15	27	630	16,984	1	8,000	24,984	39,975
1-4b	9745	Monte Vista Avenue	Monte Vista Avenue and Moreno Street	889	890	10	15	15	424	630	267,305	1	8,000	275,305	440,488
1-4b	9746	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	890	891	10	15	15	450	630	283,366	1	8,000	291,366	466,186
1-4b	9735	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	891	885	10	15	15	374	630	235,410	1	8,000	243,410	389,456
1-4b [2]	9736	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	885	371	12	--	--	474	--	--	--	8,000	--	--
1-4b [2]	10979	Monte Vista Avenue	I-10 and Monte Vista Avenue	371	884	12	--	--	37	--	--	--	8,000	--	--
1-4b [2]	9737	Monte Vista Avenue	I-10 and Monte Vista Avenue	884	261	12	--	--	478	--	--	--	8,000	--	--
1-4b [2]	NEW_296	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	885	NEW_238	12	15	15	92	--	--	--	8,000	--	--
1-4b [2]	NEW_298	Monte Vista Avenue	Monte Vista Avenue and San Jose Street	NEW_238	NEW_240	12	15	15	380	--	--	--	8,000	--	--
1-4b [2]	NEW_300	Monte Vista Avenue	I-10 and Monte Vista Avenue	NEW_240	NEW_242	12	15	15	349	--	--	--	8,000	--	--
1-4b [2]	NEW_302	Monte Vista Avenue	I-10 and Monte Vista Avenue	NEW_242	NEW_244	12	15	18	115	--	--	--	8,000	--	--
1-4b [2]	NEW_304	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	NEW_244	NEW_246	12	15	18	49	--	--	--	8,000	--	--

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-4b [2]	NEW_306	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	NEW_246	261	12	15	15	6	--	--	--	8,000	--	--
1-4b	9145	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	261	262	10	15	15	310	630	195,112	1	8,000	203,112	324,980
1-4b	9148	Monte Vista Avenue	Monte Vista Avenue and Palo Verde Street	262	263	10	15	15	345	630	217,327	1	8,000	225,327	360,523
1-4b	9147	Monte Vista Avenue	Monte Vista Avenue and Harvard Street	263	264	10	15	15	337	630	212,447	1	8,000	220,447	352,715
1-4b	9146	Monte Vista Avenue	Monte Vista Avenue and San Bernardino Street	264	253	10	15	15	328	630	206,824	1	8,000	214,824	343,718
1-5	7145	Moreno Street	Fremont Avenue and Moreno Street	2069	2070	8	12	12	241	585	141,128	1	8,000	149,128	238,604
1-5	7144	Moreno Street	Fremont Avenue and Moreno Street	2070	2078	8	12	12	252	585	147,239	1	8,000	155,239	248,382
1-5	631	Moreno Street	Lindero Avenue and Moreno Street	2078	3023	8	12	12	187	585	109,410	2	8,000	125,410	200,656
1-5	10961	Moreno Street	Olive Street and Moreno Street	3023	2079	8	12	12	228	585	133,367	1	8,000	141,367	226,187
1-5	14118	Moreno Street	Monte Vista Street and Moreno Street	2079	3021	8	12	12	304	585	177,808	1	8,000	185,808	297,293
1-5	14119	Moreno Street	Monte Vista Avenue and Moreno Street	3021	2053	8	12	12	95	585	55,719	1	8,000	63,719	101,950
1-6	13329	Arrow Hwy	Maple Avenue and Arrow Hwy	3006	2037	8	12	12	260	585	152,177	1	8,000	160,177	256,284
1-6	13328	Arrow Hwy	Ash Avenue and Arrow Hwy	2037	3014	8	12	12	74	585	43,423	1	8,000	51,423	82,277
1-6	13327	Arrow Hwy	Monte Vista Avenue and Arrow Hwy	3014	2038	8	12	12	286	585	167,420	2	8,000	183,420	293,472
1-7	10946	Richton Street	Monte Vista Avenue and Richton Street	2028	2029	8	12	12	324	585	189,627	1	8,000	197,627	316,203
1-7	10945	Richton Street	Monte Vista Avenue and Richton Street	2029	2030	8	12	12	325	585	189,878	1	8,000	197,878	316,605
1-7	10933	Richton Street	Monte Vista Avenue and Richton Street	2030	2031	8	12	12	320	585	187,227	2	8,000	203,227	325,164
1-8	9057	Monte Vista Avenue	Monte Vista Avenue and San Bernardino Street	253	254	15	15	18	352	680	239,371	0	8,000	239,371	382,993

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
1-8	9058	Monte Vista Avenue	Monte Vista Avenue and Rosewood Street	254	255	15	15	18	324	680	220,474	0	8,000	220,474	352,759
1-9	9059	Monte Vista Avenue	Monte Vista Avenue and Rosewood Street	255	256	15	15	18	321	680	218,517	0	8,000	218,517	349,628
1-9	9060	Monte Vista Avenue	Monte Vista Avenue and Benito Street	256	626	15	15	18	329	680	223,691	0	8,000	223,691	357,905
3-10	NEW_308	Monte Vista Avenue	Monte Vista Avenue and Benito Street	626	NEW_248	--	--	15	1328	400	531,266	2	8,500	548,266	877,226
3-11	NEW_310	Monte Vista Avenue	Monte Vista Avenue and Orchard Street	NEW_248	NEW_250	--	--	15	1321	400	528,544	1	8,500	537,044	859,271
3-12	NEW_312	Monte Vista Avenue	Monte Vista Avenue and Kingsley Street	NEW_250	NEW_252	--	--	15	1272	400	508,684	1	8,500	517,184	827,494
3-12	NEW_314	Holt Boulevard	Holt Boulevard and Monte Vista Avenue	NEW_252	1710	--	--	15	112	400	44,837	2	8,500	61,837	98,940
3-13	10682	Holt Boulevard	Holt Boulevard and Monte Vista Avenue	1710	2009	8	8	18	310	680	211,122	1	8,500	219,622	351,396
3-13	10922	Holt Boulevard	Holt Boulevard and Monte Vista Avenue	2009	1711	8	8	18	77	680	52,406	1	8,500	60,906	97,450
3-13	10683	Holt Boulevard	Holt Boulevard and Monte Vista Avenue	1711	1712	8	8	18	348	680	236,327	1	8,500	244,827	391,724
3-14	10684	Holt Boulevard	Holt Boulevard and Monte Vista Avenue	1712	1542	8	8	18	209	680	142,006	1	8,500	150,506	240,810
3-14	10823	Holt Boulevard	Holt Boulevard and Monte Vista Avenue	1542	1713	8	8	18	139	680	94,744	1	8,500	103,244	165,191
3-14	10685	Holt Boulevard	Holt Boulevard and Ramona Avenue	1713	1662	8	8	18	358	680	243,267	1	8,500	251,767	402,828
3-14	10538	Holt Boulevard	Holt Boulevard and Ramona Avenue	1662	1551	8	8	18	87	680	58,924	1	8,500	67,424	107,878
3-15	10927	Holt Boulevard	Holt Boulevard and Ramona Avenue	1551	1661	8	8	18	264	680	179,725	1	8,500	188,225	301,159
3-15	10539	Holt Boulevard	Holt Boulevard and Ramona Avenue	1661	1660	8	8	18	352	680	239,363	1	8,500	247,863	396,581
3-16	10540	Holt Boulevard	Holt Boulevard and Ramona Avenue	1660	1706	8	8	18	350	680	237,917	1	8,500	246,417	394,267
3-16	1921	Ramona Avenue	Holt Boulevard and Ramona Avenue	1706	1878	18	18	21	62	745	45,960	0	8,000	45,960	73,536

CIP No.	Pipe ID	Street Name	Closest Intersection	U/S MH ID	D/S MH ID	Existing Size	2017 SMP Proposed Size	2022 SMP REV 1 Proposed Size	Pipe Length (ft)	Pipe Unit Cost ($/LF)	Pipe Replacement Construction Cost ($)	Number of Manholes [1]	Manhole Cost ($)	Total Construction Cost ($)	Total Capital Cost ($)
3-16	10814	Ramona Avenue	Holt Boulevard and Ramona Avenue	1878	1879	15	15	21	278	745	207,451	0	8,000	207,451	331,922
3-16	10815	Ramona Avenue	Brooks Street and Ramona Avenue	1879	1880	15	15	21	248	745	185,030	0	8,000	185,030	296,049
1-20	2499	State Street	Ramona Avenue and State Street	2125	2126	24	24	27	26	850	22,372	0	8,500	22,372	35,795
1-20	2500	State Street	Ramona Avenue and State Street	2126	2127	24	24	27	22	850	18,794	0	8,500	18,794	30,070
1-20	12514	State Street	Ramona Avenue and State Street	2127	1694	24	24	27	312	850	264,845	0	8,500	264,845	423,752
1-20	10661	State Street	Ramona Avenue and State Street	1694	1802	24	24	27	384	850	326,043	0	8,500	326,043	521,669
													Total	**12,869,171**	**20,590,673**

[1] For original CIPs, # of MHs were taken from 2017 SMP, Table 8-3 Capital Cost Estimates for Capacity Improvement Projects, for the rehab/rechannel cost.
[2] Existing pipes will remain in service without change in parallel to the new pipe
[3] Trench paving construction costs were deducted from sewer construction due to a separate pavement project replacement in this area.

5.0 Conclusion

Alternatives 1, 2 and 3 have been outlined in this report for the City's consideration. The base hydraulic model that was used for this study depicts the 2017 SMP buildout and CIP recommendations, with the addition of the constructed pipe improvements in Monte Vista Avenue and the revised/additional sewer loadings calculated for the proposed developments. The results from the base hydraulic identified 42 deficient sewer line segments totaling approximately 10,919 feet with diameters ranging from 8" to 24". Considering the recommended CIPs identified in the 2017 SMP, there are a total of 83 segments proposed for improvement, equating to approximately 21,963 feet with diameters ranging from 8" to 24". The City can choose the construction of one alternative or a combination thereof, as they align with the City's other projects. It is recommended that the City consider concurrent construction opportunities such a street paving projects or adjacent infrastructure work to implement the proposed sewer pipeline improvement projects. Alternative 1 would be a direct removal and replacement of an existing pipe but would require sewer flow bypassing. Alternative 2 includes construction of parallel pipeline projects, which will eliminate the need for sewer bypassing; however utility investigation during the engineering design phase should be conducted to determine feasibility of parallel pipe construction. CCTV of the existing pipe should also be performed to determine pipe integrity prior to confirming a parallel pipe project. For example, if the existing pipe isn't in good condition, the City should consider just an upsized pipe replacement opposed to parallel piping to avoid inevitable replacement. Alternative 3 would reduce the disruption to the existing sewer flows by building a new pipeline; however, it still requires replacing existing pipes in other areas to account for their capacity deficiencies. Alternative 3 also requires extensive existing utility investigation during the design to avoid construction conflicts. Considering costs and constructability, it is recommended the City consider Alternatives 1 and 2, or a combination of both, for CIP implementation.

ATTACHMENT A

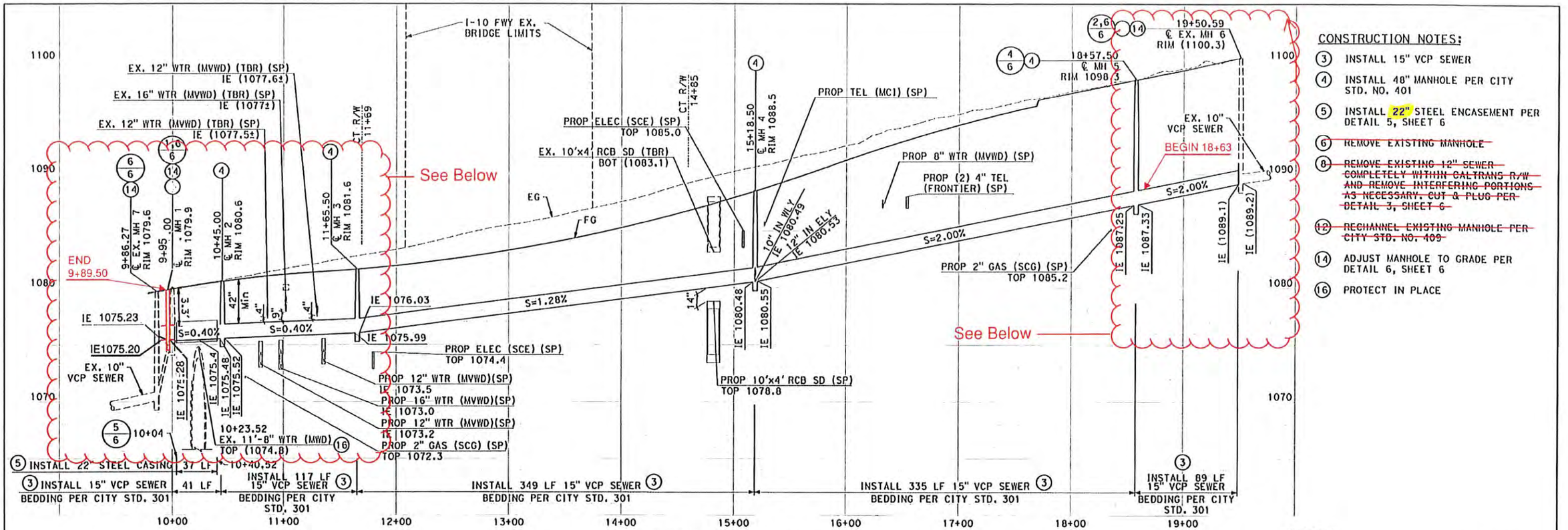
SEWER AS-BUILTS AND NORTH MONTCLAIR DOWNTOWN SPECIFIC PLAN UNIT UPDATE

Phase	Project No.	Descriptions	Land Use	Unit	Unit Factor (gdp/unit)	Quan tity	Estimated Wastewater Flow (gpd)
1	1	Paseos	Residential	No. of dwelling units	408	400.0	80,000
	2	Courtyard housing/live-work lofts	Residential	No. of dwelling units	200	185.0	37,000
		Retail	Commercial	Thousand square foot	160	25.0	4,000
	3	Townhouses/courtyard housing	Residential	No. of dwelling units	200	67.0	13,400
	4	Courtyard housing/live-work lofts	Residential	No. of dwelling units	200	55.0	11,000
		Retail	Commercial	Thousand square foot	160	13.5	2,160
	5	Courtyard housing/townhouses/live-work lofts	Residential	No. of dwelling units	200	90.0	18,000
	6	Courtyard	Residential	No. of dwelling units	200	250.0	50,000
2	7	Live-work lofts/townhouses/courtyard housing	Residential	No. of dwelling units	350	150.0	30,000
		Retail	Commercial	Thousand square foot	25,000	36.0	5,760
		Hotel	Residential	No. of dwelling units	200	300.0	60,000
	8	Live-work lofts/townhouses/courtyard housing	Residential	No. of dwelling units	200	80.0	16,000
		Retail	Commercial	Thousand square foot	160	27.0	4,320
	9	Retail	Commercial	Thousand square foot	160	60.0	9,600
	10	Live-work lofts/townhouses/courtyard housing	Residential	No. of dwelling units	200	250.0	50,000
		Retail	Commercial	Thousand square foot	160	22.5	3,600
3	11	Townhouses/courtyard housing	Residential	No. of dwelling units	200	315.0	63,000
	12	Live-work lofts/townhouses/courtyard housing	Residential	No. of dwelling units	302	500.0	100,000
4	13	Courtyard housing/townhouses/live-work lofts	Residential	No. of dwelling units	200	400.0	80,000
		Retail	Commercial	Thousand square foot	160	110.0	17,600
	14	Live-work lofts/townhouses/apartments	Residential	No. of dwelling units	200	60.0	12,000
		Retail	Commercial	Thousand square foot	160	350.0	56,000
Foreseeable future	15	Trammell Crow Residential (the developer)	Residential	No. of dwelling units	348	288.0	57,600
Total							**781,040**

Table 3-8 shows the summary of the projected future average wastewater flow from the three development categories. The future total average flow was estimated to be 1.438 mgd or 43% of the total existing flow (3.37 mgd) and the buildout flow is therefore **4.79 mgd.**

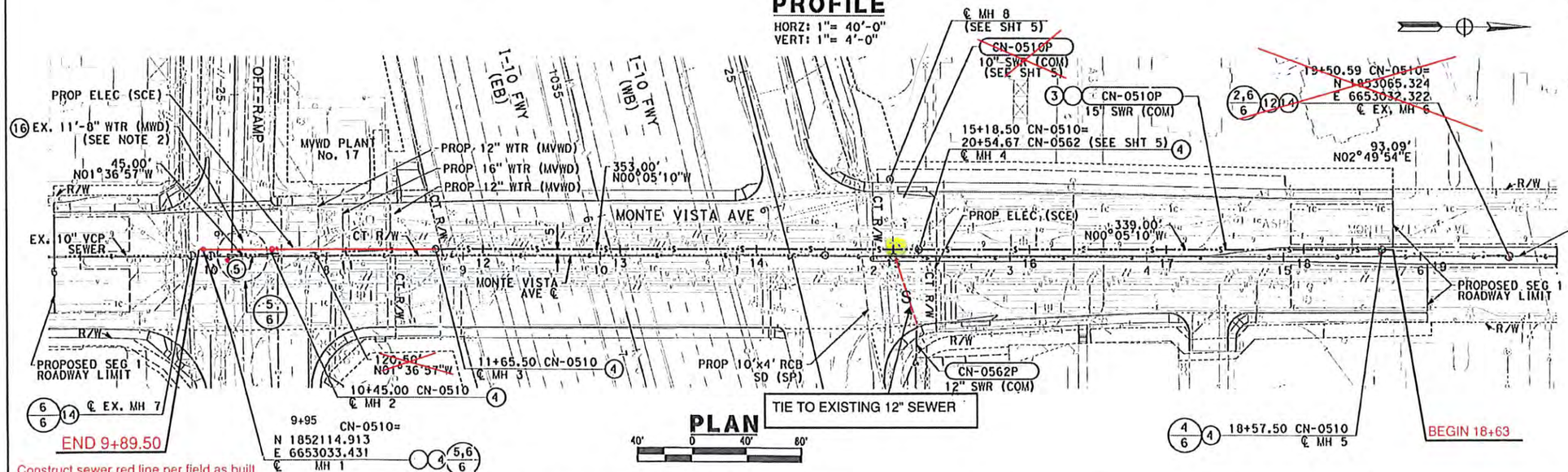
Table 3-8 Future Average Wastewater Flow Summary

Category	Total Parcel Size (ac)	Wastewater Flow (gdp)	Wastewater Flow (mgd)
Vacant Parcel	68.3	155,121	0.155
Septic Parcel	402.0	501,439	0.501
NMDSP	110.1	781,040	0.781
Total	580.4	1,437,600	1.438



PROFILE

HORZ: 1"= 40'-0"
VERT: 1"= 4'-0"



PLAN

40' 0 40' 80'

CONSTRUCTION NOTES:

(3) INSTALL 15" VCP SEWER

(4) INSTALL 48" MANHOLE PER CITY STD. NO. 401

(5) INSTALL 22" STEEL ENCASEMENT PER DETAIL 5, SHEET 6

(6) ~~REMOVE EXISTING MANHOLE~~

(8) ~~REMOVE EXISTING 12" SEWER COMPLETELY WITHIN CALTRANS R/W AND REMOVE INTERFERING PORTIONS AS NECESSARY. CUT & PLUG PER DETAIL 3, SHEET 6~~

(12) ~~RECHANNEL EXISTING MANHOLE PER CITY STD. NO. 409~~

(14) ADJUST MANHOLE TO GRADE PER DETAIL 6, SHEET 6

(16) PROTECT IN PLACE

NOTES:

1. LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING NEAR EXISTING MWD AQUEDUCT. CONTRACTOR SHALL CONTACT MWD PRIOR TO STARTING ANY WORK IN THE VICINITY OF MWD FACILITIES PER GENERAL NOTE #15, SHEET 2.

LANE SECURITY PAVING CONTRACTING
RFC
RELEASE FOR CONSTRUCTION
08/04/2020

Underground Service Alert
Call: Toll Free
1-800-422-4133
CALL BEFORE YOU DIG

REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY C. YABIKU DATE
DRAWN BY E. RODRIGUEZ DATE
CHECKED BY C. WARR DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES A. WARR No. 53435 Exp. 09/30/21 CIVIL STATE OF CALIFORNIA

V&A INC.
9755 FAIRCOAS AVE
PASADENA, CA 91105
213.972.9700
07/07/2020 DATE

CITY OF MONTCLAIR
MONTCLAIR
Engineering Division of The Public Works Department
5111 Benito Street, Montclair CA 91763
Phone: (909) 625-9478

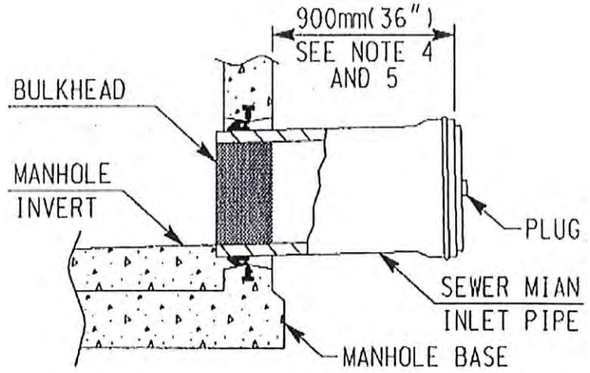
REGISTERED PROFESSIONAL ENGINEER NOEL A. CASTILLO No. 78044 Exp. 9/30/21 CIVIL STATE OF CALIFORNIA

APPROVED:
07/07/2020 DATE
NOEL A. CASTILLO CITY ENGINEER RCE 78044

CITY OF MONTCLAIR
PUBLIC WORKS DEPARTMENT
MONTE VISTA AVE
SANITARY SEWER RELOCATION PLAN
15" SANITARY SEWER RELOCATION (CN-0510P)
FOR THE RTE 10 FRWY

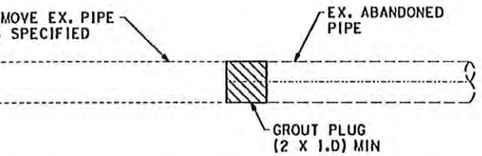
PLANSET 8
SHEET 4 OF 6

REVISION 4-18-22



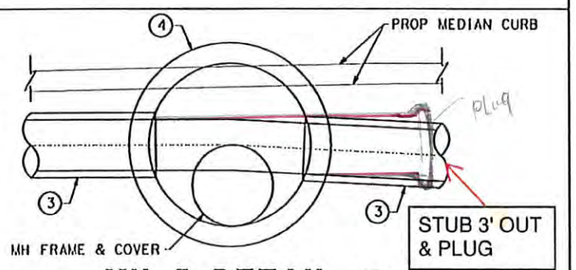
MANHOLE STUB OUT FOR FUTURE CONNECTION

NO SCALE



CUT & PLUG DETAIL (3)

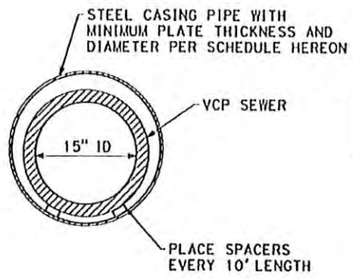
NO SCALE

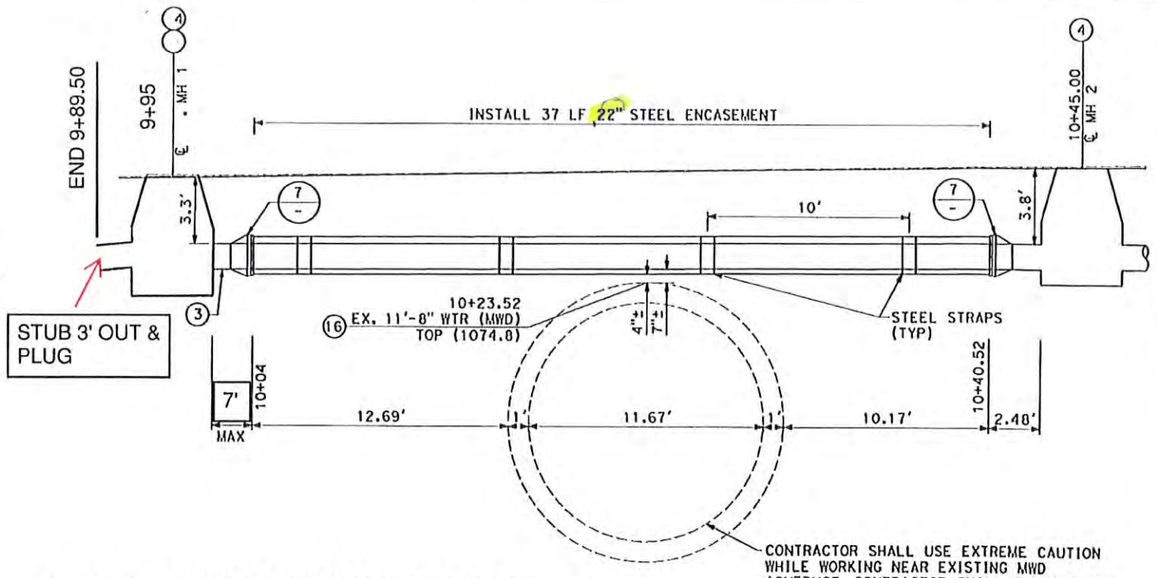


MH 5 DETAIL (4)

(PER CITY STD. NO. 401)
NO SCALE

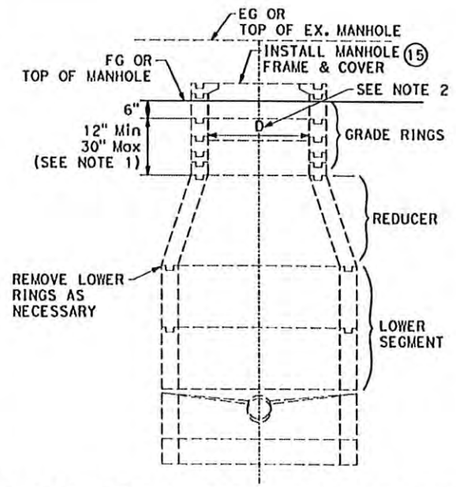
VCP SEWER	STEEL CASING PIPE	
SIZE (I.D.)	SIZE (I.D.)	MIN WALL THICKNESS
15"	22"	3/8"





STEEL ENCASEMENT DETAIL (5)

NO SCALE



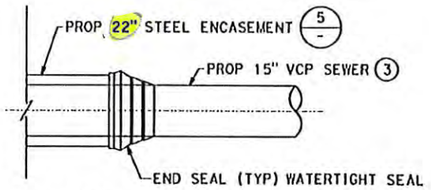
LOWERING EX. MH DETAIL (6)

PRECAST CONCRETE SEWER MANHOLE
RIM ADJUSTMENT

(PER STD. PLAN 205-2 PUBLIC WORKS
CONSTRUCTION "GREENBOOK")

NOTES:

1. LOWERING EXISTING PRECAST CONCRETE SEWER MH'S
   - A. REMOVE SUFFICIENT GRADE RINGS TO LOWER MH AS REQUIRED. APPLY CLASS "D" MORTAR TO A HEIGHT NOT EXCEEDING 3" FOR ADJUSTMENT TO FINAL GRADE.
   - B. WHERE REMOVAL OF GRADE RINGS WOULD RESULT IN THE UPPER SEGMENT OF THE SHAFT BEING LESS THAN 12" IN HEIGHT, REMOVE THE REDUCER AND SUFFICIENT SECTIONS OF THE LOWER SEGMENT OF THE SHAFT AND REINSTALL ANY NECESSARY SEGMENT OF THE LOWER SHAFT, THE REDUCER, AND THE GRADE RINGS TO CONFORM TO THE REQUIREMENTS OF THIS PLAN.
   - C. EXISTING GRADE RINGS NEED NOT BE REMOVED IF EXISTING MORTAR MAY BE REMOVED, AND AT LEAST 1½" OF MORTAR MAY BE PLACED ON TOP OF THE EXISTING GRADE RINGS TO RESEAT THE FRAME.
2. DIMENSION "D" SHALL BE THE SAME AS THE SIZE OF MANHOLE FRAME AND COVER TO BE USED.



SEWER END SEAL DETAIL (7)

NO SCALE

CONSTRUCTION NOTES:

3. INSTALL 15" VCP SEWER
4. INSTALL 48" MANHOLE PER CITY STD. NO. 401
7. ~~REMOVE EXISTING 10" SEWER COMPLETELY WITHIN CALTRANS R/W AND REMOVE INTERFERING PORTIONS AS NECESSARY. CUT & PLUG PER DETAIL 3, SHEET 6~~
8. ~~REMOVE EXISTING 12" SEWER COMPLETELY WITHIN CALTRANS R/W AND REMOVE INTERFERING PORTIONS AS NECESSARY. CUT & PLUG PER DETAIL 3, SHEET 6~~
12. ~~RECHANNEL EXISTING MANHOLE PER CITY STD. NO. 409~~
14. ADJUST MANHOLE TO GRADE PER DETAIL 6, SHEET 6
15. REPLACE EXISTING FRAME AND COVER PER CITY STD. NO. 407
16. PROTECT IN PLACE

LANE SECURITY PAVING COMPANY
RFC
RELEASE FOR CONSTRUCTION
08/04/2020

REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY C. YADIKU DATE
DRAWN BY E. RODRIGUEZ DATE
CHECKED BY C. MARR DATE

REGISTERED PROFESSIONAL ENGINEER CHARLES A. ALVES No. 53435 Exp. 09/30/21 CIVIL STATE OF CALIFORNIA

V&A INC.
9155 FAIRGRAVE AVE
PASADENA, CA 91105
213.972.9100

CHARLES A. ALVES RCE. 53435 LICENSE EXPIRES 09-30-21 — 07/07/2020 DATE

CITY OF MONTCLAIR
MONTCLAIR
Engineering Division of
The Public Works Department
5111 Benito Street, Montclair
CA 91763
Phone: (909) 625-9478

REGISTERED PROFESSIONAL ENGINEER NOEL A. CASTILLO No. 78044 Exp. 9/30/21 CIVIL STATE OF CALIFORNIA

APPROVED: 07/07/2020
NOEL A. CASTILLO, CITY ENGINEER — DATE — RCE 78044

CITY OF MONTCLAIR
PUBLIC WORKS DEPARTMENT
MONTE VISTA AVE
SANITARY SEWER RELOCATION PLAN
UTILITY DETAILS
FOR THE RTE 10 FRWY

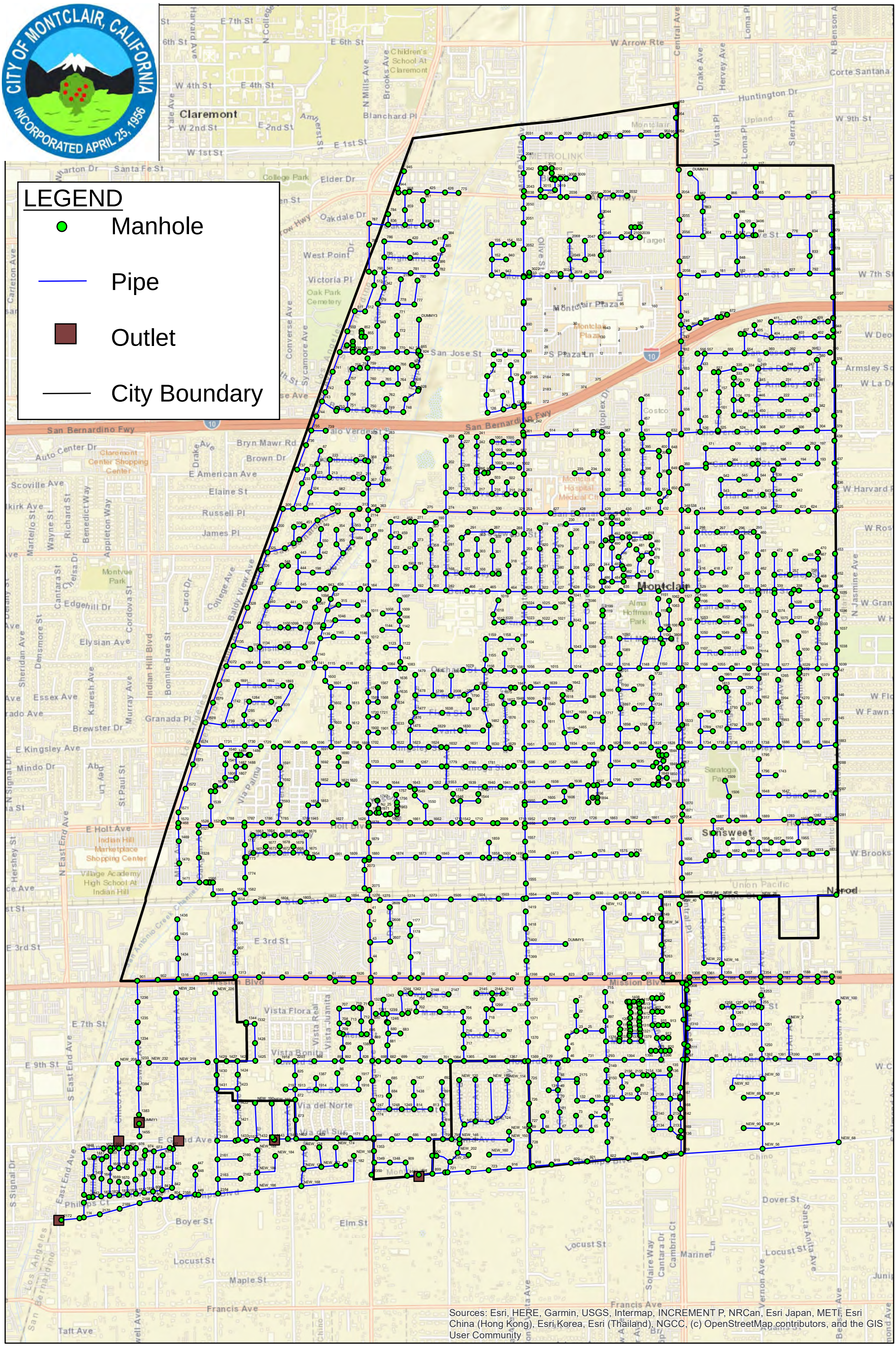
PLANSET 8
SHEET 6 OF 6

Revision 4-18-22

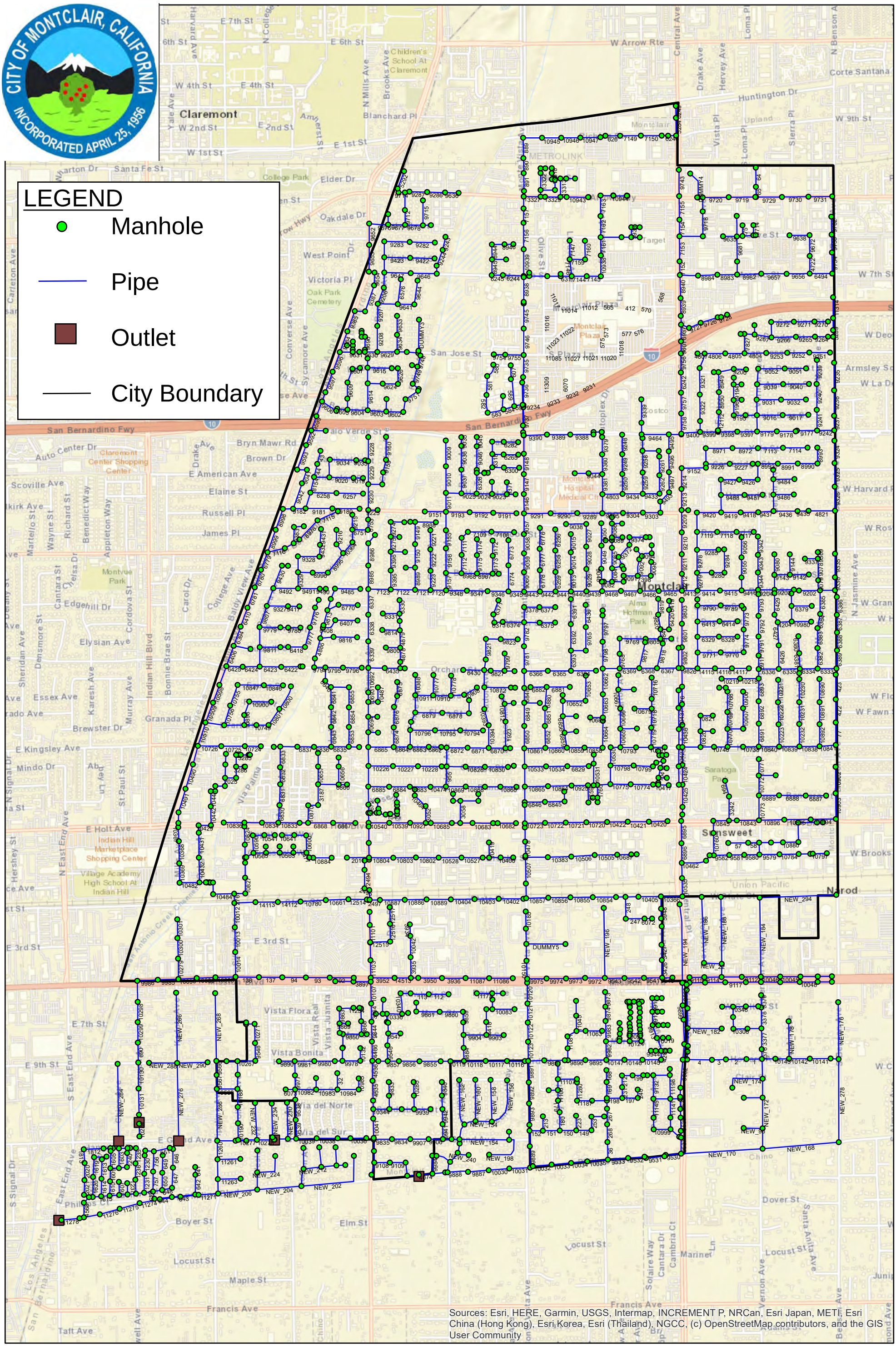
ATTACHMENT B

HYDRAULIC ANALYSIS MAPS AND RESULTS

Manhole Exhibit



Pipe Exhibit



2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
1	1392	83	8	262.713	0.004	0.007	20:10 hr	0.69	0.06	0.61	0.09	-0.41	0.06	0.09	0.69	0.02	0.05
2	83	84	8	349.039	0.004	0.01	20:06 hr	0.804	0.069	0.654	0.103	-0.434	0.069	0.103	0.802	0.022	0.056
3	84	85	8	234.439	0.004	0.011	20:07 hr	0.817	0.072	0.65	0.108	-0.428	0.072	0.108	0.814	0.024	0.058
4	85	1312	8	420.761	0.003	0.015	20:09 hr	0.841	0.089	0.599	0.134	-0.379	0.103	0.155	0.751	0.038	0.069
32	86	1915	8	277.611	0.01	0.004	20:01 hr	0.797	0.035	0.913	0.053	-0.673	0.035	0.053	0.796	0.005	0.034
36	78	922	8	299.995	0.02	0.054	20:08 hr	2.28	0.107	1.474	0.161	-0.9	0.2	0.301	0.234	0.056	0.131
43	87	88	8	227.703	0.018	0.002	20:01 hr	0.837	0.024	1.165	0.036	-0.913	0.024	0.036	0.836	0.002	0.026
44	88	323	8	228.326	0.017	0.003	20:02 hr	0.894	0.027	1.162	0.041	-0.891	0.24	0.36	0.012	0.003	0.029
57	89	90	8	337.112	0.006	0.01	12:03 hr	0.907	0.064	0.763	0.097	-0.511	0.064	0.097	0.907	0.019	0.056
58	90	1958	8	184.871	0.025	0.019	12:04 hr	1.818	0.061	1.568	0.092	-1.059	0.061	0.092	1.818	0.018	0.077
62	119	865	8	13.353	0.004	0.082	12:05 hr	1.432	0.201	0.663	0.301	-0.333	0.208	0.312	0.423	0.197	0.163
64	117	118	8	325.116	0.01	0.02	10:02 hr	1.341	0.078	1.024	0.117	-0.664	0.078	0.117	1.34	0.029	0.079
65	118	119	8	171.32	0.064	0.023	10:02 hr	2.659	0.054	2.456	0.08	-1.695	0.054	0.08	2.658	0.013	0.085
73	121	847	8	94.694	0.004	0.025	20:01 hr	1.079	0.107	0.699	0.16	-0.427	0.195	0.293	0.448	0.056	0.089
74	594	122	8	36.665	0.002	0.004	20:00 hr	0.434	0.055	0.394	0.083	-0.271	0.055	0.083	0.434	0.014	0.035
75	120	121	8	183.278	0.051	0.006	20:00 hr	1.653	0.03	2.034	0.046	-1.533	0.03	0.046	1.652	0.004	0.044
76	882	1534	8	300	0.014	0.011	10:01 hr	1.253	0.055	1.138	0.083	-0.781	0.268	0.401	0.05	0.014	0.059
77	145	1883	8	382	0.015	0.007	20:04 hr	1.134	0.045	1.146	0.067	-0.814	0.045	0.067	1.131	0.009	0.048
78	40	1322	8	66.951	0.012	0.117	12:18 hr	2.397	0.179	1.183	0.268	-0.625	0.179	0.268	2.397	0.157	0.195
92	1926	61	8	405.591	0.005	0.005	10:04 hr	0.708	0.05	0.68	0.075	-0.475	0.067	0.101	0.024	0.011	0.041
93	61	62	8	405.145	0.006	0.018	12:04 hr	1.096	0.084	0.802	0.127	-0.513	0.115	0.172	0.081	0.034	0.076
94	62	63	8	398.111	0.006	0.055	12:08 hr	1.506	0.145	0.83	0.218	-0.47	0.145	0.218	1.506	0.104	0.132
112	2147	2148	8	335.543	0.004	0.005	20:03 hr	0.654	0.053	0.608	0.079	-0.42	0.053	0.079	0.652	0.013	0.041
113	2148	1242	8	307.963	0.004	0.007	20:06 hr	0.713	0.059	0.626	0.089	-0.425	0.059	0.089	0.71	0.016	0.047
137	63	64	8	394.519	0.004	0.083	12:13 hr	1.472	0.199	0.686	0.298	-0.346	0.199	0.298	1.472	0.193	0.164
138	64	1313	8	395.507	0.002	0.089	12:16 hr	1.259	0.234	0.537	0.352	-0.247	0.667	1	0.85	0.265	0.17
148	727	69	10	100.499	0.015	0.197	20:13 hr	2.944	0.204	1.364	0.245	-1.301	0.223	0.267	0.554	0.132	0.24
149	65	66	8	259.565	0.014	0.008	20:01 hr	1.12	0.046	1.117	0.069	-0.789	0.046	0.069	1.119	0.01	0.049
150	66	67	8	278.704	0.014	0.013	20:02 hr	1.324	0.06	1.157	0.09	-0.784	0.06	0.09	1.321	0.017	0.064
151	67	68	8	284.246	0.004	0.033	20:05 hr	1.15	0.122	0.695	0.183	-0.412	0.127	0.19	0.142	0.073	0.101
152	68	69	8	226.832	0.004	0.037	20:07 hr	1.163	0.133	0.672	0.199	-0.39	0.133	0.199	1.158	0.087	0.109
168	2149	2150	8	202.55	0.02	0.005	20:01 hr	1.133	0.036	1.288	0.054	-0.947	0.036	0.054	1.133	0.006	0.041
169	2150	2151	8	273.591	0.018	0.007	20:02 hr	1.223	0.042	1.275	0.063	-0.914	0.042	0.063	1.221	0.008	0.048
170	134	76	8	139.097	0.009	0.044	20:04 hr	1.662	0.117	1.03	0.175	-0.617	0.117	0.175	1.658	0.067	0.118
179	70	71	8	200.501	0.008	0.014	20:04 hr	1.099	0.07	0.887	0.105	-0.587	0.07	0.105	1.097	0.023	0.066
180	71	67	8	312.094	0.016	0.016	20:05 hr	1.48	0.063	1.258	0.095	-0.846	0.063	0.095	1.476	0.019	0.071
197	2152	2153	8	263.792	0.011	0.016	20:01 hr	1.27	0.069	1.032	0.103	-0.684	0.069	0.103	1.269	0.022	0.07
198	2153	2151	8	262.785	0.011	0.025	20:03 hr	1.466	0.087	1.059	0.13	-0.674	0.087	0.13	1.463	0.036	0.089
199	2154	2155	8	178.456	0.009	0.002	20:01 hr	0.68	0.03	0.84	0.045	-0.634	0.03	0.045	0.679	0.004	0.028
200	2155	2156	8	179.783	0.01	0.005	20:01 hr	0.871	0.041	0.925	0.061	-0.667	0.041	0.061	0.87	0.007	0.039
212	2156	79	8	196.747	0.009	0.007	20:02 hr	0.911	0.048	0.889	0.072	-0.624	0.048	0.072	0.91	0.011	0.045
213	72	68	8	244.357	0.016	0.003	20:01 hr	0.925	0.031	1.129	0.046	-0.849	0.031	0.046	0.924	0.004	0.033
223	73	66	8	249.548	0.012	0.003	20:01 hr	0.821	0.032	0.983	0.048	-0.735	0.032	0.048	0.82	0.004	0.032
231	79	2153	8	184.903	0.009	0.007	20:03 hr	0.943	0.051	0.894	0.076	-0.622	0.051	0.076	0.941	0.012	0.048
240	80	2152	8	139.005	0.01	0.002	20:01 hr	0.702	0.03	0.877	0.044	-0.664	0.03	0.044	0.701	0.004	0.028
247	81	82	8	319.8	0.004	0.006	12:05 hr	0.691	0.055	0.63	0.082	-0.433	0.059	0.088	0.027	0.014	0.044

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
248	82	1516	8	368.905	0.004	0.008	12:09 hr	0.733	0.063	0.623	0.095	-0.419	0.285	0.427	0.035	0.019	0.05
253	74	65	8	233.44	0.016	0.004	20:01 hr	0.931	0.031	1.128	0.047	-0.846	0.031	0.047	0.931	0.004	0.033
259	75	74	8	213.845	0.016	0.001	20:01 hr	0.645	0.018	1.037	0.027	-0.85	0.018	0.027	0.645	0.001	0.018
267	76	77	8	265.077	0.01	0.045	20:05 hr	1.698	0.117	1.049	0.175	-0.628	0.117	0.175	1.691	0.067	0.12
268	77	78	8	300.29	0.016	0.053	20:06 hr	2.098	0.112	1.324	0.169	-0.8	0.112	0.169	2.089	0.062	0.13
422	146	145	8	392	0.017	0.006	20:02 hr	1.095	0.038	1.212	0.056	-0.884	0.038	0.056	1.093	0.006	0.041
423	147	146	8	418	0.016	0.003	20:02 hr	0.869	0.028	1.125	0.041	-0.862	0.028	0.041	0.867	0.003	0.029
479	1787	1771	8	66.581	0.014	0.139	20:10 hr	2.663	0.188	1.28	0.281	-0.664	0.188	0.281	2.653	0.173	0.213
554	927	928	8	31.164	0.006	0.003	20:03 hr	0.655	0.036	0.737	0.055	-0.541	0.036	0.055	0.654	0.006	0.031
580	123	124	8	235.289	0.014	0.004	20:01 hr	0.898	0.032	1.08	0.048	-0.809	0.057	0.085	0.016	0.004	0.033
581	124	125	8	320.2	0.013	0.03	10:02 hr	1.676	0.09	1.19	0.134	-0.752	0.104	0.156	0.134	0.039	0.098
582	125	126	8	304.386	0.005	0.032	10:05 hr	1.177	0.119	0.721	0.179	-0.43	0.124	0.186	0.142	0.07	0.101
583	126	NJ_32	8	272.701	0.004	0.033	10:08 hr	1.084	0.129	0.636	0.194	-0.371	0.129	0.194	1.083	0.082	0.103
584	NJ_32	127	8	190.206	0.004	0.035	10:09 hr	1.196	0.126	0.711	0.189	-0.418	0.127	0.191	0.156	0.078	0.106
585	13	NJ_32	6	230.285	0.01	0.003	20:02 hr	0.818	0.037	0.909	0.074	-0.309	0.037	0.074	0.816	0.011	0.035
589	129	127	8	463.413	0.011	0.008	20:03 hr	1.064	0.05	1.019	0.075	-0.711	0.09	0.136	0.036	0.011	0.05
590	127	371	8	145.979	0.005	0.042	20:04 hr	1.349	0.131	0.785	0.197	-0.457	0.214	0.321	0.962	0.085	0.116
607	128	129	8	233.711	0.022	0.004	20:01 hr	1.074	0.03	1.334	0.045	-1.008	0.03	0.045	1.073	0.004	0.035
622	2019	1953	8	20.82	0.009	0.013	20:07 hr	1.138	0.065	0.95	0.098	-0.635	0.201	0.301	0.057	0.02	0.064
626	2066	2067	8	249.859	0.004	0.159	20:02 hr	1.754	0.281	0.682	0.422	-0.268	0.281	0.422	1.753	0.372	0.229
631	2078	3023	12	187.026	0.005	0.728	20:07 hr	2.89	0.497	0.852	0.497	-0.742	0.497	0.497	2.881	0.495	0.447
641	447	448	8	131.703	0.006	0.006	20:01 hr	0.763	0.048	0.745	0.072	-0.523	0.048	0.072	0.762	0.01	0.041
642	448	449	8	333.094	0.005	0.012	20:03 hr	0.862	0.073	0.681	0.109	-0.447	0.073	0.109	0.86	0.025	0.06
643	449	804	8	397.599	0.004	0.012	20:06 hr	0.816	0.076	0.632	0.113	-0.412	0.076	0.113	0.811	0.027	0.06
644	804	805	8	297.245	0.003	0.013	20:08 hr	0.751	0.087	0.54	0.131	-0.343	0.087	0.131	0.747	0.037	0.064
645	805	806	8	125.574	0.003	0.013	20:10 hr	0.776	0.085	0.564	0.128	-0.36	0.085	0.128	0.77	0.035	0.064
646	936	845	8	317.291	0.009	0.019	20:02 hr	1.254	0.078	0.955	0.117	-0.619	0.078	0.117	1.252	0.029	0.077
647	845	842	8	342.576	0.004	0.036	20:04 hr	1.11	0.135	0.635	0.203	-0.367	0.135	0.203	1.107	0.09	0.107
648	842	841	8	172.568	0.004	0.042	20:05 hr	1.199	0.143	0.668	0.214	-0.381	0.143	0.214	1.196	0.1	0.116
649	935	843	8	294.993	0.01	0.01	20:02 hr	1.085	0.057	0.967	0.086	-0.66	0.057	0.086	1.083	0.015	0.057
650	843	841	8	292.288	0.006	0.018	20:04 hr	1.06	0.087	0.763	0.131	-0.485	0.087	0.131	1.058	0.037	0.076
651	937	973	8	276.321	0.005	0.013	20:02 hr	0.921	0.074	0.724	0.11	-0.474	0.074	0.11	0.919	0.026	0.063
673	1604	1950	8	46.647	0.008	0.428	20:18 hr	2.874	0.418	0.952	0.627	-0.168	0.418	0.627	2.855	0.718	0.383
690	1234	1233	21	337.234	0.012	8.444	21:18 hr	7.091	1.253	1.402	0.716	-1.356	1.253	0.716	7.069	0.862	1.346
694	1509	1506	8	274.433	0.027	0.002	10:01 hr	0.915	0.02	1.376	0.031	-1.103	0.02	0.031	0.915	0.002	0.024
721	1404	DUMMY2	8	14.786	0.005	0.187	20:14 hr	1.955	0.293	0.746	0.44	-0.28	0.293	0.44	1.939	0.4	0.249
722	1443	1908	8	9.615	0.006	0.074	20:08 hr	1.666	0.167	0.853	0.25	-0.463	0.206	0.308	0.324	0.137	0.154
738	2111	1312	8	134.53	0.015	0.11	20:24 hr	2.554	0.163	1.322	0.245	-0.722	0.163	0.245	2.535	0.132	0.189
755	974	973	8	145.896	0.015	0.009	20:00 hr	1.2	0.047	1.18	0.071	-0.831	0.047	0.071	1.199	0.01	0.052
756	973	844	8	341.151	0.008	0.03	20:04 hr	1.398	0.1	0.939	0.15	-0.582	0.1	0.15	1.394	0.048	0.097
757	844	806	8	337.058	0.006	0.04	20:06 hr	1.337	0.127	0.792	0.19	-0.466	0.127	0.19	1.332	0.079	0.113
758	841	806	8	156.351	0.003	0.063	20:05 hr	1.248	0.184	0.606	0.276	-0.317	0.184	0.276	1.244	0.167	0.142
877	NJ_37	2032	8	7.539	0.009	0	00:00 hr	0	0	0	0	-0.654	0.022	0.033	0	0	0
878	NJ_36	2032	8	6.007	0.005	0.015	10:00 hr	0.97	0.082	0.722	0.123	-0.464	0.082	0.123	0.97	0.032	0.069
879	NJ_35	2033	8	6.91	0.004	0	00:00 hr	0	0	0	0	-0.447	0.093	0.14	0	0	0
882	2033	2034	8	216.526	0.004	0.185	20:02 hr	1.812	0.309	0.675	0.463	-0.237	0.309	0.463	1.81	0.439	0.248

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
885	NJ_34	2035	8	6.803	0.006	0.006	10:00 hr	0.788	0.052	0.741	0.078	-0.514	0.052	0.078	0.788	0.012	0.045
889	2031	2041	12	344.963	0.003	0.402	20:09 hr	2.037	0.412	0.655	0.412	-0.728	0.412	0.412	2.032	0.355	0.328
890	2041	2042	12	253.135	0.032	0.402	20:09 hr	4.657	0.226	2.055	0.226	-3.171	0.226	0.226	4.641	0.112	0.328
891	2042	2043	12	304.025	0.039	0.407	20:11 hr	5.018	0.217	2.265	0.217	-3.542	0.217	0.217	4.999	0.103	0.33
892	2043	2038	12	92.996	0.049	0.407	20:11 hr	5.432	0.205	2.525	0.205	-4.009	0.41	0.41	0.791	0.092	0.33
955	1779	1553	8	340.082	0.013	0.111	20:12 hr	2.434	0.17	1.232	0.256	-0.663	0.17	0.256	2.418	0.143	0.19
992	1833	NJ_42	8	40.589	0.003	0.005	12:04 hr	0.558	0.052	0.525	0.078	-0.365	0.052	0.078	0.558	0.012	0.037
1042	1582	1583	8	186.784	0.013	0.155	20:17 hr	2.70	0.20	1.25	0.30	-0.63	0.20	0.30	2.68	0.20	0.23
1109	696	1386	8	13.893	0.071	0.02	20:04 hr	2.657	0.049	2.561	0.074	-1.792	0.049	0.074	2.652	0.011	0.079
1110	693	696	8	228.698	0.011	0.019	20:04 hr	1.373	0.076	1.063	0.114	-0.693	0.076	0.114	1.369	0.027	0.078
1193	1913	672	8	171.27	0.007	0.129	20:07 hr	2.045	0.216	0.911	0.324	-0.441	0.216	0.324	2.035	0.227	0.206
1230	975	1815	8	309.931	0.007	0.01	20:03 hr	0.948	0.062	0.814	0.093	-0.549	0.062	0.093	0.945	0.018	0.056
1231	1815	1816	8	320.807	0.007	0.02	20:03 hr	1.206	0.085	0.88	0.128	-0.562	0.131	0.196	0.832	0.035	0.08
1232	806	1816	8	151.249	0.003	0.118	20:07 hr	1.397	0.267	0.557	0.401	-0.231	0.267	0.401	1.391	0.338	0.196
1233	1816	1817	8	140.165	0.003	0.141	20:08 hr	1.573	0.279	0.614	0.419	-0.244	0.279	0.419	1.565	0.366	0.215
1234	977	976	8	100.093	0.001	0.004	20:01 hr	0.415	0.058	0.367	0.088	-0.25	0.058	0.088	0.415	0.016	0.035
1235	976	1843	8	257.219	0.008	0.012	20:02 hr	1.034	0.064	0.869	0.097	-0.582	0.064	0.097	1.032	0.019	0.06
1236	1843	1814	8	275.695	0.006	0.016	20:04 hr	1.062	0.081	0.796	0.121	-0.513	0.081	0.121	1.059	0.031	0.072
1237	1814	1817	8	238.073	0.009	0.022	20:04 hr	1.346	0.084	0.989	0.126	-0.633	0.129	0.193	0.929	0.034	0.083
1238	1817	1818	8	143.486	0.005	0.166	20:09 hr	1.876	0.277	0.735	0.416	-0.294	0.277	0.416	1.867	0.362	0.234
1239	1671	1818	8	188.74	0.013	0.006	20:01 hr	1.017	0.042	1.065	0.063	-0.764	0.083	0.124	0.836	0.008	0.043
1240	992	1650	8	238.769	0.01	0.007	20:01 hr	0.97	0.048	0.949	0.072	-0.666	0.048	0.072	0.969	0.01	0.047
1352	NJ_41	1289	8	6.596	0.006	0.001	20:00 hr	0.417	0.019	0.651	0.029	-0.528	0.043	0.064	0.302	0.001	0.015
1524	1756	NJ_29	8	51.825	0.016	0.001	20:00 hr	0.606	0.016	1.034	0.024	-0.863	0.667	1	0.004	0.001	0.016
1537	1978	1977	8	25.302	0.003	0.006	20:03 hr	0.615	0.057	0.55	0.086	-0.376	0.667	1	0.38	0.015	0.042
1538	NJ_24	1978	8	110.683	0.004	0.006	20:02 hr	0.677	0.054	0.626	0.08	-0.432	0.667	1	0.547	0.013	0.042
1539	1971	NJ_24	8	41.92	0.003	0.004	20:02 hr	0.562	0.048	0.552	0.071	-0.388	0.667	1	0.018	0.01	0.035
1543	NJ_28	NJ_27	8	13.065	0.005	0.003	20:01 hr	0.547	0.036	0.622	0.053	-0.457	0.667	1	0.011	0.006	0.028
1545	1962	NJ_28	8	112.8	0.004	0.003	20:01 hr	0.517	0.037	0.576	0.056	-0.421	0.667	1	0.487	0.006	0.028
1546	1963	1962	8	48.642	0.025	0.002	20:00 hr	0.951	0.023	1.363	0.034	-1.077	0.667	1	0.01	0.002	0.026
1547	NJ_29	NJ_30	8	71.621	0.012	0.002	20:00 hr	0.691	0.025	0.946	0.037	-0.737	0.667	1	0.651	0.003	0.024
1601	991	993	8	145.753	0.028	0.004	20:00 hr	1.177	0.029	1.495	0.043	-1.138	0.029	0.043	1.176	0.003	0.035
1602	994	993	8	99.243	0.062	0.004	20:00 hr	1.532	0.024	2.145	0.035	-1.683	0.024	0.035	1.532	0.002	0.035
1603	993	1667	8	331.776	0.008	0.015	20:02 hr	1.144	0.073	0.906	0.109	-0.595	0.073	0.109	1.142	0.025	0.069
1604	1650	1667	8	135.756	0.003	0.008	20:02 hr	0.669	0.066	0.554	0.099	-0.37	0.066	0.099	0.667	0.021	0.049
1605	1069	1668	8	290.577	0.016	0.007	20:01 hr	1.143	0.041	1.203	0.062	-0.865	0.041	0.062	1.141	0.008	0.046
1606	1667	1668	8	145.753	0.003	0.023	20:03 hr	0.958	0.109	0.615	0.163	-0.375	0.109	0.163	0.956	0.058	0.085
1607	1670	1819	8	221.226	0.006	0.007	20:02 hr	0.8	0.054	0.738	0.081	-0.509	0.087	0.131	0.676	0.013	0.046
1608	1818	1819	8	140.795	0.003	0.175	20:10 hr	1.591	0.327	0.578	0.491	-0.187	0.327	0.491	1.583	0.484	0.241
1609	1668	1669	8	220.348	0.009	0.035	20:04 hr	1.531	0.105	1.003	0.157	-0.615	0.105	0.157	1.527	0.053	0.105
1610	1669	1820	8	244.16	0.01	0.041	20:05 hr	1.644	0.112	1.04	0.168	-0.629	0.146	0.219	1.393	0.061	0.114
1611	1819	1820	8	163.278	0.003	0.186	20:11 hr	1.696	0.325	0.617	0.488	-0.201	0.325	0.488	1.687	0.48	0.248
1612	1303	1447	8	210.958	0.008	0.009	20:01 hr	0.969	0.056	0.876	0.084	-0.6	0.056	0.084	0.968	0.014	0.052
1613	1304	1649	8	327.041	0.013	0.009	20:02 hr	1.147	0.051	1.087	0.077	-0.756	0.051	0.077	1.145	0.012	0.053
1614	1649	1821	8	299.345	0.009	0.017	20:02 hr	1.242	0.075	0.966	0.113	-0.631	0.136	0.205	0.972	0.027	0.074
1615	1820	1821	8	141.736	0.003	0.229	20:11 hr	1.693	0.386	0.576	0.579	-0.132	0.386	0.579	1.685	0.635	0.277

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1616	1821	1822	8	143.891	0.003	0.25	20:11 hr	1.748	0.404	0.585	0.605	-0.117	0.404	0.605	1.74	0.681	0.289
1617	1822	1842	8	64.987	0.009	0.276	20:11 hr	2.788	0.301	1.05	0.452	-0.381	0.366	0.549	1.202	0.42	0.305
1618	1823	1842	8	91.891	0.005	0.07	20:04 hr	1.555	0.17	0.789	0.254	-0.425	0.302	0.452	0.616	0.142	0.15
1619	1447	1451	8	334.062	0.009	0.017	20:02 hr	1.229	0.075	0.959	0.112	-0.627	0.075	0.112	1.227	0.026	0.073
1620	1451	1822	8	340.14	0.012	0.026	20:04 hr	1.559	0.085	1.139	0.127	-0.728	0.141	0.212	0.929	0.034	0.091
1759	1899	1898	8	289.554	0.004	0.014	20:02 hr	0.901	0.083	0.667	0.124	-0.428	0.111	0.166	0.786	0.033	0.067
1760	1895	1897	8	212.99	0.004	0.009	20:02 hr	0.768	0.067	0.634	0.1	-0.422	0.067	0.1	0.767	0.021	0.053
1811	1068	1070	8	116.854	0.002	0.003	20:01 hr	0.418	0.049	0.406	0.073	-0.285	0.049	0.073	0.417	0.011	0.031
1812	1070	1448	8	335.197	0.005	0.023	20:03 hr	1.078	0.1	0.723	0.15	-0.447	0.1	0.15	1.076	0.049	0.085
1813	1448	1449	8	231.319	0.012	0.034	20:04 hr	1.664	0.097	1.132	0.146	-0.705	0.097	0.146	1.661	0.046	0.104
1921	1706	1878	18	61.691	0.008	6.568	20:45 hr	5.75	1.5	1.093	1	1.364	1.5	1	5.673	1.262	1.228
1923	1876	1629	8	449.831	0	0.011	20:05 hr	0.352	0.129	0.207	0.193	-0.121	0.129	0.193	0.351	0.082	0.058
1940	857	768	8	94.728	0.001	0.052	20:11 hr	0.8	0.22	0.352	0.331	-0.168	0.22	0.331	0.796	0.236	0.129
1941	1858	1501	8	108.528	0.008	0.035	10:04 hr	1.475	0.108	0.951	0.162	-0.58	0.161	0.242	0.155	0.057	0.105
1992	1699	1825	8	165.829	0.005	0.047	20:07 hr	1.36	0.141	0.762	0.211	-0.436	0.141	0.211	1.354	0.098	0.123
2009	1810	1794	8	68.766	0.009	0.006	10:01 hr	0.904	0.045	0.914	0.067	-0.649	0.045	0.067	0.904	0.009	0.043
2010	1813	1810	4	110.742	0.019	0.006	10:01 hr	1.257	0.045	1.26	0.135	-0.141	0.045	0.135	1.257	0.039	0.051
2011	1809	1880	8	373.349	0.001	0.002	12:05 hr	0.252	0.053	0.235	0.079	-0.163	0.053	0.079	0.252	0.013	0.025
2020	1449	1450	8	291.411	0.012	0.049	20:03 hr	1.866	0.116	1.158	0.174	-0.695	0.116	0.174	1.863	0.066	0.125
2021	1450	1823	8	248.516	0.011	0.061	20:03 hr	1.923	0.133	1.113	0.199	-0.646	0.133	0.199	1.919	0.087	0.14
2025	1807	1806	8	185.444	0.011	0.019	20:01 hr	1.338	0.075	1.038	0.113	-0.677	0.078	0.118	0.083	0.027	0.077
2125	1744	1746	8	71.389	0.006	0.169	12:17 hr	2.042	0.263	0.821	0.394	-0.346	0.263	0.394	2.039	0.328	0.236
2225	1952	1558	8	70.602	0.019	0.486	20:20 hr	4.196	0.34	1.498	0.511	-0.452	0.34	0.511	4.166	0.518	0.41
2261	1721	1720	8	151.633	0.009	0.003	20:01 hr	0.679	0.031	0.831	0.046	-0.626	0.667	1	0.608	0.004	0.028
2424	1958	1684	8	202.318	0.008	0.056	12:08 hr	1.695	0.136	0.969	0.204	-0.559	0.136	0.204	1.695	0.091	0.134
2476	1674	2019	8	140.832	0.002	0.013	20:07 hr	0.692	0.092	0.485	0.138	-0.305	0.092	0.138	0.689	0.041	0.064
2477	1954	1675	8	94.134	0.004	0.002	20:00 hr	0.447	0.032	0.535	0.048	-0.4	0.032	0.048	0.447	0.004	0.023
2480	1842	115	8	126.243	0.004	0.349	20:10 hr	2.211	0.44	0.722	0.659	-0.103	0.44	0.659	2.204	0.772	0.345
2494	2073	2074	21	312.19	0.006	6.649	20:49 hr	5.097	1.369	0.996	0.782	-0.312	1.369	0.782	5.095	0.955	1.195
2495	2074	2075	21	88.81	0.014	6.649	20:49 hr	7.157	1.01	1.504	0.577	-3.867	1.01	0.577	7.143	0.632	1.195
2496	2076	2077	21	79.95	0.005	6.647	20:47 hr	4.276	1.75	0.9	1	0.353	1.75	1	4.613	1.056	1.195
2497	1275	2125	15	174.841	0.014	1.093	20:47 hr	4.549	0.428	1.436	0.342	-3.237	1.137	0.91	1.371	0.252	0.516
2498	1276	2125	18	5.741	0.03	6.648	20:50 hr	9.478	0.885	2.135	0.59	-3.503	1.5	1	5.78	0.655	1.234
2499	2125	2126	24	26.32	0.003	7.741	20:50 hr	3.812	2	0.671	1	1.188	2	1	3.787	1.181	1.243
2500	2126	2127	24	22.11	0.003	7.741	20:50 hr	3.812	2	0.678	1	1.122	2	1	3.787	1.17	1.243
2761	1583	1614	15	158.481	0.003	0.523	20:39 hr	2.07	0.444	0.641	0.355	-1.411	0.542	0.434	1.901	0.27	0.352
3023	1563	1564	12	41.74	0.003	0.373	20:44 hr	1.922	0.407	0.622	0.407	-0.7	0.407	0.407	1.918	0.347	0.316
3024	NJ_2	NJ_8	10	42.691	0.01	0.2	20:44 hr	2.555	0.228	1.115	0.274	-1.02	0.833	1	0.562	0.164	0.241
3025	1562	1566	12	107.332	0.003	0.372	20:44 hr	1.99	0.395	0.653	0.395	-0.755	0.395	0.395	1.985	0.33	0.315
3038	1556	1472	10	25.067	0.004	0.493	20:22 hr	2.334	0.482	0.71	0.578	-0.285	0.482	0.578	2.316	0.634	0.385
3052	1550	1551	8	288.253	0.012	0.027	10:01 hr	1.557	0.086	1.129	0.129	-0.719	0.667	1	0.118	0.036	0.092
3058	1545	1542	8	376.886	0.013	0.012	20:03 hr	1.26	0.057	1.124	0.086	-0.767	0.057	0.086	1.259	0.015	0.061
3092	1537	1538	8	73.31	0.028	0.054	20:00 hr	2.589	0.099	1.751	0.148	-1.087	0.099	0.148	2.589	0.047	0.131
3159	1869	1868	8	60.907	0.006	0.038	10:12 hr	1.317	0.123	0.793	0.184	-0.469	0.123	0.184	1.317	0.074	0.109
3160	1871	1654	8	112.743	0.015	0.34	20:27 hr	3.46	0.299	1.307	0.449	-0.479	0.299	0.449	3.42	0.415	0.34
3186	1856	1857	8	85.372	0.017	0.025	20:01 hr	1.723	0.077	1.323	0.116	-0.859	0.077	0.116	1.723	0.028	0.089

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3187	1852	1853	8	352.973	0.013	0.019	20:04 hr	1.447	0.073	1.144	0.109	-0.751	0.073	0.109	1.443	0.025	0.078
3202	1853	1854	8	166.645	0.005	0.02	20:05 hr	1.037	0.092	0.726	0.138	-0.456	0.092	0.138	1.034	0.041	0.078
3238	1851	1856	8	31.186	0.019	0.015	20:01 hr	1.552	0.059	1.364	0.089	-0.926	0.059	0.089	1.551	0.016	0.069
3239	1841	1845	8	99.387	0.024	0	00:00 hr	0	0	0	0	-1.041	0	0	0	0	0
3242	1506	1507	8	409.63	0.017	0.016	10:03 hr	1.508	0.062	1.298	0.092	-0.876	0.062	0.092	1.508	0.018	0.07
3251	1554	1502	15	48.946	0.003	1.074	20:30 hr	2.439	0.679	0.62	0.543	-0.796	0.679	0.543	2.422	0.574	0.511
3277	1488	NJ_20	8	9.394	0.021	0.007	20:00 hr	1.286	0.041	1.365	0.061	-0.983	0.044	0.065	0.934	0.007	0.048
3279	NJ_19	NJ_18	8	46.194	0.002	0.001	20:01 hr	0.292	0.024	0.403	0.036	-0.315	0.024	0.036	0.292	0.002	0.015
3281	NJ_18	1485	8	34.128	0.019	0.001	20:00 hr	0.69	0.017	1.134	0.026	-0.936	0.017	0.026	0.69	0.001	0.018
3284	NJ_23	NJ_22	8	13.248	0.014	0	19:59 hr	0.427	0.011	0.889	0.016	-0.791	0.013	0.019	0.001	0	0.01
3285	NJ_22	NJ_19	8	132.268	0.014	0.001	20:00 hr	0.537	0.015	0.94	0.023	-0.791	0.015	0.023	0.537	0.001	0.015
3286	NJ_20	1487	8	141.084	0.013	0.008	20:00 hr	1.109	0.046	1.105	0.069	-0.78	0.046	0.069	1.109	0.01	0.049
3287	1486	NJ_23	8	9.542	0.013	0	19:59 hr	0.401	0.01	0.851	0.015	-0.761	0.011	0.016	0.001	0	0.01
3361	1570	1468	10	71.585	0.005	0.309	20:41 hr	2.33	0.335	0.83	0.402	-0.599	0.335	0.402	2.32	0.34	0.302
3376	1250	1392	8	165.058	0.008	0.007	20:07 hr	0.909	0.051	0.864	0.076	-0.602	0.069	0.104	0.031	0.012	0.047
3377	1251	1250	8	350.661	0.008	0.007	20:06 hr	0.887	0.05	0.848	0.075	-0.592	0.05	0.075	0.884	0.011	0.046
3378	1252	1251	8	354.145	0.012	0.001	20:02 hr	0.638	0.022	0.935	0.032	-0.745	0.022	0.032	0.637	0.002	0.021
3379	1253	1252	8	207.062	0.011	0.001	20:01 hr	0.494	0.015	0.86	0.023	-0.722	0.015	0.023	0.493	0.001	0.014
3387	1245	1246	8	22.426	0.004	0.014	20:07 hr	0.837	0.085	0.612	0.127	-0.391	0.085	0.127	0.835	0.034	0.066
3388	1239	1245	8	137.358	0.005	0.014	20:08 hr	0.968	0.076	0.748	0.114	-0.488	0.076	0.114	0.965	0.027	0.066
3426	1263	1264	8	299.672	0.013	0.01	12:05 hr	1.187	0.054	1.094	0.081	-0.754	0.054	0.081	1.187	0.013	0.056
3427	1262	1263	8	260.137	0.009	0.009	12:03 hr	1.002	0.054	0.925	0.081	-0.638	0.054	0.081	1.002	0.013	0.052
3650	1398	1373	8	67.793	0.006	0.105	12:30 hr	1.856	0.199	0.863	0.299	-0.435	0.38	0.57	0.466	0.194	0.185
3779	1369	1368	8	56.463	0.004	0.062	20:08 hr	1.36	0.17	0.69	0.255	-0.371	0.17	0.255	1.359	0.142	0.141
3807	1350	1349	8	212.358	0.004	0.001	20:02 hr	0.404	0.025	0.553	0.037	-0.431	0.025	0.037	0.404	0.003	0.018
3821	NJ_21	1333	8	3.524	0.028	0.005	20:00 hr	1.291	0.033	1.528	0.049	-1.138	0.069	0.104	0.937	0.005	0.041
3827	1344	1333	8	27.908	0.018	0.021	10:00 hr	1.665	0.07	1.343	0.105	-0.887	0.07	0.105	1.665	0.023	0.081
3828	1333	1332	8	143.388	0.006	0.033	10:01 hr	1.279	0.114	0.803	0.171	-0.484	0.114	0.171	1.279	0.063	0.102
3864	1323	690	8	309.287	0.005	0.119	12:24 hr	1.717	0.23	0.739	0.345	-0.345	0.23	0.345	1.717	0.256	0.197
3889	1312	1397	8	71.628	0.006	0.124	20:24 hr	1.908	0.221	0.84	0.331	-0.401	0.221	0.331	1.896	0.237	0.202
3890	1311	2111	8	96.408	0.006	0.11	20:24 hr	1.865	0.205	0.855	0.307	-0.426	0.205	0.307	1.852	0.205	0.189
3891	1307	1308	8	92.536	0.004	0.099	20:17 hr	1.533	0.22	0.676	0.33	-0.324	0.22	0.33	1.523	0.235	0.179
3892	1305	1307	8	58.475	0.011	0.099	20:17 hr	2.243	0.167	1.147	0.251	-0.622	0.167	0.251	2.229	0.138	0.179
3893	1306	1305	8	91.891	0.017	0.088	20:17 hr	2.528	0.141	1.413	0.212	-0.807	0.141	0.212	2.508	0.099	0.169
3897	1302	1322	8	291.555	0.004	0.001	10:05 hr	0.424	0.027	0.559	0.04	-0.43	0.142	0.212	0.006	0.003	0.02
3908	1198	1377	8	43.659	0.054	0.003	20:01 hr	1.408	0.023	1.995	0.035	-1.571	0.064	0.096	0.015	0.002	0.033
3909	1197	1378	8	92.238	0.026	0.014	20:02 hr	1.673	0.052	1.572	0.078	-1.09	0.073	0.109	0.435	0.012	0.065
3910	1196	1197	8	33.11	0.011	0.013	20:02 hr	1.225	0.063	1.046	0.094	-0.704	0.063	0.094	1.225	0.018	0.064
3934	1177	1178	8	193.601	0.01	0.01	12:01 hr	1.104	0.057	0.989	0.085	-0.676	0.057	0.085	1.104	0.015	0.057
3935	1179	1180	8	353.32	0.006	0.015	12:09 hr	1.048	0.077	0.803	0.116	-0.521	0.077	0.116	1.048	0.029	0.069
3936	36	37	8	397.578	0.006	0.044	12:08 hr	1.443	0.128	0.851	0.192	-0.499	0.128	0.192	1.443	0.081	0.118
3939	1351	688	10	23.503	0.008	0.212	12:53 hr	2.42	0.247	1.011	0.296	-0.895	0.247	0.296	2.42	0.191	0.248
3950	37	38	8	401.684	0.008	0.045	12:10 hr	1.547	0.125	0.924	0.188	-0.544	0.125	0.188	1.547	0.077	0.12
3951	38	1180	8	125.738	0.004	0.046	12:12 hr	1.266	0.146	0.697	0.219	-0.394	0.146	0.219	1.266	0.105	0.121
3952	39	40	8	402.575	0.016	0.062	12:17 hr	2.188	0.122	1.326	0.182	-0.787	0.122	0.182	2.188	0.073	0.14
4001	918	917	10	51.401	0.01	0.303	20:36 hr	2.902	0.281	1.131	0.337	-0.935	0.281	0.337	2.88	0.245	0.299

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
4072	898	1203	15	26.547	0.006	0.833	20:31 hr	3.161	0.458	0.963	0.367	-2.07	0.458	0.367	3.131	0.287	0.448
4073	910	898	10	198.074	0.005	0.278	20:29 hr	2.145	0.329	0.771	0.395	-0.565	0.387	0.464	0.767	0.33	0.286
4074	899	898	15	230.678	0.004	0.555	20:32 hr	2.38	0.419	0.76	0.335	-1.736	0.419	0.335	2.362	0.242	0.363
4129	1164	1165	10	28.721	0.003	0.249	20:28 hr	1.867	0.336	0.664	0.404	-0.477	0.336	0.404	1.851	0.343	0.27
4130	1162	1163	10	29.621	0.003	0.248	20:25 hr	1.843	0.338	0.654	0.406	-0.467	0.338	0.406	1.83	0.346	0.269
4204	2121	1075	8	236.91	0.006	0.012	20:05 hr	0.957	0.07	0.771	0.105	-0.51	0.07	0.105	0.954	0.023	0.061
4227	856	857	8	38.494	0.038	0.002	20:02 hr	1.053	0.019	1.634	0.029	-1.324	0.019	0.029	1.052	0.001	0.025
4228	854	855	8	59.899	0.009	0.002	20:00 hr	0.601	0.025	0.819	0.037	-0.637	0.025	0.037	0.601	0.003	0.023
4285	808	1396	8	150.583	0.014	0.042	10:08 hr	1.874	0.103	1.236	0.155	-0.76	0.103	0.155	1.872	0.052	0.115
4415	721	720	15	41.051	0.004	0.554	20:30 hr	2.305	0.428	0.727	0.343	-1.639	0.428	0.343	2.284	0.252	0.363
4418	718	719	8	220.586	0.015	0.009	20:06 hr	1.214	0.05	1.158	0.075	-0.808	0.05	0.075	1.209	0.012	0.054
4486	689	697	8	326.872	0.016	0.119	12:28 hr	2.681	0.167	1.372	0.251	-0.743	0.167	0.251	2.681	0.138	0.197
4526	674	1299	8	160.612	0.035	0.007	20:03 hr	1.525	0.036	1.719	0.054	-1.262	0.036	0.054	1.521	0.006	0.048
4535	671	1173	10	335.705	0.011	0.209	12:50 hr	2.732	0.224	1.203	0.269	-1.109	0.224	0.269	2.731	0.159	0.247
4536	697	671	10	336.688	0.011	0.208	12:48 hr	2.722	0.225	1.198	0.269	-1.104	0.225	0.269	2.721	0.159	0.247
4568	115	114	8	249.467	0.005	0.351	20:12 hr	2.34	0.421	0.773	0.632	-0.133	0.421	0.632	2.328	0.726	0.346
4722	833	792	8	299.657	0.004	0.021	20:04 hr	0.992	0.099	0.668	0.149	-0.414	0.099	0.149	0.991	0.048	0.081
4723	829	830	8	43.432	0.038	0	20:00 hr	0.623	0.009	1.438	0.013	-1.322	0.009	0.013	0.623	0	0.01
4803	553	507	8	339.362	0.006	0.038	20:08 hr	1.344	0.121	0.816	0.182	-0.485	0.121	0.182	1.338	0.072	0.109
4804	393	554	8	365.714	0.006	0.015	20:07 hr	1.012	0.077	0.777	0.115	-0.506	0.117	0.176	0.693	0.028	0.068
4805	554	555	8	328.164	0.006	0.172	20:20 hr	2.079	0.263	0.835	0.395	-0.351	0.263	0.395	2.058	0.329	0.239
4806	555	557	8	346.76	0.006	0.176	20:23 hr	2.086	0.266	0.833	0.4	-0.346	0.266	0.4	2.06	0.337	0.241
4807	556	557	6	120.263	0.029	0.005	10:00 hr	1.321	0.033	1.547	0.067	-0.535	0.033	0.067	1.32	0.009	0.042
4809	122	121	8	186.824	0.004	0.015	20:01 hr	0.884	0.087	0.638	0.13	-0.406	0.087	0.13	0.884	0.036	0.069
4821	625	624	8	446.371	0.006	0.017	20:06 hr	1.071	0.083	0.792	0.124	-0.509	0.083	0.124	1.066	0.033	0.074
4847	1060	1130	8	160.475	0.009	0.014	20:03 hr	1.135	0.069	0.925	0.103	-0.613	0.069	0.103	1.133	0.022	0.066
4878	1122	1143	8	241.395	0.014	0.02	20:04 hr	1.494	0.072	1.185	0.108	-0.779	0.667	1	1.441	0.025	0.079
4879	1142	1122	8	296.316	0.006	0.012	20:04 hr	0.925	0.07	0.744	0.105	-0.492	0.07	0.105	0.922	0.023	0.06
4880	1006	1142	8	155.398	0.01	0.008	20:03 hr	1.011	0.049	0.976	0.074	-0.683	0.049	0.074	1.01	0.011	0.049
4885	1047	1139	8	185.685	0.019	0.011	20:05 hr	1.408	0.051	1.334	0.076	-0.929	0.051	0.076	1.404	0.012	0.059
4886	1139	1140	8	355.875	0.01	0.017	20:06 hr	1.26	0.072	1.002	0.108	-0.659	0.072	0.108	1.255	0.024	0.072
4887	1140	1141	8	148.717	0.031	0.017	20:06 hr	1.885	0.055	1.714	0.083	-1.178	0.11	0.165	0.073	0.014	0.073
5224	1061	1060	8	142.299	0.009	0.008	20:03 hr	0.979	0.053	0.914	0.079	-0.633	0.155	0.233	0.036	0.013	0.05
5226	1057	1028	8	213.538	0.029	0.002	20:01 hr	0.968	0.021	1.442	0.031	-1.153	0.021	0.031	0.967	0.002	0.025
5284	954	952	10	299.001	0.006	0.007	10:03 hr	0.811	0.05	0.778	0.06	-0.982	0.05	0.06	0.811	0.007	0.044
5289	948	947	8	111.199	0.005	0.123	20:03 hr	1.808	0.228	0.782	0.342	-0.367	0.228	0.342	1.804	0.251	0.2
5290	947	401	8	87.529	0.015	0.124	20:04 hr	2.655	0.173	1.333	0.26	-0.713	0.173	0.26	2.649	0.148	0.201
5291	944	860	8	66.485	0.017	0.009	20:00 hr	1.24	0.046	1.235	0.069	-0.872	0.046	0.069	1.24	0.01	0.051
5292	945	944	8	312.922	0.027	0.004	20:01 hr	1.184	0.03	1.461	0.045	-1.102	0.03	0.045	1.183	0.004	0.037
5334	939	519	10	10.089	0.315	0.604	12:35 hr	12.046	0.167	6.223	0.2	-6.305	0.167	0.2	12.037	0.087	0.429
5359	2178	1959	8	318.1	0.004	0.008	10:04 hr	0.762	0.063	0.646	0.095	-0.434	0.063	0.095	0.762	0.019	0.051
5360	2179	2178	8	100	0.005	0.006	10:00 hr	0.719	0.054	0.659	0.082	-0.454	0.054	0.082	0.719	0.014	0.044
5391	538	348	6	109.868	0.02	0.001	10:00 hr	0.713	0.018	1.153	0.035	-0.441	0.018	0.035	0.713	0.002	0.019
5564	665	144	6	37.86	0.016	0.005	20:03 hr	1.084	0.04	1.163	0.08	-0.392	0.04	0.08	1.081	0.013	0.043
5578	2053	NJ_33	15	20.207	0.007	1.606	20:10 hr	3.968	0.635	1.037	0.508	-1.519	0.635	0.508	3.952	0.514	0.631
5639	315	316	8	209.929	0.017	0.003	20:03 hr	0.876	0.027	1.138	0.041	-0.872	0.101	0.151	0.012	0.003	0.029

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5776	1028	2121	8	261.796	0.015	0.007	20:02 hr	1.112	0.044	1.141	0.065	-0.814	0.044	0.065	1.11	0.008	0.047
5917	1114	1078	8	229.394	0.03	0.014	20:04 hr	1.752	0.051	1.664	0.076	-1.158	0.101	0.151	0.061	0.012	0.066
5929	1009	1006	8	125.271	0.013	0.007	20:02 hr	1.068	0.046	1.07	0.068	-0.757	0.047	0.071	0.032	0.009	0.047
5933	995	996	8	126.112	0.004	0.017	20:05 hr	0.896	0.094	0.619	0.142	-0.388	0.094	0.142	0.893	0.043	0.074
5934	990	995	8	11.707	0.002	0.017	20:04 hr	0.682	0.11	0.435	0.165	-0.264	0.11	0.165	0.68	0.059	0.072
5935	989	990	8	55.349	0.003	0.017	20:04 hr	0.871	0.093	0.607	0.14	-0.381	0.093	0.14	0.869	0.042	0.072
5938	984	2109	8	170.004	0.023	0.034	10:02 hr	2.113	0.082	1.567	0.124	-1.006	0.119	0.179	0.15	0.033	0.104
5939	985	984	8	64.891	0.009	0.03	10:01 hr	1.473	0.098	1.001	0.146	-0.622	0.098	0.146	1.473	0.046	0.098
5940	223	213	8	303.017	0.001	0.005	20:06 hr	0.325	0.082	0.242	0.123	-0.156	0.082	0.123	0.324	0.032	0.04
5948	149	1511	8	163.065	0.004	0.003	12:01 hr	0.572	0.043	0.594	0.064	-0.425	0.048	0.073	0.015	0.008	0.033
5950	1383	NJ_1	21	129.064	0.042	8.452	21:22 hr	11.492	0.838	2.604	0.479	-9.751	0.838	0.479	11.416	0.464	1.347
6069	2182	985	8	77.545	0.01	0.03	10:00 hr	1.531	0.095	1.054	0.143	-0.659	0.096	0.145	1.079	0.044	0.098
6072	2191	81	8	126.3	0.002	0.001	12:02 hr	0.298	0.032	0.359	0.048	-0.269	0.032	0.048	0.298	0.004	0.019
6073	2197	1913	8	160.31	0.005	0.002	20:01 hr	0.533	0.034	0.616	0.052	-0.456	0.054	0.081	0.45	0.005	0.027
6231	1902	191	8	156.98	0.007	0.002	20:01 hr	0.604	0.031	0.741	0.046	-0.558	0.443	0.664	0.568	0.004	0.026
6242	933	934	10	343.362	0.021	0.598	12:31 hr	4.588	0.331	1.644	0.397	-1.201	0.331	0.397	4.583	0.332	0.427
6243	940	152	8	237.5	0.012	0.004	20:01 hr	0.854	0.033	1.011	0.049	-0.753	0.033	0.049	0.853	0.005	0.033
6244	942	2053	8	350.751	0.004	0.032	10:04 hr	1.106	0.123	0.666	0.185	-0.394	0.123	0.185	1.105	0.074	0.1
6245	941	942	8	187.544	0.004	0.03	10:01 hr	1.082	0.12	0.661	0.179	-0.394	0.12	0.179	1.081	0.07	0.097
6246	952	951	8	133.485	0.018	0.011	10:04 hr	1.354	0.051	1.287	0.076	-0.896	0.061	0.092	0.047	0.012	0.058
6247	951	950	8	108.034	0.004	0.011	10:05 hr	0.809	0.072	0.643	0.108	-0.422	0.107	0.16	0.047	0.025	0.058
6249	953	954	10	201.782	0.021	0.004	10:01 hr	1.07	0.031	1.315	0.037	-1.792	0.045	0.054	0.013	0.002	0.035
6255	979	980	8	363.072	0.017	0.009	20:02 hr	1.264	0.048	1.234	0.072	-0.867	0.048	0.072	1.262	0.01	0.053
6256	978	979	8	356.238	0.022	0.005	20:01 hr	1.165	0.034	1.35	0.051	-1	0.034	0.051	1.163	0.005	0.04
6257	981	982	8	449.265	0.009	0.002	20:04 hr	0.67	0.03	0.834	0.045	-0.632	0.03	0.045	0.668	0.004	0.027
6258	982	324	8	442.136	0.008	0.004	20:07 hr	0.787	0.04	0.849	0.059	-0.615	0.04	0.059	0.784	0.007	0.036
6259	980	627	8	330.919	0.024	0.012	20:03 hr	1.541	0.049	1.487	0.074	-1.04	0.667	1	0.051	0.011	0.06
6261	1003	989	8	120.71	0.003	0.016	20:04 hr	0.857	0.09	0.608	0.135	-0.385	0.09	0.135	0.855	0.039	0.07
6265	997	998	8	249.785	0.01	0.002	20:01 hr	0.695	0.029	0.874	0.044	-0.663	0.029	0.044	0.694	0.004	0.027
6266	998	1005	8	190.285	0.016	0.003	20:02 hr	0.916	0.031	1.122	0.046	-0.844	0.031	0.046	0.915	0.004	0.033
6282	999	1000	8	244.913	0.007	0.002	20:02 hr	0.602	0.03	0.744	0.045	-0.562	0.03	0.045	0.601	0.004	0.026
6283	1000	1001	8	192.841	0.012	0.004	20:01 hr	0.883	0.036	0.992	0.055	-0.727	0.036	0.055	0.883	0.006	0.036
6300	1002	1004	8	259.615	0.004	0.003	20:02 hr	0.52	0.037	0.578	0.056	-0.423	0.037	0.056	0.519	0.006	0.028
6301	1004	1003	8	194.415	0.004	0.004	20:03 hr	0.586	0.045	0.592	0.067	-0.42	0.045	0.067	0.585	0.009	0.035
6317	1001	1005	8	209.223	0.026	0.006	20:02 hr	1.276	0.035	1.469	0.052	-1.086	0.035	0.052	1.274	0.005	0.042
6318	1005	1003	8	224.026	0.017	0.011	20:03 hr	1.343	0.052	1.264	0.077	-0.878	0.052	0.077	1.341	0.012	0.058
6326	996	217	8	352.839	0.019	0.026	20:06 hr	1.829	0.077	1.407	0.115	-0.916	0.077	0.115	1.823	0.028	0.091
6327	486	630	8	160.661	0.019	0.104	20:06 hr	2.719	0.151	1.47	0.226	-0.823	0.667	1	2.18	0.112	0.184
6328	1048	1049	8	312.272	0.006	0.003	20:03 hr	0.647	0.038	0.712	0.057	-0.519	0.038	0.057	0.645	0.006	0.032
6329	1049	1050	8	361.248	0.006	0.006	20:05 hr	0.781	0.051	0.741	0.076	-0.516	0.051	0.076	0.779	0.012	0.044
6330	1007	1009	8	228.933	0.041	0.001	20:00 hr	0.968	0.016	1.647	0.024	-1.374	0.016	0.024	0.967	0.001	0.021
6331	1008	1009	8	279.547	0.004	0.004	20:02 hr	0.581	0.044	0.591	0.067	-0.42	0.044	0.067	0.58	0.009	0.034
6333	1039	1010	8	317.391	0.005	0.009	20:07 hr	0.836	0.063	0.71	0.095	-0.477	0.063	0.095	0.833	0.019	0.053
6334	1010	1029	8	300.846	0.005	0.042	20:10 hr	1.319	0.133	0.763	0.199	-0.444	0.133	0.199	1.311	0.087	0.116
6335	1029	1077	8	356.869	0.005	0.053	20:12 hr	1.416	0.149	0.769	0.224	-0.433	0.149	0.224	1.407	0.11	0.131
6336	1077	1078	8	339.099	0.005	0.082	20:12 hr	1.607	0.185	0.778	0.278	-0.405	0.185	0.278	1.596	0.169	0.163

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
6337	184	1011	15	433.09	0.016	6.154	20:32 hr	7.758	1.25	1.514	1	1.577	1.25	1	7.48	1.345	1.172
6338	1011	1012	15	450.47	0.013	6.158	20:35 hr	7.765	1.25	1.38	1	1.978	1.25	1	7.52	1.473	1.172
6339	1012	1085	15	450.187	0.017	6.165	20:36 hr	7.772	1.25	1.568	1	1.429	1.25	1	7.555	1.302	1.172
6364	1013	1014	8	424.3	0.007	0.003	20:04 hr	0.702	0.036	0.795	0.054	-0.584	0.036	0.054	0.7	0.006	0.032
6365	1014	1015	8	391.204	0.007	0.032	20:09 hr	1.336	0.108	0.861	0.162	-0.525	0.108	0.162	1.328	0.057	0.1
6366	1015	1056	8	401.413	0.006	0.034	20:12 hr	1.308	0.116	0.813	0.173	-0.488	0.116	0.173	1.297	0.066	0.104
6367	1132	1150	8	364.882	0.01	0.006	20:02 hr	0.933	0.045	0.943	0.067	-0.669	0.045	0.067	0.933	0.009	0.044
6368	1150	1148	8	300.601	0.007	0.012	20:04 hr	1.002	0.068	0.818	0.103	-0.543	0.068	0.103	1	0.022	0.062
6369	1148	1016	8	332.396	0.007	0.02	20:06 hr	1.19	0.086	0.863	0.129	-0.55	0.086	0.129	1.186	0.035	0.08
6370	1016	1082	8	285.115	0.007	0.051	20:09 hr	1.534	0.136	0.875	0.204	-0.505	0.136	0.204	1.527	0.092	0.127
6371	1019	1018	8	250.961	0.008	0.004	20:02 hr	0.778	0.041	0.828	0.061	-0.597	0.041	0.061	0.777	0.007	0.037
6372	1018	1017	8	140.503	0.006	0.006	20:03 hr	0.795	0.051	0.751	0.077	-0.522	0.051	0.077	0.794	0.012	0.044
6373	1017	1020	8	141.074	0.006	0.008	20:03 hr	0.83	0.056	0.749	0.084	-0.513	0.056	0.084	0.829	0.015	0.049
6374	1020	1023	8	361.696	0.006	0.01	20:05 hr	0.891	0.063	0.76	0.094	-0.511	0.063	0.094	0.888	0.018	0.055
6375	1021	1022	8	263.74	0.006	0.005	20:02 hr	0.735	0.046	0.735	0.069	-0.52	0.046	0.069	0.733	0.009	0.039
6376	1022	1023	8	260.721	0.011	0.007	20:03 hr	1.017	0.046	1.015	0.069	-0.717	0.046	0.069	1.015	0.01	0.046
6377	1026	1025	8	267.885	0.006	0.005	20:02 hr	0.716	0.045	0.727	0.067	-0.517	0.045	0.067	0.715	0.009	0.038
6378	1025	1024	8	259.822	0.006	0.013	20:02 hr	0.979	0.072	0.776	0.109	-0.51	0.072	0.109	0.977	0.025	0.064
6379	1027	1028	8	342.472	0.006	0.003	20:03 hr	0.643	0.038	0.71	0.057	-0.518	0.038	0.057	0.641	0.006	0.032
6380	1031	1030	8	289.52	0.017	0.006	20:01 hr	1.125	0.04	1.203	0.06	-0.868	0.04	0.06	1.124	0.007	0.044
6381	1030	1029	8	263.306	0.019	0.009	20:02 hr	1.322	0.046	1.322	0.069	-0.936	0.057	0.085	1.117	0.009	0.053
6382	1034	1010	8	350.198	0.014	0.031	20:08 hr	1.714	0.089	1.22	0.134	-0.773	0.089	0.134	1.707	0.038	0.099
6383	1033	1034	8	338.004	0.018	0.027	20:07 hr	1.8	0.079	1.359	0.119	-0.879	0.079	0.119	1.793	0.03	0.093
6384	1032	1033	8	243.628	0.009	0.023	20:05 hr	1.371	0.085	0.999	0.128	-0.638	0.085	0.128	1.367	0.035	0.085
6385	469	1032	8	397.862	0.022	0.02	20:04 hr	1.778	0.066	1.482	0.098	-0.99	0.066	0.098	1.773	0.02	0.08
6386	1035	1036	8	305.058	0.017	0.002	20:01 hr	0.807	0.024	1.131	0.035	-0.887	0.024	0.035	0.806	0.002	0.025
6387	1036	1037	8	297.17	0.018	0.004	20:01 hr	0.983	0.031	1.192	0.047	-0.895	0.031	0.047	0.982	0.004	0.034
6388	1037	1038	8	302.298	0.017	0.006	20:02 hr	1.116	0.039	1.218	0.058	-0.885	0.039	0.058	1.114	0.007	0.043
6389	1038	1039	8	308.766	0.014	0.007	20:04 hr	1.096	0.044	1.112	0.067	-0.791	0.044	0.067	1.093	0.009	0.047
6390	1143	1040	8	107.128	0.018	0.02	20:05 hr	1.66	0.068	1.356	0.102	-0.9	0.667	1	1.6	0.022	0.08
6391	1041	1042	8	423.383	0.024	0.005	20:02 hr	1.184	0.032	1.415	0.048	-1.057	0.032	0.048	1.182	0.004	0.038
6392	1042	1043	8	448.099	0.016	0.009	20:04 hr	1.208	0.047	1.188	0.071	-0.837	0.047	0.071	1.205	0.01	0.052
6393	1043	1014	8	340.547	0.011	0.026	20:06 hr	1.516	0.086	1.098	0.129	-0.699	0.086	0.129	1.51	0.036	0.09
6394	1044	1135	10	345.701	0.019	0.192	20:36 hr	3.194	0.189	1.539	0.227	-1.505	0.189	0.227	3.154	0.113	0.237
6406	1135	1072	10	365.448	0.019	0.195	20:37 hr	3.2	0.191	1.537	0.229	-1.5	0.191	0.229	3.164	0.115	0.238
6407	1045	1046	8	377.205	0.013	0.002	20:02 hr	0.778	0.027	1.011	0.041	-0.776	0.027	0.041	0.777	0.003	0.027
6408	1046	1047	8	275.298	0.015	0.003	20:03 hr	0.896	0.031	1.085	0.047	-0.815	0.031	0.047	0.894	0.004	0.033
6410	328	1044	10	341.549	0.019	0.191	20:34 hr	3.213	0.188	1.555	0.226	-1.524	0.188	0.226	3.168	0.112	0.236
6413	1052	1053	8	372.394	0.006	0.006	20:05 hr	0.767	0.051	0.73	0.076	-0.508	0.051	0.076	0.764	0.012	0.043
6414	1051	1052	8	305.606	0.006	0.003	20:03 hr	0.662	0.038	0.725	0.057	-0.527	0.038	0.057	0.66	0.006	0.033
6418	1058	1059	8	286.621	0.006	0.007	20:04 hr	0.802	0.053	0.742	0.08	-0.513	0.053	0.08	0.8	0.013	0.046
6419	1062	1063	8	153.3	0.03	0.003	20:00 hr	1.069	0.024	1.487	0.036	-1.164	0.024	0.036	1.069	0.002	0.029
6420	1063	1061	8	328.785	0.009	0.007	20:02 hr	0.921	0.049	0.892	0.073	-0.625	0.049	0.073	0.92	0.011	0.046
6421	1071	1067	8	35.921	0.014	0.001	20:00 hr	0.623	0.019	0.975	0.028	-0.792	0.019	0.028	0.623	0.001	0.019
6422	1067	1066	8	324.785	0.006	0.003	20:03 hr	0.675	0.038	0.744	0.057	-0.542	0.038	0.057	0.674	0.006	0.033
6423	1066	1065	8	363.624	0	0.006	20:05 hr	0.284	0.094	0.196	0.142	-0.123	0.094	0.142	0.283	0.043	0.041

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6424	1065	1064	8	288.188	0.006	0.073	20:15 hr	1.628	0.169	0.827	0.254	-0.446	0.169	0.254	1.614	0.141	0.154
6425	1064	1072	8	277.816	0.011	0.074	20:16 hr	2.03	0.146	1.115	0.219	-0.631	0.146	0.219	1.894	0.105	0.155
6426	1076	1077	8	398.949	0.022	0.027	20:06 hr	1.923	0.074	1.502	0.112	-0.983	0.088	0.133	1.58	0.026	0.091
6427	1075	1076	8	392.873	0.013	0.022	20:05 hr	1.494	0.077	1.143	0.116	-0.742	0.077	0.116	1.49	0.029	0.083
6428	1074	1075	8	136.733	0.02	0.006	20:02 hr	1.164	0.036	1.312	0.054	-0.962	0.036	0.054	1.163	0.006	0.042
6429	1073	1074	8	365.588	0.017	0.004	20:02 hr	0.976	0.031	1.187	0.047	-0.892	0.031	0.047	0.974	0.004	0.034
6430	1079	1156	8	354.78	0.006	0.005	20:03 hr	0.722	0.045	0.731	0.067	-0.519	0.045	0.067	0.721	0.009	0.038
6431	1081	1120	8	167.604	0.006	0.001	20:01 hr	0.467	0.024	0.65	0.036	-0.51	0.03	0.046	0.322	0.002	0.019
6432	1080	1156	8	111.839	0.02	0.008	20:03 hr	1.297	0.043	1.337	0.065	-0.955	0.043	0.065	1.294	0.008	0.05
6433	1084	1085	8	278.179	0.004	0.026	20:08 hr	1.046	0.113	0.66	0.169	-0.398	0.667	1	0.951	0.062	0.091
6434	1083	1040	8	75.441	0.009	0.001	20:00 hr	0.493	0.019	0.778	0.028	-0.634	0.667	1	0.465	0.001	0.016
6435	1040	1084	8	261.371	0.004	0.024	20:06 hr	1.017	0.107	0.659	0.16	-0.402	0.667	1	0.977	0.056	0.087
6436	1086	1087	8	375.614	0.018	0.008	20:02 hr	1.259	0.044	1.279	0.067	-0.909	0.044	0.067	1.257	0.009	0.05
6494	886	792	8	378.646	0.001	0.074	10:08 hr	0.88	0.265	0.352	0.398	-0.147	0.265	0.398	0.879	0.334	0.154
6517	789	790	8	97.253	0.006	0.057	20:12 hr	1.522	0.148	0.83	0.223	-0.467	0.148	0.223	1.512	0.109	0.135
6576	2193	778	8	423.697	0.026	0.002	20:02 hr	0.938	0.022	1.373	0.032	-1.093	0.022	0.032	0.937	0.002	0.025
6748	249	445	8	263.642	0.004	0.012	20:06 hr	0.814	0.077	0.625	0.116	-0.406	0.077	0.116	0.811	0.028	0.061
6751	277	353	8	262.906	0.009	0.017	20:09 hr	1.213	0.075	0.944	0.112	-0.616	0.075	0.112	1.208	0.027	0.073
6753	2114	277	8	176.332	0.013	0.016	20:07 hr	1.362	0.066	1.128	0.1	-0.752	0.066	0.1	1.358	0.021	0.071
6760	272	271	8	80.467	0.027	0.001	20:00 hr	0.822	0.017	1.359	0.025	-1.123	0.017	0.025	0.822	0.001	0.02
6769	310	309	8	171.961	0.014	0.179	20:26 hr	2.862	0.214	1.28	0.321	-0.623	0.214	0.321	2.826	0.223	0.243
6770	314	315	8	324.672	0.015	0.002	20:02 hr	0.78	0.024	1.078	0.036	-0.843	0.024	0.036	0.779	0.002	0.025
6773	317	318	8	426.108	0.018	0.005	20:02 hr	1.086	0.036	1.227	0.054	-0.901	0.06	0.089	1.022	0.006	0.04
6774	318	464	8	440.796	0.023	0.008	20:04 hr	1.389	0.043	1.438	0.064	-1.028	0.667	1	0.956	0.008	0.051
6776	319	320	10	352.039	0.016	0.004	20:01 hr	0.957	0.031	1.16	0.038	-1.574	0.031	0.038	0.956	0.003	0.034
6777	320	321	10	364.043	0.019	0.008	20:01 hr	1.25	0.042	1.315	0.05	-1.708	0.042	0.05	1.248	0.005	0.048
6778	321	322	10	361.286	0.027	0.011	20:03 hr	1.545	0.045	1.561	0.054	-2.003	0.833	1	1.064	0.006	0.056
6779	325	326	10	315.291	0.021	0.189	20:30 hr	3.265	0.184	1.598	0.221	-1.577	0.184	0.221	3.216	0.107	0.234
6780	326	327	10	317.572	0.02	0.189	20:31 hr	3.241	0.185	1.579	0.223	-1.555	0.185	0.223	3.188	0.109	0.235
6781	327	328	10	365.647	0.015	0.19	20:33 hr	2.918	0.2	1.364	0.241	-1.31	0.2	0.241	2.874	0.127	0.235
6829	1589	1588	8	361.321	0.007	0.005	20:03 hr	0.782	0.044	0.796	0.066	-0.566	0.044	0.066	0.78	0.009	0.04
6830	1593	1785	8	298.566	0.016	0.085	20:07 hr	2.428	0.141	1.359	0.212	-0.776	0.141	0.212	2.42	0.099	0.165
6831	1592	1593	8	355.807	0.01	0.081	20:08 hr	1.986	0.157	1.05	0.236	-0.581	0.157	0.236	1.981	0.122	0.161
6832	1591	1592	8	288.094	0.021	0.072	20:11 hr	2.535	0.123	1.528	0.184	-0.905	0.123	0.184	2.53	0.074	0.153
6833	1590	1591	8	348.893	0.02	0.049	20:17 hr	2.229	0.102	1.481	0.153	-0.914	0.102	0.153	2.212	0.05	0.124
6834	3807	1590	8	108.223	0.012	0	20:00 hr	0.386	0.01	0.838	0.015	-0.755	0.01	0.015	0.386	0	0.009
6835	1598	1597	8	299.022	0.005	0.012	20:05 hr	0.913	0.072	0.725	0.108	-0.477	0.072	0.108	0.911	0.025	0.061
6836	1597	1596	8	289.226	0.005	0.044	20:13 hr	1.34	0.135	0.767	0.203	-0.443	0.135	0.203	1.333	0.09	0.118
6837	1596	1595	8	283.931	0.005	0.045	20:14 hr	1.351	0.137	0.767	0.206	-0.441	0.137	0.206	1.342	0.093	0.12
6838	1595	1590	8	287.008	0.005	0.046	20:16 hr	1.354	0.139	0.763	0.209	-0.438	0.139	0.209	1.344	0.096	0.121
6839	1115	1600	8	228.367	0.005	0.024	20:09 hr	1.115	0.1	0.749	0.15	-0.464	0.1	0.15	1.11	0.048	0.086
6840	1600	1601	8	142.223	0.005	0.024	20:10 hr	1.105	0.101	0.737	0.151	-0.456	0.101	0.151	1.098	0.05	0.087
6841	1601	1602	8	338.379	0.011	0.026	20:12 hr	1.48	0.087	1.063	0.131	-0.676	0.087	0.131	1.47	0.037	0.09
6842	1602	1603	8	335.249	0.016	0.03	20:13 hr	1.786	0.085	1.304	0.127	-0.834	0.085	0.127	1.775	0.034	0.097
6843	1603	1597	8	335.031	0.019	0.032	20:14 hr	1.922	0.084	1.41	0.126	-0.903	0.084	0.126	1.91	0.034	0.1
6844	1607	1606	8	167.565	0.016	0.003	20:01 hr	0.861	0.027	1.116	0.041	-0.856	0.027	0.041	0.86	0.003	0.029

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ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
6845	1606	1605	8	331.794	0.004	0.006	20:03 hr	0.684	0.057	0.614	0.085	-0.42	0.057	0.085	0.682	0.015	0.044
6846	1605	1604	8	341.463	0.011	0.009	20:05 hr	1.083	0.054	1	0.08	-0.691	0.231	0.347	0.041	0.013	0.054
6847	1056	1608	8	288.097	0.015	0.074	20:11 hr	2.284	0.134	1.315	0.201	-0.762	0.134	0.201	2.269	0.088	0.154
6848	1608	1609	8	252.945	0.018	0.075	20:12 hr	2.463	0.129	1.447	0.193	-0.847	0.333	0.5	0.326	0.082	0.156
6849	1609	1610	8	390.095	0.015	0.081	20:14 hr	2.336	0.141	1.309	0.211	-0.749	0.141	0.211	2.319	0.098	0.162
6850	1610	1951	8	380.506	0.021	0.085	20:15 hr	2.653	0.133	1.53	0.2	-0.888	0.137	0.206	2.496	0.088	0.166
6851	1640	1611	8	301.624	0.014	0.014	20:05 hr	1.358	0.061	1.178	0.091	-0.797	0.061	0.091	1.355	0.017	0.066
6852	1611	1933	8	373.077	0.016	0.018	20:06 hr	1.537	0.067	1.264	0.101	-0.841	0.067	0.101	1.532	0.021	0.076
6853	1612	1598	8	335.526	0.016	0.008	20:04 hr	1.186	0.045	1.192	0.068	-0.845	0.045	0.068	1.182	0.009	0.05
6854	1613	1612	8	334.131	0.017	0.006	20:04 hr	1.141	0.04	1.23	0.059	-0.89	0.04	0.059	1.138	0.007	0.044
6855	1481	1613	8	339.846	0.017	0.004	20:02 hr	0.979	0.032	1.179	0.048	-0.883	0.032	0.048	0.978	0.004	0.035
6856	1617	1616	8	280.589	0.012	0.017	20:03 hr	1.374	0.07	1.109	0.105	-0.733	0.07	0.105	1.371	0.023	0.074
6857	1618	1617	8	258.866	0.016	0.012	20:04 hr	1.356	0.055	1.239	0.082	-0.853	0.055	0.082	1.353	0.014	0.061
6858	1619	1618	8	98.3	0.013	0.001	20:00 hr	0.546	0.017	0.914	0.025	-0.758	0.017	0.025	0.546	0.001	0.016
6859	1616	1934	8	256.706	0.016	0.022	20:04 hr	1.636	0.073	1.292	0.109	-0.848	0.073	0.109	1.631	0.025	0.083
6860	1620	1621	8	141.058	0.007	0.003	20:01 hr	0.636	0.034	0.74	0.051	-0.548	0.042	0.064	0.012	0.005	0.029
6861	1621	1852	8	348.227	0.011	0.008	20:03 hr	1.052	0.051	0.997	0.076	-0.694	0.051	0.076	1.049	0.012	0.051
6862	1625	1624	8	211.706	0.007	0.004	20:01 hr	0.752	0.041	0.791	0.062	-0.569	0.331	0.496	0.751	0.008	0.037
6863	1624	1623	8	317.506	0.007	0.01	20:03 hr	0.946	0.06	0.823	0.09	-0.558	0.667	1	0.943	0.017	0.055
6864	1623	1622	8	275.933	0.008	0.072	20:10 hr	1.768	0.158	0.933	0.236	-0.516	0.667	1	1.659	0.123	0.152
6865	1622	1702	8	429.976	0.01	0.092	20:10 hr	2.095	0.167	1.074	0.25	-0.582	0.667	1	1.858	0.137	0.173
6867	1626	1627	8	377.81	0.011	0.016	10:02 hr	1.281	0.07	1.036	0.104	-0.685	0.07	0.104	1.28	0.023	0.071
6868	1627	1945	8	424.473	0.006	0.022	12:04 hr	1.139	0.093	0.795	0.139	-0.499	0.093	0.139	1.139	0.042	0.083
6869	1628	1629	8	77.243	0.01	0.002	20:00 hr	0.661	0.027	0.863	0.041	-0.662	0.027	0.041	0.661	0.003	0.025
6870	1629	1630	8	284.837	0.006	0.017	20:05 hr	1.071	0.084	0.788	0.125	-0.505	0.121	0.181	0.738	0.033	0.074
6871	1630	1631	8	357.283	0.001	0.067	20:11 hr	0.816	0.261	0.329	0.392	-0.139	0.261	0.392	0.813	0.325	0.147
6872	1631	1632	8	353.883	0.005	0.072	20:13 hr	1.548	0.174	0.776	0.261	-0.414	0.174	0.261	1.538	0.149	0.153
6874	1633	1622	8	330.788	0.023	0.015	20:03 hr	1.627	0.056	1.466	0.085	-1.004	0.667	1	1.53	0.015	0.068
6875	1636	1635	8	237.055	0.017	0.004	20:01 hr	1.015	0.034	1.181	0.051	-0.875	0.034	0.051	1.014	0.005	0.037
6876	1634	1633	8	348.618	0.017	0.012	20:03 hr	1.382	0.054	1.277	0.08	-0.882	0.054	0.08	1.379	0.013	0.061
6877	1635	1634	8	190.698	0.015	0.008	20:01 hr	1.159	0.045	1.176	0.067	-0.835	0.045	0.067	1.158	0.009	0.048
6878	1637	1638	8	451.164	0.006	0.009	20:04 hr	0.875	0.06	0.762	0.09	-0.516	0.06	0.09	0.872	0.017	0.053
6879	1638	1477	8	457.669	0.006	0.014	20:08 hr	0.99	0.074	0.775	0.111	-0.508	0.074	0.111	0.986	0.026	0.065
6880	1639	1640	8	358.808	0.008	0.01	20:05 hr	1.015	0.059	0.895	0.088	-0.609	0.059	0.088	1.012	0.016	0.056
6881	1642	1639	8	390.583	0.012	0.005	20:02 hr	0.929	0.039	1.015	0.058	-0.738	0.039	0.058	0.928	0.007	0.039
6882	1641	1639	8	274.921	0.007	0.002	20:02 hr	0.614	0.032	0.737	0.048	-0.551	0.032	0.048	0.613	0.004	0.027
6883	1552	1643	8	350.693	0.005	0.148	20:15 hr	1.89	0.252	0.776	0.378	-0.339	0.667	1	1.874	0.304	0.22
6884	1643	1644	8	350.082	0.005	0.154	20:18 hr	1.913	0.258	0.777	0.386	-0.333	0.667	1	1.794	0.316	0.225
6885	1644	1704	8	351.743	0.011	0.158	20:20 hr	2.508	0.216	1.117	0.323	-0.541	0.667	1	2.345	0.226	0.228
6887	1645	1646	8	345.717	0.006	0.006	20:03 hr	0.791	0.052	0.745	0.077	-0.518	0.052	0.077	0.789	0.012	0.045
6888	1646	1647	8	449.733	0.006	0.013	20:04 hr	0.977	0.072	0.774	0.109	-0.509	0.072	0.109	0.974	0.025	0.064
6889	1647	1648	8	340.253	0.006	0.017	20:07 hr	1.067	0.082	0.791	0.123	-0.508	0.082	0.123	1.062	0.032	0.073
6891	1653	1738	8	389.121	0.021	0.116	20:17 hr	2.932	0.155	1.563	0.232	-0.869	0.155	0.232	2.904	0.118	0.195
6892	1652	1653	8	379.137	0.018	0.112	20:15 hr	2.746	0.158	1.447	0.237	-0.799	0.158	0.237	2.723	0.123	0.191
6893	1651	1652	8	385.978	0.007	0.108	20:13 hr	1.948	0.196	0.915	0.294	-0.465	0.196	0.294	1.934	0.188	0.187
6894	1078	1651	8	159.835	0.02	0.097	20:11 hr	2.745	0.142	1.531	0.213	-0.873	0.142	0.213	2.728	0.1	0.177

2017 CIP + Revised Buildout Scenario Pipe Results																	
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6895	1654	1655	8	375.483	0.018	0.344	20:29 hr	3.776	0.283	1.465	0.425	-0.573	0.283	0.425	3.729	0.375	0.342
6896	1655	1656	8	334.247	0.018	0.346	20:30 hr	3.778	0.284	1.464	0.425	-0.571	0.284	0.425	3.728	0.377	0.343
6897	1656	1657	10	256.937	0.014	0.49	20:29 hr	3.688	0.336	1.313	0.403	-0.946	0.336	0.403	3.654	0.341	0.384
6936	752	753	8	37.509	0.005	0.031	20:08 hr	1.228	0.114	0.77	0.171	-0.464	0.114	0.171	1.222	0.063	0.1
6937	746	747	10	280.931	0.011	0.59	12:27 hr	3.587	0.395	1.183	0.474	-0.705	0.395	0.474	3.583	0.456	0.424
6953	742	743	8	163.987	0.042	0.119	20:21 hr	3.776	0.132	2.191	0.198	-1.276	0.132	0.198	3.736	0.085	0.197
7108	288	287	8	381.227	0.006	0.004	20:03 hr	0.716	0.042	0.752	0.063	-0.54	0.042	0.063	0.714	0.008	0.036
7109	287	291	8	399.246	0.006	0.009	20:03 hr	0.866	0.059	0.759	0.089	-0.515	0.059	0.089	0.863	0.016	0.052
7110	291	290	8	146.982	0.008	0.011	20:04 hr	1.03	0.063	0.876	0.094	-0.589	0.063	0.094	1.027	0.019	0.059
7111	290	289	8	288.91	0.02	0.014	20:05 hr	1.527	0.055	1.391	0.083	-0.956	0.055	0.083	1.524	0.014	0.065
7112	289	167	8	309.139	0.022	0.016	20:05 hr	1.671	0.059	1.47	0.088	-1	0.667	1	1.571	0.016	0.072
7113	293	169	8	423.362	0.006	0.01	20:04 hr	0.913	0.064	0.768	0.097	-0.514	0.064	0.097	0.909	0.019	0.056
7114	292	293	8	416.398	0.006	0.005	20:04 hr	0.746	0.047	0.735	0.071	-0.517	0.047	0.071	0.743	0.01	0.04
7115	294	176	8	379.111	0.016	0.002	20:02 hr	0.801	0.024	1.11	0.036	-0.869	0.024	0.036	0.8	0.002	0.025
7116	179	325	8	298.726	0.01	0.008	20:05 hr	0.995	0.05	0.954	0.075	-0.667	0.05	0.075	0.992	0.011	0.049
7117	295	296	8	290.01	0.009	0.003	20:02 hr	0.737	0.034	0.852	0.052	-0.631	0.034	0.052	0.736	0.005	0.032
7118	296	297	8	328.316	0.006	0.007	20:03 hr	0.841	0.054	0.772	0.081	-0.532	0.054	0.081	0.838	0.014	0.048
7119	297	298	8	340.002	0.006	0.01	20:06 hr	0.918	0.065	0.767	0.098	-0.513	0.065	0.098	0.915	0.02	0.057
7120	282	360	18	262.577	0.005	6.083	20:25 hr	5.326	1.5	0.848	1	2.028	1.5	1	5.078	1.5	1.185
7121	360	192	18	260.308	0.005	6.094	20:26 hr	5.336	1.5	0.848	1	2.039	1.5	1	5.072	1.503	1.187
7122	192	299	18	411.612	0.005	6.112	20:29 hr	5.351	1.5	0.852	1	2.041	1.5	1	5.115	1.501	1.188
7123	299	184	18	379.258	0.005	6.133	20:31 hr	5.37	1.5	0.886	1	1.903	1.5	1	5.158	1.45	1.19
7144	2070	2078	12	251.69	0.006	0.539	20:08 hr	2.765	0.409	0.892	0.409	-1	0.409	0.409	2.754	0.35	0.382
7145	2069	2070	12	241.244	0.006	0.538	20:06 hr	2.765	0.408	0.892	0.408	-1.002	0.408	0.408	2.757	0.349	0.382
7146	2049	2078	8	286.4	0.02	0.19	20:03 hr	3.316	0.201	1.534	0.302	-0.771	0.247	0.37	2.647	0.198	0.251
7147	2068	2049	8	318.857	0.027	0.048	20:01 hr	2.469	0.094	1.713	0.141	-1.074	0.097	0.146	2.335	0.043	0.123
7148	2067	2027	8	85.883	0.004	0.159	20:02 hr	1.694	0.289	0.651	0.433	-0.249	0.289	0.433	1.694	0.389	0.229
7149	2065	2066	8	351.476	0.004	0.088	10:12 hr	1.485	0.206	0.679	0.308	-0.337	0.206	0.308	1.485	0.207	0.168
7150	950	2065	8	353.994	0.004	0.042	10:09 hr	1.204	0.141	0.674	0.212	-0.385	0.141	0.212	1.204	0.098	0.115
7152	2057	2058	8	229.979	0.037	0.263	10:25 hr	4.505	0.204	2.071	0.305	-1.034	0.204	0.305	4.503	0.203	0.297
7153	2056	2057	8	424.914	0.022	0.255	12:20 hr	3.743	0.228	1.62	0.342	-0.759	0.228	0.342	3.741	0.251	0.293
7154	2055	2056	8	281.678	0.032	0.064	10:05 hr	2.867	0.104	1.887	0.156	-1.159	0.104	0.156	2.864	0.053	0.143
7155	2054	2055	8	400.366	0.029	0.057	10:03 hr	2.651	0.101	1.774	0.151	-1.096	0.101	0.151	2.65	0.049	0.135
7156	2051	2052	15	449.214	0.026	0.79	20:07 hr	5.158	0.31	1.94	0.248	-5.077	0.31	0.248	5.143	0.135	0.436
7157	2050	2051	15	243.526	0.024	0.736	20:06 hr	4.879	0.307	1.845	0.245	-4.848	0.307	0.245	0.921	0.132	0.42
7158	2038	2050	15	202.842	0.006	0.668	20:06 hr	2.863	0.419	0.914	0.335	-2.087	0.419	0.335	2.856	0.243	0.4
7159	2048	2049	8	259.228	0.006	0.095	20:02 hr	1.763	0.193	0.835	0.289	-0.428	0.193	0.289	1.759	0.182	0.176
7160	2047	2048	8	314.46	0.026	0.048	20:01 hr	2.43	0.095	1.676	0.142	-1.049	0.095	0.142	2.427	0.044	0.123
7161	2045	2046	8	310.452	0.026	0.518	20:03 hr	4.773	0.324	1.741	0.485	-0.572	0.324	0.485	4.768	0.475	0.424
7162	2044	2045	8	359.276	0.027	0.313	20:04 hr	4.231	0.242	1.773	0.363	-0.797	0.242	0.363	4.223	0.282	0.326
7163	2034	2044	8	345.964	0.026	0.283	20:03 hr	4.093	0.23	1.761	0.345	-0.82	0.23	0.345	4.088	0.256	0.309
7164	2039	2109	8	142.01	0.003	0.038	10:02 hr	1.028	0.147	0.563	0.221	-0.318	0.152	0.227	0.169	0.107	0.11
7398	475	474	8	222.06	0.001	0.037	10:06 hr	0.659	0.197	0.309	0.295	-0.157	0.197	0.295	0.659	0.19	0.108
7399	478	477	8	70.804	0.004	0.005	20:01 hr	0.599	0.05	0.572	0.075	-0.399	0.05	0.075	0.599	0.012	0.038
7400	482	483	8	98.497	0.011	0.043	10:07 hr	1.765	0.11	1.127	0.165	-0.684	0.11	0.165	1.763	0.059	0.117
7401	492	491	8	47.506	0.025	0.017	20:02 hr	1.748	0.059	1.541	0.088	-1.048	0.059	0.088	1.746	0.016	0.073

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ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
7402	491	490	8	127.483	0.029	0.019	20:02 hr	1.911	0.06	1.668	0.09	-1.131	0.06	0.09	1.909	0.017	0.078
7403	485	486	8	33.329	0.006	0.098	20:06 hr	1.784	0.195	0.839	0.293	-0.428	0.654	0.981	1.72	0.187	0.178
7635	647	432	10	190.287	0.024	0.915	20:26 hr	5.358	0.406	1.745	0.488	-0.994	0.833	1	2.541	0.479	0.533
7827	406	554	8	328.386	0.011	0.154	20:17 hr	2.495	0.213	1.12	0.319	-0.547	0.213	0.319	2.47	0.22	0.225
7965	366	2114	8	161.433	0.026	0.015	20:06 hr	1.71	0.055	1.563	0.082	-1.076	0.055	0.082	1.705	0.014	0.069
7992	361	362	8	64.66	0.008	0.032	20:08 hr	1.435	0.103	0.947	0.155	-0.583	0.103	0.155	1.43	0.052	0.1
8153	324	311	8	281.382	0.019	0.017	20:08 hr	1.586	0.062	1.36	0.093	-0.917	0.062	0.093	1.578	0.018	0.072
8154	323	324	8	270.502	0.019	0.012	20:06 hr	1.43	0.053	1.329	0.079	-0.92	0.053	0.079	1.425	0.013	0.061
8218	305	306	8	24.895	0.003	0.027	20:07 hr	0.98	0.119	0.6	0.178	-0.358	0.119	0.178	0.976	0.069	0.092
8389	NJ_3	NJ_9	8	42.769	0.01	0.172	20:44 hr	2.494	0.23	1.074	0.345	-0.5	0.667	1	0.756	0.256	0.238
8390	1566	NJ_3	8	17.857	0.527	0.172	20:44 hr	10.225	0.085	7.448	0.128	-4.754	0.667	1	0.756	0.035	0.238
8548	235	234	8	232.266	0.003	0.05	20:02 hr	1.172	0.162	0.609	0.244	-0.333	0.166	0.249	0.22	0.13	0.126
8849	180	2058	8	306.895	0.004	0.238	20:13 hr	1.958	0.353	0.689	0.53	-0.194	0.353	0.53	1.954	0.551	0.282
8851	177	178	8	114.345	0.02	0.004	20:03 hr	1.037	0.03	1.279	0.045	-0.965	0.03	0.045	1.035	0.004	0.034
8890	163	516	8	39.352	0.017	0.023	10:00 hr	1.682	0.075	1.31	0.112	-0.855	0.088	0.132	1.183	0.027	0.086
8891	162	163	8	138.741	0.001	0	00:00 hr	0	0	0	0	-0.163	0.037	0.056	0	0	0
8934	501	618	8	64.882	0.004	0.001	20:00 hr	0.352	0.021	0.525	0.031	-0.421	0.062	0.092	0.255	0.002	0.015
8935	1806	1808	8	139.537	0.011	0.023	20:02 hr	1.436	0.082	1.069	0.123	-0.688	0.082	0.123	1.434	0.032	0.085
8936	154	155	8	212.051	0.014	0.005	20:01 hr	1.004	0.04	1.083	0.059	-0.784	0.04	0.059	1.003	0.007	0.041
8937	682	698	8	157.318	0.007	0.116	20:20 hr	2.018	0.201	0.935	0.301	-0.47	0.201	0.301	2.005	0.197	0.194
8938	NJ_33	2103	15	418.187	0.019	1.612	20:11 hr	5.596	0.49	1.649	0.392	-3.359	0.49	0.392	5.565	0.324	0.632
8939	151	745	10	299.987	0.021	0.523	12:27 hr	4.394	0.309	1.63	0.371	-1.261	0.309	0.371	4.388	0.293	0.397
8940	2058	151	10	393.337	0.013	0.507	12:26 hr	3.701	0.343	1.303	0.412	-0.919	0.343	0.412	3.696	0.355	0.391
8944	155	152	8	255.489	0.021	0.007	20:02 hr	1.276	0.041	1.343	0.062	-0.965	0.041	0.062	1.274	0.008	0.048
8945	152	941	8	266.032	0.007	0.013	20:04 hr	1.034	0.068	0.845	0.102	-0.561	0.091	0.137	0.055	0.022	0.063
8946	153	154	8	151.249	0.014	0.002	20:01 hr	0.789	0.027	1.04	0.04	-0.801	0.027	0.04	0.789	0.003	0.027
8948	527	347	8	77.737	0.047	0.001	20:00 hr	1.045	0.016	1.773	0.024	-1.477	0.016	0.024	1.045	0.001	0.021
8949	347	157	8	337.906	0.019	0.01	20:01 hr	1.358	0.049	1.307	0.074	-0.913	0.049	0.074	1.356	0.011	0.057
8950	157	161	8	337.257	0.019	0.014	20:03 hr	1.502	0.058	1.333	0.087	-0.909	0.058	0.087	1.499	0.016	0.067
8965	195	544	8	268.167	0.006	0.016	20:08 hr	1.032	0.079	0.781	0.119	-0.505	0.079	0.119	1.027	0.03	0.07
8966	164	165	8	101.547	0.006	0.001	20:01 hr	0.479	0.024	0.661	0.036	-0.516	0.024	0.036	0.479	0.002	0.02
8967	165	166	8	264.66	0.006	0.01	20:03 hr	0.898	0.063	0.763	0.095	-0.513	0.063	0.095	0.896	0.019	0.055
8968	166	167	8	261.66	0.006	0.017	20:04 hr	1.065	0.083	0.785	0.125	-0.503	0.667	1	1.001	0.033	0.074
8969	167	168	8	264.309	0.006	0.035	20:07 hr	1.318	0.118	0.812	0.176	-0.486	0.667	1	1.173	0.068	0.106
8971	170	171	8	451.462	0.006	0.02	20:11 hr	1.107	0.088	0.793	0.132	-0.503	0.088	0.132	1.101	0.037	0.078
8972	169	170	8	429.271	0.006	0.015	20:08 hr	1.023	0.078	0.782	0.116	-0.508	0.078	0.116	1.018	0.029	0.069
8973	173	172	8	134.214	0.01	0.002	20:01 hr	0.657	0.026	0.87	0.04	-0.671	0.026	0.04	0.657	0.003	0.025
8975	175	174	8	135.964	0.01	0.002	20:01 hr	0.638	0.025	0.86	0.038	-0.667	0.025	0.038	0.638	0.003	0.024
8976	176	177	8	447.018	0.017	0.003	20:04 hr	0.934	0.03	1.152	0.046	-0.869	0.03	0.046	0.932	0.004	0.033
8977	178	179	8	172.204	0.019	0.007	20:03 hr	1.21	0.041	1.286	0.061	-0.927	0.041	0.061	1.207	0.007	0.046
8982	183	182	8	409.001	0.005	0.149	20:08 hr	1.851	0.258	0.752	0.386	-0.322	0.258	0.386	1.848	0.316	0.221
8983	182	181	8	335.893	0.004	0.221	20:08 hr	1.978	0.331	0.714	0.497	-0.226	0.331	0.497	1.975	0.495	0.272
8984	181	180	8	325.028	0.004	0.234	20:10 hr	2.004	0.342	0.713	0.514	-0.213	0.342	0.514	2	0.523	0.28
8985	187	184	8	399.754	0.016	0.018	20:04 hr	1.541	0.067	1.271	0.1	-0.847	0.667	1	1.376	0.021	0.076
8986	188	187	8	375.935	0.021	0.013	20:02 hr	1.501	0.053	1.391	0.08	-0.961	0.653	0.98	1.413	0.013	0.063
8987	189	188	8	181.661	0.017	0.003	20:01 hr	0.911	0.028	1.166	0.042	-0.889	0.028	0.042	0.91	0.003	0.03

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
8988	190	271	8	352.187	0.015	0.004	20:02 hr	0.948	0.033	1.114	0.05	-0.829	0.033	0.05	0.946	0.005	0.035
8989	191	192	8	378.323	0.023	0.017	20:05 hr	1.706	0.059	1.501	0.089	-1.02	0.667	1	1.519	0.016	0.072
8990	193	194	8	332.316	0.006	0.007	20:03 hr	0.821	0.054	0.752	0.082	-0.518	0.054	0.082	0.818	0.014	0.047
8991	194	196	8	339.308	0.006	0.011	20:06 hr	0.922	0.066	0.763	0.1	-0.509	0.066	0.1	0.919	0.021	0.058
8992	196	195	8	336.862	0.006	0.013	20:08 hr	0.976	0.072	0.774	0.108	-0.509	0.072	0.108	0.971	0.025	0.064
8993	197	193	8	269.9	0.007	0.002	20:02 hr	0.633	0.031	0.772	0.047	-0.58	0.031	0.047	0.632	0.004	0.027
8994	353	1464	8	213.545	0.021	0.02	20:09 hr	1.726	0.065	1.443	0.098	-0.966	0.065	0.098	1.719	0.02	0.078
8995	356	199	8	417.441	0.017	0.026	20:09 hr	1.757	0.078	1.34	0.117	-0.87	0.078	0.117	1.749	0.029	0.09
8996	199	198	8	257.44	0.006	0.027	20:10 hr	1.221	0.104	0.804	0.155	-0.494	0.104	0.155	1.214	0.052	0.093
8997	198	444	8	248.776	0.006	0.028	20:12 hr	1.234	0.105	0.807	0.157	-0.495	0.105	0.157	1.225	0.054	0.094
8998	309	200	10	375.983	0.018	0.18	20:27 hr	3.068	0.186	1.493	0.223	-1.469	0.186	0.223	3.025	0.109	0.229
8999	200	325	10	405.108	0.017	0.181	20:29 hr	3.04	0.188	1.472	0.225	-1.444	0.188	0.225	2.993	0.111	0.229
9009	203	202	8	435.935	0.019	0.003	20:02 hr	0.923	0.027	1.212	0.04	-0.933	0.027	0.04	0.921	0.003	0.03
9010	202	201	8	449.211	0.02	0.01	20:03 hr	1.379	0.048	1.346	0.072	-0.945	0.048	0.072	1.376	0.01	0.056
9011	201	274	8	320.309	0.021	0.066	20:07 hr	2.485	0.116	1.541	0.174	-0.924	0.116	0.174	2.474	0.066	0.145
9013	208	628	8	329.07	0.023	0.011	20:03 hr	1.478	0.048	1.448	0.072	-1.018	0.667	1	1.153	0.01	0.058
9014	207	208	8	331.315	0.015	0.008	20:02 hr	1.18	0.047	1.166	0.07	-0.822	0.047	0.07	1.178	0.01	0.051
9015	206	207	8	309.903	0.017	0.004	20:01 hr	1.016	0.033	1.197	0.05	-0.891	0.033	0.05	1.014	0.005	0.036
9016	210	450	8	436.282	0.006	0.009	20:07 hr	0.888	0.059	0.781	0.089	-0.531	0.059	0.089	0.885	0.016	0.052
9017	209	210	8	436.417	0.006	0.005	20:04 hr	0.744	0.044	0.756	0.067	-0.538	0.044	0.067	0.742	0.009	0.039
9019	211	212	8	163.1	0.017	0.001	20:00 hr	0.604	0.015	1.052	0.023	-0.884	0.015	0.023	0.604	0.001	0.016
9020	212	213	8	410.599	0.007	0.003	20:04 hr	0.642	0.034	0.747	0.051	-0.554	0.044	0.066	0.012	0.005	0.029
9021	213	323	8	256.887	0.009	0.009	20:05 hr	1.007	0.054	0.925	0.081	-0.638	0.054	0.081	1.003	0.014	0.052
9022	214	215	8	147.592	0.02	0.002	20:00 hr	0.859	0.023	1.224	0.034	-0.966	0.023	0.034	0.859	0.002	0.025
9023	215	216	8	250.076	0.008	0.007	20:02 hr	0.892	0.05	0.853	0.075	-0.595	0.05	0.075	0.89	0.011	0.046
9024	216	217	8	260.391	0.006	0.011	20:04 hr	0.936	0.068	0.764	0.102	-0.507	0.068	0.102	0.933	0.022	0.06
9025	217	229	8	256.077	0.006	0.04	20:07 hr	1.377	0.124	0.824	0.187	-0.486	0.124	0.187	1.371	0.076	0.113
9026	229	201	8	263.492	0.01	0.052	20:07 hr	1.765	0.125	1.054	0.188	-0.621	0.125	0.188	1.757	0.077	0.128
9027	218	219	8	385.201	0.011	0.007	20:02 hr	1.041	0.048	1.023	0.071	-0.72	0.048	0.071	1.039	0.01	0.048
9028	219	220	8	379.679	0.017	0.011	20:04 hr	1.374	0.053	1.279	0.079	-0.885	0.053	0.079	1.371	0.013	0.06
9029	220	629	8	375.203	0.02	0.015	20:05 hr	1.557	0.057	1.39	0.086	-0.949	0.667	1	1.387	0.015	0.068
9031	222	446	8	412.222	0.007	0.009	20:07 hr	0.91	0.058	0.804	0.088	-0.548	0.058	0.088	0.906	0.016	0.052
9032	221	222	8	421.036	0.007	0.006	20:04 hr	0.797	0.047	0.784	0.071	-0.552	0.047	0.071	0.794	0.01	0.042
9033	225	224	8	149.117	0.014	0.001	20:00 hr	0.598	0.017	0.977	0.026	-0.804	0.017	0.026	0.598	0.001	0.017
9034	224	223	8	447.415	0.007	0.004	20:04 hr	0.709	0.039	0.764	0.059	-0.554	0.039	0.059	0.706	0.007	0.035
9035	226	227	8	149.852	0.034	0.003	20:00 hr	1.097	0.022	1.578	0.034	-1.248	0.022	0.034	1.096	0.002	0.028
9036	227	228	8	399.632	0.021	0.007	20:02 hr	1.245	0.039	1.358	0.058	-0.986	0.039	0.058	1.243	0.007	0.045
9037	228	229	8	401.272	0.022	0.01	20:04 hr	1.411	0.046	1.402	0.07	-0.99	0.046	0.07	1.408	0.01	0.055
9038	230	218	8	341.923	0.006	0.004	20:03 hr	0.669	0.04	0.717	0.06	-0.518	0.04	0.06	0.667	0.007	0.034
9039	231	445	8	441.158	0.006	0.009	20:07 hr	0.865	0.06	0.754	0.09	-0.511	0.064	0.096	0.038	0.017	0.052
9040	232	231	8	438.436	0.006	0.005	20:04 hr	0.726	0.045	0.734	0.067	-0.521	0.045	0.067	0.723	0.009	0.038
9041	738	233	8	242.048	0.008	0.157	20:25 hr	2.286	0.229	0.987	0.343	-0.462	0.229	0.343	2.256	0.253	0.227
9042	233	310	8	457.669	0.022	0.159	20:27 hr	3.248	0.18	1.598	0.269	-0.844	0.18	0.269	3.2	0.159	0.229
9044	234	506	8	234.743	0.003	0.055	20:04 hr	1.209	0.171	0.611	0.256	-0.328	0.171	0.256	1.206	0.144	0.133
9045	241	242	8	155.747	0.035	0.002	20:00 hr	1.094	0.022	1.603	0.032	-1.275	0.022	0.032	1.094	0.002	0.027
9046	242	243	8	399.506	0.022	0.007	20:02 hr	1.251	0.038	1.369	0.058	-0.996	0.038	0.058	1.248	0.006	0.045

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9047	243	996	8	49.46	0.021	0.007	20:02 hr	1.257	0.04	1.351	0.06	-0.977	0.04	0.06	1.255	0.007	0.046
9048	244	486	8	220.646	0.023	0.006	20:03 hr	1.217	0.036	1.384	0.053	-1.019	0.343	0.515	1.086	0.006	0.042
9049	245	244	8	389.629	0.016	0.004	20:02 hr	0.992	0.035	1.143	0.052	-0.845	0.035	0.052	0.99	0.005	0.037
9050	246	245	8	380.238	0.02	0.002	20:02 hr	0.85	0.023	1.217	0.034	-0.962	0.023	0.034	0.849	0.002	0.025
9051	247	248	8	362.602	0.006	0.005	20:03 hr	0.722	0.045	0.726	0.068	-0.514	0.045	0.068	0.72	0.009	0.039
9052	248	249	8	449.168	0.006	0.009	20:04 hr	0.902	0.06	0.784	0.091	-0.531	0.06	0.091	0.899	0.017	0.053
9054	250	531	8	219.844	0.001	0.011	20:04 hr	0.479	0.104	0.316	0.156	-0.194	0.117	0.176	0.047	0.052	0.058
9055	251	250	8	340.021	0.018	0.009	20:01 hr	1.297	0.047	1.285	0.07	-0.906	0.047	0.07	1.295	0.01	0.053
9056	252	251	8	342.532	0.018	0.004	20:02 hr	1.024	0.032	1.22	0.049	-0.91	0.032	0.049	1.022	0.005	0.036
9057	253	254	15	352.016	0.018	5.483	20:12 hr	6.913	1.25	1.622	1	0.591	1.25	1	6.908	1.121	1.136
9058	254	255	15	324.227	0.02	5.486	20:14 hr	6.917	1.25	1.691	1	0.389	1.25	1	7.147	1.076	1.136
9059	255	256	15	321.349	0.02	5.49	20:15 hr	6.922	1.25	1.693	1	0.386	1.25	1	7.154	1.076	1.137
9060	256	626	15	328.957	0.021	5.492	20:16 hr	6.925	1.25	1.739	1	0.249	1.25	1	6.731	1.048	1.137
9078	467	468	8	365.114	0.017	0.009	20:02 hr	1.257	0.047	1.245	0.07	-0.878	0.047	0.07	1.255	0.01	0.052
9079	468	469	8	181.864	0.035	0.01	20:02 hr	1.657	0.041	1.747	0.062	-1.256	0.041	0.062	1.654	0.008	0.055
9080	472	471	8	346.744	0.021	0.004	20:01 hr	1.077	0.031	1.317	0.046	-0.991	0.031	0.046	1.075	0.004	0.035
9081	471	339	8	254.748	0.009	0.014	20:03 hr	1.174	0.069	0.954	0.103	-0.632	0.069	0.103	1.171	0.022	0.067
9082	484	485	8	140.914	0.009	0.098	20:06 hr	2.097	0.174	1.051	0.261	-0.561	0.265	0.398	2.022	0.149	0.178
9083	483	484	8	194.584	0.001	0.044	10:08 hr	0.726	0.208	0.33	0.313	-0.163	0.208	0.313	0.725	0.212	0.118
9084	487	484	8	227.391	0.013	0.06	20:06 hr	2.018	0.126	1.197	0.19	-0.704	0.149	0.224	0.263	0.079	0.139
9085	490	487	8	346.674	0.017	0.024	20:04 hr	1.698	0.075	1.321	0.113	-0.862	0.075	0.113	1.694	0.027	0.086
9086	493	492	8	236.433	0.02	0.015	20:02 hr	1.57	0.058	1.399	0.086	-0.954	0.058	0.086	1.568	0.015	0.068
9087	494	493	8	108.563	0.003	0.001	20:01 hr	0.402	0.03	0.5	0.045	-0.378	0.094	0.14	0.006	0.004	0.021
9088	500	493	8	172.714	0.004	0.011	20:01 hr	0.842	0.072	0.668	0.108	-0.439	0.115	0.172	0.049	0.025	0.059
9089	499	492	8	176.484	0.027	0.002	20:00 hr	0.971	0.022	1.41	0.033	-1.119	0.022	0.033	0.97	0.002	0.026
9090	488	487	8	175.431	0.012	0.034	20:06 hr	1.658	0.098	1.125	0.147	-0.7	0.098	0.147	1.652	0.046	0.104
9091	474	482	8	238.444	0.005	0.042	10:07 hr	1.312	0.133	0.758	0.2	-0.439	0.133	0.2	1.31	0.087	0.116
9092	477	474	8	282.2	0.011	0.008	20:01 hr	1.033	0.05	0.988	0.075	-0.689	0.05	0.075	1.032	0.011	0.05
9093	481	478	8	146.134	0.061	0.001	20:00 hr	1.142	0.015	1.996	0.023	-1.678	0.015	0.023	1.142	0.001	0.021
9094	479	478	8	184.271	0.004	0.003	20:01 hr	0.528	0.039	0.573	0.059	-0.415	0.039	0.059	0.527	0.007	0.03
9095	480	479	8	137.231	0.02	0.001	20:00 hr	0.675	0.016	1.149	0.024	-0.958	0.016	0.024	0.675	0.001	0.017
9096	476	475	8	236.142	0.019	0.035	10:01 hr	1.97	0.088	1.41	0.132	-0.894	0.143	0.214	0.155	0.038	0.105
9108	1349	1348	12	264.534	0.004	0.277	20:25 hr	1.997	0.318	0.734	0.318	-0.99	0.318	0.318	1.756	0.218	0.271
9109	1348	909	12	266.572	0.004	0.278	20:27 hr	1.994	0.319	0.731	0.319	-0.984	0.319	0.319	1.98	0.22	0.271
9110	1353	1349	10	195.497	0.014	0.275	20:23 hr	3.142	0.247	1.312	0.297	-1.16	0.247	0.297	3.124	0.192	0.285
9111	688	1353	10	196.97	0.014	0.275	20:22 hr	3.131	0.247	1.307	0.297	-1.155	0.247	0.297	3.113	0.192	0.284
9112	1354	1357	8	321.727	0.004	0.045	20:11 hr	1.235	0.146	0.68	0.219	-0.385	0.146	0.219	1.231	0.105	0.12
9113	1357	1359	8	343.015	0.004	0.045	20:14 hr	1.226	0.147	0.671	0.221	-0.379	0.147	0.221	1.222	0.107	0.12
9114	1359	1361	8	291.056	0.004	0.088	20:14 hr	1.494	0.205	0.684	0.307	-0.341	0.205	0.307	1.484	0.205	0.169
9115	1361	1306	8	251.093	0.004	0.088	20:16 hr	1.495	0.205	0.684	0.308	-0.34	0.205	0.308	1.484	0.206	0.169
9116	1355	1356	8	255.114	0.004	0.006	10:05 hr	0.673	0.056	0.61	0.083	-0.419	0.056	0.083	0.672	0.014	0.043
9117	1356	1358	8	350.837	0.004	0.011	10:09 hr	0.8	0.073	0.632	0.109	-0.415	0.073	0.109	0.799	0.025	0.058
9132	138	2139	8	401.253	0.009	0.003	20:02 hr	0.733	0.032	0.873	0.049	-0.652	0.032	0.049	0.731	0.005	0.03
9142	258	257	8	319.64	0.007	0.003	20:03 hr	0.685	0.037	0.759	0.056	-0.554	0.037	0.056	0.683	0.006	0.033
9143	257	471	8	262.604	0.013	0.009	20:03 hr	1.129	0.05	1.077	0.075	-0.751	0.05	0.075	1.126	0.012	0.052
9144	259	257	8	344.449	0.015	0.004	20:02 hr	0.932	0.032	1.121	0.048	-0.84	0.032	0.048	0.931	0.004	0.034

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
9145	261	262	15	309.702	0.019	4.43	20:07 hr	7.191	0.907	1.678	0.725	-0.628	0.907	0.725	7.179	0.876	1.051
9146	264	253	15	328.292	0.026	4.455	20:11 hr	8.067	0.821	1.924	0.657	-1.349	1.25	1	7.768	0.768	1.053
9147	263	264	15	337.217	0.019	4.44	20:09 hr	7.186	0.909	1.676	0.727	-0.613	1.25	1	6.967	0.879	1.052
9148	262	263	15	344.963	0.019	4.433	20:08 hr	7.179	0.908	1.674	0.727	-0.616	0.908	0.727	7.163	0.878	1.051
9149	271	273	8	375.734	0.013	0.009	20:02 hr	1.15	0.049	1.113	0.073	-0.78	0.049	0.073	1.148	0.011	0.052
9150	273	191	8	396.165	0.005	0.012	20:05 hr	0.902	0.072	0.718	0.108	-0.473	0.072	0.108	0.899	0.024	0.061
9151	275	274	8	358.55	0.006	0.003	20:03 hr	0.638	0.037	0.711	0.056	-0.52	0.037	0.056	0.637	0.006	0.031
9152	362	350	8	410.93	0.006	0.043	20:11 hr	1.412	0.129	0.831	0.193	-0.486	0.129	0.193	1.407	0.081	0.117
9154	274	280	8	315.086	0.007	0.085	20:10 hr	1.765	0.177	0.875	0.266	-0.464	0.177	0.266	1.754	0.155	0.166
9155	280	281	8	306.89	0.023	0.089	20:11 hr	2.774	0.133	1.602	0.199	-0.93	0.133	0.199	2.754	0.087	0.169
9156	281	168	8	414.848	0.022	0.092	20:14 hr	2.79	0.136	1.592	0.204	-0.919	0.667	1	2.462	0.091	0.173
9157	168	282	8	295.745	0.02	0.129	20:12 hr	2.99	0.164	1.544	0.246	-0.841	0.667	1	2.047	0.133	0.205
9158	285	286	8	203.402	0.016	0.007	20:02 hr	1.157	0.043	1.199	0.064	-0.857	0.043	0.064	1.156	0.008	0.047
9159	284	285	8	216.239	0.022	0.005	20:03 hr	1.136	0.033	1.339	0.05	-0.997	0.033	0.05	1.134	0.005	0.038
9160	283	284	8	388.807	0.02	0.003	20:02 hr	0.962	0.027	1.247	0.041	-0.956	0.027	0.041	0.96	0.003	0.031
9161	286	367	8	235.763	0.006	0.008	20:04 hr	0.828	0.057	0.743	0.085	-0.508	0.057	0.085	0.826	0.015	0.049
9172	300	301	8	255.049	0.019	0.003	20:01 hr	0.956	0.028	1.22	0.043	-0.93	0.028	0.043	0.955	0.003	0.031
9173	301	165	8	303.638	0.02	0.006	20:02 hr	1.148	0.037	1.289	0.055	-0.945	0.037	0.055	1.147	0.006	0.041
9174	302	303	8	271	0.022	0.003	20:01 hr	1.004	0.027	1.303	0.041	-0.998	0.027	0.041	1.003	0.003	0.031
9175	303	166	8	309.472	0.019	0.006	20:02 hr	1.141	0.037	1.278	0.055	-0.936	0.037	0.055	1.139	0.006	0.041
9177	304	305	8	339.89	0.006	0.026	20:07 hr	1.207	0.102	0.801	0.153	-0.494	0.102	0.153	1.201	0.051	0.091
9178	306	307	8	318.691	0.006	0.03	20:09 hr	1.259	0.109	0.807	0.164	-0.491	0.109	0.164	1.252	0.058	0.098
9179	307	308	8	334.724	0.006	0.033	20:12 hr	1.315	0.113	0.827	0.17	-0.499	0.113	0.17	1.305	0.063	0.103
9180	313	312	8	462.794	0.006	0.001	20:04 hr	0.5	0.025	0.674	0.038	-0.523	0.025	0.038	0.499	0.003	0.021
9181	312	311	8	452.802	0.011	0.003	20:03 hr	0.797	0.033	0.948	0.049	-0.708	0.033	0.049	0.795	0.005	0.032
9182	311	310	8	211.598	0.011	0.021	20:08 hr	1.4	0.078	1.068	0.117	-0.693	0.078	0.117	1.313	0.029	0.081
9191	329	330	8	391.347	0.006	0.006	20:03 hr	0.762	0.048	0.742	0.073	-0.52	0.048	0.073	0.76	0.011	0.042
9192	330	331	8	400.558	0.006	0.01	20:06 hr	0.914	0.065	0.766	0.097	-0.513	0.065	0.097	0.911	0.02	0.057
9193	331	274	8	400.161	0.012	0.014	20:07 hr	1.273	0.065	1.069	0.097	-0.717	0.12	0.18	0.062	0.019	0.067
9194	172	174	8	263.866	0.018	0.006	20:01 hr	1.108	0.037	1.228	0.056	-0.896	0.037	0.056	1.107	0.006	0.042
9195	332	1161	8	195.79	0.005	0.012	20:04 hr	0.89	0.072	0.708	0.108	-0.466	0.072	0.108	0.888	0.024	0.06
9196	174	332	8	259.044	0.007	0.009	20:03 hr	0.922	0.061	0.801	0.091	-0.542	0.061	0.091	0.92	0.017	0.054
9197	333	172	8	113.246	0.019	0.001	20:00 hr	0.715	0.018	1.152	0.027	-0.945	0.083	0.124	0.005	0.001	0.019
9198	335	347	8	265.281	0.015	0.005	20:02 hr	1.037	0.037	1.149	0.056	-0.839	0.037	0.056	1.035	0.006	0.04
9200	334	335	8	206.576	0.006	0.003	20:01 hr	0.641	0.037	0.719	0.055	-0.527	0.037	0.055	0.641	0.006	0.031
9201	336	469	8	253.194	0.02	0.005	20:04 hr	1.126	0.034	1.303	0.051	-0.965	0.034	0.051	1.123	0.005	0.039
9202	337	469	8	355.78	0.02	0.003	20:01 hr	0.956	0.027	1.246	0.041	-0.956	0.027	0.041	0.955	0.003	0.03
9203	338	339	8	326.896	0.006	0.002	20:03 hr	0.59	0.033	0.698	0.049	-0.52	0.033	0.049	0.589	0.005	0.027
9204	339	340	8	278.692	0.006	0.019	20:05 hr	1.087	0.086	0.788	0.129	-0.502	0.086	0.129	1.083	0.036	0.076
9205	341	342	8	257.026	0.022	0.024	20:09 hr	1.869	0.071	1.491	0.107	-0.983	0.071	0.107	1.86	0.024	0.087
9206	342	779	8	290.691	0.029	0.025	20:10 hr	2.079	0.067	1.711	0.101	-1.139	0.067	0.101	2.067	0.021	0.088
9207	779	343	8	376.331	0.021	0.035	20:10 hr	2.038	0.087	1.472	0.13	-0.938	0.087	0.13	2.026	0.036	0.105
9208	343	769	8	439.905	0.024	0.037	20:11 hr	2.183	0.086	1.581	0.129	-1.008	0.086	0.129	2.169	0.036	0.109
9209	348	344	8	379.428	0.023	0.056	10:09 hr	2.431	0.105	1.587	0.158	-0.971	0.105	0.158	2.429	0.054	0.133
9210	344	345	8	370.189	0.019	0.057	10:11 hr	2.309	0.111	1.466	0.167	-0.887	0.111	0.167	2.306	0.06	0.135
9211	345	346	8	331.229	0.022	0.107	10:12 hr	2.914	0.146	1.601	0.22	-0.905	0.146	0.22	2.911	0.106	0.186

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9212	346	528	8	286.214	0.014	0.113	10:14 hr	2.508	0.169	1.276	0.253	-0.689	0.182	0.273	2.492	0.141	0.192
9213	349	348	8	357.016	0.022	0.049	20:14 hr	2.31	0.1	1.552	0.149	-0.962	0.1	0.149	2.301	0.048	0.125
9214	350	349	8	352.491	0.015	0.044	20:13 hr	1.952	0.105	1.276	0.158	-0.782	0.105	0.158	1.943	0.054	0.119
9215	352	353	8	252.733	0.022	0.002	20:01 hr	0.817	0.02	1.248	0.03	-1.006	0.02	0.03	0.816	0.002	0.022
9216	354	355	8	242.674	0.01	0.002	20:01 hr	0.709	0.029	0.899	0.043	-0.684	0.029	0.043	0.708	0.003	0.027
9217	355	356	8	188.032	0.01	0.003	20:02 hr	0.766	0.032	0.914	0.049	-0.683	0.032	0.049	0.765	0.005	0.031
9221	357	358	8	325.411	0.018	0.004	20:01 hr	1.01	0.032	1.217	0.048	-0.911	0.032	0.048	1.008	0.004	0.035
9222	358	359	8	360.378	0.018	0.008	20:02 hr	1.236	0.044	1.261	0.066	-0.897	0.044	0.066	1.234	0.009	0.05
9223	359	360	8	328.462	0.029	0.01	20:03 hr	1.583	0.045	1.606	0.067	-1.141	0.667	1	0.045	0.009	0.057
9224	171	361	8	266.387	0.008	0.023	20:10 hr	1.31	0.089	0.936	0.133	-0.593	0.089	0.133	1.303	0.038	0.086
9225	363	366	8	158.3	0.009	0.003	20:01 hr	0.679	0.031	0.832	0.046	-0.627	0.031	0.046	0.678	0.004	0.028
9226	364	361	8	401.07	0.006	0.008	20:04 hr	0.856	0.059	0.756	0.088	-0.514	0.059	0.088	0.853	0.016	0.051
9227	365	364	8	389	0.006	0.004	20:03 hr	0.699	0.043	0.719	0.065	-0.513	0.043	0.065	0.697	0.008	0.037
9228	370	368	8	410.183	0.022	0.002	20:02 hr	0.878	0.022	1.278	0.033	-1.015	0.022	0.033	0.877	0.002	0.025
9229	368	367	8	389.487	0.021	0.003	20:03 hr	1.023	0.029	1.298	0.043	-0.988	0.029	0.043	1.021	0.003	0.033
9230	367	366	8	438.071	0.019	0.012	20:06 hr	1.42	0.053	1.319	0.08	-0.912	0.053	0.08	1.415	0.013	0.061
9235	376	377	8	467.643	0.022	0.003	20:02 hr	1.009	0.028	1.304	0.041	-0.999	0.028	0.041	1.007	0.003	0.032
9236	377	378	8	429.348	0.027	0.006	20:03 hr	1.314	0.036	1.495	0.053	-1.101	0.036	0.053	1.312	0.006	0.044
9237	378	379	8	247.805	0.007	0.007	20:04 hr	0.865	0.052	0.814	0.077	-0.565	0.052	0.077	0.862	0.012	0.047
9239	380	381	8	406.198	0.023	0.004	20:02 hr	1.127	0.032	1.361	0.047	-1.02	0.032	0.047	1.125	0.004	0.037
9240	381	382	8	439.454	0.021	0.009	20:02 hr	1.335	0.044	1.36	0.066	-0.968	0.044	0.066	1.332	0.009	0.052
9241	382	304	8	348.923	0.015	0.012	20:04 hr	1.295	0.055	1.177	0.083	-0.808	0.055	0.083	1.291	0.014	0.06
9242	379	304	8	290.158	0.009	0.012	20:05 hr	1.111	0.063	0.945	0.095	-0.635	0.063	0.095	1.108	0.019	0.061
9243	384	385	8	224.722	0.024	0.007	20:01 hr	1.323	0.038	1.448	0.058	-1.053	0.038	0.058	1.323	0.007	0.046
9244	385	386	8	286.657	0.018	0.008	20:02 hr	1.25	0.044	1.28	0.066	-0.912	0.044	0.066	1.248	0.009	0.05
9245	386	782	8	133.519	0.029	0.008	20:02 hr	1.493	0.04	1.597	0.06	-1.153	0.04	0.06	1.491	0.007	0.051
9248	387	388	8	329.969	0.022	0.005	20:01 hr	1.152	0.034	1.344	0.051	-0.997	0.034	0.051	1.15	0.005	0.039
9249	388	389	8	335.296	0.021	0.01	20:01 hr	1.401	0.047	1.381	0.071	-0.972	0.047	0.071	1.399	0.01	0.056
9250	389	553	8	336.974	0.019	0.014	20:03 hr	1.501	0.056	1.355	0.084	-0.928	0.056	0.084	1.498	0.015	0.065
9251	390	391	8	349.896	0.006	0.003	20:03 hr	0.646	0.037	0.715	0.056	-0.523	0.037	0.056	0.644	0.006	0.032
9252	391	392	8	374.643	0.006	0.007	20:03 hr	0.826	0.055	0.752	0.083	-0.516	0.055	0.083	0.824	0.014	0.048
9253	392	393	8	356.273	0.006	0.011	20:06 hr	0.942	0.068	0.772	0.101	-0.513	0.068	0.101	0.938	0.022	0.059
9255	394	395	8	218.308	0.026	0.003	20:01 hr	1.041	0.025	1.413	0.038	-1.098	0.025	0.038	1.04	0.003	0.03
9257	NJ_9	1563	8	21.083	-0.395	0.172	20:44 hr	0.763	0.667	0.163	1	0.818	0.667	1	0.756	1	0.238
9258	395	396	8	365.426	0.017	0.01	20:02 hr	1.286	0.049	1.244	0.073	-0.872	0.049	0.073	1.283	0.011	0.055
9259	396	552	8	359.11	0.02	0.013	20:04 hr	1.488	0.055	1.36	0.082	-0.936	0.055	0.082	1.484	0.014	0.064
9260	397	405	8	157.676	0.041	0.003	20:00 hr	1.186	0.022	1.724	0.033	-1.368	0.032	0.047	1.118	0.002	0.029
9261	399	398	8	318.057	0.017	0.002	20:01 hr	0.797	0.024	1.111	0.036	-0.871	0.024	0.036	0.795	0.002	0.025
9262	398	551	8	309.105	0.018	0.003	20:02 hr	0.949	0.029	1.198	0.043	-0.91	0.029	0.043	0.947	0.004	0.032
9263	400	395	8	275.56	0.006	0.002	20:02 hr	0.564	0.031	0.69	0.046	-0.52	0.031	0.046	0.563	0.004	0.026
9264	401	402	8	219.023	0.007	0.125	20:05 hr	2.069	0.209	0.938	0.313	-0.462	0.209	0.313	2.062	0.213	0.202
9265	402	403	8	324.581	0.006	0.129	20:08 hr	1.92	0.225	0.836	0.338	-0.394	0.225	0.338	1.911	0.246	0.205
9266	403	404	8	411.592	0.006	0.133	20:12 hr	1.934	0.229	0.834	0.344	-0.39	0.229	0.344	1.919	0.254	0.208
9267	404	405	8	291.19	0.006	0.147	20:14 hr	1.992	0.242	0.835	0.363	-0.376	0.242	0.363	1.976	0.282	0.22
9268	405	406	8	171.708	0.006	0.15	20:15 hr	1.996	0.245	0.831	0.368	-0.37	0.245	0.368	1.979	0.289	0.222
9269	407	406	8	63.889	0.024	0.002	20:00 hr	0.836	0.019	1.299	0.029	-1.052	0.114	0.171	0.617	0.001	0.022

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9270	408	409	8	228.691	0.009	0.002	20:01 hr	0.636	0.027	0.83	0.041	-0.637	0.027	0.041	0.636	0.003	0.025
9271	409	410	8	348.271	0.006	0.006	20:03 hr	0.775	0.05	0.743	0.075	-0.519	0.05	0.075	0.773	0.011	0.043
9272	410	411	8	383.603	0.006	0.011	20:05 hr	0.929	0.067	0.766	0.1	-0.51	0.067	0.1	0.926	0.021	0.059
9273	411	404	8	261.919	0.021	0.012	20:05 hr	1.485	0.052	1.387	0.079	-0.961	0.052	0.079	1.48	0.013	0.062
9274	412	413	8	251.932	0.016	0.006	20:01 hr	1.077	0.038	1.178	0.058	-0.857	0.038	0.058	1.076	0.007	0.042
9275	413	522	8	253.898	0.016	0.01	20:02 hr	1.299	0.051	1.234	0.076	-0.86	0.051	0.076	1.297	0.012	0.056
9276	414	298	8	329.672	0.011	0.114	20:12 hr	2.297	0.181	1.125	0.272	-0.591	0.181	0.272	2.281	0.162	0.193
9277	298	415	8	302.664	0.021	0.127	20:12 hr	3.006	0.161	1.567	0.242	-0.859	0.161	0.242	2.984	0.129	0.203
9278	415	416	8	387.909	0.017	0.134	20:14 hr	2.85	0.174	1.426	0.262	-0.761	0.174	0.262	2.827	0.15	0.209
9279	416	529	8	303.129	0.022	0.146	20:14 hr	3.164	0.172	1.593	0.258	-0.854	0.172	0.258	3.137	0.146	0.219
9280	417	418	8	217.261	0.007	0.009	20:03 hr	0.937	0.057	0.841	0.085	-0.576	0.057	0.085	0.935	0.015	0.052
9281	418	416	8	244.825	0.008	0.01	20:03 hr	1.027	0.06	0.895	0.09	-0.606	0.06	0.09	1.025	0.017	0.057
9282	419	420	8	426.483	0.006	0.003	20:04 hr	0.614	0.035	0.705	0.052	-0.521	0.035	0.052	0.612	0.005	0.029
9283	420	786	8	428.655	0.006	0.005	20:04 hr	0.754	0.048	0.736	0.072	-0.517	0.048	0.072	0.752	0.01	0.041
9284	421	417	8	393.671	0.013	0.005	20:02 hr	0.995	0.04	1.067	0.06	-0.771	0.04	0.06	0.993	0.007	0.041
9285	422	415	8	361.165	0.008	0.004	20:03 hr	0.763	0.038	0.844	0.056	-0.616	0.038	0.056	0.761	0.006	0.035
9286	426	425	8	304.728	0.006	0.014	20:03 hr	1.006	0.075	0.786	0.112	-0.513	0.075	0.112	1.005	0.026	0.066
9287	425	424	8	300.906	0.006	0.02	20:03 hr	1.106	0.09	0.783	0.135	-0.494	0.09	0.135	1.104	0.039	0.08
9288	424	858	8	77.904	0.023	0.024	20:03 hr	1.889	0.07	1.518	0.106	-1.002	0.158	0.237	0.792	0.023	0.087
9289	429	428	12	424.437	0.006	1.03	20:32 hr	3.243	0.599	0.89	0.599	-0.506	1	1	3.194	0.67	0.536
9290	428	427	12	450.773	0.006	1.035	20:34 hr	3.259	0.6	0.894	0.6	-0.508	1	1	3.212	0.671	0.537
9291	427	253	12	450.871	0.006	1.042	20:37 hr	3.263	0.602	0.894	0.602	-0.5	1	1	2.544	0.676	0.539
9303	432	431	12	294.844	0.005	0.921	20:29 hr	2.996	0.583	0.829	0.583	-0.511	1	1	2.968	0.643	0.505
9304	431	430	12	336.932	0.005	0.924	20:31 hr	3.001	0.584	0.831	0.584	-0.509	1	1	2.973	0.645	0.506
9305	430	429	12	350.26	0.005	0.929	20:33 hr	3.019	0.584	0.836	0.584	-0.514	1	1	2.988	0.644	0.508
9320	557	433	8	261.15	0.017	0.181	20:24 hr	3.07	0.205	1.405	0.308	-0.699	0.209	0.313	0.767	0.206	0.245
9321	433	434	8	448.261	0.023	0.186	20:26 hr	3.473	0.192	1.649	0.288	-0.847	0.266	0.399	0.788	0.18	0.248
9322	434	435	8	447.866	0.021	0.192	20:28 hr	3.364	0.2	1.56	0.3	-0.785	0.2	0.3	3.316	0.196	0.252
9323	435	526	8	186.181	0.03	0.193	20:28 hr	3.862	0.182	1.887	0.273	-0.991	0.182	0.273	3.806	0.163	0.253
9324	438	437	8	378.05	0.016	0.003	20:02 hr	0.859	0.027	1.122	0.041	-0.862	0.027	0.041	0.858	0.003	0.029
9325	437	436	8	400.218	0.019	0.007	20:02 hr	1.231	0.042	1.292	0.063	-0.928	0.042	0.063	1.229	0.008	0.047
9326	436	625	8	408.123	0.018	0.013	20:03 hr	1.455	0.056	1.318	0.083	-0.904	0.056	0.083	1.452	0.014	0.064
9327	441	440	8	355.583	0.008	0.004	20:03 hr	0.786	0.039	0.849	0.059	-0.615	0.039	0.059	0.784	0.007	0.036
9328	442	443	8	364.739	0.006	0.005	20:03 hr	0.745	0.047	0.734	0.071	-0.517	0.047	0.071	0.743	0.01	0.04
9329	444	645	8	274.161	0.016	0.035	20:11 hr	1.869	0.092	1.307	0.138	-0.823	0.092	0.138	1.857	0.041	0.106
9330	443	444	8	268.36	0.016	0.006	20:04 hr	1.107	0.041	1.173	0.061	-0.845	0.041	0.061	1.103	0.007	0.044
9331	445	446	8	261.496	0.023	0.023	20:07 hr	1.851	0.069	1.503	0.104	-0.996	0.069	0.104	1.844	0.022	0.085
9332	446	450	8	262.882	0.017	0.034	20:08 hr	1.895	0.088	1.354	0.133	-0.859	0.088	0.133	1.886	0.038	0.103
9333	450	308	8	276.051	0.022	0.057	20:08 hr	2.418	0.107	1.565	0.161	-0.955	0.107	0.161	2.407	0.056	0.135
9334	451	509	8	166.849	0.006	0.001	20:01 hr	0.479	0.024	0.661	0.036	-0.516	0.024	0.036	0.478	0.002	0.02
9335	453	452	8	399.78	0.02	0.002	20:02 hr	0.906	0.025	1.235	0.037	-0.961	0.025	0.037	0.905	0.003	0.028
9336	452	336	8	218.39	0.006	0.004	20:04 hr	0.673	0.04	0.72	0.06	-0.52	0.04	0.06	0.671	0.007	0.034
9337	455	467	8	219.503	0.006	0.003	20:02 hr	0.631	0.036	0.71	0.054	-0.521	0.036	0.054	0.63	0.006	0.031
9338	457	631	8	199.048	0.004	0.071	10:05 hr	1.375	0.186	0.665	0.278	-0.346	0.186	0.278	1.375	0.169	0.151
9339	456	457	8	394.571	0.021	0.07	10:02 hr	2.519	0.12	1.536	0.18	-0.914	0.12	0.18	2.519	0.071	0.15
9340	458	412	8	229.391	0.016	0.003	20:01 hr	0.871	0.028	1.124	0.042	-0.86	0.028	0.042	0.87	0.003	0.029

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
9341	459	413	8	145.96	0.009	0.002	20:01 hr	0.651	0.029	0.823	0.043	-0.626	0.14	0.21	0.01	0.004	0.026
9342	460	461	8	308.762	0.017	0.005	10:01 hr	1.059	0.035	1.209	0.053	-0.89	0.035	0.053	1.059	0.005	0.039
9343	461	462	8	299.432	0.021	0.008	20:01 hr	1.304	0.042	1.37	0.062	-0.984	0.042	0.062	1.303	0.008	0.049
9344	462	340	8	292.737	0.024	0.01	20:02 hr	1.477	0.046	1.475	0.069	-1.043	0.046	0.069	1.476	0.01	0.056
9345	626	464	18	264.214	0.004	5.937	20:17 hr	5.198	1.5	0.81	1	2.062	1.5	1	5.037	1.532	1.172
9346	464	465	18	352.824	0.004	5.948	20:19 hr	5.208	1.5	0.815	1	2.051	1.5	1	5.024	1.526	1.173
9347	465	466	18	350.091	0.004	5.95	20:22 hr	5.21	1.5	0.812	1	2.063	1.5	1	5.003	1.531	1.173
9348	466	282	18	352.997	0.004	5.955	20:24 hr	5.214	1.5	0.82	1	2.033	1.5	1	4.984	1.518	1.174
9369	470	467	8	109.367	0.046	0.002	20:00 hr	1.132	0.019	1.78	0.028	-1.448	0.019	0.028	1.131	0.001	0.025
9370	489	488	8	58.678	0.003	0.001	20:00 hr	0.385	0.026	0.512	0.039	-0.395	0.062	0.093	0.279	0.003	0.019
9371	496	488	8	165.292	0.016	0.032	20:05 hr	1.81	0.088	1.294	0.133	-0.821	0.088	0.133	1.804	0.038	0.101
9372	497	496	8	277.834	0.019	0.03	20:04 hr	1.883	0.083	1.391	0.124	-0.893	0.083	0.124	1.878	0.033	0.098
9373	498	497	8	128.853	0.017	0.028	20:02 hr	1.785	0.081	1.339	0.121	-0.863	0.081	0.122	0.122	0.031	0.093
9374	618	498	8	276.901	0.006	0.026	20:02 hr	1.182	0.103	0.782	0.154	-0.482	0.103	0.154	1.18	0.051	0.091
9375	495	491	8	107.637	0.004	0.001	20:01 hr	0.401	0.027	0.523	0.041	-0.402	0.027	0.041	0.4	0.003	0.02
9377	502	215	8	202.88	0.016	0.003	20:01 hr	0.874	0.028	1.126	0.042	-0.861	0.028	0.042	0.873	0.003	0.03
9378	503	216	8	205.182	0.019	0.002	20:01 hr	0.851	0.023	1.198	0.035	-0.942	0.023	0.035	0.85	0.002	0.026
9379	504	505	8	291.531	0.022	0.002	20:01 hr	0.93	0.024	1.277	0.037	-0.996	0.024	0.037	0.929	0.002	0.028
9380	505	506	8	335.261	0.016	0.005	20:02 hr	1.029	0.036	1.157	0.055	-0.848	0.036	0.055	1.027	0.006	0.039
9381	506	507	8	339.612	0.018	0.062	20:06 hr	2.285	0.119	1.402	0.178	-0.837	0.119	0.178	2.278	0.069	0.141
9382	507	429	8	322.265	0.002	0.105	20:09 hr	1.131	0.288	0.435	0.431	-0.167	0.667	1	0.459	0.386	0.185
9383	509	178	8	275.226	0.018	0.002	20:01 hr	0.843	0.024	1.158	0.037	-0.903	0.024	0.037	0.842	0.002	0.026
9384	510	767	8	374.99	0.025	0.063	20:19 hr	2.61	0.109	1.674	0.163	-1.02	0.109	0.163	2.585	0.058	0.142
9385	511	510	8	364.148	0.021	0.062	20:17 hr	2.453	0.113	1.54	0.17	-0.93	0.113	0.17	2.432	0.063	0.141
9386	512	511	8	175.109	0.006	0.062	20:16 hr	1.551	0.155	0.826	0.233	-0.459	0.155	0.233	1.539	0.119	0.141
9387	513	512	8	465.934	0.022	0.061	20:15 hr	2.475	0.111	1.57	0.167	-0.952	0.111	0.167	2.457	0.06	0.14
9388	516	515	8	392.767	0.009	0.032	10:03 hr	1.498	0.101	1	0.152	-0.617	0.101	0.152	1.498	0.05	0.101
9389	515	514	8	395.284	0.006	0.037	10:08 hr	1.34	0.12	0.817	0.18	-0.486	0.12	0.18	1.34	0.071	0.108
9390	514	261	8	392.123	0.006	0.037	10:11 hr	1.345	0.12	0.821	0.18	-0.488	0.262	0.393	1.007	0.071	0.109
9392	519	632	10	210.909	0.013	0.854	20:22 hr	4.12	0.474	1.26	0.569	-0.526	0.474	0.569	4.102	0.619	0.514
9394	521	522	8	240.122	0.013	0.002	20:01 hr	0.788	0.027	1.022	0.041	-0.783	0.027	0.041	0.787	0.003	0.028
9395	523	299	8	320.856	0.018	0.019	20:04 hr	1.617	0.066	1.341	0.099	-0.894	0.667	1	1.442	0.021	0.077
9396	522	523	8	317.938	0.019	0.016	20:03 hr	1.562	0.06	1.359	0.09	-0.92	0.667	1	1.469	0.017	0.07
9397	308	524	8	334.274	0.005	0.093	20:12 hr	1.659	0.198	0.775	0.296	-0.392	0.198	0.296	1.647	0.191	0.173
9398	524	525	8	328.295	0.005	0.097	20:15 hr	1.682	0.201	0.778	0.302	-0.39	0.201	0.302	1.667	0.199	0.177
9399	525	526	8	299.485	0.004	0.117	20:15 hr	1.668	0.233	0.714	0.349	-0.33	0.263	0.395	1.304	0.262	0.195
9400	526	519	8	325.023	0.004	0.312	20:24 hr	2.148	0.409	0.716	0.613	-0.137	0.409	0.613	2.127	0.695	0.325
9413	529	528	8	265.508	0.006	0.196	20:16 hr	2.153	0.282	0.836	0.424	-0.328	0.282	0.424	2.134	0.374	0.255
9414	530	529	8	379.193	0.006	0.049	20:11 hr	1.449	0.138	0.822	0.206	-0.473	0.157	0.235	1.206	0.093	0.125
9415	531	530	8	365.222	0.006	0.045	20:08 hr	1.417	0.132	0.822	0.198	-0.478	0.132	0.198	1.41	0.086	0.119
9416	340	531	8	278.984	0.006	0.031	20:06 hr	1.263	0.109	0.808	0.164	-0.491	0.109	0.164	1.259	0.058	0.098
9417	532	441	8	193.448	0.008	0.002	20:01 hr	0.661	0.03	0.813	0.046	-0.613	0.09	0.135	0.011	0.004	0.027
9418	534	536	8	298.432	0.006	0.041	20:10 hr	1.379	0.126	0.821	0.188	-0.484	0.126	0.188	1.371	0.078	0.114
9419	536	535	8	329.557	0.006	0.044	20:12 hr	1.411	0.131	0.822	0.196	-0.479	0.131	0.196	1.402	0.084	0.118
9420	535	414	8	408.339	0.006	0.112	20:11 hr	1.843	0.209	0.834	0.314	-0.411	0.209	0.314	1.833	0.214	0.191
9422	539	540	8	413.72	0.006	0.002	20:04 hr	0.579	0.032	0.697	0.048	-0.522	0.032	0.048	0.577	0.004	0.027

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9423	540	785	8	436.867	0.006	0.004	20:07 hr	0.703	0.043	0.725	0.065	-0.518	0.043	0.065	0.7	0.008	0.037
9424	542	543	8	259.31	0.019	0.057	20:01 hr	2.294	0.112	1.452	0.168	-0.877	0.112	0.168	2.292	0.061	0.135
9425	543	535	8	294.106	0.023	0.065	20:02 hr	2.563	0.114	1.609	0.17	-0.97	0.114	0.17	2.558	0.063	0.145
9426	544	545	8	312.751	0.006	0.018	20:11 hr	1.084	0.086	0.787	0.129	-0.502	0.086	0.129	1.078	0.035	0.076
9427	545	542	8	310.032	0.006	0.022	20:12 hr	1.139	0.092	0.796	0.138	-0.501	0.092	0.138	1.133	0.041	0.082
9429	546	548	8	101.252	0.014	0.001	20:00 hr	0.604	0.018	0.975	0.027	-0.8	0.018	0.027	0.604	0.001	0.018
9430	548	547	8	407.909	0.016	0.003	20:02 hr	0.881	0.029	1.117	0.043	-0.85	0.029	0.043	0.879	0.003	0.03
9431	549	550	8	269.11	0.017	0.002	20:01 hr	0.792	0.023	1.122	0.035	-0.883	0.023	0.035	0.791	0.002	0.024
9432	550	442	8	199.629	0.02	0.003	20:02 hr	0.963	0.027	1.253	0.041	-0.961	0.027	0.041	0.962	0.003	0.031
9433	551	552	8	282.571	0.008	0.005	20:03 hr	0.827	0.044	0.84	0.067	-0.598	0.044	0.067	0.825	0.009	0.041
9434	552	553	8	343.21	0.006	0.021	20:07 hr	1.138	0.092	0.797	0.138	-0.502	0.092	0.138	1.134	0.041	0.082
9435	624	623	8	186.952	0.006	0.02	20:07 hr	1.113	0.089	0.791	0.134	-0.5	0.089	0.134	1.109	0.039	0.08
9436	623	622	8	405.888	0.006	0.024	20:11 hr	1.179	0.098	0.798	0.147	-0.496	0.098	0.147	1.173	0.047	0.088
9437	622	534	8	259.313	0.006	0.037	20:08 hr	1.341	0.121	0.814	0.181	-0.484	0.121	0.181	1.335	0.072	0.109
9438	547	440	8	320.008	0.025	0.044	20:14 hr	2.353	0.092	1.647	0.138	-1.038	0.092	0.138	2.334	0.041	0.119
9439	630	629	10	266.037	0.006	0.392	20:22 hr	2.563	0.374	0.867	0.448	-0.556	0.833	1	2.405	0.414	0.342
9440	629	628	10	261.701	0.006	0.409	20:23 hr	2.588	0.383	0.866	0.459	-0.538	0.833	1	2.423	0.432	0.35
9441	628	627	10	261.249	0.006	0.421	20:24 hr	2.615	0.388	0.869	0.466	-0.53	0.833	1	2.444	0.443	0.355
9442	627	322	10	264.137	0.006	0.434	20:25 hr	2.618	0.397	0.862	0.476	-0.509	0.833	1	2.412	0.46	0.361
9443	322	626	10	268.829	0.006	0.446	20:26 hr	2.639	0.403	0.862	0.484	-0.497	0.833	1	2.253	0.473	0.366
9464	631	632	8	461.428	0.004	0.071	10:09 hr	1.406	0.184	0.682	0.277	-0.356	0.184	0.277	1.406	0.167	0.152
9465	528	634	10	390.864	0.006	0.289	20:19 hr	2.362	0.316	0.866	0.379	-0.659	0.316	0.379	2.345	0.305	0.292
9466	634	633	10	318.263	0.006	0.29	20:21 hr	2.359	0.317	0.864	0.38	-0.656	0.317	0.38	2.339	0.306	0.292
9467	633	635	10	320.813	0.006	0.291	20:23 hr	2.363	0.317	0.865	0.38	-0.656	0.833	1	2.21	0.307	0.293
9468	635	630	10	317.758	0.006	0.291	20:25 hr	2.364	0.317	0.865	0.381	-0.655	0.833	1	2.213	0.308	0.293
9479	637	316	8	198.379	0.019	0.004	20:05 hr	1.033	0.032	1.236	0.048	-0.924	0.032	0.048	1.029	0.004	0.036
9480	636	637	8	190.09	0.025	0.004	20:04 hr	1.119	0.029	1.403	0.044	-1.064	0.029	0.044	1.115	0.004	0.035
9481	638	639	8	160.479	0.029	0.002	20:00 hr	0.91	0.019	1.427	0.028	-1.16	0.019	0.028	0.909	0.001	0.022
9482	639	640	8	260.262	0.013	0.007	20:02 hr	1.065	0.046	1.068	0.068	-0.756	0.046	0.068	1.063	0.009	0.047
9483	640	622	8	279.235	0.019	0.012	20:04 hr	1.422	0.053	1.319	0.08	-0.911	0.053	0.08	1.418	0.013	0.061
9484	142	639	8	357.365	0.005	0.003	20:03 hr	0.639	0.04	0.688	0.06	-0.498	0.04	0.06	0.638	0.007	0.033
9485	641	636	8	427.07	0.008	0.004	20:04 hr	0.728	0.038	0.802	0.057	-0.585	0.038	0.057	0.725	0.006	0.034
9486	642	640	8	347.172	0.006	0.003	20:03 hr	0.64	0.037	0.711	0.056	-0.52	0.037	0.056	0.639	0.006	0.031
9487	643	644	8	303.997	0.007	0.004	20:02 hr	0.74	0.04	0.789	0.061	-0.569	0.04	0.061	0.739	0.007	0.036
9488	644	543	8	400.285	0.007	0.007	20:05 hr	0.88	0.053	0.817	0.08	-0.565	0.053	0.08	0.877	0.013	0.048
9490	943	646	8	100.424	0.022	0.001	20:00 hr	0.698	0.016	1.191	0.024	-0.994	0.016	0.024	0.698	0.001	0.017
9491	646	645	8	369.506	0.006	0.003	20:03 hr	0.625	0.036	0.708	0.054	-0.521	0.036	0.054	0.623	0.006	0.03
9492	645	547	8	416.741	0.006	0.04	20:14 hr	1.373	0.125	0.819	0.187	-0.483	0.125	0.187	1.361	0.077	0.113
9493	650	647	10	215.366	0.023	0.912	20:26 hr	5.227	0.414	1.689	0.496	-0.936	0.414	0.496	5.199	0.494	0.532
9495	632	648	10	285.92	0.013	0.901	20:22 hr	4.174	0.491	1.262	0.589	-0.479	0.491	0.589	4.158	0.653	0.528
9496	648	649	10	352.546	0.013	0.906	20:24 hr	4.276	0.483	1.3	0.58	-0.516	0.483	0.58	4.258	0.637	0.53
9497	649	650	10	341.666	0.018	0.91	20:25 hr	4.753	0.445	1.49	0.534	-0.72	0.445	0.534	4.73	0.558	0.531
9529	1161	450	8	195.008	0.005	0.013	20:05 hr	0.935	0.074	0.731	0.111	-0.478	0.074	0.111	0.932	0.026	0.063
9530	669	1162	10	262.364	0.004	0.247	20:25 hr	1.932	0.326	0.698	0.391	-0.517	0.326	0.391	1.918	0.323	0.269
9531	1163	1164	10	315.135	0.004	0.249	20:27 hr	1.963	0.324	0.711	0.389	-0.529	0.324	0.389	1.946	0.32	0.27
9532	1165	1166	10	279.498	0.004	0.25	20:29 hr	1.941	0.328	0.699	0.393	-0.515	0.328	0.393	1.923	0.327	0.271

2017 CIP + Revised Buildout Scenario Pipe Results																	
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9533	1166	922	10	345.159	0.004	0.25	20:32 hr	1.976	0.324	0.716	0.388	-0.534	0.324	0.388	1.955	0.319	0.271
9534	796	1167	10	155.871	0.018	0.142	20:26 hr	2.88	0.165	1.494	0.198	-1.519	0.165	0.198	2.863	0.086	0.203
9535	2141	1168	10	174.315	0.007	0.159	20:22 hr	2.118	0.221	0.94	0.266	-0.871	0.221	0.266	2.109	0.154	0.214
9536	2142	1169	10	225.094	0.012	0.16	20:23 hr	2.575	0.194	1.226	0.233	-1.19	0.194	0.233	2.563	0.119	0.215
9537	2136	669	10	274.123	0.014	0.17	20:19 hr	2.743	0.193	1.309	0.232	-1.271	0.193	0.232	2.73	0.118	0.222
9538	672	673	8	346.489	0.01	0.131	20:10 hr	2.295	0.2	1.064	0.301	-0.535	0.2	0.301	2.28	0.197	0.207
9539	673	1402	8	317.643	0.015	0.133	20:12 hr	2.674	0.181	1.31	0.272	-0.688	0.181	0.272	2.652	0.162	0.208
9540	677	1264	8	175.51	0.004	0	10:01 hr	0.25	0.013	0.471	0.02	-0.406	0.013	0.02	0.25	0.001	0.009
9541	1264	678	8	306.544	0.004	0.01	12:09 hr	0.81	0.071	0.647	0.107	-0.426	0.071	0.107	0.81	0.024	0.057
9542	678	679	8	331.073	0.004	0.012	12:13 hr	0.827	0.077	0.636	0.115	-0.413	0.077	0.115	0.827	0.028	0.061
9543	679	821	8	332.535	0.005	0.015	12:16 hr	0.963	0.079	0.728	0.119	-0.471	0.079	0.119	0.963	0.03	0.068
9544	1246	680	8	182.483	0.01	0.014	20:08 hr	1.227	0.066	1.017	0.099	-0.678	0.066	0.099	1.222	0.021	0.067
9545	680	681	8	202.005	0.01	0.016	20:08 hr	1.22	0.071	0.979	0.106	-0.646	0.071	0.106	1.215	0.024	0.07
9546	681	682	8	266.713	0.009	0.016	20:09 hr	1.221	0.072	0.972	0.108	-0.64	0.135	0.202	0.069	0.024	0.071
9547	683	680	8	203.86	0.002	0.001	20:02 hr	0.275	0.025	0.371	0.038	-0.288	0.025	0.038	0.274	0.003	0.015
9548	1428	1425	8	300.191	0.006	0.036	10:08 hr	1.345	0.118	0.828	0.177	-0.495	0.118	0.177	1.343	0.068	0.107
9566	1429	1430	8	238.521	0.014	0.039	20:11 hr	1.844	0.1	1.234	0.151	-0.764	0.1	0.151	1.835	0.049	0.112
9567	1430	1431	8	234.169	0.01	0.044	20:12 hr	1.682	0.115	1.049	0.173	-0.63	0.115	0.173	1.675	0.065	0.118
9568	1431	1423	8	350.106	0.004	0.003	20:04 hr	0.524	0.037	0.583	0.056	-0.427	0.037	0.056	0.52	0.006	0.028
9579	1685	1684	8	340.653	0.004	0.009	12:12 hr	0.778	0.067	0.64	0.101	-0.426	0.067	0.101	0.778	0.021	0.054
9580	1684	1683	8	255.894	0.004	0.068	12:15 hr	1.346	0.183	0.656	0.274	-0.344	0.183	0.274	1.346	0.164	0.147
9581	1683	1682	8	253.562	0.004	0.069	12:18 hr	1.395	0.181	0.683	0.272	-0.359	0.181	0.272	1.395	0.162	0.149
9582	1682	1744	8	262.871	0.002	0.07	12:20 hr	1.091	0.219	0.482	0.329	-0.231	0.219	0.329	1.091	0.233	0.15
9592	735	736	8	263.688	0.008	0.154	20:21 hr	2.265	0.227	0.981	0.341	-0.46	0.227	0.341	2.24	0.251	0.225
9593	736	737	8	441.441	0.021	0.155	20:23 hr	3.157	0.18	1.554	0.269	-0.82	0.18	0.269	3.117	0.159	0.225
9594	737	738	8	164.914	0.008	0.155	20:24 hr	2.232	0.231	0.958	0.347	-0.445	0.231	0.347	2.204	0.258	0.226
9595	739	735	8	243.539	0.018	0.001	20:01 hr	0.666	0.017	1.11	0.025	-0.919	0.02	0.03	0.627	0.001	0.018
9596	767	741	8	352.379	0.019	0.117	20:19 hr	2.821	0.159	1.479	0.239	-0.815	0.159	0.239	2.794	0.125	0.195
9597	741	742	8	369.922	0.023	0.119	20:20 hr	3.056	0.152	1.643	0.228	-0.919	0.152	0.228	3.026	0.114	0.197
9598	743	744	8	269.274	0.023	0.152	20:18 hr	3.27	0.173	1.642	0.26	-0.879	0.173	0.26	3.241	0.148	0.224
9599	744	735	8	256.52	0.019	0.152	20:20 hr	3.049	0.182	1.49	0.273	-0.782	0.182	0.273	3.019	0.163	0.224
9600	745	746	10	148.84	0.055	0.524	12:27 hr	6.229	0.24	2.643	0.288	-2.367	0.267	0.32	4.894	0.181	0.398
9601	747	932	10	206.245	0.011	0.59	12:29 hr	3.632	0.391	1.203	0.469	-0.726	0.391	0.469	3.628	0.448	0.424
9602	748	749	8	289.9	0.004	0.007	20:04 hr	0.716	0.061	0.619	0.092	-0.418	0.061	0.092	0.715	0.017	0.048
9603	749	750	8	311.602	0.004	0.011	20:06 hr	0.8	0.072	0.635	0.108	-0.418	0.072	0.108	0.797	0.025	0.057
9604	750	751	8	343.688	0.004	0.023	20:08 hr	1.01	0.105	0.659	0.158	-0.404	0.105	0.158	1.005	0.054	0.085
9605	751	752	8	174.18	0.004	0.031	20:08 hr	1.095	0.122	0.663	0.183	-0.393	0.122	0.183	1.089	0.073	0.099
9606	753	743	8	289.579	0.006	0.033	20:10 hr	1.286	0.113	0.808	0.17	-0.487	0.113	0.17	1.279	0.063	0.102
9607	754	755	8	128.724	0.018	0.002	20:00 hr	0.794	0.022	1.146	0.033	-0.907	0.022	0.033	0.794	0.002	0.024
9608	756	751	8	186.477	0.007	0.007	20:03 hr	0.853	0.053	0.791	0.08	-0.546	0.087	0.13	0.032	0.013	0.047
9609	757	756	8	272.62	0.02	0.007	20:01 hr	1.21	0.039	1.306	0.059	-0.946	0.039	0.059	1.208	0.007	0.045
9610	755	757	8	247.145	0.02	0.003	20:01 hr	0.986	0.028	1.259	0.042	-0.96	0.028	0.042	0.985	0.003	0.032
9612	758	759	8	156.541	0.016	0.001	20:00 hr	0.563	0.014	1.018	0.021	-0.866	0.014	0.021	0.563	0.001	0.014
9613	759	760	8	266.002	0.02	0.003	20:02 hr	1.004	0.029	1.262	0.044	-0.958	0.029	0.044	1.003	0.004	0.033
9614	760	750	8	455.79	0.019	0.011	20:05 hr	1.369	0.05	1.308	0.075	-0.913	0.05	0.075	1.364	0.011	0.057
9615	761	759	8	410.092	0.009	0.002	20:02 hr	0.619	0.026	0.818	0.04	-0.63	0.026	0.04	0.617	0.003	0.024

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9616	762	749	8	211.846	0.016	0.002	20:01 hr	0.748	0.023	1.071	0.034	-0.847	0.023	0.034	0.747	0.002	0.023
9620	763	748	8	219.01	0.016	0.006	20:03 hr	1.073	0.038	1.178	0.057	-0.857	0.038	0.057	1.071	0.006	0.041
9624	764	765	8	254.162	0.006	0.004	20:02 hr	0.666	0.04	0.718	0.059	-0.519	0.04	0.059	0.665	0.007	0.034
9625	765	760	8	255.981	0.006	0.004	20:04 hr	0.707	0.044	0.725	0.065	-0.517	0.044	0.065	0.705	0.009	0.037
9626	766	764	8	265.84	0.028	0.002	20:01 hr	0.953	0.021	1.41	0.032	-1.126	0.021	0.032	0.952	0.002	0.025
9629	770	769	8	330.322	0.009	0.012	20:05 hr	1.117	0.064	0.945	0.095	-0.635	0.064	0.095	1.113	0.019	0.062
9630	769	857	8	212.912	0.011	0.05	20:10 hr	1.836	0.119	1.126	0.178	-0.672	0.168	0.252	0.217	0.069	0.126
9631	768	830	8	109.951	0.008	0.053	20:11 hr	1.663	0.132	0.965	0.198	-0.561	0.132	0.198	1.653	0.086	0.13
9633	771	772	8	320.741	0.022	0.003	20:01 hr	0.992	0.026	1.314	0.039	-1.014	0.026	0.039	0.99	0.003	0.03
9634	772	770	8	287.515	0.02	0.004	20:02 hr	1.076	0.032	1.284	0.048	-0.96	0.032	0.048	1.074	0.004	0.037
9635	773	847	8	234.885	0.004	0.014	10:02 hr	0.859	0.082	0.639	0.123	-0.411	0.082	0.123	0.858	0.032	0.065
9636	775	426	8	227.342	0.004	0.011	12:02 hr	0.793	0.073	0.624	0.11	-0.409	0.073	0.11	0.791	0.025	0.058
9638	776	834	8	340.893	0.005	0.008	20:03 hr	0.818	0.061	0.71	0.091	-0.481	0.178	0.266	0.037	0.017	0.051
9641	777	778	8	279.513	0.006	0.005	20:03 hr	0.737	0.046	0.733	0.069	-0.518	0.046	0.069	0.735	0.01	0.04
9642	778	779	8	337.81	0.006	0.008	20:05 hr	0.86	0.059	0.757	0.088	-0.515	0.059	0.088	0.857	0.016	0.051
9644	780	777	8	407.771	0.024	0.003	20:02 hr	1.022	0.026	1.353	0.04	-1.044	0.026	0.04	1.021	0.003	0.031
9646	782	781	8	440.628	0.007	0.01	20:06 hr	0.978	0.062	0.835	0.094	-0.562	0.062	0.094	0.974	0.018	0.057
9647	781	341	8	447.021	0.006	0.012	20:09 hr	0.958	0.07	0.772	0.105	-0.51	0.07	0.105	0.953	0.023	0.061
9649	784	836	8	178.408	0.024	0.001	20:00 hr	0.703	0.015	1.253	0.022	-1.06	0.015	0.022	0.703	0.001	0.016
9650	785	341	8	257.801	0.022	0.012	20:06 hr	1.49	0.05	1.419	0.076	-0.99	0.05	0.076	1.484	0.012	0.06
9651	786	785	8	269.361	0.022	0.006	20:05 hr	1.246	0.038	1.362	0.058	-0.991	0.038	0.058	1.242	0.007	0.045
9652	787	788	8	361.841	0.022	0.056	20:09 hr	2.39	0.107	1.547	0.16	-0.945	0.107	0.16	2.377	0.056	0.134
9653	788	789	8	452.438	0.022	0.057	20:12 hr	2.4	0.108	1.546	0.162	-0.942	0.108	0.162	2.385	0.057	0.135
9654	790	513	8	217.094	0.021	0.058	20:13 hr	2.39	0.11	1.527	0.165	-0.928	0.11	0.165	2.374	0.059	0.136
9656	792	827	8	391.32	0.005	0.096	12:11 hr	1.63	0.205	0.747	0.307	-0.372	0.205	0.307	1.627	0.205	0.176
9657	827	183	8	429.386	0.005	0.141	20:04 hr	1.808	0.252	0.743	0.377	-0.325	0.252	0.377	1.807	0.303	0.215
9658	828	829	8	69.169	0.018	0	20:00 hr	0.484	0.01	1.027	0.015	-0.919	0.01	0.015	0.484	0	0.01
9659	831	828	8	66.44	0.003	0	20:00 hr	0.227	0.012	0.454	0.017	-0.399	0.012	0.017	0.227	0	0.008
9666	832	828	8	100.108	0.005	0	20:00 hr	0	0	0	0	-0.484	0	0	0	0	0.004
9672	834	833	8	350.176	0.012	0.014	20:02 hr	1.283	0.065	1.075	0.097	-0.719	0.065	0.097	1.282	0.02	0.067
9676	836	787	8	322.211	0.007	0.056	20:08 hr	1.59	0.142	0.888	0.213	-0.506	0.142	0.213	1.583	0.099	0.134
9677	837	836	8	284.258	0.006	0.055	20:05 hr	1.502	0.145	0.828	0.218	-0.469	0.145	0.218	1.498	0.104	0.132
9678	838	837	8	303.024	0.011	0.01	20:03 hr	1.124	0.057	1.01	0.085	-0.691	0.057	0.085	1.122	0.015	0.057
9679	839	838	8	134.855	0.006	0.006	20:01 hr	0.802	0.051	0.757	0.077	-0.526	0.051	0.077	0.801	0.012	0.045
9680	846	847	8	347.977	0.026	0.015	10:01 hr	1.718	0.055	1.561	0.083	-1.071	0.055	0.083	1.717	0.014	0.069
9681	847	848	8	424.927	0.026	0.056	20:03 hr	2.534	0.103	1.673	0.155	-1.029	0.103	0.155	2.533	0.052	0.134
9682	848	182	8	222.357	0.034	0.069	12:05 hr	2.971	0.107	1.928	0.16	-1.178	0.118	0.178	2.73	0.055	0.149
9694	852	853	8	37.169	0.01	0.001	20:00 hr	0.565	0.021	0.844	0.031	-0.676	0.021	0.031	0.565	0.002	0.019
9695	853	854	8	62.981	0.01	0.001	20:00 hr	0.6	0.023	0.853	0.034	-0.672	0.023	0.034	0.6	0.002	0.021
9696	855	856	8	216.002	0.012	0.002	20:01 hr	0.698	0.025	0.942	0.038	-0.731	0.025	0.038	0.697	0.003	0.025
9712	859	837	8	250.1	0.028	0.043	20:03 hr	2.398	0.089	1.711	0.133	-1.084	0.089	0.133	2.395	0.038	0.117
9713	858	859	8	298.578	0.031	0.042	20:02 hr	2.471	0.086	1.794	0.129	-1.143	0.086	0.129	2.469	0.035	0.116
9714	860	858	8	108.343	0.006	0.012	20:01 hr	0.943	0.072	0.749	0.108	-0.493	0.072	0.108	0.942	0.025	0.062
9715	861	838	8	425.123	0.025	0.002	20:02 hr	0.985	0.024	1.378	0.035	-1.081	0.024	0.035	0.983	0.002	0.028
9717	862	863	8	236.273	0.017	0.15	12:13 hr	2.891	0.187	1.392	0.281	-0.722	0.187	0.281	2.889	0.172	0.222
9718	863	864	8	424.682	0.028	0.161	12:15 hr	3.569	0.169	1.814	0.254	-0.978	0.169	0.254	3.566	0.141	0.23

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9719	865	866	8	450.266	0.004	0.096	12:09 hr	1.528	0.215	0.681	0.323	-0.33	0.215	0.323	1.527	0.226	0.177
9720	866	862	8	438.157	0.004	0.122	12:13 hr	1.634	0.244	0.683	0.365	-0.306	0.244	0.365	1.632	0.285	0.199
9721	867	602	8	17.647	0.006	0.005	20:00 hr	0.712	0.046	0.715	0.068	-0.506	0.067	0.101	0.531	0.009	0.038
9724	869	746	8	146.531	0.006	0.065	10:07 hr	1.544	0.161	0.807	0.241	-0.443	0.161	0.241	1.543	0.127	0.144
9725	871	870	8	61.135	0.002	0.044	10:02 hr	0.89	0.18	0.438	0.269	-0.231	0.18	0.269	0.89	0.159	0.118
9726	870	868	8	299.132	0.006	0.057	10:04 hr	1.523	0.148	0.834	0.221	-0.47	0.148	0.221	1.522	0.107	0.134
9727	868	869	8	216.473	0.012	0.059	10:05 hr	1.977	0.126	1.175	0.189	-0.691	0.143	0.215	0.259	0.078	0.137
9728	872	871	8	107.905	0.012	0.041	10:00 hr	1.756	0.108	1.135	0.161	-0.692	0.108	0.161	1.756	0.056	0.115
9729	876	119	8	436.942	0.004	0.058	12:08 hr	1.334	0.164	0.689	0.246	-0.376	0.182	0.273	0.255	0.133	0.136
9730	875	876	8	449.863	0.004	0.044	12:04 hr	1.217	0.144	0.675	0.216	-0.383	0.144	0.216	1.217	0.102	0.118
9731	874	875	8	400.828	0.004	0.021	10:04 hr	0.984	0.101	0.656	0.152	-0.405	0.101	0.152	0.983	0.05	0.082
9732	883	879	8	305.219	0.024	0.025	10:01 hr	1.965	0.071	1.572	0.107	-1.036	0.071	0.107	1.965	0.024	0.089
9733	879	878	8	304.786	0.028	0.037	10:03 hr	2.308	0.083	1.705	0.125	-1.093	0.083	0.125	2.307	0.033	0.109
9734	878	886	8	355.87	0.022	0.044	10:04 hr	2.218	0.095	1.53	0.142	-0.957	0.265	0.397	0.192	0.043	0.118
9735	891	885	15	373.667	0.019	3.64	20:01 hr	6.927	0.786	1.674	0.629	-1.407	0.786	0.629	6.923	0.721	0.961
9736	885	371	12	473.524	0.004	0.922	20:06 hr	2.653	0.647	0.711	0.647	-0.305	0.647	0.647	2.647	0.751	0.506
9737	884	261	12	477.551	0.008	1.69	20:05 hr	4.062	0.764	1.052	0.764	-0.126	0.764	0.764	4.06	0.931	0.693
9743	887	2054	8	446.463	0.025	0.036	10:02 hr	2.19	0.084	1.612	0.125	-1.032	0.084	0.125	2.188	0.034	0.107
9744	2103	889	15	26.959	0.019	1.612	20:12 hr	5.651	0.486	1.671	0.389	-3.427	0.486	0.389	5.621	0.32	0.632
9745	889	890	15	424.294	0.02	1.629	20:13 hr	5.701	0.487	1.685	0.389	-3.452	0.487	0.389	5.665	0.321	0.636
9746	890	891	15	449.788	0.03	1.668	20:14 hr	6.676	0.441	2.076	0.353	-4.589	0.56	0.448	2.051	0.267	0.644
9748	924	925	8	195.257	0.05	0.001	20:00 hr	0.86	0.012	1.727	0.017	-1.518	0.012	0.017	0.86	0	0.015
9749	925	926	8	299.86	0.007	0.003	20:02 hr	0.63	0.033	0.74	0.05	-0.55	0.033	0.05	0.628	0.005	0.029
9750	926	927	8	134.695	0.006	0.003	20:03 hr	0.649	0.037	0.727	0.055	-0.533	0.037	0.055	0.648	0.006	0.031
9751	928	763	8	257.578	0.027	0.004	20:04 hr	1.198	0.03	1.474	0.046	-1.111	0.194	0.291	0.02	0.004	0.037
9753	929	925	8	95.943	0.019	0.001	20:00 hr	0.55	0.012	1.073	0.018	-0.934	0.012	0.018	0.55	0.001	0.013
9754	930	931	8	192.1	0.004	0.003	20:01 hr	0.569	0.042	0.598	0.063	-0.429	0.042	0.063	0.569	0.008	0.032
9755	931	891	8	314.201	0.004	0.004	20:04 hr	0.598	0.045	0.605	0.067	-0.429	0.335	0.502	0.017	0.009	0.035
9756	932	933	10	322.013	0.025	0.595	12:30 hr	4.878	0.315	1.792	0.378	-1.366	0.315	0.378	4.873	0.303	0.425
9757	934	938	10	351.698	0.022	0.6	12:33 hr	4.673	0.327	1.684	0.392	-1.243	0.327	0.392	4.668	0.325	0.427
9758	938	939	10	343.052	0.012	0.604	12:35 hr	3.693	0.393	1.22	0.472	-0.731	0.393	0.472	3.69	0.452	0.429
9765	1087	1088	8	397.79	0.018	0.014	20:04 hr	1.475	0.057	1.323	0.085	-0.905	0.057	0.085	1.472	0.015	0.065
9766	1088	1043	8	251.775	0.007	0.015	20:05 hr	1.066	0.075	0.829	0.113	-0.541	0.075	0.113	1.062	0.027	0.068
9767	1090	1089	8	259.348	0.017	0.028	20:07 hr	1.759	0.081	1.314	0.122	-0.846	0.081	0.122	1.754	0.032	0.093
9768	1089	1016	8	247.041	0.018	0.029	20:09 hr	1.832	0.082	1.358	0.124	-0.872	0.082	0.124	1.826	0.033	0.096
9769	1091	1090	8	437.498	0.007	0.023	20:07 hr	1.217	0.093	0.85	0.139	-0.534	0.093	0.139	1.212	0.041	0.085
9770	1093	1092	8	389.847	0.006	0.011	20:05 hr	0.936	0.067	0.77	0.101	-0.512	0.067	0.101	0.934	0.021	0.059
9771	1092	1107	8	387.799	0.006	0.014	20:06 hr	1.011	0.076	0.783	0.113	-0.511	0.076	0.113	1.007	0.027	0.067
9773	1095	1094	8	357.899	0.019	0.004	20:02 hr	1.013	0.031	1.245	0.046	-0.939	0.031	0.046	1.011	0.004	0.034
9774	1094	1093	8	384.776	0.018	0.007	20:04 hr	1.168	0.04	1.246	0.061	-0.9	0.04	0.061	1.166	0.007	0.045
9775	1096	1097	8	144.191	0.019	0.001	20:00 hr	0.677	0.017	1.12	0.025	-0.926	0.017	0.025	0.677	0.001	0.018
9776	1097	1098	8	347.48	0.018	0.003	20:02 hr	0.922	0.028	1.179	0.042	-0.9	0.028	0.042	0.92	0.003	0.031
9777	1098	1058	8	341.182	0.026	0.005	20:03 hr	1.215	0.032	1.457	0.048	-1.09	0.032	0.048	1.213	0.004	0.039
9778	1099	1100	8	132.522	0.006	0.003	20:02 hr	0.626	0.037	0.698	0.055	-0.511	0.037	0.055	0.625	0.006	0.031
9779	1100	1101	8	350.344	0.006	0.005	20:04 hr	0.731	0.046	0.732	0.069	-0.518	0.046	0.069	0.729	0.009	0.039
9780	1102	1099	8	205.519	0.006	0.002	20:01 hr	0.57	0.031	0.698	0.046	-0.525	0.219	0.328	0.009	0.004	0.026

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
9781	1104	1056	8	417.717	0.019	0.038	20:08 hr	2.038	0.092	1.431	0.137	-0.902	0.092	0.137	2.029	0.04	0.11
9782	1023	1104	8	405.647	0.012	0.036	20:06 hr	1.687	0.1	1.132	0.15	-0.701	0.1	0.15	1.681	0.049	0.106
9783	1024	1023	8	256.136	0.025	0.013	20:03 hr	1.63	0.052	1.526	0.078	-1.058	0.052	0.078	1.626	0.012	0.065
9784	1053	1050	8	258.81	0.018	0.019	20:05 hr	1.625	0.066	1.345	0.1	-0.897	0.066	0.1	1.62	0.021	0.077
9785	1106	1053	8	270.533	0.016	0.011	20:04 hr	1.324	0.053	1.234	0.079	-0.855	0.053	0.079	1.321	0.013	0.059
9786	1105	1106	8	102.072	0.036	0.001	20:00 hr	0.788	0.013	1.494	0.019	-1.29	0.013	0.019	0.788	0.001	0.016
9787	1050	1107	8	267.954	0.018	0.028	20:06 hr	1.796	0.08	1.352	0.12	-0.873	0.089	0.133	0.121	0.031	0.093
9788	1107	1108	8	267.157	0.018	0.044	20:07 hr	2.089	0.099	1.406	0.149	-0.872	0.117	0.176	0.191	0.048	0.118
9789	1110	1109	8	358.022	0.006	0.004	20:03 hr	0.707	0.044	0.725	0.066	-0.517	0.044	0.066	0.705	0.009	0.037
9790	1109	1106	8	389.668	0.006	0.008	20:05 hr	0.837	0.057	0.751	0.085	-0.514	0.057	0.085	0.834	0.015	0.049
9791	1113	1114	8	322.526	0.015	0.012	20:04 hr	1.321	0.056	1.194	0.084	-0.819	0.056	0.084	1.318	0.014	0.061
9792	1112	1113	8	348.534	0.015	0.008	20:02 hr	1.167	0.046	1.165	0.069	-0.823	0.046	0.069	1.165	0.01	0.05
9793	1111	1112	8	366.075	0.018	0.004	20:02 hr	1.019	0.032	1.225	0.048	-0.918	0.032	0.048	1.017	0.004	0.035
9794	1141	1115	8	189.413	0.005	0.017	20:08 hr	0.997	0.085	0.726	0.128	-0.464	0.085	0.128	0.992	0.035	0.073
9795	1116	1115	8	298.727	0.017	0.006	20:01 hr	1.108	0.039	1.199	0.059	-0.869	0.039	0.059	1.106	0.007	0.043
9796	1117	1116	8	316.284	0.007	0.003	20:03 hr	0.663	0.036	0.753	0.053	-0.554	0.036	0.053	0.661	0.006	0.031
9797	1119	1118	8	446.707	0.017	0.005	20:02 hr	1.049	0.036	1.187	0.054	-0.872	0.036	0.054	1.048	0.006	0.039
9798	1118	1082	8	454.03	0.022	0.009	20:02 hr	1.4	0.045	1.408	0.068	-0.997	0.045	0.068	1.398	0.009	0.054
9799	1121	1120	8	294.272	0.017	0.005	20:01 hr	1.051	0.035	1.199	0.053	-0.883	0.035	0.053	1.049	0.005	0.039
9800	1123	1122	8	241.83	0.004	0.004	20:02 hr	0.619	0.047	0.613	0.07	-0.432	0.047	0.07	0.618	0.01	0.037
9801	1126	1125	8	399.73	0.017	0.005	20:02 hr	1.048	0.035	1.194	0.053	-0.879	0.035	0.053	1.046	0.005	0.039
9802	1125	1124	8	354.49	0.027	0.006	20:03 hr	1.312	0.035	1.495	0.053	-1.101	0.035	0.053	1.309	0.005	0.043
9803	1127	1126	8	400.326	0.017	0.002	20:02 hr	0.843	0.026	1.127	0.039	-0.872	0.026	0.039	0.841	0.003	0.027
9804	3806	1130	8	181.281	0.006	0.001	20:01 hr	0.505	0.024	0.696	0.036	-0.544	0.024	0.036	0.505	0.002	0.02
9805	1130	1091	8	255.499	0.013	0.017	20:04 hr	1.398	0.068	1.14	0.103	-0.757	0.068	0.103	1.395	0.022	0.073
9806	1133	1132	8	342.527	0.02	0.002	20:01 hr	0.858	0.023	1.217	0.034	-0.958	0.034	0.051	0.009	0.002	0.025
9807	440	1101	8	378.372	0.018	0.05	20:16 hr	2.182	0.105	1.423	0.158	-0.872	0.111	0.166	0.216	0.054	0.126
9808	1101	1134	8	339.723	0.014	0.056	20:16 hr	2.064	0.119	1.265	0.178	-0.756	0.119	0.178	2.048	0.069	0.134
9809	1134	1065	8	329.718	0.014	0.067	20:15 hr	2.141	0.13	1.25	0.195	-0.73	0.13	0.195	2.124	0.084	0.146
9810	1136	1135	8	291.912	0.012	0.002	20:01 hr	0.671	0.024	0.938	0.035	-0.736	0.024	0.035	0.67	0.002	0.023
9811	1137	1134	8	350.656	0.007	0.01	20:07 hr	0.936	0.061	0.808	0.092	-0.546	0.061	0.092	0.932	0.017	0.055
9812	1059	1137	8	128.762	0.002	0.008	20:05 hr	0.563	0.075	0.437	0.113	-0.285	0.075	0.113	0.561	0.027	0.05
9813	316	1138	8	262.821	0.015	0.007	20:05 hr	1.131	0.045	1.142	0.067	-0.811	0.045	0.067	1.127	0.009	0.048
9814	1144	1142	8	293.447	0.003	0.003	20:02 hr	0.524	0.043	0.539	0.065	-0.385	0.043	0.065	0.523	0.008	0.032
9815	1145	1139	8	226.462	0.01	0.004	20:04 hr	0.795	0.036	0.902	0.054	-0.664	0.036	0.054	0.793	0.006	0.034
9816	1146	1145	8	397.66	0.011	0.003	20:03 hr	0.769	0.031	0.943	0.046	-0.711	0.031	0.046	0.767	0.004	0.03
9817	1147	1148	8	452.657	0.019	0.005	20:02 hr	1.105	0.035	1.274	0.052	-0.942	0.035	0.052	1.102	0.005	0.039
9818	1149	1150	8	429.133	0.023	0.005	20:02 hr	1.151	0.033	1.371	0.049	-1.023	0.033	0.049	1.149	0.005	0.038
9819	1151	1152	8	269.264	0.019	0.003	20:01 hr	0.906	0.026	1.197	0.04	-0.923	0.026	0.04	0.905	0.003	0.029
9820	1152	1060	8	250.243	0.009	0.005	20:01 hr	0.856	0.041	0.908	0.061	-0.654	0.041	0.061	0.855	0.007	0.039
9821	1159	1155	8	348.941	0.015	0.013	20:03 hr	1.367	0.058	1.218	0.086	-0.831	0.058	0.086	1.365	0.015	0.064
9822	1155	1156	8	182.516	0.032	0.014	20:03 hr	1.817	0.05	1.732	0.076	-1.207	0.108	0.162	0.062	0.012	0.067
9823	1157	1158	8	286.048	0.008	0.004	20:02 hr	0.732	0.037	0.818	0.055	-0.598	0.037	0.055	0.731	0.006	0.033
9824	1158	1159	8	250.093	0.008	0.006	20:04 hr	0.875	0.049	0.85	0.073	-0.596	0.049	0.073	0.874	0.011	0.045
9826	1108	1124	8	264.261	0.006	0.049	20:09 hr	1.451	0.137	0.824	0.206	-0.475	0.137	0.206	1.442	0.093	0.124
9827	1120	1080	8	231.677	0.006	0.008	20:03 hr	0.855	0.057	0.764	0.086	-0.521	0.057	0.086	0.853	0.015	0.05

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
9828	1138	1047	8	40.146	0.034	0.007	20:05 hr	1.514	0.037	1.69	0.055	-1.237	0.037	0.055	1.509	0.006	0.048
9829	830	767	8	217.882	0.004	0.054	20:13 hr	1.27	0.161	0.662	0.242	-0.363	0.161	0.242	1.26	0.129	0.131
9832	684	1248	8	227.385	0.006	0.001	20:03 hr	0.501	0.024	0.69	0.037	-0.539	0.024	0.037	0.5	0.002	0.02
9833	685	684	8	229.378	0.016	0.001	20:01 hr	0.629	0.017	1.047	0.025	-0.867	0.017	0.025	0.628	0.001	0.017
9834	686	687	8	311.492	0.004	0.072	20:18 hr	1.457	0.182	0.713	0.272	-0.374	0.182	0.272	1.437	0.162	0.153
9835	687	688	8	307.625	0.004	0.073	20:21 hr	1.415	0.187	0.682	0.28	-0.354	0.187	0.28	1.393	0.171	0.153
9844	690	689	8	334.851	0.011	0.119	12:26 hr	2.307	0.186	1.115	0.279	-0.58	0.186	0.279	2.307	0.17	0.197
9845	691	815	8	228.402	0.007	0.003	20:02 hr	0.665	0.035	0.763	0.052	-0.563	0.035	0.052	0.664	0.005	0.03
9846	692	691	8	229.308	0.014	0.002	20:01 hr	0.747	0.024	1.04	0.036	-0.815	0.024	0.036	0.746	0.002	0.024
9849	695	694	8	89.833	0.006	0.001	20:00 hr	0.439	0.021	0.651	0.032	-0.52	0.021	0.032	0.439	0.002	0.017
9850	694	693	8	314.273	0.014	0.007	20:04 hr	1.113	0.046	1.116	0.069	-0.79	0.046	0.069	1.111	0.009	0.048
9851	709	693	8	58.542	0.009	0.009	20:03 hr	1.032	0.056	0.929	0.085	-0.636	0.066	0.099	0.294	0.015	0.054
9854	1364	701	8	165.324	0.008	0.092	20:16 hr	1.953	0.174	0.977	0.261	-0.522	0.174	0.261	1.943	0.149	0.172
9855	701	700	8	360.896	0.004	0.098	20:18 hr	1.517	0.219	0.67	0.329	-0.322	0.219	0.329	1.509	0.233	0.178
9856	700	699	8	346.162	0.004	0.099	20:21 hr	1.584	0.214	0.709	0.321	-0.345	0.214	0.321	1.573	0.223	0.179
9857	699	682	8	189.904	0.005	0.1	20:22 hr	1.652	0.208	0.75	0.312	-0.37	0.208	0.312	1.641	0.212	0.18
9858	698	697	8	101.996	0.011	0.116	20:21 hr	2.342	0.181	1.149	0.271	-0.605	0.181	0.271	2.326	0.16	0.194
9859	704	705	8	178.35	0.004	0.008	20:04 hr	0.733	0.063	0.621	0.095	-0.417	0.063	0.095	0.731	0.019	0.05
9860	703	704	8	395.238	0.004	0.006	20:05 hr	0.665	0.054	0.612	0.081	-0.422	0.054	0.081	0.663	0.013	0.042
9861	702	703	8	394.824	0.003	0.003	20:03 hr	0.504	0.044	0.514	0.066	-0.366	0.044	0.066	0.503	0.009	0.032
9862	706	702	8	151.721	0.004	0.001	20:01 hr	0.384	0.023	0.542	0.035	-0.426	0.023	0.035	0.384	0.002	0.017
9863	707	708	8	251.133	0.006	0.007	20:02 hr	0.789	0.053	0.736	0.079	-0.509	0.113	0.17	0.029	0.013	0.045
9864	708	709	8	161.458	0.005	0.009	20:03 hr	0.817	0.064	0.69	0.096	-0.463	0.064	0.096	0.816	0.019	0.053
9865	710	707	8	240.754	0.018	0.004	20:01 hr	0.977	0.031	1.194	0.046	-0.898	0.031	0.046	0.976	0.004	0.034
9867	711	712	8	217.751	0.004	0.003	20:02 hr	0.519	0.037	0.577	0.056	-0.421	0.037	0.056	0.518	0.006	0.028
9868	712	694	8	218.664	0.004	0.004	20:04 hr	0.595	0.046	0.593	0.069	-0.419	0.046	0.069	0.594	0.01	0.036
9869	713	708	8	145.938	0.004	0.002	20:01 hr	0.481	0.03	0.597	0.045	-0.451	0.03	0.045	0.48	0.004	0.023
9873	715	714	8	247.497	0.015	0.009	10:01 hr	1.228	0.049	1.183	0.074	-0.827	0.049	0.074	1.228	0.011	0.054
9874	714	897	8	243.315	0.015	0.015	20:01 hr	1.414	0.061	1.224	0.092	-0.827	0.061	0.092	1.414	0.017	0.068
9882	705	716	8	212.201	0.012	0.009	20:05 hr	1.099	0.05	1.047	0.076	-0.73	0.05	0.076	1.096	0.012	0.052
9883	716	717	8	220.852	0.004	0.02	20:10 hr	0.972	0.099	0.654	0.149	-0.405	0.099	0.149	0.967	0.048	0.08
9884	717	1365	8	221.658	0.004	0.021	20:12 hr	0.972	0.101	0.649	0.151	-0.402	0.101	0.151	0.965	0.049	0.081
9885	1298	718	8	215.806	0.012	0.009	20:05 hr	1.132	0.051	1.069	0.077	-0.743	0.051	0.077	1.128	0.012	0.053
9886	720	899	15	216.284	0.004	0.554	20:31 hr	2.356	0.421	0.75	0.337	-1.707	0.504	0.403	0.678	0.245	0.363
9887	723	722	15	350.765	0.006	0.542	20:28 hr	2.727	0.373	0.927	0.299	-2.252	0.373	0.299	2.7	0.194	0.359
9888	722	721	15	349.453	0.004	0.544	20:30 hr	2.364	0.415	0.759	0.332	-1.744	0.415	0.332	2.344	0.238	0.359
9889	728	917	10	361.381	0.015	0.238	20:13 hr	3.105	0.224	1.367	0.269	-1.26	0.224	0.269	3.093	0.159	0.264
9890	1918	2203	8	264.249	0.004	0	00:00 hr	0	0	0	0	-0.413	0	0	0	0	0
9891	1369	725	10	361.141	0.011	0.185	20:10 hr	2.568	0.215	1.157	0.258	-1.084	0.215	0.258	2.563	0.146	0.232
9892	725	726	10	359.347	0.011	0.189	20:11 hr	2.582	0.217	1.158	0.261	-1.08	0.217	0.261	2.577	0.149	0.234
9893	726	727	10	362.364	0.011	0.197	20:13 hr	2.61	0.222	1.156	0.266	-1.07	0.222	0.266	2.604	0.155	0.239
9894	69	728	10	262.93	0.011	0.236	20:11 hr	2.747	0.244	1.157	0.292	-1.029	0.244	0.292	2.739	0.186	0.263
9895	793	731	8	352.352	0.004	0.102	20:09 hr	1.548	0.223	0.678	0.334	-0.323	0.223	0.334	1.543	0.241	0.182
9896	731	46	8	297.726	0.006	0.107	20:10 hr	1.798	0.207	0.819	0.311	-0.405	0.221	0.332	0.47	0.21	0.187
9897	730	729	8	348.972	0.011	0.146	20:11 hr	2.456	0.206	1.122	0.309	-0.557	0.206	0.309	2.447	0.207	0.219
9898	729	1369	8	270.181	0.016	0.148	20:12 hr	2.869	0.186	1.384	0.28	-0.719	0.186	0.28	2.856	0.171	0.221

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
9899	810	794	8	242.874	0.007	0.019	10:13 hr	1.133	0.084	0.832	0.126	-0.532	0.084	0.126	1.132	0.034	0.077
9900	794	795	8	414.804	0.01	0.019	10:16 hr	1.306	0.076	1.008	0.114	-0.656	0.076	0.114	1.304	0.028	0.077
9901	795	1397	8	264.261	0.013	0.021	10:17 hr	1.481	0.077	1.14	0.115	-0.742	0.077	0.115	1.48	0.028	0.082
9902	1397	796	10	476.213	0.01	0.141	20:26 hr	2.352	0.189	1.135	0.227	-1.109	0.189	0.227	2.338	0.113	0.202
9903	797	719	8	293.269	0.007	0.001	20:02 hr	0.544	0.024	0.749	0.037	-0.585	0.024	0.037	0.543	0.002	0.021
9904	719	716	8	386.871	0.004	0.011	20:09 hr	0.817	0.075	0.636	0.112	-0.415	0.075	0.112	0.812	0.027	0.06
9905	798	799	8	147.657	0.004	0.065	20:10 hr	1.372	0.176	0.684	0.263	-0.364	0.176	0.263	1.362	0.152	0.144
9906	799	800	8	242.322	0.004	0.071	20:12 hr	1.389	0.184	0.674	0.276	-0.352	0.184	0.276	1.377	0.167	0.151
9907	800	686	8	309.286	0.004	0.072	20:15 hr	1.455	0.18	0.715	0.27	-0.377	0.18	0.27	1.439	0.16	0.152
9911	801	802	8	229.383	0.015	0.019	10:01 hr	1.529	0.069	1.24	0.104	-0.821	0.069	0.104	1.529	0.023	0.077
9912	802	803	8	229.459	0.015	0.021	10:02 hr	1.578	0.073	1.246	0.109	-0.817	0.073	0.109	1.577	0.025	0.082
9913	803	807	8	228.682	0.004	0.028	10:05 hr	1.063	0.116	0.659	0.174	-0.395	0.116	0.174	1.062	0.066	0.094
9914	807	808	8	228.415	0.004	0.04	10:07 hr	1.182	0.137	0.672	0.206	-0.386	0.137	0.206	1.18	0.093	0.112
9938	809	810	8	381.024	0.011	0.018	10:10 hr	1.336	0.074	1.047	0.111	-0.686	0.074	0.111	1.334	0.026	0.076
9939	813	814	8	277.596	0.004	0.001	20:02 hr	0.403	0.025	0.546	0.038	-0.424	0.025	0.038	0.402	0.003	0.019
9941	816	799	8	252.91	0.004	0.005	20:06 hr	0.62	0.049	0.602	0.073	-0.422	0.049	0.073	0.618	0.011	0.038
9942	815	816	8	257.111	0.008	0.004	20:04 hr	0.761	0.039	0.824	0.059	-0.597	0.039	0.059	0.76	0.007	0.036
9943	817	820	8	73.276	0.013	0.001	20:00 hr	0.63	0.02	0.958	0.03	-0.772	0.021	0.031	0.457	0.002	0.02
9944	818	819	8	81.772	0.015	0.001	20:00 hr	0.697	0.021	1.032	0.032	-0.824	0.023	0.034	0.505	0.002	0.021
9961	819	808	8	91.111	0.015	0.002	20:00 hr	0.774	0.025	1.055	0.037	-0.821	0.025	0.037	0.774	0.003	0.026
9962	820	808	8	72.886	0.015	0.002	20:00 hr	0.716	0.021	1.054	0.032	-0.84	0.06	0.09	0.007	0.002	0.022
9972	821	822	8	333.015	0.003	0.043	12:20 hr	1.058	0.157	0.56	0.235	-0.31	0.157	0.235	1.058	0.122	0.117
9973	822	823	8	321.993	0.007	0.056	12:23 hr	1.623	0.139	0.915	0.209	-0.524	0.139	0.209	1.623	0.096	0.133
9974	823	824	8	330.76	0.006	0.06	12:27 hr	1.553	0.151	0.839	0.227	-0.469	0.151	0.227	1.553	0.113	0.138
9975	824	1398	8	327.853	0.008	0.06	12:30 hr	1.738	0.14	0.978	0.21	-0.559	0.14	0.21	1.738	0.097	0.138
9976	2203	825	8	241.09	0.014	0.102	20:04 hr	2.427	0.161	1.268	0.241	-0.696	0.161	0.241	2.418	0.128	0.182
9977	825	1913	8	240.251	0.008	0.103	20:06 hr	1.992	0.187	0.961	0.28	-0.499	0.187	0.28	1.983	0.171	0.183
9978	826	892	8	301.049	0.007	0.007	20:02 hr	0.846	0.05	0.811	0.075	-0.566	0.05	0.075	0.845	0.011	0.045
9979	892	893	8	128.891	0.005	0.029	20:06 hr	1.165	0.111	0.741	0.166	-0.45	0.111	0.166	1.161	0.06	0.095
9980	893	894	8	347.925	0.005	0.031	20:08 hr	1.21	0.114	0.758	0.171	-0.457	0.118	0.178	1.076	0.063	0.099
9981	894	2203	8	330.739	0.005	0.1	20:03 hr	1.706	0.205	0.781	0.307	-0.389	0.205	0.307	1.702	0.205	0.18
9982	1376	793	8	315.611	0.016	0.048	20:05 hr	2.035	0.107	1.317	0.161	-0.804	0.107	0.161	2.03	0.056	0.123
9983	897	1376	8	343.369	0.006	0.017	20:04 hr	1.06	0.083	0.784	0.124	-0.503	0.083	0.124	1.058	0.033	0.073
9984	900	899	8	303.776	0.009	0.001	20:02 hr	0.517	0.02	0.786	0.03	-0.633	0.02	0.03	0.516	0.002	0.018
9985	1316	902	24	347.158	0.006	8.43	21:11 hr	5.433	1.428	1.005	0.714	-1.381	1.428	0.714	5.423	0.859	1.299
9986	902	901	24	348.403	0.006	8.432	21:13 hr	5.402	1.436	0.998	0.718	-1.314	1.436	0.718	5.391	0.865	1.3
9987	903	904	8	79.527	0.015	0.004	10:00 hr	0.974	0.034	1.126	0.052	-0.833	0.034	0.052	0.974	0.005	0.037
9988	904	801	8	79.874	0.016	0.004	10:01 hr	0.999	0.034	1.159	0.051	-0.858	0.034	0.051	0.999	0.005	0.037
9989	906	905	8	80.278	0.01	0.001	20:00 hr	0.615	0.023	0.874	0.034	-0.689	0.025	0.038	0.446	0.002	0.021
9990	905	802	8	84.79	0.009	0.002	20:00 hr	0.658	0.028	0.849	0.042	-0.649	0.028	0.042	0.658	0.003	0.026
10012	1614	908	24	411.55	0.005	8.298	21:02 hr	5.10	1.49	0.94	0.75	-0.84	1.49	0.75	5.10	0.91	1.29
10013	908	907	24	418.653	0.006	8.318	21:04 hr	5.43	1.41	1.01	0.71	-1.50	1.41	0.71	5.42	0.85	1.29
10014	907	1313	21	420.164	0.012	8.328	21:05 hr	7.03	1.25	1.39	0.71	-1.39	1.25	0.71	7.02	0.86	1.34
10015	909	910	10	225.239	0.008	0.278	20:28 hr	2.54	0.29	0.97	0.35	-0.79	0.29	0.35	2.52	0.26	0.29
10016	913	914	8	75.885	0.01	0.005	10:00 hr	0.89	0.04	0.94	0.06	-0.67	0.04	0.06	0.64	0.01	0.04
10017	914	915	8	85.802	0.01	0.006	10:01 hr	0.94	0.04	0.97	0.07	-0.69	0.05	0.07	0.45	0.01	0.04

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
10018	915	803	8	93.92	0.009	0.006	10:01 hr	0.92	0.05	0.92	0.07	-0.65	0.05	0.07	0.92	0.01	0.04
10019	911	912	8	95.479	0.012	0.011	10:00 hr	1.19	0.06	1.07	0.09	-0.73	0.06	0.09	0.86	0.02	0.06
10020	912	807	8	101.551	0.012	0.011	10:01 hr	1.19	0.06	1.06	0.09	-0.72	0.06	0.09	1.19	0.02	0.06
10030	916	723	15	348.605	0.005	0.541	20:26 hr	2.47	0.40	0.81	0.32	-1.90	0.40	0.32	2.45	0.22	0.36
10031	917	916	15	352.408	0.006	0.539	20:24 hr	2.71	0.37	0.92	0.30	-2.24	0.37	0.30	2.69	0.19	0.36
10032	919	918	10	318.722	0.006	0.303	20:36 hr	2.45	0.32	0.89	0.38	-0.67	0.32	0.38	2.43	0.31	0.30
10033	920	919	10	333.199	0.004	0.303	20:34 hr	2.07	0.36	0.71	0.43	-0.48	0.36	0.43	2.05	0.39	0.30
10034	921	920	10	272.492	0.004	0.302	20:31 hr	2.00	0.37	0.68	0.44	-0.44	0.37	0.44	1.98	0.41	0.30
10035	922	921	10	348.323	0.004	0.301	20:29 hr	2.06	0.36	0.71	0.43	-0.47	0.36	0.43	2.04	0.39	0.30
10036	1172	1171	8	269.429	0.008	0.001	20:02 hr	0.56	0.02	0.78	0.04	-0.62	0.02	0.04	0.56	0.00	0.02
10037	1171	1170	8	217.41	0.008	0.003	20:03 hr	0.67	0.03	0.82	0.05	-0.62	0.03	0.05	0.67	0.00	0.03
10038	1170	923	8	353.621	0.008	0.048	20:03 hr	1.63	0.13	0.97	0.19	-0.57	0.13	0.19	1.63	0.08	0.12
10039	923	1402	8	346.872	0.004	0.050	20:06 hr	1.27	0.15	0.68	0.23	-0.38	0.18	0.27	1.00	0.12	0.13
10040	1173	1247	10	144.685	0.011	0.209	12:50 hr	2.73	0.22	1.20	0.27	-1.11	0.22	0.27	2.73	0.16	0.25
10041	1174	1351	10	327.002	0.012	0.212	12:53 hr	2.78	0.22	1.23	0.27	-1.13	0.22	0.27	2.78	0.16	0.25
10042	1178	1179	8	358.699	0.004	0.012	12:05 hr	0.83	0.08	0.65	0.11	-0.42	0.08	0.11	0.83	0.03	0.06
10043	1190	1189	8	239.833	0.004	0.006	12:02 hr	0.68	0.06	0.60	0.09	-0.41	0.06	0.09	0.68	0.02	0.05
10044	1189	1188	8	292.941	0.004	0.011	12:05 hr	0.81	0.07	0.64	0.11	-0.42	0.08	0.11	0.05	0.03	0.06
10045	1188	1187	8	341.317	0.004	0.014	12:09 hr	0.90	0.08	0.68	0.12	-0.44	0.08	0.12	0.90	0.03	0.07
10046	1187	1354	8	328.197	0.005	0.014	12:12 hr	0.95	0.08	0.72	0.12	-0.47	0.23	0.34	0.06	0.03	0.07
10047	1186	1185	8	241.466	0.003	0.001	20:02 hr	0.36	0.03	0.49	0.04	-0.38	0.03	0.04	0.36	0.00	0.02
10048	1185	1184	8	302.242	0.004	0.002	20:04 hr	0.45	0.03	0.56	0.05	-0.42	0.03	0.05	0.01	0.00	0.02
10049	1184	1183	8	329.383	0.004	0.002	20:07 hr	0.44	0.03	0.54	0.05	-0.41	0.04	0.06	0.01	0.00	0.02
10050	1183	1355	8	326.351	0.004	0.005	10:03 hr	0.66	0.05	0.63	0.08	-0.44	0.05	0.08	0.66	0.01	0.04
10051	1193	1192	8	93.472	0.01	0.005	20:00 hr	0.90	0.04	0.95	0.06	-0.68	0.04	0.06	0.36	0.01	0.04
10052	1192	1191	8	94.614	0.01	0.006	20:00 hr	0.92	0.04	0.94	0.07	-0.67	0.04	0.07	0.92	0.01	0.04
10059	1191	1194	8	60.366	0.03	0.007	20:00 hr	1.42	0.04	1.60	0.05	-1.18	0.14	0.22	0.03	0.01	0.05
10060	1194	1195	8	55.81	0.003	0.007	20:00 hr	0.68	0.06	0.58	0.09	-0.39	0.15	0.22	0.22	0.02	0.05
10061	1195	1196	8	57.433	0.017	0.007	20:01 hr	1.19	0.04	1.24	0.06	-0.88	0.05	0.08	0.03	0.01	0.05
10062	1200	1199	8	104.754	0.014	0.002	20:00 hr	0.74	0.02	1.03	0.04	-0.80	0.03	0.04	0.01	0.00	0.02
10063	1199	1297	8	78.02	0.013	0.003	20:00 hr	0.82	0.03	1.03	0.05	-0.78	0.03	0.05	0.43	0.00	0.03
10064	1297	1198	8	79.881	0.013	0.003	20:00 hr	0.87	0.03	1.04	0.05	-0.78	0.03	0.05	0.87	0.00	0.03
10082	1299	1298	8	100.744	0.006	0.008	20:04 hr	0.88	0.06	0.78	0.09	-0.53	0.06	0.09	0.87	0.02	0.05
10083	1300	1299	8	375.483	0.009	0.001	20:03 hr	0.54	0.02	0.81	0.03	-0.65	0.02	0.03	0.54	0.00	0.02
10084	1301	1302	8	309.22	0.004	0.001	10:03 hr	0.36	0.02	0.53	0.03	-0.42	0.02	0.03	0.36	0.00	0.02
10085	1308	1309	8	310.039	0.004	0.100	20:20 hr	1.53	0.22	0.67	0.33	-0.32	0.22	0.33	1.52	0.24	0.18
10086	1309	1310	8	337.99	0.012	0.100	20:22 hr	2.29	0.17	1.18	0.25	-0.64	0.17	0.25	2.28	0.14	0.18
10087	1310	1311	8	299.508	0.012	0.109	20:23 hr	2.35	0.17	1.18	0.26	-0.63	0.17	0.26	2.33	0.15	0.19
10088	1313	1314	24	340.776	0.005	8.379	21:07 hr	5.19	1.48	0.95	0.74	-0.93	1.48	0.74	5.19	0.90	1.30
10089	1314	1315	24	318.686	0.006	8.383	21:08 hr	5.25	1.47	0.97	0.73	-1.06	1.47	0.73	5.25	0.89	1.30
10090	1315	1316	24	310.698	0.006	8.384	21:10 hr	5.26	1.47	0.97	0.73	-1.07	1.47	0.73	5.25	0.89	1.30
10091	1320	1196	8	176.282	0.006	0.006	20:01 hr	0.76	0.05	0.73	0.07	-0.51	0.05	0.07	0.76	0.01	0.04
10092	1317	1318	8	62.955	0.014	0.004	20:00 hr	0.90	0.03	1.08	0.05	-0.80	0.03	0.05	0.02	0.00	0.03
10093	1318	1319	8	68.143	0.013	0.004	20:00 hr	0.93	0.04	1.05	0.05	-0.77	0.04	0.06	0.39	0.01	0.04
10094	1319	1320	8	69.368	0.008	0.005	20:00 hr	0.81	0.04	0.85	0.06	-0.61	0.04	0.06	0.81	0.01	0.04
10095	1321	1320	8	35.725	0.002	0.001	20:00 hr	0.25	0.02	0.38	0.03	-0.30	0.02	0.03	0.25	0.00	0.01

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
10107	1322	1323	8	368.641	0.003	0.118	12:21 hr	1.48	0.26	0.60	0.39	-0.26	0.26	0.39	1.48	0.31	0.20
10114	1358	1360	8	339.706	0.004	0.016	10:12 hr	0.90	0.09	0.65	0.13	-0.41	0.09	0.13	0.90	0.04	0.07
10115	1360	1305	8	262.578	0.004	0.016	10:14 hr	0.89	0.09	0.63	0.14	-0.40	0.09	0.14	0.89	0.04	0.07
10116	1368	1367	8	302.723	0.004	0.063	20:10 hr	1.36	0.17	0.68	0.26	-0.36	0.17	0.26	1.36	0.15	0.14
10117	1367	1366	8	360.917	0.004	0.066	20:13 hr	1.38	0.18	0.68	0.27	-0.36	0.18	0.27	1.37	0.15	0.15
10118	1366	1365	8	366.527	0.004	0.069	20:15 hr	1.39	0.18	0.68	0.27	-0.36	0.18	0.27	1.38	0.16	0.15
10119	1365	1364	8	227.955	0.004	0.091	20:15 hr	1.52	0.21	0.69	0.31	-0.34	0.21	0.31	1.51	0.21	0.17
10120	1373	1372	8	351.364	0.017	0.111	12:32 hr	2.67	0.16	1.39	0.24	-0.77	0.16	0.24	2.67	0.13	0.19
10121	1372	1371	8	322.829	0.014	0.114	12:32 hr	2.53	0.17	1.29	0.25	-0.70	0.17	0.25	2.53	0.14	0.19
10122	1371	1370	8	325.622	0.018	0.115	12:33 hr	2.75	0.16	1.44	0.24	-0.79	0.16	0.24	2.75	0.13	0.19
10123	1370	1369	8	324.054	0.013	0.115	12:35 hr	2.47	0.17	1.24	0.26	-0.66	0.17	0.26	2.47	0.15	0.19
10124	1379	1378	8	195.837	0.005	0.004	20:01 hr	0.61	0.04	0.64	0.06	-0.46	0.04	0.06	0.61	0.01	0.03
10125	1378	1377	8	176.312	0.005	0.020	20:02 hr	1.02	0.09	0.70	0.14	-0.44	0.09	0.14	1.02	0.04	0.08
10126	1377	1376	8	226.569	0.005	0.025	20:04 hr	1.11	0.11	0.72	0.16	-0.44	0.11	0.16	1.11	0.05	0.09
10130	1233	1384	21	438.715	0.012	8.448	21:19 hr	7.07	1.26	1.40	0.72	-1.32	1.26	0.72	7.04	0.87	1.35
10131	1384	1383	21	446.892	0.012	8.452	21:21 hr	7.15	1.24	1.42	0.71	-1.45	1.24	0.71	7.12	0.85	1.35
10132	1385	826	8	214.324	0.008	0.003	20:01 hr	0.72	0.03	0.84	0.05	-0.62	0.03	0.05	0.72	0.01	0.03
10135	1386	892	8	214.006	0.004	0.021	20:06 hr	1.00	0.10	0.68	0.15	-0.42	0.10	0.15	1.00	0.05	0.08
10138	1387	1914	8	193.787	0.004	0.004	20:01 hr	0.58	0.05	0.59	0.07	-0.42	0.05	0.07	0.58	0.01	0.03
10141	1388	1389	8	349.983	0.004	0.007	20:03 hr	0.72	0.06	0.63	0.09	-0.42	0.06	0.09	0.72	0.02	0.05
10142	1389	1390	8	350.791	0.002	0.008	20:06 hr	0.60	0.07	0.48	0.11	-0.31	0.07	0.11	0.60	0.03	0.05
10143	1390	1391	8	231.568	0.004	0.012	20:06 hr	0.82	0.08	0.63	0.12	-0.41	0.08	0.12	0.81	0.03	0.06
10144	1391	1392	8	227.473	0.004	0.012	20:08 hr	0.82	0.08	0.63	0.12	-0.41	0.08	0.12	0.82	0.03	0.06
10145	1396	1395	8	314.613	0.004	0.043	10:10 hr	1.21	0.14	0.67	0.22	-0.38	0.14	0.22	1.21	0.10	0.12
10146	1395	1394	8	305.656	0.004	0.047	20:06 hr	1.25	0.15	0.68	0.22	-0.38	0.15	0.22	1.25	0.11	0.12
10147	1394	793	8	307.305	0.004	0.051	20:07 hr	1.28	0.16	0.68	0.23	-0.38	0.16	0.23	1.27	0.12	0.13
10149	1400	1399	8	286.991	0.009	0.019	12:08 hr	1.28	0.08	0.97	0.12	-0.63	0.08	0.12	1.28	0.03	0.08
10150	1399	1398	8	304.446	0.007	0.045	12:12 hr	1.49	0.13	0.88	0.19	-0.52	0.13	0.19	1.49	0.08	0.12
10151	1402	1403	8	140.344	0.004	0.182	20:12 hr	1.79	0.31	0.67	0.46	-0.24	0.31	0.46	1.77	0.44	0.25
10152	1403	1404	8	227.934	0.004	0.187	20:14 hr	1.84	0.31	0.69	0.46	-0.24	0.31	0.46	1.82	0.44	0.25
10153	1411	1410	8	49.191	0.008	0.000	20:00 hr	0.40	0.02	0.71	0.02	-0.60	0.02	0.02	0.29	0.00	0.01
10154	1410	1409	8	83.345	0.011	0.001	20:00 hr	0.51	0.02	0.85	0.03	-0.71	0.02	0.03	0.00	0.00	0.02
10155	1409	1408	8	78.766	0.01	0.001	20:00 hr	0.58	0.02	0.85	0.03	-0.67	0.03	0.04	0.32	0.00	0.02
10156	1407	1408	8	32.197	0.053	0.003	10:00 hr	1.37	0.02	1.98	0.03	-1.57	0.03	0.04	0.99	0.00	0.03
10157	1408	NJ_38	8	65.455	0.012	0.004	10:00 hr	0.88	0.04	1.02	0.05	-0.75	0.04	0.05	0.02	0.01	0.04
10158	1414	1193	8	90.547	0.007	0.004	20:00 hr	0.76	0.04	0.80	0.06	-0.58	0.04	0.06	0.76	0.01	0.04
10159	1415	1413	8	73.063	0.014	0.001	20:00 hr	0.61	0.02	0.98	0.03	-0.80	0.02	0.03	0.61	0.00	0.02
10160	1413	1416	8	72.475	0.014	0.002	20:00 hr	0.69	0.02	1.00	0.03	-0.79	0.03	0.04	0.01	0.00	0.02
10161	1416	1412	8	90.602	0.014	0.003	20:00 hr	0.82	0.03	1.06	0.04	-0.81	0.03	0.04	0.45	0.00	0.03
10162	1412	1317	8	69.361	0.014	0.003	20:00 hr	0.85	0.03	1.04	0.05	-0.79	0.03	0.05	0.85	0.00	0.03
10184	NJ_38	1414	8	29.972	0.011	0.004	10:00 hr	0.86	0.04	0.98	0.05	-0.72	0.04	0.06	0.02	0.01	0.04
10185	1419	1418	8	290.606	0.016	0.004	12:01 hr	0.99	0.03	1.16	0.05	-0.87	0.03	0.05	0.99	0.01	0.04
10186	1418	1400	8	258.827	0.02	0.004	12:03 hr	1.07	0.03	1.29	0.05	-0.96	0.03	0.05	1.07	0.00	0.04
10188	1423	1422	8	304.898	0.007	0.051	10:15 hr	1.59	0.13	0.92	0.20	-0.54	0.13	0.20	1.59	0.09	0.13
10189	1422	1421	8	279.806	0.008	0.054	20:07 hr	1.69	0.13	0.98	0.20	-0.57	0.13	0.20	1.69	0.09	0.13
10190	1421	1433	8	280.429	0.01	0.056	20:08 hr	1.81	0.13	1.06	0.20	-0.62	0.13	0.20	1.80	0.08	0.13

2017 CIP + Revised Buildout Scenario Pipe Results																	
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10191	1426	1424	8	230.477	0.02	0.040	10:12 hr	2.09	0.09	1.45	0.14	-0.91	0.09	0.14	2.08	0.04	0.11
10192	1424	1423	8	240.771	0.022	0.049	10:13 hr	2.32	0.10	1.56	0.15	-0.97	0.10	0.15	2.32	0.05	0.13
10196	1960	1954	8	66.623	0.022	0.002	12:03 hr	0.80	0.02	1.23	0.03	-1.00	0.02	0.03	0.80	0.00	0.02
10201	NJ_30	1963	8	23.336	0.015	0.002	20:00 hr	0.77	0.02	1.07	0.04	-0.84	0.67	1.00	0.72	0.00	0.02
10203	NJ_27	NJ_26	8	67.006	0.004	0.003	20:01 hr	0.53	0.04	0.58	0.06	-0.42	0.67	1.00	0.50	0.01	0.03
10204	NJ_26	1971	8	116.322	0.005	0.003	20:02 hr	0.59	0.04	0.64	0.06	-0.47	0.67	1.00	0.01	0.01	0.03
10209	NJ_25	1971	8	70.715	0.005	0.001	20:00 hr	0.43	0.02	0.61	0.03	-0.48	0.67	1.00	0.40	0.00	0.02
10214	1747	NJ_25	8	140.04	0.016	0.001	20:00 hr	0.60	0.02	1.03	0.02	-0.86	0.67	1.00	0.00	0.00	0.02
10217	1632	1779	8	319.43	0.019	0.076	20:13 hr	2.47	0.13	1.45	0.19	-0.85	0.13	0.19	2.46	0.08	0.16
10218	1990	1651	8	315.507	0.004	0.007	20:05 hr	0.71	0.06	0.62	0.09	-0.42	0.06	0.09	0.71	0.02	0.05
10219	1991	1990	8	313.352	0.004	0.005	20:03 hr	0.62	0.05	0.60	0.07	-0.42	0.05	0.07	0.62	0.01	0.04
10221	1265	1994	8	379.111	0.019	0.007	20:02 hr	1.21	0.04	1.28	0.06	-0.92	0.04	0.06	1.21	0.01	0.05
10222	1994	1993	8	375.761	0.021	0.012	20:03 hr	1.49	0.05	1.39	0.08	-0.96	0.05	0.08	1.48	0.01	0.06
10223	1993	1886	8	375.731	0.014	0.017	20:04 hr	1.42	0.07	1.17	0.10	-0.78	0.07	0.10	1.34	0.02	0.07
10226	1268	1703	8	415.436	0.013	0.032	20:06 hr	1.68	0.09	1.17	0.14	-0.74	0.67	1.00	1.57	0.04	0.10
10227	1267	1268	8	421.532	0.006	0.023	20:04 hr	1.16	0.10	0.80	0.14	-0.50	0.67	1.00	1.16	0.04	0.09
10228	1266	1267	8	401.187	0.006	0.010	20:04 hr	0.89	0.06	0.76	0.09	-0.51	0.06	0.09	0.89	0.02	0.06
10229	1272	1271	8	100.065	0.031	0.001	20:00 hr	0.87	0.02	1.45	0.03	-1.20	0.02	0.03	0.87	0.00	0.02
10230	1271	1270	8	389.22	0.017	0.008	20:02 hr	1.21	0.05	1.23	0.07	-0.87	0.05	0.07	1.21	0.01	0.05
10231	1270	1269	8	372.146	0.017	0.013	20:04 hr	1.42	0.06	1.27	0.09	-0.87	0.06	0.09	1.42	0.02	0.07
10232	1269	1885	8	378.496	0.014	0.018	20:04 hr	1.45	0.07	1.17	0.11	-0.78	0.07	0.11	1.45	0.02	0.08
10267	1425	1426	8	304.739	0.004	0.037	10:11 hr	1.16	0.13	0.67	0.20	-0.39	0.13	0.20	1.15	0.09	0.11
10268	1427	1426	8	183.429	0.006	0.005	20:01 hr	0.71	0.05	0.71	0.07	-0.51	0.05	0.07	0.71	0.01	0.04
10271	1332	1428	8	324.726	0.006	0.035	10:05 hr	1.30	0.12	0.80	0.18	-0.48	0.12	0.18	0.15	0.07	0.11
10277	1433	1432	8	318.54	0.005	0.058	20:11 hr	1.48	0.15	0.79	0.23	-0.44	0.15	0.23	1.47	0.12	0.14
10278	1432	1443	8	289.822	0.006	0.067	20:10 hr	1.60	0.16	0.84	0.24	-0.46	0.17	0.25	0.29	0.13	0.15
10279	1434	1316	8	347.082	0.014	0.044	12:09 hr	1.91	0.11	1.24	0.16	-0.76	0.11	0.16	1.91	0.06	0.12
10280	1437	1438	8	230.47	0.01	0.001	20:01 hr	0.56	0.02	0.85	0.03	-0.68	0.02	0.03	0.56	0.00	0.02
10281	1438	814	8	227.886	0.006	0.001	20:03 hr	0.50	0.03	0.66	0.04	-0.51	0.03	0.04	0.49	0.00	0.02
10284	1455	DUMMY1	8	237.262	0.004	0.003	20:02 hr	0.55	0.04	0.58	0.06	-0.42	0.04	0.06	0.55	0.01	0.03
10297	901	1236	24	356.454	0.008	8.434	21:14 hr	6.17	1.28	1.17	0.64	-3.03	1.28	0.64	6.15	0.74	1.30
10298	1236	1235	21	343.027	0.012	8.438	21:16 hr	7.04	1.26	1.39	0.72	-1.28	1.26	0.72	7.02	0.87	1.35
10299	1235	1234	21	347.353	0.012	8.442	21:17 hr	7.00	1.27	1.38	0.72	-1.22	1.27	0.72	6.98	0.87	1.35
10300	1435	1434	8	347.905	0.013	0.044	12:07 hr	1.86	0.11	1.20	0.16	-0.73	0.11	0.16	1.86	0.06	0.12
10301	1436	1435	8	316.518	0.006	0.035	12:03 hr	1.29	0.12	0.80	0.18	-0.48	0.12	0.18	1.29	0.07	0.11
10302	1237	1238	8	103.912	0.01	0.001	20:00 hr	0.52	0.02	0.82	0.03	-0.67	0.02	0.03	0.52	0.00	0.02
10305	1260	1251	8	238.483	0.004	0.004	20:07 hr	0.61	0.05	0.60	0.07	-0.42	0.05	0.07	0.61	0.01	0.04
10306	1259	1260	8	238.503	0.004	0.004	20:05 hr	0.60	0.05	0.60	0.07	-0.42	0.05	0.07	0.60	0.01	0.04
10319	1257	1261	8	175.827	0.004	0.003	20:02 hr	0.54	0.04	0.58	0.06	-0.42	0.04	0.06	0.54	0.01	0.03
10320	1261	1259	8	200.117	0.004	0.003	20:04 hr	0.56	0.04	0.59	0.06	-0.42	0.04	0.06	0.56	0.01	0.03
10334	1241	1240	8	114.988	0.007	0.000	20:00 hr	0.34	0.01	0.66	0.02	-0.58	0.01	0.02	0.34	0.00	0.01
10335	1240	1239	8	70.055	0.004	0.002	20:02 hr	0.47	0.03	0.56	0.05	-0.42	0.03	0.05	0.47	0.00	0.02
10336	1238	1239	8	257.891	0.01	0.011	20:08 hr	1.12	0.06	0.98	0.09	-0.66	0.06	0.09	1.12	0.02	0.06
10337	1242	1244	8	170.287	0.014	0.008	20:06 hr	1.14	0.05	1.11	0.07	-0.78	0.05	0.07	1.13	0.01	0.05
10339	1243	1240	8	242.191	0.007	0.002	20:02 hr	0.54	0.03	0.72	0.04	-0.55	0.03	0.04	0.53	0.00	0.02
10340	1244	1238	8	351.128	0.007	0.010	20:09 hr	0.96	0.06	0.83	0.09	-0.56	0.06	0.09	0.95	0.02	0.06

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10342	814	1249	8	209.554	0.004	0.003	20:04 hr	0.55	0.04	0.59	0.06	-0.42	0.04	0.06	0.01	0.01	0.03
10343	1249	1248	8	210.035	0.004	0.004	20:06 hr	0.59	0.05	0.60	0.07	-0.42	0.05	0.07	0.59	0.01	0.04
10344	1248	1247	8	272.144	0.004	0.006	20:06 hr	0.66	0.05	0.61	0.08	-0.42	0.10	0.14	0.45	0.01	0.04
10345	1255	1256	8	210.02	0.004	0.001	20:02 hr	0.32	0.02	0.52	0.03	-0.42	0.02	0.03	0.32	0.00	0.01
10346	1256	1257	8	216.371	0.004	0.001	20:03 hr	0.38	0.02	0.54	0.04	-0.42	0.02	0.04	0.38	0.00	0.02
10347	1258	1257	8	185.127	0.004	0.002	10:01 hr	0.47	0.03	0.56	0.05	-0.42	0.03	0.05	0.47	0.01	0.02
10363	1247	1174	10	164.323	0.009	0.212	12:51 hr	2.47	0.24	1.04	0.29	-0.92	0.24	0.29	2.47	0.19	0.25
10364	1464	356	8	244.158	0.017	0.020	20:09 hr	1.62	0.07	1.30	0.11	-0.86	0.07	0.11	1.61	0.02	0.08
10365	1465	1616	8	198.493	0.01	0.003	20:01 hr	0.73	0.03	0.90	0.05	-0.68	0.03	0.05	0.73	0.00	0.03
10366	1466	1510	10	362.807	0.006	0.492	20:33 hr	2.71	0.43	0.87	0.51	-0.46	0.43	0.51	2.69	0.52	0.39
10367	1468	1469	10	237.144	0.008	0.309	20:43 hr	2.72	0.30	1.03	0.36	-0.82	0.30	0.36	2.71	0.28	0.30
10368	1469	1470	10	374.001	0.015	0.310	20:45 hr	3.37	0.26	1.38	0.31	-1.20	0.26	0.31	3.36	0.21	0.30
10369	1470	1471	10	328.757	0.014	0.313	20:46 hr	3.31	0.26	1.34	0.31	-1.16	0.26	0.31	3.31	0.21	0.30
10382	1473	1472	8	380.835	0.004	0.107	12:18 hr	1.62	0.22	0.71	0.33	-0.34	0.22	0.33	1.62	0.24	0.19
10383	1474	1473	8	397.443	0.004	0.093	12:13 hr	1.52	0.21	0.68	0.32	-0.34	0.21	0.32	1.52	0.22	0.17
10384	1475	1623	8	283.952	0.017	0.058	20:09 hr	2.20	0.12	1.36	0.17	-0.82	0.67	1.00	2.19	0.07	0.14
10385	1476	1475	8	140.581	0.023	0.042	20:07 hr	2.23	0.09	1.57	0.14	-0.99	0.09	0.14	2.22	0.04	0.12
10386	1477	1476	8	171.374	0.018	0.040	20:08 hr	2.01	0.10	1.37	0.14	-0.86	0.10	0.14	2.00	0.05	0.11
10387	1478	1477	8	294.604	0.017	0.025	20:06 hr	1.74	0.08	1.33	0.12	-0.87	0.08	0.12	1.73	0.03	0.09
10388	1479	1478	8	342.853	0.019	0.005	20:01 hr	1.09	0.03	1.26	0.05	-0.93	0.03	0.05	1.09	0.01	0.04
10389	1480	1609	8	263.015	0.006	0.002	20:02 hr	0.54	0.03	0.68	0.04	-0.52	0.03	0.04	0.54	0.00	0.02
10390	1481	1601	8	305.806	0.011	0.000	00:00 hr	0.00	0.00	0.00	0.00	-0.70	0.03	0.05	0.00	0.00	0.00
10391	1156	1484	8	289.596	0.006	0.028	20:05 hr	1.24	0.11	0.81	0.16	-0.49	0.11	0.16	1.23	0.06	0.10
10392	1484	1483	8	369.278	0.013	0.037	20:07 hr	1.77	0.10	1.19	0.15	-0.74	0.10	0.15	1.76	0.05	0.11
10393	1483	1482	8	283.061	0.015	0.041	20:08 hr	1.92	0.10	1.29	0.15	-0.80	0.10	0.15	1.91	0.05	0.11
10394	1482	1630	8	384.823	0.02	0.043	20:10 hr	2.14	0.10	1.46	0.15	-0.91	0.10	0.15	2.13	0.05	0.12
10395	1485	1487	8	199.352	0.01	0.002	20:01 hr	0.67	0.03	0.88	0.04	-0.67	0.03	0.04	0.67	0.00	0.03
10396	1487	1807	8	188.93	0.013	0.011	20:02 hr	1.22	0.05	1.12	0.08	-0.77	0.05	0.08	1.22	0.01	0.06
10400	1499	1500	8	214.351	0.015	0.007	10:01 hr	1.12	0.04	1.14	0.07	-0.81	0.04	0.07	1.12	0.01	0.05
10401	1500	1858	8	190.594	0.005	0.024	10:03 hr	1.08	0.10	0.71	0.15	-0.44	0.11	0.16	0.10	0.05	0.09
10402	1502	1503	15	415.918	0.003	1.075	20:34 hr	2.61	0.64	0.68	0.52	-0.97	0.64	0.52	2.60	0.53	0.51
10403	1503	1504	15	407.379	0.004	1.081	20:37 hr	2.92	0.59	0.79	0.47	-1.29	0.59	0.47	2.91	0.46	0.51
10404	1504	1505	15	402.523	0.006	1.087	20:39 hr	3.29	0.54	0.92	0.43	-1.70	0.54	0.43	3.28	0.39	0.52
10405	1510	1514	10	380.147	0.006	0.496	20:36 hr	2.72	0.43	0.87	0.51	-0.45	0.43	0.51	2.70	0.52	0.39
10406	1516	1517	10	159.577	0.003	0.504	20:39 hr	2.20	0.52	0.65	0.62	-0.21	0.52	0.62	2.19	0.70	0.39
10407	1514	1516	10	220.98	0.007	0.496	20:38 hr	2.94	0.40	0.96	0.48	-0.56	0.40	0.48	2.84	0.47	0.39
10408	1520	1521	8	74.419	0.004	0.000	00:00 hr	0.00	0.00	0.00	0.00	-0.42	0.00	0.00	0.00	0.00	0.00
10409	1521	1841	8	51.82	0.023	0.000	00:00 hr	0.00	0.00	0.00	0.00	-1.04	0.00	0.00	0.00	0.00	0.00
10410	1844	1841	8	68.825	0.013	0.000	00:00 hr	0.00	0.00	0.00	0.00	-0.78	0.00	0.00	0.00	0.00	0.00
10411	1846	1845	8	124.836	0.007	0.001	20:01 hr	0.44	0.02	0.69	0.03	-0.56	0.13	0.19	0.00	0.00	0.02
10412	1845	1847	8	128.579	0.023	0.015	20:00 hr	1.65	0.06	1.48	0.09	-1.01	0.06	0.09	0.07	0.02	0.07
10413	1848	1847	8	106.73	0.005	0.000	00:00 hr	0.00	0.00	0.00	0.00	-0.46	0.00	0.00	0.00	0.00	0.00
10414	1847	1849	8	171.075	0.02	0.015	20:01 hr	1.58	0.06	1.39	0.09	-0.95	0.06	0.09	1.58	0.02	0.07
10415	1850	1849	8	139.993	0.023	0.000	00:00 hr	0.00	0.00	0.00	0.00	-1.03	0.00	0.00	0.00	0.00	0.00
10416	1849	1851	8	87.77	0.011	0.015	20:01 hr	1.27	0.07	1.04	0.10	-0.69	0.07	0.10	1.26	0.02	0.07
10417	1855	1856	8	176.731	0.015	0.016	10:01 hr	1.42	0.06	1.21	0.10	-0.81	0.06	0.10	1.42	0.02	0.07

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
10419	1859	1858	8	256.3	0.032	0.011	10:01 hr	1.70	0.05	1.71	0.07	-1.21	0.08	0.12	0.05	0.01	0.06
10420	1577	1861	8	315.007	0.01	0.017	10:02 hr	1.28	0.07	1.01	0.11	-0.66	0.07	0.11	1.28	0.03	0.07
10421	1861	1862	8	357.067	0.006	0.030	10:06 hr	1.28	0.11	0.83	0.16	-0.50	0.11	0.16	1.28	0.06	0.10
10422	1862	1863	8	348.574	0.006	0.048	10:09 hr	1.45	0.14	0.83	0.20	-0.48	0.14	0.20	1.45	0.09	0.12
10423	1865	1866	8	304.963	0.012	0.293	20:23 hr	3.08	0.29	1.18	0.44	-0.44	0.29	0.44	3.04	0.40	0.32
10424	1866	1868	8	334.569	0.012	0.303	20:25 hr	3.12	0.30	1.18	0.45	-0.44	0.30	0.45	3.08	0.41	0.32
10425	1868	1870	8	377.269	0.012	0.340	20:26 hr	3.23	0.32	1.19	0.47	-0.41	0.32	0.47	3.19	0.46	0.34
10426	1870	1871	8	127.849	0.016	0.340	20:26 hr	3.56	0.29	1.36	0.44	-0.51	0.29	0.44	3.52	0.40	0.34
10427	1864	1867	8	326.586	0.016	0.032	10:08 hr	1.82	0.09	1.31	0.13	-0.83	0.09	0.13	1.82	0.04	0.10
10428	1867	1869	8	311.133	0.019	0.038	10:10 hr	2.01	0.09	1.41	0.14	-0.89	0.09	0.14	2.01	0.04	0.11
10429	1525	1526	8	210.471	0.006	0.055	20:07 hr	1.49	0.15	0.82	0.22	-0.46	0.15	0.22	1.49	0.11	0.13
10430	1526	1527	8	124.088	0.034	0.055	20:08 hr	2.77	0.10	1.90	0.14	-1.19	0.10	0.14	2.75	0.04	0.13
10431	1527	1528	8	422.365	0.012	0.057	20:11 hr	1.93	0.13	1.15	0.19	-0.68	0.13	0.19	1.92	0.08	0.14
10432	1528	1562	8	418.502	0.024	0.060	20:13 hr	2.52	0.11	1.62	0.16	-0.99	0.12	0.18	2.38	0.06	0.14
10433	1124	1531	8	313.399	0.01	0.057	20:11 hr	1.86	0.13	1.09	0.19	-0.64	0.13	0.19	1.85	0.08	0.14
10434	1531	1532	8	297.671	0.018	0.057	20:12 hr	2.25	0.11	1.41	0.17	-0.85	0.11	0.17	2.23	0.06	0.14
10435	1532	1533	8	349.214	0.014	0.060	20:14 hr	2.08	0.12	1.25	0.19	-0.74	0.12	0.19	2.06	0.08	0.14
10436	1533	1865	8	372.895	0.026	0.063	20:15 hr	2.65	0.11	1.70	0.16	-1.04	0.15	0.22	1.84	0.06	0.14
10437	1534	1535	8	359.416	0.014	0.018	10:04 hr	1.47	0.07	1.19	0.11	-0.78	0.07	0.11	1.47	0.02	0.08
10438	1535	1864	8	302.125	0.015	0.029	10:06 hr	1.73	0.09	1.27	0.13	-0.81	0.09	0.13	1.73	0.03	0.10
10439	1808	1536	8	162.886	0.008	0.023	20:03 hr	1.29	0.09	0.92	0.13	-0.59	0.09	0.13	1.29	0.04	0.09
10440	1536	1537	8	89.584	0.008	0.023	20:03 hr	1.28	0.09	0.91	0.13	-0.58	0.09	0.13	1.28	0.04	0.09
10441	1538	1539	8	256.73	0.007	0.054	20:02 hr	1.59	0.14	0.89	0.21	-0.51	0.14	0.21	1.58	0.10	0.13
10442	1539	1525	8	322.893	0.006	0.055	20:06 hr	1.54	0.14	0.85	0.22	-0.49	0.14	0.22	1.53	0.10	0.13
10443	1540	1541	8	180.486	0.014	0.001	20:01 hr	0.53	0.02	0.94	0.02	-0.79	0.02	0.02	0.53	0.00	0.02
10444	1541	1806	8	226.67	0.01	0.002	20:01 hr	0.68	0.03	0.90	0.04	-0.69	0.05	0.08	0.01	0.00	0.03
10446	1546	1545	8	124.699	0.006	0.002	20:01 hr	0.58	0.03	0.71	0.05	-0.54	0.03	0.05	0.58	0.00	0.03
10447	1544	1545	8	305.393	0.003	0.004	20:03 hr	0.52	0.05	0.49	0.08	-0.34	0.05	0.08	0.52	0.01	0.04
10461	1746	1547	8	108.158	0.006	0.169	12:19 hr	2.04	0.26	0.82	0.40	-0.35	0.26	0.40	2.04	0.33	0.24
10462	1547	1656	8	415.687	0.006	0.171	12:22 hr	2.07	0.26	0.83	0.39	-0.35	0.26	0.39	2.07	0.33	0.24
10463	1548	1549	8	102.464	0.022	0.001	20:00 hr	0.76	0.02	1.22	0.03	-1.00	0.02	0.03	0.75	0.00	0.02
10464	1549	1550	8	254.845	0.002	0.003	20:02 hr	0.48	0.05	0.47	0.07	-0.33	0.05	0.07	0.48	0.01	0.03
10474	1553	1552	8	259.438	0.005	0.141	20:12 hr	1.89	0.24	0.79	0.37	-0.35	0.55	0.82	1.87	0.29	0.22
10477	1558	1557	10	241.042	0.018	0.491	20:21 hr	4.07	0.31	1.50	0.38	-1.15	0.31	0.38	4.03	0.30	0.38
10478	1557	1556	10	239.839	0.018	0.493	20:22 hr	4.06	0.31	1.49	0.38	-1.14	0.39	0.47	1.35	0.30	0.39
10479	1555	1554	10	250.295	0.024	0.574	20:24 hr	4.76	0.31	1.76	0.37	-1.35	0.31	0.37	4.72	0.30	0.42
10482	1471	1562	12	337.791	0.003	0.317	20:49 hr	1.89	0.37	0.65	0.37	-0.80	0.37	0.37	1.89	0.28	0.29
10483	1564	1565	12	195.522	0.003	0.373	20:45 hr	1.97	0.40	0.64	0.40	-0.74	0.40	0.40	1.97	0.34	0.32
10484	1565	1583	12	357.339	0.003	0.373	20:49 hr	1.96	0.40	0.64	0.40	-0.73	0.40	0.40	1.96	0.34	0.32
10487	1567	1568	8	245.718	0.008	0.004	20:01 hr	0.74	0.04	0.83	0.06	-0.60	0.67	1.00	0.70	0.01	0.03
10488	1568	1569	8	162.468	0.009	0.004	20:02 hr	0.81	0.04	0.86	0.06	-0.62	0.67	1.00	0.72	0.01	0.04
10489	1574	1573	10	323.324	0.01	0.301	20:37 hr	2.84	0.28	1.10	0.34	-0.90	0.28	0.34	2.81	0.25	0.30
10490	1573	1572	10	431.496	0.019	0.305	20:39 hr	3.61	0.24	1.53	0.29	-1.37	0.24	0.29	3.59	0.18	0.30
10491	1572	1571	10	417.328	0.013	0.309	20:41 hr	3.24	0.26	1.31	0.32	-1.12	0.26	0.32	3.22	0.22	0.30
10492	1571	1570	10	182.338	0.016	0.309	20:41 hr	3.47	0.25	1.44	0.30	-1.27	0.25	0.30	3.45	0.20	0.30
10505	1575	1576	8	378.833	0.008	0.071	12:06 hr	1.79	0.15	0.96	0.23	-0.53	0.15	0.23	1.79	0.12	0.15

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
10506	1576	1474	8	396.697	0.008	0.081	12:09 hr	1.87	0.17	0.96	0.25	-0.52	0.17	0.25	1.87	0.14	0.16
10507	1472	1555	10	443.211	0.011	0.574	20:23 hr	3.54	0.39	1.17	0.47	-0.71	0.39	0.47	3.52	0.45	0.42
10508	1580	1579	10	319.517	0.02	0.269	20:36 hr	3.58	0.22	1.59	0.27	-1.47	0.22	0.27	3.54	0.15	0.28
10509	1579	1578	10	357.504	0.019	0.269	20:37 hr	3.49	0.23	1.53	0.27	-1.41	0.23	0.27	3.46	0.16	0.28
10510	1578	1574	10	418.026	0.013	0.293	20:37 hr	3.156	0.258	1.288	0.31	-1.116	0.258	0.31	3.127	0.208	0.294
10524	1072	1580	10	338.877	0.008	0.268	20:35 hr	2.541	0.283	0.987	0.339	-0.812	0.283	0.339	2.511	0.248	0.281
10527	1501	1581	8	359.943	0.001	0.05	12:07 hr	0.789	0.215	0.352	0.322	-0.171	0.215	0.322	0.789	0.225	0.126
10528	1581	1840	8	386.618	0.001	0.069	12:11 hr	0.922	0.243	0.386	0.365	-0.173	0.243	0.365	0.922	0.284	0.148
10529	1834	1798	8	316.81	0.026	0.068	20:08 hr	2.692	0.113	1.697	0.169	-1.025	0.113	0.169	2.678	0.062	0.148
10530	1825	1834	8	305.928	0.013	0.05	20:09 hr	1.929	0.115	1.202	0.173	-0.723	0.115	0.173	1.919	0.065	0.126
10531	1584	1937	8	365.694	0.03	0.005	20:01 hr	1.265	0.03	1.558	0.046	-1.175	0.03	0.046	1.263	0.004	0.038
10532	1585	1584	8	154.405	0.02	0.002	20:00 hr	0.86	0.023	1.214	0.035	-0.955	0.252	0.378	0.009	0.002	0.026
10533	1587	1586	8	362.519	0.006	0.014	20:06 hr	0.993	0.074	0.776	0.111	-0.508	0.074	0.111	0.989	0.026	0.065
10534	1588	1587	8	359.697	0.006	0.01	20:03 hr	0.912	0.065	0.766	0.097	-0.513	0.065	0.097	0.909	0.019	0.056
10535	1657	1466	10	310.381	0.016	0.49	20:30 hr	3.891	0.322	1.413	0.387	-1.056	0.322	0.387	3.854	0.317	0.384
10538	1662	1551	8	86.653	0.005	0.045	10:12 hr	1.36	0.135	0.779	0.203	-0.45	0.667	1	0.197	0.09	0.119
10539	1661	1660	8	352.005	0.005	0.077	10:17 hr	1.573	0.18	0.774	0.27	-0.408	0.667	1	1.572	0.159	0.158
10540	1660	1706	8	349.878	0.006	0.08	10:20 hr	1.68	0.177	0.834	0.265	-0.443	0.667	1	1.677	0.154	0.161
10541	1665	1664	8	178.901	0.019	0.001	20:01 hr	0.71	0.018	1.149	0.027	-0.943	0.018	0.027	0.71	0.001	0.019
10542	1664	1663	8	193.339	0.018	0.002	20:01 hr	0.804	0.023	1.148	0.034	-0.906	0.023	0.034	0.803	0.002	0.024
10562	1675	1666	8	222.411	0.004	0.006	20:04 hr	0.652	0.057	0.586	0.085	-0.401	0.128	0.192	0.027	0.015	0.043
10563	1666	1672	8	231.897	0.004	0.007	20:05 hr	0.737	0.06	0.641	0.091	-0.434	0.06	0.091	0.735	0.017	0.048
10564	1672	1673	8	228.57	0.004	0.009	20:07 hr	0.729	0.068	0.595	0.102	-0.395	0.068	0.102	0.727	0.022	0.053
10565	1673	1674	8	213.542	0.004	0.01	20:08 hr	0.762	0.073	0.601	0.109	-0.395	0.073	0.109	0.759	0.025	0.056
10590	1663	1674	8	300.552	0.012	0.002	20:03 hr	0.75	0.027	0.974	0.041	-0.747	0.027	0.041	0.748	0.003	0.027
10600	1676	1675	8	292.591	0.024	0.004	20:03 hr	1.071	0.028	1.363	0.043	-1.039	0.028	0.043	1.069	0.003	0.033
10617	1677	1673	8	106.801	0.031	0.001	20:00 hr	0.715	0.012	1.378	0.019	-1.196	0.012	0.019	0.715	0.001	0.015
10625	1678	1672	8	105.833	0.021	0.001	20:00 hr	0.622	0.014	1.148	0.02	-0.982	0.014	0.02	0.622	0.001	0.015
10633	1679	1666	8	103.165	0.06	0.001	20:00 hr	0.898	0.011	1.872	0.016	-1.666	0.035	0.053	0.003	0	0.015
10641	1681	1680	8	206.818	0.005	0.001	20:02 hr	0.465	0.024	0.641	0.037	-0.5	0.024	0.037	0.464	0.002	0.019
10642	1680	1676	8	203.1	0.003	0.002	20:03 hr	0.466	0.036	0.531	0.053	-0.391	0.036	0.053	0.465	0.006	0.026
10652	1686	1618	8	386.118	0.01	0.009	20:05 hr	1.032	0.053	0.964	0.079	-0.667	0.053	0.079	1.029	0.013	0.052
10653	1687	1686	8	427.17	0.017	0.005	20:02 hr	1.05	0.035	1.199	0.053	-0.884	0.035	0.053	1.047	0.005	0.039
10654	1688	1617	8	225.448	0.012	0.003	20:01 hr	0.77	0.03	0.961	0.044	-0.727	0.03	0.044	0.769	0.004	0.029
10655	1690	1689	8	153.09	0.014	0.002	20:01 hr	0.756	0.025	1.027	0.038	-0.798	0.025	0.038	0.756	0.003	0.025
10656	1689	1621	8	304.035	0.023	0.005	20:01 hr	1.157	0.033	1.374	0.049	-1.024	0.033	0.049	1.155	0.005	0.038
10657	1692	1852	8	299.875	0.017	0.005	20:01 hr	1.063	0.036	1.204	0.054	-0.885	0.036	0.054	1.062	0.006	0.039
10658	1691	1692	8	228.829	0.017	0.002	20:01 hr	0.825	0.025	1.132	0.037	-0.883	0.025	0.037	0.824	0.002	0.026
10659	1693	1598	8	175.358	0.01	0.003	20:01 hr	0.737	0.032	0.884	0.048	-0.661	0.032	0.048	0.737	0.004	0.03
10661	1694	1802	24	383.58	0.004	7.74	20:53 hr	3.812	2	0.783	1	0.092	2	1	4.273	1.012	1.243
10662	1082	1696	8	434.73	0.019	0.064	20:10 hr	2.384	0.118	1.465	0.177	-0.875	0.118	0.177	2.373	0.069	0.144
10663	1696	1717	8	393.588	0.015	0.068	20:11 hr	2.244	0.128	1.32	0.193	-0.773	0.139	0.209	1.873	0.081	0.148
10664	1695	1824	8	455.464	0.011	0.08	20:12 hr	2.108	0.149	1.145	0.224	-0.643	0.149	0.224	2.097	0.11	0.16
10665	1698	1699	8	316.326	0.024	0.021	20:05 hr	1.849	0.065	1.546	0.098	-1.034	0.065	0.098	1.844	0.02	0.081
10666	1697	1698	8	342.948	0.017	0.015	20:04 hr	1.472	0.06	1.286	0.09	-0.872	0.06	0.09	1.468	0.017	0.068
10667	1700	1697	8	321.331	0.01	0.011	20:03 hr	1.126	0.059	0.993	0.088	-0.676	0.059	0.088	1.123	0.016	0.058

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
10668	1701	1700	8	244.319	0.019	0.003	20:01 hr	0.954	0.029	1.211	0.043	-0.922	0.029	0.043	0.953	0.003	0.032
10669	1702	1703	15	318.987	0.018	6.298	20:42 hr	7.941	1.25	1.62	1	1.406	1.25	1	7.797	1.287	1.178
10670	1703	1704	18	351.693	0.012	6.334	20:43 hr	6.508	1.192	1.372	0.795	-0.19	1.5	1	6.33	0.971	1.208
10671	1704	1705	18	303.537	0.012	6.505	20:44 hr	5.695	1.5	1.332	1	0.17	1.5	1	6.179	1.027	1.222
10672	1705	1977	18	140.671	0.009	6.509	20:44 hr	5.699	1.5	1.188	1	0.859	1.5	1	5.618	1.152	1.223
10679	1707	1724	8	291.8	0.006	0.004	20:02 hr	0.687	0.042	0.722	0.062	-0.519	0.042	0.062	0.686	0.008	0.035
10680	1708	1698	8	282.489	0.01	0.004	20:02 hr	0.806	0.036	0.912	0.054	-0.671	0.036	0.054	0.804	0.006	0.034
10681	1709	1700	8	263.036	0.015	0.005	20:01 hr	0.981	0.035	1.119	0.053	-0.824	0.035	0.053	0.98	0.005	0.037
10682	1710	2009	8	310.474	0.008	0.009	10:02 hr	0.941	0.057	0.847	0.085	-0.579	0.057	0.085	0.942	0.015	0.052
10683	1711	1712	8	347.54	0.01	0.023	10:05 hr	1.415	0.083	1.043	0.125	-0.669	0.083	0.125	1.415	0.033	0.085
10684	1712	1542	8	208.833	0.005	0.023	10:08 hr	1.067	0.101	0.712	0.152	-0.439	0.101	0.152	1.067	0.05	0.085
10685	1713	1662	8	357.746	0.005	0.045	10:11 hr	1.334	0.137	0.759	0.206	-0.437	0.667	1	1.333	0.093	0.119
10686	1714	1715	8	88.977	0.012	0.048	12:00 hr	1.829	0.116	1.137	0.174	-0.682	0.116	0.174	1.829	0.066	0.124
10687	1715	1575	8	240.189	0.013	0.055	12:02 hr	1.998	0.119	1.225	0.179	-0.73	0.137	0.205	0.242	0.07	0.132
10688	1717	1695	8	56.384	0.002	0.072	20:11 hr	1.16	0.213	0.52	0.319	-0.254	0.213	0.319	1.155	0.221	0.152
10689	1718	1717	8	215.412	0.004	0.003	20:02 hr	0.558	0.042	0.583	0.063	-0.418	0.042	0.063	0.557	0.008	0.032
10692	1085	1719	15	414.017	0.021	6.192	20:37 hr	7.807	1.25	1.761	1	0.882	1.25	1	7.609	1.166	1.173
10693	1719	1569	15	162.862	0.024	6.193	20:38 hr	7.809	1.25	1.845	1	0.63	1.25	1	7.624	1.113	1.173
10694	1720	1900	15	260.596	0.02	6.204	20:40 hr	7.822	1.25	1.694	1	1.094	1.25	1	7.658	1.214	1.174
10695	1900	1702	15	250.882	0.015	6.207	20:41 hr	7.826	1.25	1.465	1	1.778	1.25	1	7.674	1.401	1.174
10716	1722	1723	8	355.638	0.013	0.006	20:02 hr	1.019	0.042	1.06	0.064	-0.759	0.042	0.064	1.017	0.008	0.044
10717	1723	1724	8	169.466	0.045	0.008	20:02 hr	1.681	0.035	1.936	0.052	-1.431	0.035	0.052	1.678	0.005	0.048
10718	1724	1725	8	321.184	0.013	0.015	20:04 hr	1.343	0.065	1.12	0.098	-0.749	0.065	0.098	1.34	0.02	0.069
10719	1725	1827	8	333.121	0.02	0.019	20:05 hr	1.671	0.065	1.404	0.097	-0.94	0.065	0.097	1.667	0.02	0.077
10720	1863	1726	8	349.786	0.004	0.062	10:13 hr	1.382	0.168	0.705	0.252	-0.381	0.168	0.252	1.382	0.139	0.141
10721	1726	1727	8	350.444	0.007	0.068	10:16 hr	1.672	0.158	0.883	0.237	-0.488	0.158	0.237	1.672	0.123	0.148
10722	1727	1728	8	349.415	0.005	0.084	10:20 hr	1.619	0.188	0.778	0.282	-0.403	0.188	0.282	1.619	0.173	0.165
10723	1728	1952	8	342.219	0.005	0.094	10:23 hr	1.667	0.198	0.777	0.298	-0.393	0.198	0.298	1.667	0.193	0.174
10724	1729	1730	8	269.524	0.012	0.002	20:01 hr	0.743	0.027	0.967	0.041	-0.742	0.027	0.041	0.742	0.003	0.027
10725	1730	1731	8	398.791	0.006	0.005	20:03 hr	0.711	0.045	0.718	0.068	-0.51	0.045	0.068	0.709	0.009	0.038
10726	1731	1574	8	397.858	0.006	0.009	20:05 hr	0.875	0.061	0.759	0.091	-0.514	0.061	0.091	0.872	0.017	0.053
10728	1732	1544	8	117.09	0.015	0.001	20:00 hr	0.651	0.019	1.022	0.028	-0.831	0.019	0.028	0.651	0.001	0.019
10733	1733	1546	8	116.237	0.062	0.001	20:00 hr	1.07	0.014	1.969	0.021	-1.683	0.022	0.033	0.005	0.001	0.019
10738	1738	1737	8	266.871	0.005	0.189	20:16 hr	2.02	0.289	0.776	0.433	-0.297	0.289	0.433	2.004	0.389	0.25
10739	1737	1736	8	263.835	0.005	0.191	20:18 hr	2.024	0.291	0.775	0.436	-0.294	0.291	0.436	2.005	0.394	0.252
10740	1736	1735	8	227.065	0.005	0.213	20:19 hr	2.08	0.309	0.774	0.464	-0.272	0.309	0.464	2.061	0.439	0.266
10741	1735	1734	8	226.247	0.006	0.214	20:21 hr	2.144	0.303	0.805	0.455	-0.291	0.303	0.455	1.476	0.424	0.267
10742	1734	1865	8	309.341	0.005	0.231	20:24 hr	2.123	0.324	0.775	0.486	-0.254	0.324	0.486	2.099	0.476	0.278
10743	1740	1739	8	341.384	0.006	0.015	20:06 hr	1.028	0.078	0.782	0.118	-0.507	0.078	0.118	1.024	0.029	0.069
10744	1741	1740	8	205.266	0.006	0.009	20:03 hr	0.868	0.06	0.756	0.09	-0.512	0.06	0.09	0.866	0.017	0.052
10745	1739	1578	8	319.568	0.007	0.025	20:09 hr	1.272	0.095	0.874	0.143	-0.547	0.095	0.143	1.264	0.044	0.089
10749	1791	1741	8	206.125	0.007	0.008	20:03 hr	0.872	0.055	0.799	0.082	-0.55	0.055	0.082	0.871	0.014	0.049
10755	1891	1742	8	372.936	0.014	0.007	20:06 hr	1.087	0.044	1.111	0.066	-0.791	0.044	0.066	1.084	0.009	0.046
10756	1742	1739	8	348.081	0.017	0.008	20:07 hr	1.227	0.046	1.226	0.069	-0.867	0.05	0.075	1.075	0.01	0.051
10757	1743	1796	8	285.143	0.009	0.004	20:02 hr	0.776	0.037	0.86	0.056	-0.628	0.037	0.056	0.775	0.006	0.035
10759	1887	1745	8	207.339	0.004	0.094	10:13 hr	1.518	0.213	0.682	0.319	-0.333	0.213	0.319	1.517	0.221	0.175

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10760	1745	1744	8	376.454	0.024	0.099	10:15 hr	2.931	0.138	1.66	0.207	-0.953	0.138	0.207	2.927	0.094	0.179
10763	1757	1756	8	129.251	0.023	0.001	20:00 hr	0.681	0.015	1.208	0.022	-1.021	0.667	1	0.681	0.001	0.016
10766	1767	1769	8	207.39	0.008	0.003	20:01 hr	0.703	0.035	0.808	0.052	-0.597	0.035	0.052	0.702	0.005	0.031
10767	1790	1637	8	220.375	0.016	0.002	20:01 hr	0.848	0.026	1.125	0.039	-0.869	0.026	0.039	0.847	0.003	0.028
10768	1794	1793	8	346.313	0.018	0.008	10:03 hr	1.221	0.043	1.256	0.065	-0.896	0.043	0.065	1.22	0.008	0.049
10769	1793	1792	8	286.792	0.018	0.01	20:01 hr	1.338	0.05	1.281	0.075	-0.894	0.05	0.075	1.337	0.011	0.057
10770	1792	1736	8	303.347	0.022	0.022	20:04 hr	1.797	0.068	1.472	0.102	-0.978	0.085	0.128	1.639	0.022	0.083
10771	1795	1796	8	277.525	0.017	0.012	20:01 hr	1.36	0.054	1.252	0.081	-0.863	0.054	0.081	1.359	0.013	0.061
10772	1796	1648	8	336.723	0.021	0.021	20:02 hr	1.771	0.067	1.46	0.101	-0.971	0.067	0.101	1.768	0.021	0.081
10773	1648	1889	8	420.334	0.011	0.048	20:06 hr	1.814	0.116	1.128	0.174	-0.677	0.116	0.174	1.808	0.066	0.123
10774	1857	1797	8	381.444	0.008	0.038	20:03 hr	1.491	0.113	0.938	0.17	-0.566	0.113	0.17	1.489	0.063	0.109
10775	1797	1798	8	344.713	0.005	0.049	20:06 hr	1.378	0.144	0.764	0.216	-0.434	0.144	0.216	1.375	0.102	0.125
10776	1798	1897	8	218.313	0.008	0.136	20:08 hr	2.196	0.212	0.987	0.319	-0.482	0.212	0.319	2.189	0.22	0.211
10777	1800	1799	8	345.192	0.017	0.004	20:02 hr	0.995	0.033	1.181	0.049	-0.881	0.033	0.049	0.993	0.005	0.036
10778	1801	2008	8	340.393	0.013	0.004	20:02 hr	0.88	0.033	1.037	0.05	-0.771	0.033	0.05	0.878	0.005	0.034
10780	1802	1803	24	428.862	0.003	7.748	20:56 hr	3.816	2	0.741	1	0.515	2	1	4.059	1.071	1.244
10783	NJ_42	1805	8	198.247	0.004	0.005	12:05 hr	0.67	0.051	0.635	0.076	-0.442	0.051	0.076	0.67	0.012	0.041
10784	1805	1685	8	323.665	0.003	0.007	12:09 hr	0.638	0.065	0.536	0.097	-0.359	0.065	0.097	0.638	0.02	0.047
10791	1828	1827	8	234.1	0.01	0.001	20:01 hr	0.517	0.018	0.828	0.027	-0.678	0.018	0.027	0.516	0.001	0.016
10792	1827	1826	8	250.821	0.005	0.022	20:06 hr	1.092	0.096	0.748	0.144	-0.467	0.096	0.144	1.088	0.045	0.083
10793	1826	1699	8	267.542	0.005	0.025	20:08 hr	1.127	0.103	0.745	0.154	-0.459	0.103	0.154	1.122	0.051	0.089
10794	1831	1830	8	387.54	0.006	0.005	20:03 hr	0.722	0.045	0.727	0.068	-0.516	0.045	0.068	0.72	0.009	0.039
10795	1830	1829	8	425.736	0.006	0.01	20:04 hr	0.914	0.065	0.766	0.097	-0.513	0.065	0.097	0.911	0.02	0.057
10796	1829	1475	8	419.556	0.006	0.014	20:08 hr	1.012	0.075	0.785	0.113	-0.513	0.075	0.113	1.007	0.027	0.067
10797	1832	1833	8	238.05	0.004	0.004	12:02 hr	0.586	0.045	0.59	0.068	-0.418	0.045	0.068	0.586	0.009	0.035
10798	1835	1834	8	393.376	0.006	0.015	20:05 hr	1.015	0.077	0.779	0.116	-0.506	0.077	0.116	1.012	0.028	0.068
10799	1836	1835	8	328	0.007	0.008	20:03 hr	0.914	0.056	0.827	0.084	-0.567	0.056	0.084	0.912	0.014	0.051
10800	1838	1839	8	433.392	0.01	0.003	20:02 hr	0.751	0.033	0.888	0.049	-0.662	0.033	0.049	0.75	0.005	0.031
10801	1839	1791	8	327.714	0.022	0.005	20:03 hr	1.165	0.035	1.343	0.052	-0.992	0.054	0.082	0.023	0.005	0.04
10802	1840	1873	8	383.616	0.005	0.079	12:13 hr	1.576	0.183	0.768	0.274	-0.402	0.183	0.274	1.576	0.165	0.16
10803	1873	1874	8	384.254	0.005	0.101	12:18 hr	1.689	0.208	0.768	0.312	-0.38	0.208	0.312	1.689	0.211	0.181
10804	1874	1880	8	409.699	0.005	0.114	12:21 hr	1.745	0.22	0.768	0.331	-0.368	0.22	0.331	1.745	0.236	0.192
10812	1877	1876	8	301.032	0.016	0.006	20:01 hr	1.113	0.041	1.176	0.062	-0.846	0.041	0.062	1.111	0.008	0.045
10813	1875	1877	8	135.074	0.017	0.002	20:00 hr	0.777	0.022	1.124	0.033	-0.891	0.022	0.033	0.776	0.002	0.023
10814	1878	1879	15	278.458	0.018	6.572	20:46 hr	8.286	1.25	1.592	1	1.759	1.25	1	8.187	1.366	1.188
10815	1879	1880	15	248.363	0.019	6.572	20:47 hr	8.286	1.25	1.654	1	1.576	1.25	1	8.197	1.315	1.188
10819	1768	1769	8	263.024	0.012	0.007	20:01 hr	1.041	0.045	1.049	0.068	-0.744	0.045	0.068	1.04	0.009	0.046
10820	1769	1734	8	267.108	0.027	0.012	20:03 hr	1.609	0.048	1.564	0.073	-1.097	0.082	0.123	1.321	0.011	0.061
10821	1770	1768	8	206.388	0.011	0.003	20:01 hr	0.79	0.033	0.939	0.049	-0.701	0.039	0.058	0.014	0.005	0.032
10822	1569	1720	15	251.974	0.017	6.199	20:39 hr	7.816	1.25	1.558	1	1.493	1.25	1	7.638	1.317	1.174
10823	1542	1713	8	139.33	0.005	0.036	10:08 hr	1.209	0.127	0.716	0.19	-0.42	0.127	0.19	1.207	0.079	0.107
10824	1771	1772	8	306.487	0.015	0.139	20:12 hr	2.712	0.186	1.311	0.279	-0.682	0.186	0.279	2.698	0.169	0.214
10825	1772	1953	8	217.209	0.024	0.14	20:13 hr	3.232	0.165	1.666	0.247	-0.907	0.279	0.419	0.611	0.134	0.215
10826	1773	1774	8	253.412	0.014	0.155	20:14 hr	2.734	0.199	1.272	0.299	-0.642	0.199	0.299	2.717	0.194	0.226
10827	1774	1582	8	265.246	0.013	0.155	20:15 hr	2.69	0.202	1.243	0.302	-0.624	0.202	0.302	2.671	0.199	0.226
10828	1781	1780	8	327.675	0.005	0.024	20:06 hr	1.134	0.1	0.762	0.15	-0.472	0.1	0.15	1.13	0.048	0.087

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10829	1780	1779	8	321.012	0.005	0.031	20:07 hr	1.208	0.115	0.754	0.172	-0.454	0.115	0.172	1.203	0.064	0.099
10830	1782	1781	8	389.532	0.009	0.015	20:03 hr	1.167	0.07	0.939	0.105	-0.62	0.07	0.105	1.164	0.023	0.068
10831	1783	1782	8	100.257	0.017	0.002	20:00 hr	0.85	0.026	1.134	0.039	-0.876	0.026	0.039	0.849	0.003	0.028
10832	1945	1784	8	140.873	0.002	0.035	20:07 hr	0.948	0.147	0.52	0.22	-0.294	0.147	0.22	0.946	0.106	0.105
10833	1784	1785	8	361.55	0.005	0.035	20:10 hr	1.254	0.121	0.761	0.182	-0.452	0.121	0.182	1.251	0.072	0.106
10834	1785	1786	8	275.227	0.01	0.12	20:11 hr	2.292	0.189	1.099	0.283	-0.568	0.189	0.283	2.283	0.175	0.198
10835	1786	1787	8	297.621	0.01	0.127	20:12 hr	2.323	0.194	1.097	0.291	-0.56	0.194	0.291	2.313	0.184	0.203
10836	1788	1787	8	350.971	0.019	0.012	20:02 hr	1.431	0.054	1.321	0.081	-0.911	0.054	0.081	1.429	0.013	0.062
10838	1884	1885	8	340.84	0.005	0.029	20:07 hr	1.184	0.11	0.754	0.166	-0.457	0.11	0.166	1.179	0.06	0.096
10839	1885	1886	8	343.202	0.005	0.048	20:09 hr	1.373	0.142	0.767	0.212	-0.438	0.142	0.212	1.366	0.099	0.124
10840	1886	1738	8	343.93	0.005	0.068	20:10 hr	1.519	0.169	0.773	0.253	-0.417	0.175	0.263	1.357	0.141	0.148
10841	1883	1884	8	274.347	0.005	0.008	20:06 hr	0.811	0.06	0.706	0.09	-0.478	0.06	0.09	0.808	0.017	0.051
10843	1889	1888	8	373.732	0.004	0.069	20:09 hr	1.391	0.181	0.681	0.272	-0.358	0.181	0.272	1.387	0.162	0.149
10844	1888	1507	8	133.627	0.004	0.069	20:10 hr	1.428	0.178	0.707	0.267	-0.374	0.178	0.267	1.424	0.156	0.149
10845	1507	1887	8	266.259	0.003	0.08	10:11 hr	1.378	0.204	0.634	0.305	-0.316	0.204	0.305	1.377	0.203	0.161
10846	1893	1892	8	322.184	0.006	0.002	20:03 hr	0.565	0.031	0.691	0.046	-0.52	0.031	0.046	0.564	0.004	0.026
10847	1892	1891	8	444.879	0.006	0.005	20:04 hr	0.716	0.044	0.728	0.066	-0.518	0.044	0.066	0.713	0.009	0.038
10848	1894	1895	8	76.528	0.004	0.001	20:00 hr	0.317	0.018	0.503	0.028	-0.41	0.018	0.028	0.317	0.001	0.013
10849	1896	1895	8	79.121	0.003	0.007	20:00 hr	0.655	0.065	0.548	0.098	-0.366	0.065	0.098	0.655	0.02	0.048
10853	1901	1900	8	165.509	0.016	0.002	20:01 hr	0.8	0.025	1.095	0.037	-0.853	0.667	1	0.01	0.003	0.026
10854	1517	1930	10	391.327	0.006	0.505	20:42 hr	2.704	0.436	0.855	0.523	-0.43	0.436	0.523	2.69	0.54	0.39
10855	1930	1931	10	378.204	0.006	0.507	20:45 hr	2.742	0.433	0.87	0.519	-0.444	0.433	0.519	2.732	0.533	0.391
10856	1931	1932	10	375.386	0.006	0.511	20:48 hr	2.755	0.434	0.873	0.521	-0.444	0.434	0.521	2.749	0.535	0.393
10857	1932	1554	10	373.824	0.006	0.513	20:52 hr	2.761	0.434	0.875	0.521	-0.444	0.434	0.521	2.758	0.536	0.393
10858	1824	1935	8	303.018	0.009	0.08	20:14 hr	1.94	0.16	1.018	0.239	-0.56	0.16	0.239	1.927	0.126	0.161
10859	1935	1934	8	300.344	0.006	0.084	20:17 hr	1.74	0.178	0.861	0.267	-0.456	0.178	0.267	1.725	0.156	0.165
10860	1934	1933	8	362.384	0.007	0.109	20:16 hr	1.945	0.197	0.909	0.296	-0.461	0.205	0.308	0.47	0.191	0.188
10861	1933	1951	8	357.723	0.007	0.129	20:16 hr	2.004	0.219	0.886	0.329	-0.425	0.219	0.329	1.988	0.233	0.206
10862	1897	1937	8	61.929	0.004	0.145	20:08 hr	1.771	0.261	0.716	0.391	-0.303	0.261	0.391	1.766	0.323	0.218
10863	1937	1898	8	95.219	0.005	0.149	20:08 hr	1.898	0.253	0.777	0.38	-0.338	0.253	0.38	1.892	0.307	0.221
10864	1936	1938	8	398.185	0.005	0.17	20:12 hr	1.968	0.271	0.78	0.407	-0.318	0.271	0.407	1.956	0.348	0.237
10865	1938	1949	8	393.5	0.005	0.174	20:15 hr	1.975	0.275	0.776	0.413	-0.313	0.275	0.413	1.959	0.357	0.239
10866	1942	1941	8	271.934	0.012	0.004	20:01 hr	0.869	0.034	1.008	0.051	-0.746	0.034	0.051	0.867	0.005	0.034
10867	1941	1940	8	260.606	0.006	0.016	20:02 hr	1.045	0.08	0.786	0.12	-0.507	0.08	0.12	1.043	0.031	0.071
10868	1940	1939	8	325.569	0.005	0.022	20:05 hr	1.059	0.097	0.72	0.146	-0.448	0.097	0.146	1.055	0.046	0.083
10869	1939	1553	8	334.958	0.005	0.026	20:08 hr	1.14	0.106	0.742	0.159	-0.454	0.123	0.185	0.937	0.055	0.091
10870	1854	1945	8	297.509	0.014	0.02	20:06 hr	1.527	0.073	1.206	0.109	-0.792	0.073	0.109	1.52	0.025	0.08
10871	1947	1946	8	71.252	0.012	0.001	20:00 hr	0.542	0.017	0.9	0.025	-0.745	0.017	0.025	0.542	0.001	0.016
10872	1946	1484	8	450.351	0.007	0.005	20:04 hr	0.754	0.044	0.774	0.065	-0.552	0.044	0.065	0.751	0.008	0.038
10873	1948	1877	8	152.28	0.011	0.001	20:01 hr	0.599	0.02	0.902	0.031	-0.724	0.02	0.031	0.599	0.002	0.019
10876	1950	1952	8	312.617	0.009	0.428	20:20 hr	3.018	0.401	1.013	0.602	-0.206	0.401	0.602	2.993	0.675	0.384
10877	1949	1604	8	263.1	0.013	0.406	20:18 hr	3.509	0.34	1.253	0.51	-0.379	0.34	0.51	3.478	0.517	0.373
10878	1586	1949	8	340.825	0.023	0.232	20:18 hr	3.701	0.214	1.654	0.322	-0.804	0.222	0.333	3.325	0.224	0.278
10879	1951	1586	8	306.137	0.012	0.217	20:18 hr	2.846	0.247	1.18	0.371	-0.522	0.247	0.371	2.82	0.293	0.269
10880	1955	1956	8	262.339	0.021	0.023	12:01 hr	1.821	0.071	1.458	0.106	-0.961	0.071	0.106	1.821	0.024	0.086
10881	1957	1958	8	200.282	0.005	0.037	12:07 hr	1.248	0.125	0.744	0.188	-0.438	0.131	0.196	0.163	0.077	0.108

2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
10882	1956	1957	8	202.102	0.004	0.031	12:04 hr	1.089	0.122	0.659	0.183	-0.391	0.122	0.183	1.089	0.073	0.099
10883	1959	1955	8	329.305	0.009	0.022	10:07 hr	1.325	0.084	0.974	0.126	-0.624	0.084	0.126	1.325	0.034	0.083
10884	1961	1960	8	311.769	0.016	0.002	12:01 hr	0.718	0.021	1.068	0.031	-0.854	0.021	0.031	0.718	0.002	0.022
10886	1273	1274	15	369.382	0.006	1.091	20:44 hr	3.408	0.53	0.966	0.424	-1.821	0.53	0.424	3.401	0.375	0.516
10887	1274	1275	15	420	0.006	1.093	20:47 hr	3.282	0.546	0.917	0.437	-1.673	0.546	0.437	3.277	0.395	0.516
10889	1505	1273	15	410	0.004	1.09	20:42 hr	2.796	0.617	0.74	0.493	-1.141	0.617	0.493	2.79	0.489	0.515
10890	1279	1278	8	390.514	0.013	0.006	20:02 hr	1.039	0.042	1.09	0.063	-0.782	0.042	0.063	1.037	0.008	0.044
10891	1278	1277	8	374.712	0.016	0.011	20:03 hr	1.336	0.053	1.236	0.08	-0.853	0.053	0.08	1.333	0.013	0.06
10892	1277	1884	8	375.537	0.013	0.016	20:04 hr	1.363	0.065	1.137	0.098	-0.76	0.065	0.098	1.359	0.02	0.07
10894	1281	1282	8	423.684	0.006	0.012	10:07 hr	0.98	0.069	0.797	0.103	-0.528	0.069	0.103	0.979	0.022	0.061
10895	1282	1283	8	448.971	0.006	0.016	10:10 hr	1.048	0.08	0.788	0.12	-0.508	0.08	0.12	1.046	0.031	0.071
10896	1283	1889	8	427.077	0.004	0.029	10:14 hr	1.082	0.118	0.666	0.177	-0.398	0.118	0.177	1.081	0.068	0.096
10897	1284	1285	8	242.241	0.013	0.004	20:04 hr	0.919	0.036	1.034	0.055	-0.758	0.036	0.055	0.917	0.006	0.037
10898	1285	1740	8	169.36	0.018	0.005	20:04 hr	1.061	0.035	1.213	0.053	-0.894	0.035	0.053	1.059	0.005	0.039
10900	1286	1284	8	373.733	0.008	0.003	20:03 hr	0.655	0.032	0.783	0.048	-0.586	0.032	0.048	0.653	0.004	0.028
10902	1288	1287	8	448.044	0.017	0.004	20:02 hr	0.995	0.033	1.17	0.05	-0.87	0.033	0.05	0.993	0.005	0.036
10903	1287	1281	8	436.273	0.014	0.007	20:04 hr	1.113	0.045	1.13	0.067	-0.803	0.045	0.067	1.112	0.009	0.047
10904	1289	1792	8	265.167	0.006	0.01	20:04 hr	0.898	0.063	0.762	0.095	-0.512	0.063	0.095	0.895	0.019	0.055
10906	1290	1291	8	278.809	0.013	0.004	20:01 hr	0.893	0.035	1.028	0.052	-0.76	0.035	0.052	0.892	0.005	0.035
10907	1291	1289	8	349.326	0.012	0.007	20:03 hr	1.027	0.045	1.034	0.068	-0.733	0.045	0.068	1.025	0.009	0.046
10908	2006	2007	8	248.279	0.007	0.003	20:02 hr	0.663	0.033	0.785	0.049	-0.585	0.033	0.049	0.662	0.005	0.029
10909	2007	2008	8	225.681	0.007	0.005	20:01 hr	0.807	0.045	0.817	0.067	-0.58	0.045	0.067	0.806	0.009	0.04
10910	2008	1799	8	299.967	0.008	0.012	20:04 hr	1.032	0.065	0.862	0.098	-0.576	0.065	0.098	1.029	0.02	0.061
10911	1799	1478	8	302.246	0.006	0.018	20:06 hr	1.101	0.083	0.813	0.125	-0.522	0.083	0.125	1.097	0.033	0.075
10921	1977	1706	18	170.307	0.012	6.513	20:44 hr	5.703	1.5	1.344	1	0.12	1.5	1	5.627	1.019	1.223
10922	2009	1711	8	77.068	0.005	0.011	10:03 hr	0.888	0.069	0.722	0.103	-0.478	0.069	0.103	0.888	0.022	0.059
10923	1953	1773	8	88.456	0.001	0.153	20:13 hr	1.085	0.4	0.364	0.6	-0.075	0.4	0.6	1.081	0.672	0.225
10925	1898	1936	8	279.666	0.002	0.166	20:09 hr	1.42	0.342	0.506	0.513	-0.151	0.342	0.513	1.415	0.523	0.234
10927	1551	1661	8	264.301	0.005	0.077	10:13 hr	1.607	0.177	0.799	0.265	-0.424	0.667	1	0.34	0.153	0.157
10933	2030	2031	12	320.047	0.017	0.284	20:08 hr	3.367	0.223	1.499	0.223	-2.325	0.223	0.223	3.354	0.109	0.274
10937	2040	2045	8	350.512	0.004	0.072	10:08 hr	1.404	0.185	0.68	0.278	-0.354	0.185	0.278	1.404	0.169	0.152
10938	2046	2069	8	352.127	0.023	0.537	20:05 hr	4.64	0.34	1.657	0.511	-0.5	0.34	0.511	4.631	0.518	0.432
10939	2052	2053	15	451.008	0.029	0.792	20:09 hr	5.343	0.303	2.034	0.242	-5.367	0.415	0.332	0.986	0.129	0.437
10943	2035	2036	8	365.248	0.006	0.04	20:03 hr	1.37	0.125	0.819	0.187	-0.483	0.125	0.187	1.367	0.076	0.113
10944	2032	2033	8	228.968	0.004	0.046	20:02 hr	1.279	0.144	0.709	0.216	-0.403	0.226	0.339	0.203	0.102	0.121
10945	2029	2030	12	324.578	0.004	0.284	20:07 hr	2.011	0.322	0.734	0.322	-0.983	0.322	0.322	2.004	0.224	0.274
10946	2028	2029	12	324.148	0.001	0.284	20:04 hr	1.401	0.42	0.446	0.42	-0.486	0.42	0.42	1.4	0.368	0.274
10947	2027	2028	8	340.231	0.01	0.159	20:04 hr	2.411	0.222	1.058	0.333	-0.504	0.222	0.333	2.408	0.24	0.229
10961	3023	2079	12	227.978	0.006	0.781	20:08 hr	3.045	0.504	0.892	0.504	-0.758	0.504	0.504	3.034	0.508	0.464
10976	2109	2040	8	166.373	0.008	0.072	10:04 hr	1.792	0.156	0.952	0.234	-0.528	0.156	0.234	1.792	0.12	0.152
10977	864	2056	8	395.688	0.006	0.189	12:18 hr	2.132	0.278	0.835	0.416	-0.334	0.278	0.416	2.131	0.362	0.251
10978	602	862	8	75.164	0.007	0.023	10:03 hr	1.247	0.091	0.876	0.137	-0.552	0.091	0.137	1.246	0.04	0.086
10979	371	884	12	36.775	0.027	1.69	20:03 hr	6.539	0.507	1.912	0.507	-1.61	0.583	0.583	4.74	0.512	0.693
10980	1904	2121	8	332.048	0.006	0.003	20:03 hr	0.645	0.038	0.708	0.057	-0.515	0.038	0.057	0.644	0.006	0.032
10981	1511	1510	8	207.765	0.003	0.005	12:04 hr	0.534	0.054	0.491	0.081	-0.338	0.232	0.348	0.02	0.013	0.038
10982	1914	1913	8	355.597	0.005	0.023	20:07 hr	1.074	0.101	0.717	0.151	-0.443	0.101	0.151	1.069	0.049	0.085

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10983	1915	1914	8	361.452	0.005	0.016	20:05 hr	0.96	0.084	0.705	0.126	-0.451	0.084	0.126	0.957	0.034	0.07
10984	1916	1915	8	359.502	0.005	0.009	20:03 hr	0.805	0.063	0.683	0.095	-0.459	0.063	0.095	0.803	0.019	0.052
10985	1917	1916	8	188.91	0.005	0.004	20:01 hr	0.625	0.043	0.649	0.064	-0.465	0.043	0.064	0.624	0.008	0.034
10986	1566	NJ_2	10	17.075	0.551	0.2	20:44 hr	10.546	0.085	7.706	0.102	-8.935	0.833	1	0.562	0.022	0.241
10991	NJ_8	1563	10	20.005	-0.416	0.2	20:44 hr	0.568	0.833	0.109	1	0.846	0.833	1	0.562	1	0.241
10999	2134	2133	8	285.984	0.005	0.005	20:02 hr	0.682	0.047	0.67	0.071	-0.472	0.047	0.071	0.68	0.01	0.039
11044	21	22	8	250.961	0.008	0.009	10:02 hr	0.95	0.056	0.855	0.085	-0.585	0.056	0.085	0.95	0.015	0.052
11045	22	23	8	258.669	0.008	0.012	20:02 hr	1.048	0.064	0.882	0.096	-0.591	0.064	0.096	1.047	0.019	0.06
11063	24	25	8	280.205	0.01	0.004	20:02 hr	0.789	0.035	0.907	0.052	-0.67	0.035	0.052	0.788	0.005	0.033
11064	25	23	8	152.946	0.01	0.005	20:03 hr	0.864	0.04	0.922	0.061	-0.665	0.04	0.061	0.863	0.007	0.039
11079	46	730	8	51.426	0.006	0.142	20:09 hr	1.958	0.238	0.828	0.357	-0.377	0.238	0.357	1.952	0.273	0.216
11080	23	26	8	177.743	0.01	0.028	20:01 hr	1.473	0.093	1.027	0.139	-0.645	0.093	0.139	1.472	0.042	0.094
11081	26	45	8	203.43	0.01	0.028	20:02 hr	1.473	0.093	1.027	0.139	-0.645	0.093	0.139	1.47	0.042	0.094
11082	45	46	8	200.587	0.005	0.035	20:04 hr	1.216	0.122	0.734	0.184	-0.435	0.122	0.184	1.213	0.074	0.105
11086	34	35	8	397.037	0.005	0.018	10:03 hr	1.029	0.088	0.738	0.132	-0.468	0.088	0.132	1.029	0.037	0.075
11087	35	36	8	401.199	0.005	0.029	12:04 hr	1.183	0.109	0.757	0.164	-0.46	0.149	0.223	0.127	0.058	0.095
11100	41	42	8	223.629	0.023	0.022	10:01 hr	1.823	0.067	1.505	0.1	-1.001	0.067	0.1	1.823	0.021	0.082
11101	42	2606	8	289.248	0.013	0.022	10:03 hr	1.509	0.077	1.163	0.115	-0.756	0.077	0.115	1.509	0.028	0.083
11102	43	44	8	297.184	0.013	0.042	10:10 hr	1.857	0.105	1.216	0.157	-0.745	0.105	0.157	1.857	0.054	0.116
11103	44	40	8	298.239	0.012	0.055	10:12 hr	1.906	0.124	1.143	0.186	-0.675	0.124	0.186	1.906	0.076	0.133
11104	47	48	8	259.538	0.008	0.003	20:02 hr	0.676	0.032	0.812	0.048	-0.608	0.042	0.063	0.012	0.004	0.029
11105	48	49	8	185.852	0.008	0.008	20:03 hr	0.935	0.053	0.87	0.079	-0.602	0.056	0.084	0.034	0.013	0.049
11106	49	70	8	176.013	0.008	0.01	20:04 hr	1.03	0.06	0.897	0.09	-0.608	0.065	0.097	0.046	0.017	0.057
11107	2175	48	8	322.341	0.008	0.004	20:02 hr	0.776	0.04	0.836	0.059	-0.605	0.046	0.069	0.019	0.007	0.036
11108	131	49	8	156.353	0.008	0.001	20:01 hr	0.491	0.019	0.762	0.029	-0.618	0.04	0.059	0.004	0.001	0.017
11127	2151	134	8	37.587	0.009	0.033	20:03 hr	1.51	0.101	1.007	0.152	-0.622	0.108	0.163	0.143	0.05	0.102
11135	1169	2136	10	112.9	0.011	0.16	20:23 hr	2.492	0.198	1.173	0.238	-1.129	0.198	0.238	2.48	0.124	0.215
11136	2135	2136	8	30.655	0.004	0.01	20:03 hr	0.807	0.069	0.653	0.104	-0.432	0.131	0.196	0.044	0.023	0.056
11138	2133	2135	8	194.641	0.005	0.01	20:03 hr	0.847	0.067	0.698	0.101	-0.464	0.067	0.101	0.846	0.021	0.056
11141	2137	2138	8	320.926	0.012	0	00:00 hr	0	0	0	0	-0.74	0	0	0	0	0
11145	2139	2140	8	321.085	0.012	0	00:00 hr	0	0	0	0	-0.74	0	0	0	0	0
11157	2138	2133	8	197.904	0.02	0.001	20:01 hr	0.659	0.016	1.139	0.023	-0.954	0.016	0.023	0.658	0.001	0.017
11173	2140	2134	8	198.059	0.019	0.002	20:01 hr	0.795	0.021	1.176	0.032	-0.938	0.021	0.032	0.795	0.002	0.023
11178	2145	2144	8	259.681	0.005	0.005	20:02 hr	0.697	0.051	0.663	0.076	-0.462	0.051	0.076	0.695	0.012	0.041
11179	2143	2144	8	179.302	0.005	0.001	20:01 hr	0.443	0.025	0.6	0.038	-0.466	0.025	0.038	0.443	0.003	0.019
11180	2144	674	8	106.399	0.006	0.007	20:03 hr	0.828	0.054	0.764	0.08	-0.527	0.054	0.08	0.826	0.013	0.047
11187	132	133	8	253.624	0.004	0.008	20:02 hr	0.72	0.061	0.62	0.092	-0.419	0.066	0.1	0.033	0.018	0.048
11188	133	134	8	247.779	0.004	0.011	20:04 hr	0.804	0.072	0.639	0.108	-0.421	0.094	0.141	0.046	0.024	0.057
11197	135	136	8	103.969	0.019	0.001	20:00 hr	0.724	0.018	1.151	0.027	-0.94	0.035	0.052	0.006	0.001	0.02
11198	136	2137	8	401.316	0.009	0.008	20:03 hr	0.953	0.051	0.901	0.077	-0.626	0.051	0.077	0.951	0.012	0.049
11216	1167	2141	10	30.069	0.021	0.142	20:26 hr	3.042	0.159	1.611	0.19	-1.653	0.188	0.226	0.396	0.079	0.203
11218	2139	2137	8	285.827	0.005	0.007	20:02 hr	0.789	0.057	0.704	0.086	-0.481	0.057	0.086	0.788	0.015	0.048
11221	2137	2141	8	168.441	0.005	0.017	20:04 hr	1.005	0.085	0.733	0.128	-0.468	0.152	0.228	0.074	0.035	0.073
11222	1168	2142	10	147.165	0.018	0.16	20:22 hr	2.99	0.174	1.508	0.209	-1.51	0.183	0.219	0.447	0.096	0.215
11236	137	138	8	98.854	0.01	0.001	20:00 hr	0.482	0.016	0.819	0.024	-0.682	0.024	0.036	0.35	0.001	0.015
11237	138	136	8	282.164	0.007	0.003	20:02 hr	0.639	0.032	0.762	0.049	-0.569	0.042	0.063	0.011	0.005	0.028

2017 CIP + Revised Buildout Scenario Pipe Results																	
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11254	2146	710	8	100.497	0.004	0.001	20:01 hr	0.376	0.023	0.535	0.034	-0.422	0.023	0.034	0.376	0.002	0.017
11258	2157	2158	8	181.28	0.004	0.001	20:01 hr	0.443	0.027	0.584	0.04	-0.45	0.027	0.04	0.443	0.003	0.02
11259	2158	2159	8	310.704	0.007	0.005	20:03 hr	0.765	0.044	0.783	0.066	-0.558	0.044	0.066	0.763	0.009	0.039
11260	2159	2161	8	315.159	0.015	0.074	20:07 hr	2.301	0.134	1.326	0.201	-0.769	0.134	0.201	2.292	0.088	0.154
11261	2160	2161	8	386.208	0.009	0.006	20:03 hr	0.92	0.046	0.923	0.068	-0.654	0.046	0.068	0.918	0.009	0.044
11262	2161	2163	8	334.506	0.017	0.085	20:09 hr	2.498	0.138	1.413	0.208	-0.811	0.138	0.208	2.487	0.095	0.165
11263	2162	2163	8	385.906	0.015	0.005	20:02 hr	1.03	0.038	1.133	0.057	-0.825	0.038	0.057	1.028	0.006	0.04
11264	2163	2164	8	243.3	0.004	0.092	20:11 hr	1.508	0.211	0.681	0.316	-0.334	0.211	0.316	1.501	0.216	0.173
11271	2164	2165	8	331.227	0.003	0.147	20:15 hr	1.637	0.28	0.639	0.42	-0.253	0.28	0.42	1.624	0.368	0.22
11272	2165	2166	8	308.951	0.004	0.147	20:18 hr	1.794	0.261	0.724	0.392	-0.307	0.261	0.392	1.776	0.324	0.22
11273	2166	2167	8	350.396	0.004	0.147	20:21 hr	1.714	0.27	0.68	0.405	-0.279	0.27	0.405	1.693	0.345	0.22
11274	2167	2168	8	349.046	0.004	0.147	20:24 hr	1.717	0.27	0.681	0.405	-0.28	0.27	0.405	1.692	0.345	0.22
11275	2168	2169	8	348.604	0.004	0.147	20:27 hr	1.718	0.27	0.682	0.405	-0.28	0.27	0.405	1.689	0.345	0.22
11276	2169	2170	8	349.751	0.004	0.161	20:30 hr	1.756	0.283	0.681	0.425	-0.266	0.283	0.425	1.729	0.377	0.23
11277	2170	114	8	275.745	0.004	0.167	20:32 hr	1.816	0.285	0.703	0.427	-0.273	0.341	0.512	1.202	0.379	0.235
11278	2171	2172	15	306.895	0.002	0.537	20:18 hr	1.716	0.521	0.491	0.417	-0.942	0.541	0.433	0.655	0.363	0.357
11279	2172	2173	15	42.675	0.001	0.537	20:18 hr	1.389	0.613	0.368	0.49	-0.574	0.613	0.49	1.377	0.484	0.357
11280	2174	132	8	309.889	0.003	0.004	20:03 hr	0.536	0.045	0.539	0.068	-0.382	0.053	0.08	0.016	0.009	0.033
11301	2199	1119	8	83.78	0.02	0	00:00 hr	0	0	0	0	-0.961	0.018	0.027	0	0	0
11307	2077	2073	21	157.511	0.006	6.648	20:47 hr	5.137	1.358	1.004	0.776	-0.372	1.358	0.776	5.133	0.947	1.195
11311	114	2171	15	75.425	0.002	0.514	20:16 hr	1.669	0.515	0.48	0.412	-0.933	0.515	0.412	1.658	0.355	0.349
11313	2206	948	8	204	0.031	0.123	20:02 hr	3.41	0.144	1.886	0.217	-1.07	0.195	0.293	0.541	0.103	0.2
11314	2207	2206	8	351.03	0.019	0.122	20:02 hr	2.844	0.164	1.471	0.246	-0.802	0.164	0.246	2.84	0.132	0.2
12112	161	NJ_40	8	311	0.008	0.017	20:05 hr	1.183	0.078	0.905	0.116	-0.587	0.078	0.116	1.179	0.029	0.074
12113	NJ_40	NJ_39	8	8	0.132	0.017	20:05 hr	3.157	0.04	3.391	0.06	-2.453	0.04	0.06	3.147	0.007	0.074
12114	NJ_39	525	8	16.786	0.231	0.017	20:04 hr	3.827	0.035	4.391	0.052	-3.241	0.035	0.052	3.816	0.005	0.074
12512	1880	2076	21	34	0.04	6.647	20:47 hr	10.617	0.741	2.545	0.423	-11.151	1.163	0.665	4.23	0.373	1.195
12513	2075	1276	21	161.398	0.03	6.649	20:49 hr	9.562	0.802	2.208	0.459	-8.794	1.309	0.748	4.247	0.431	1.195
12514	2127	1694	24	311.582	0.004	7.741	20:51 hr	4.645	1.53	0.85	0.765	-0.56	1.785	0.893	4.589	0.932	1.243
12515	2607	2606	8	338.98	0.006	0.02	10:09 hr	1.122	0.088	0.803	0.132	-0.509	0.088	0.132	1.122	0.038	0.079
12516	2608	2607	8	298.6	0.01	0.016	10:05 hr	1.228	0.071	0.982	0.107	-0.647	0.071	0.107	1.228	0.024	0.071
12517	2609	2608	8	280.47	0.01	0.01	10:02 hr	1.079	0.056	0.971	0.085	-0.665	0.056	0.085	1.078	0.015	0.056
12912	NJ_31	770	8	166.38	0.01	0.006	20:05 hr	0.943	0.046	0.943	0.069	-0.667	0.046	0.069	0.94	0.009	0.045
12913	144	NJ_31	8	195.359	0.009	0.006	20:04 hr	0.898	0.044	0.915	0.066	-0.651	0.044	0.066	0.895	0.009	0.042
13313	3007	3006	8	311.24	0.01	0.05	20:02 hr	1.749	0.123	1.054	0.184	-0.624	0.123	0.184	1.746	0.074	0.126
13314	3008	3007	8	98.12	0.01	0	00:00 hr	0	0	0	0	-0.664	0	0	0	0	0
13315	3009	3008	8	149.67	0.015	0	00:00 hr	0	0	0	0	-0.825	0	0	0	0	0
13316	3010	3007	8	98.65	0.009	0	00:00 hr	0	0	0	0	-0.652	0	0	0	0	0
13317	3011	3010	8	46.37	0.008	0	00:00 hr	0	0	0	0	-0.606	0	0	0	0	0
13318	3012	3011	8	102.16	0.01	0	00:00 hr	0	0	0	0	-0.665	0	0	0	0	0
13319	3013	3012	8	85.43	0.023	0	00:00 hr	0	0	0	0	-1.031	0	0	0	0	0
13321	3015	3014	8	114.75	0.033	0.05	20:00 hr	2.671	0.092	1.874	0.138	-1.18	0.092	0.138	2.67	0.041	0.126
13322	3016	3015	8	287.56	0.01	0	00:00 hr	0	0	0	0	-0.674	0	0	0	0	0
13323	3017	3016	8	79.71	0.01	0	00:00 hr	0	0	0	0	-0.663	0	0	0	0	0
13324	3018	3017	8	80.44	0.009	0	00:00 hr	0	0	0	0	-0.66	0	0	0	0	0
13325	3019	3015	8	243.44	0.01	0	00:00 hr	0	0	0	0	-0.672	0	0	0	0	0

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13326	3020	3019	8	172.22	0.006	0	00:00 hr	0	0	0	0	-0.52	0	0	0	0	0
13327	3014	2038	12	286.188	0.02	0.194	20:04 hr	3.209	0.177	1.614	0.177	-2.659	0.197	0.197	2.878	0.068	0.226
13328	2037	3014	12	74.228	0.005	0.144	20:04 hr	1.753	0.218	0.789	0.218	-1.23	0.218	0.218	1.75	0.105	0.193
13329	3006	2037	12	260.132	0.001	0.144	20:03 hr	0.934	0.343	0.329	0.343	-0.425	0.343	0.343	0.932	0.253	0.193
13330	2036	3006	8	105.496	0.008	0.04	20:03 hr	1.531	0.115	0.954	0.173	-0.573	0.178	0.267	0.934	0.065	0.113
13331	3022	3021	8	56	0.085	0	00:00 hr	0	0	0	0	-1.979	0.17	0.254	0	0	0
13333	3024	3023	8	36	0.004	0.054	20:00 hr	1.322	0.159	0.696	0.238	-0.384	0.159	0.238	1.322	0.124	0.132
13714	3406	122	8	172	0.048	0.006	20:00 hr	1.625	0.031	1.978	0.047	-1.486	0.031	0.047	1.625	0.004	0.044
14112	1803	1804	24	380	0.007	7.761	20:57 hr	5.628	1.285	1.068	0.643	-2.668	1.285	0.643	5.627	0.744	1.245
14113	1804	2194	24	380	0.007	7.771	20:59 hr	5.629	1.286	1.068	0.643	-2.657	1.286	0.643	5.63	0.745	1.246
14114	2194	1614	24	356.823	0.012	7.771	21:00 hr	6.941	1.081	1.398	0.54	-5.882	1.122	0.561	6.533	0.569	1.246
14115	1055	1108	8	295	0.012	0.004	20:03 hr	0.906	0.036	1.018	0.055	-0.746	0.036	0.055	0.904	0.006	0.037
14116	881	1055	8	285	0.006	0.004	20:04 hr	0.663	0.039	0.716	0.059	-0.519	0.039	0.059	0.661	0.007	0.033
14117	1054	881	8	290	0.006	0.002	20:02 hr	0.555	0.03	0.689	0.045	-0.521	0.03	0.045	0.554	0.004	0.025
14118	2079	3021	12	303.946	0.007	0.784	20:11 hr	3.29	0.476	0.989	0.476	-0.922	0.476	0.476	3.274	0.46	0.465
14119	3021	2053	12	95.246	0.024	0.784	20:11 hr	5.096	0.343	1.798	0.343	-2.319	0.343	0.343	5.069	0.253	0.465
14512	2606	43	8	7.946	0.025	0.042	10:09 hr	2.302	0.089	1.637	0.134	-1.035	0.089	0.134	2.302	0.039	0.115
14513	1180	39	8	275.058	0.005	0.062	12:14 hr	1.433	0.163	0.742	0.245	-0.405	0.163	0.245	1.433	0.132	0.14
DUMMY1	DUMMY1	NJ_1	21	10	0.003	0.003	20:02 hr	0.434	0.036	0.493	0.021	-4.706	0.811	0.464	0.002	0.001	0.025
DUMMY2	DUMMY2	1908	8	10	0.01	0.187	20:14 hr	2.568	0.239	1.084	0.359	-0.492	0.239	0.359	2.546	0.275	0.249
DUMMY3	DUMMY3	665	6	526	0.02	0.005	20:03 hr	1.176	0.038	1.296	0.075	-0.44	0.038	0.075	1.172	0.011	0.043
DUMMY4	DUMMY4	602	6	462	0.027	0.017	10:03 hr	1.882	0.063	1.595	0.126	-0.497	0.077	0.154	0.137	0.034	0.08
DUMMY5	DUMMY5	1400	6	662	0.005	0.015	12:06 hr	0.965	0.09	0.68	0.18	-0.197	0.09	0.18	0.965	0.071	0.074
NEW_134	NEW_124	NEW_130	8	277.865	0.014	0.022	20:06 hr	1.573	0.076	1.215	0.114	-0.792	0.087	0.13	0.098	0.028	0.084
NEW_136	NEW_130	NEW_132	8	198.354	0.01	0.032	20:06 hr	1.551	0.099	1.046	0.149	-0.649	0.111	0.166	0.142	0.048	0.101
NEW_148	NEW_146	798	8	133.223	0.008	0.064	20:09 hr	1.711	0.149	0.931	0.223	-0.524	0.149	0.223	1.7	0.11	0.144
NEW_150	NEW_148	NEW_150	8	138.045	0.007	0.003	20:01 hr	0.644	0.032	0.77	0.048	-0.575	0.07	0.105	0.011	0.004	0.028
NEW_154	NEW_150	NEW_146	8	838.841	0.002	0.019	20:08 hr	0.801	0.109	0.513	0.164	-0.312	0.128	0.191	0.084	0.058	0.078
NEW_156	NEW_114	NEW_124	8	830.429	0.01	0.011	20:07 hr	1.101	0.059	0.964	0.089	-0.655	0.067	0.101	0.047	0.016	0.058
NEW_158	NEW_116	NEW_124	8	708.64	0.011	0.009	20:04 hr	1.103	0.053	1.028	0.079	-0.712	0.064	0.096	0.04	0.013	0.053
NEW_16	NEW_16	1359	8	223.118	0.022	0.043	20:12 hr	2.227	0.093	1.548	0.14	-0.973	0.093	0.14	2.208	0.042	0.116
NEW_160	NEW_118	NEW_130	8	704.292	0.014	0.009	20:04 hr	1.185	0.049	1.143	0.074	-0.8	0.074	0.11	0.039	0.011	0.053
NEW_162	NEW_120	NEW_132	8	778.382	0.013	0.011	20:04 hr	1.213	0.055	1.104	0.083	-0.758	0.089	0.134	0.047	0.014	0.058
NEW_164	NEW_132	NEW_146	8	269.183	0.007	0.045	20:08 hr	1.532	0.125	0.916	0.187	-0.54	0.135	0.203	0.195	0.076	0.119
NEW_168	NEW_68	NEW_56	8	1,293.73	0.006	0.008	20:19 hr	0.853	0.056	0.767	0.085	-0.526	0.117	0.175	0.033	0.015	0.049
NEW_170	NEW_56	669	8	1,380.52	0.005	0.076	20:23 hr	1.521	0.182	0.743	0.273	-0.39	0.182	0.273	1.504	0.163	0.156
NEW_172	NEW_82	NEW_54	8	520.833	0.015	0.045	20:11 hr	1.981	0.105	1.297	0.157	-0.796	0.14	0.21	0.196	0.053	0.119
NEW_174	NEW_92	NEW_50	8	664.563	0.003	0.019	20:06 hr	0.865	0.102	0.573	0.154	-0.353	0.102	0.154	0.861	0.051	0.077
NEW_176	NEW_100	NEW_98	8	961.831	0.011	0.004	20:05 hr	0.877	0.036	0.984	0.055	-0.722	0.036	0.055	0.018	0.006	0.036
NEW_178	NEW_2	1390	8	633.209	0.013	0.004	20:04 hr	0.86	0.033	1.018	0.049	-0.759	0.033	0.049	0.857	0.005	0.033
NEW_182	NEW_24	1310	8	574.31	0.009	0.009	20:05 hr	1.01	0.056	0.911	0.084	-0.624	0.056	0.084	1.007	0.015	0.054
NEW_184	NEW_28	1354	8	1,339.84	0.011	0.033	20:08 hr	1.619	0.098	1.1	0.146	-0.685	0.098	0.146	1.614	0.046	0.102
NEW_186	NEW_44	NEW_22	8	1,118.71	0.006	0.014	20:10 hr	1.026	0.075	0.799	0.112	-0.523	0.075	0.112	1.018	0.027	0.067
NEW_188	NEW_42	NEW_16	8	1,132.48	0.009	0.026	20:10 hr	1.383	0.091	0.97	0.137	-0.612	0.091	0.137	0.111	0.04	0.09
NEW_194	NEW_40	809	8	1,331.69	0.015	0.017	10:08 hr	1.476	0.066	1.222	0.1	-0.814	0.12	0.18	0.076	0.021	0.074
NEW_196	NEW_112	821	8	1,186.35	0.013	0.025	12:07 hr	1.55	0.082	1.15	0.124	-0.738	0.082	0.124	1.55	0.032	0.088

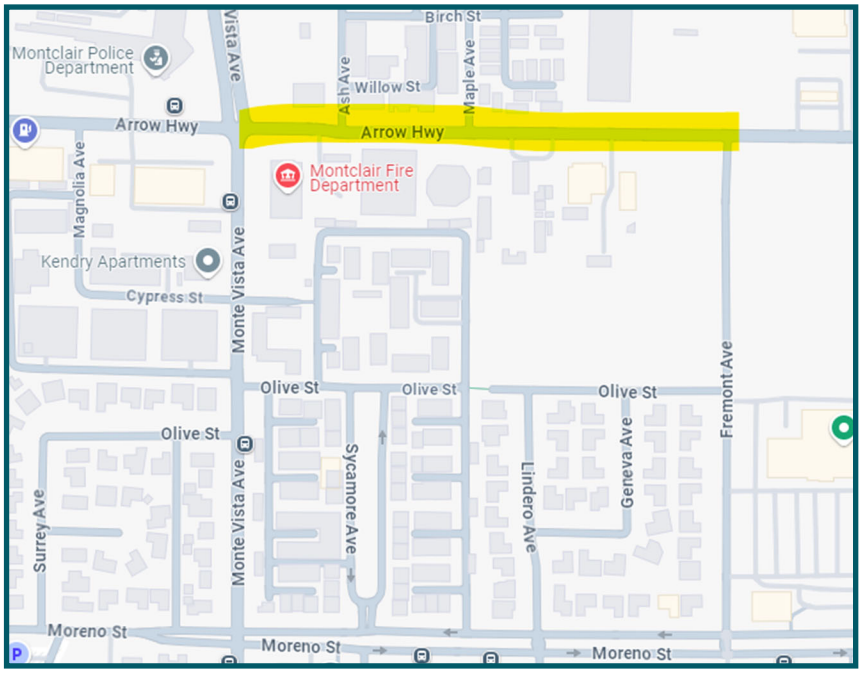
2017 CIP + Revised Buildout Scenario Pipe Results																	
ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Maximum Flow (mgd)	Maximum Flow Time (hour)	Maximum Velocity (ft/s)	Maximum Water Depth (ft)	Maximum Froude Number	Maximum d/D	Maximum Overflow (mgd)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
NEW_198	NEW_160	NEW_150	8	712.945	0.003	0.008	20:07 hr	0.656	0.069	0.531	0.104	-0.351	0.088	0.133	0.036	0.023	0.051
NEW_202	NEW_164	NEW_168	8	1,323.05	0.01	0.009	20:12 hr	1.054	0.055	0.963	0.082	-0.663	0.083	0.125	0.04	0.014	0.054
NEW_204	NEW_168	NEW_166	8	748.858	0.008	0.039	20:12 hr	1.507	0.114	0.944	0.171	-0.569	0.141	0.211	0.166	0.064	0.111
NEW_206	NEW_166	2164	8	665.482	0.003	0.054	20:16 hr	1.176	0.172	0.593	0.258	-0.318	0.172	0.258	1.164	0.146	0.132
NEW_210	NEW_176	NEW_172	8	335.137	0.006	0.003	20:03 hr	0.65	0.038	0.715	0.057	-0.521	0.055	0.082	0.015	0.006	0.032
NEW_212	NEW_172	NEW_170	8	300.623	0.007	0.014	20:05 hr	1.038	0.073	0.822	0.109	-0.54	0.074	0.112	0.06	0.025	0.066
NEW_214	NEW_178	NEW_170	8	354.184	0.006	0.009	20:03 hr	0.872	0.063	0.744	0.094	-0.501	0.07	0.104	0.041	0.018	0.054
NEW_216	NEW_170	NEW_168	8	296.242	0.017	0.025	20:04 hr	1.717	0.077	1.318	0.115	-0.857	0.094	0.142	0.109	0.028	0.089
NEW_218	NEW_174	NEW_180	8	309.34	0.01	0.003	20:02 hr	0.778	0.034	0.899	0.052	-0.665	0.044	0.066	0.015	0.005	0.033
NEW_22	NEW_22	NEW_16	8	299.317	0.01	0.016	20:12 hr	1.254	0.071	1.005	0.106	-0.663	0.081	0.121	0.069	0.024	0.071
NEW_222	NEW_180	NEW_172	8	258.091	0.008	0.008	20:03 hr	0.93	0.054	0.855	0.081	-0.589	0.063	0.095	0.035	0.013	0.05
NEW_224	NEW_184	NEW_186	8	559.625	0.011	0.007	20:03 hr	1.004	0.047	0.988	0.071	-0.696	0.054	0.081	0.031	0.01	0.047
NEW_226	NEW_188	NEW_186	8	371.544	0.013	0.005	20:02 hr	0.973	0.038	1.073	0.057	-0.782	0.05	0.074	0.022	0.006	0.039
NEW_228	NEW_186	NEW_166	8	291.667	0.014	0.014	20:03 hr	1.343	0.062	1.156	0.092	-0.781	0.115	0.173	0.062	0.018	0.066
NEW_230	NEW_194	1403	8	615.387	0.011	0.003	20:04 hr	0.789	0.031	0.959	0.047	-0.721	0.031	0.047	0.786	0.004	0.031
NEW_232	NEW_190	1432	8	626.907	0.011	0.007	20:04 hr	1.01	0.046	1.005	0.069	-0.71	0.046	0.069	1.006	0.01	0.046
NEW_234	NEW_192	NEW_196	8	569.386	0.011	0.006	20:03 hr	0.964	0.045	0.973	0.068	-0.69	0.045	0.068	0.962	0.009	0.044
NEW_236	NEW_196	1443	8	48.052	0.021	0.006	20:03 hr	1.222	0.038	1.337	0.058	-0.973	0.038	0.058	1.219	0.006	0.044
NEW_238	NEW_162	NEW_202	8	159.884	0.013	0.001	20:01 hr	0.607	0.019	0.937	0.029	-0.758	0.035	0.052	0.005	0.002	0.019
NEW_240	NEW_200	NEW_202	8	193.2	0.01	0.006	20:01 hr	0.92	0.042	0.957	0.064	-0.685	0.046	0.07	0.025	0.008	0.042
NEW_242	NEW_202	NEW_206	8	201.312	0.01	0.008	20:02 hr	1.01	0.051	0.96	0.076	-0.669	0.059	0.089	0.035	0.012	0.05
NEW_244	NEW_204	NEW_206	8	260.313	0.004	0.002	20:02 hr	0.503	0.036	0.569	0.054	-0.418	0.052	0.078	0.01	0.006	0.027
NEW_246	NEW_206	721	8	185.128	0.005	0.011	20:03 hr	0.9	0.068	0.735	0.102	-0.488	0.068	0.102	0.897	0.022	0.058
NEW_266	NEW_224	NEW_218	8	1,191.10	0.013	0.035	20:07 hr	1.715	0.097	1.166	0.146	-0.727	0.126	0.189	0.152	0.046	0.105
NEW_268	NEW_226	1429	8	1,149.52	0.009	0.037	20:10 hr	1.53	0.109	0.98	0.164	-0.596	0.109	0.164	1.522	0.058	0.108
NEW_276	NEW_218	NEW_222	8	1,319.67	0.011	0.085	20:12 hr	2.098	0.157	1.109	0.236	-0.614	0.157	0.236	2.082	0.122	0.166
NEW_278	NEW_98	NEW_68	8	1,409.00	0.013	0.005	20:13 hr	0.956	0.037	1.068	0.055	-0.783	0.046	0.069	0.02	0.006	0.038
NEW_280	1392	NEW_50	8	336.946	0.019	0.015	20:09 hr	1.533	0.059	1.35	0.088	-0.918	0.078	0.117	0.066	0.016	0.069
NEW_284	NEW_208	NEW_210	8	1,308.74	0.011	0.037	20:08 hr	1.641	0.103	1.081	0.155	-0.665	0.103	0.155	1.63	0.052	0.108
NEW_286	1431	2159	8	879.25	0.014	0.063	20:06 hr	2.1	0.127	1.243	0.191	-0.73	0.127	0.191	2.094	0.079	0.142
NEW_288	NEW_232	NEW_218	8	476.17	0.004	0.006	20:04 hr	0.673	0.053	0.627	0.079	-0.434	0.104	0.156	0.024	0.013	0.042
NEW_290	NEW_234	NEW_218	8	513.596	0.004	0.007	20:05 hr	0.699	0.059	0.613	0.089	-0.417	0.107	0.161	0.03	0.016	0.046
NEW_292	NEW_182	NEW_180	8	149.467	0.007	0.002	20:01 hr	0.594	0.03	0.733	0.045	-0.553	0.042	0.063	0.01	0.004	0.026
NEW_294	NEW_236	NEW_28	8	1,296.52	0.004	0.009	12:12 hr	0.759	0.068	0.621	0.102	-0.412	0.082	0.124	0.041	0.022	0.054
NEW_296	885	NEW_238	15	92.168	0.02	2.717	20:02 hr	6.557	0.647	1.7	0.518	-2.409	0.647	0.518	6.552	0.53	0.83
NEW_298	NEW_238	NEW_240	15	380.122	0.02	2.717	20:03 hr	6.561	0.647	1.702	0.517	-2.413	0.656	0.525	5.977	0.53	0.83
NEW_300	NEW_240	NEW_242	15	348.92	0.013	2.717	20:04 hr	5.534	0.742	1.362	0.594	-1.39	1.079	0.863	3.391	0.662	0.83
NEW_302	NEW_242	NEW_244	15	114.68	0.004	2.717	20:05 hr	3.425	1.25	0.762	1.00	0.42	1.25	1.00	3.385	1.182	0.83
NEW_304	NEW_244	NEW_246	15	48.89	0.004	2.716	20:06 hr	3.425	1.25	0.75	1.00	0.46	1.25	1.00	3.385	1.201	0.83
NEW_306	NEW_246	261	15	6.47	0.005	2.716	20:06 hr	4.092	0.975	0.946	0.78	-0.135	0.975	0.78	4.088	0.953	0.83
NEW_34	NEW_34	1262	8	312.52	0.022	0.008	12:01 hr	1.32	0.041	1.4	0.061	-1.008	0.041	0.061	1.32	0.007	0.048
NEW_56	NEW_54	NEW_56	8	345.49	0.003	0.057	20:13 hr	1.177	0.178	0.582	0.267	-0.308	0.178	0.267	1.06	0.156	0.135
NEW_76	NEW_50	NEW_82	8	319.55	0.016	0.04	20:08 hr	1.924	0.098	1.302	0.147	-0.809	0.101	0.151	0.174	0.047	0.112
NEW_94	NEW_88	NEW_82	8	317.713	0.003	0.003	20:03 hr	0.519	0.044	0.53	0.066	-0.377	0.074	0.111	0.015	0.009	0.032
NEW_96	NEW_90	NEW_54	8	321.223	0.006	0.01	20:03 hr	0.929	0.064	0.783	0.096	-0.525	0.12	0.18	0.045	0.019	0.057
NEW_98	NEW_98	1388	8	136.891	0.007	0.003	20:05 hr	0.704	0.037	0.788	0.055	-0.577	0.037	0.055	0.703	0.006	0.033

Sewer Improvements 2024-2029



Arrow Highway Sewer Upgrade

Project Number: 19036
Category: Sewer Improvements
Location: Arrow Highway from Monte Vista Avenue to Fremont Avenue
Status: Design



[**Pictured Above:** The location of the pending sewer upgrade highlighted in yellow.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. These improvements will replace the existing 8" sewer main with a 12" sewer main (620 linear feet).

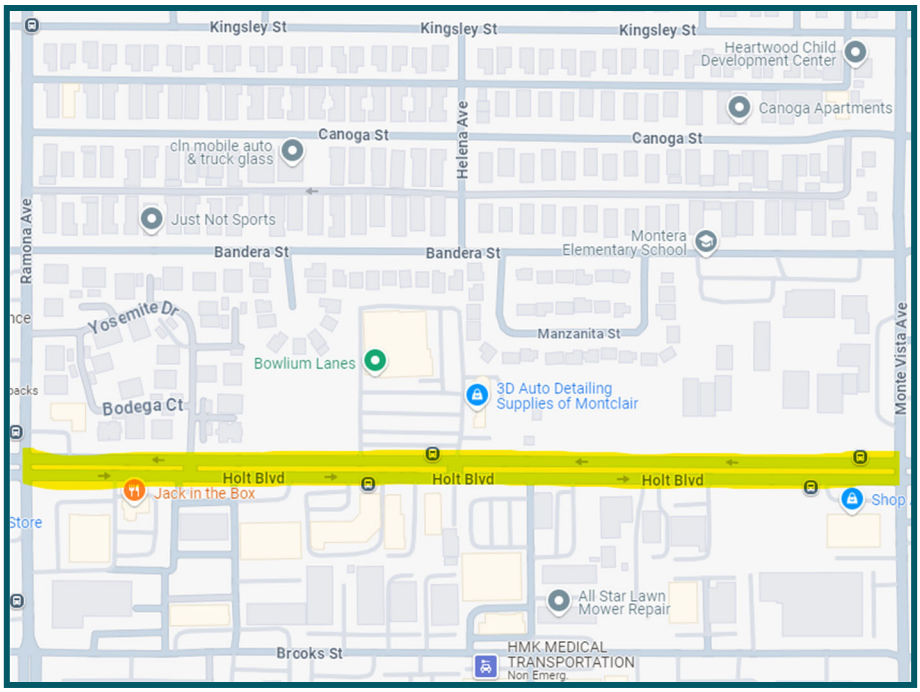
Estimated Project Costs			
	Environmental	Design	Construction
Prior Years	-	$13,734	-
FY 24/25	-	-	$729,999
FY 25/26	-	-	-
FY 26/27	-	-	-
FY 27/28	-	-	-
FY 28/29	-	-	-
Subtotal	-	$111,700	$729,999
		TOTAL	**$743,733**

Funding Source	
	SOF
Prior Years	$13,734
FY 24/25	$729,999
FY 25/26	-
FY 26/27	-
FY 27/28	-
FY 28/29	-
Subtotal	$743,733

CIP: Sewer Improvements

Holt Boulevard Sewer Upgrade

Project Number: NEW
Category: Sewer Improvements
Location: Holt Boulevard from Ramona Avenue to Monte Vista Avenue
Status: Design



[**Pictured Above:** The location of the pending sewer upgrade highlighted in yellow.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. These improvements will replace the existing 8" sewer main with an 18" sewer main (2,494 linear feet).

Estimated Project Costs			
	Environmental	Design	Construction
Prior Years	-	-	-
FY 24/25	-	-	-
FY 25/26	-	$171,851	-
FY 26/27	-	-	$2,455,017
FY 27/28	-	-	-
FY 28/29	-	-	-
Subtotal	-	$171,851	$2,455,017
*Pursing grant for partial project funding.		**TOTAL**	**$2,626,868**

Funding Source		
	SOF	[Unfunded]
Prior Years	-	-
FY 24/25	-	-
FY 25/26	$171,851	-
FY 26/27	-	$2,455,017
FY 27/28	-	-
FY 28/29	-	-
Subtotal	$171,851	$2,455,017

CIP: Sewer Improvements

Monte Vista Avenue Sewer Upgrade - North Montclair (1)

Project Number: 19036
Category: Sewer Improvements
Location: Monte Vista Avenue from Richton Street to Arrow Highway
Status: Design



[**Pictured Above:** The location of the pending sewer upgrade highlighted in yellow.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. This project will replace an existing 8" sewer line with a 12" sewer line (902 linear feet). Additionally, sewer main upgrades are required along Richton Street, Arrow Highway, and Moreno Street. These segments of sewer upgrades will be designed and constructed separately.

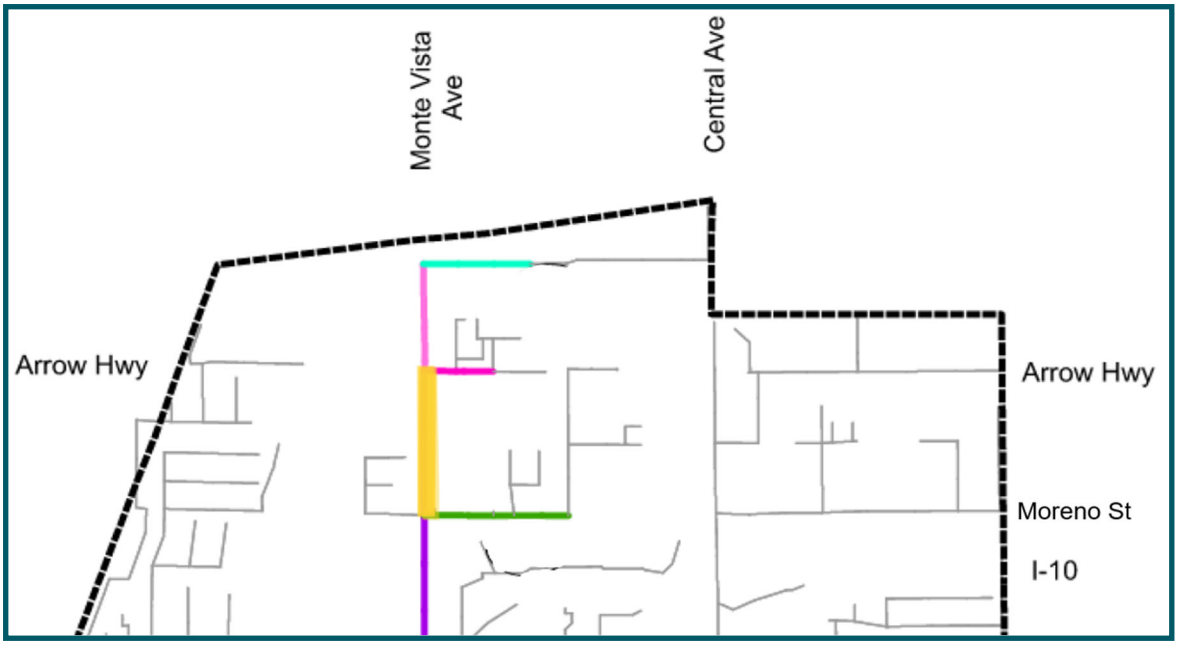
Estimated Project Costs				
	Environmental	Right-of-Way	Design	Construction
Prior Years	-	-		-
FY 24/25	-	-	$61,795	-
FY 25/26	-	-	-	$882,786
FY 26/27	-	-	-	-
FY 27/28	-	-	-	-
FY 28/29	-	-	-	-
Subtotal	-	-	$61,795	$882,786
			TOTAL	**$944,581**

Funding Source	
	SOF
Prior Years	-
FY 24/25	$61,795
FY 25/26	$882,786
FY 26/27	-
FY 27/28	-
FY 28/29	-
Subtotal	$944,581

CIP: Sewer Improvements

Monte Vista Avenue Sewer Upgrade - North Montclair (2)

Project Number: NEW
Category: Sewer Improvements
Location: Monte Vista Avenue from Arrow Highway to Moreno Street
Status: Not Started



[**Pictured Above:** The location of the pending sewer upgrade highlighted in yellow.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. This project will replace the existing 8" sewer line with a 15" sewer line (1,440 linear feet).

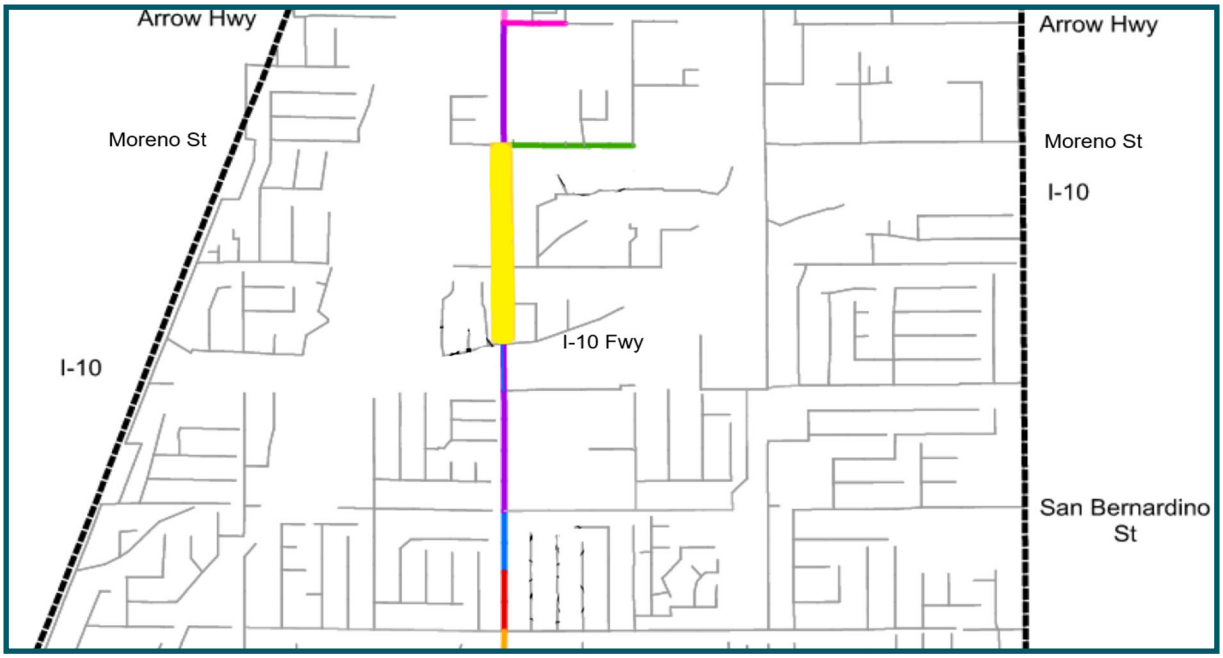
Estimated Project Costs				
	Environmental	Right-of-Way	Design	Construction
Prior Years	-	-	-	-
FY 24/25	-	-	-	-
FY 25/26	-	-	$106,484	-
FY 26/27	-	-	-	$1,521,207
FY 27/28	-	-	-	-
FY 28/29	-	-	-	-
Subtotal	-	-	$106,484	$1,521,207
			TOTAL	**$1,627,691**

Funding Source		
	SOF	[Unfunded]
Prior Years	-	-
FY 24/25	-	-
FY 25/26	$106,484	-
FY 26/27	-	$1,521,207
FY 27/28	-	-
FY 28/29	-	-
Subtotal	$106,484	$1,521,207

CIP: Sewer Improvements

Monte Vista Avenue Sewer Upgrade - North Montclair (3)

Project Number: NEW
Category: Sewer Improvements
Location: Monte Vista Avenue from Moreno Street to North of the I-10 Freeway
Status: Not Started



[**Pictured Above:** The location of the pending sewer upgrade highlighted in yellow.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. This project will replace an existing 8" sewer line with a 15" sewer line (2,187 linear feet). As part of the I-1O Freeway Widening Project, a 15" sewer line was installed parallel to the existing 12" sewer line. The new 12" sewer line will be extended from the north end of the I-10 Freeway to Moreno Street.

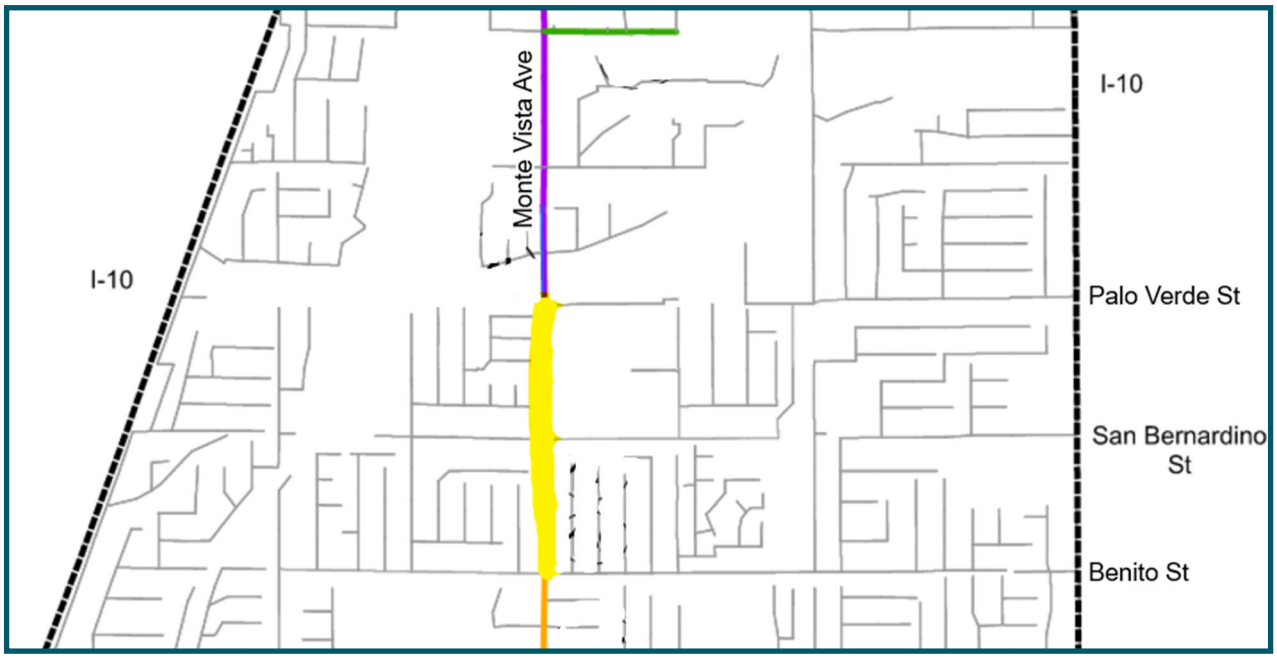
Estimated Project Costs				
	Environmental	Right-of-Way	Design	Construction
Prior Years	-	-	-	-
FY 24/25	-	-	-	-
FY 25/26	-	-	$126,252	-
FY 26/27	-	-	-	$1,803,606
FY 27/28	-	-	-	-
FY 28/29	-	-	-	-
Subtotal	-	-	-	-
			TOTAL	**$1,929,858**

Funding Source		
	SOF	[Unfunded]
Prior Years	-	-
FY 24/25	-	-
FY 25/26	$126,252	-
FY 26/27	-	$1,803,606
FY 27/28	-	-
FY 28/29	-	-
Subtotal	$126,252	$1,803,606

CIP: Sewer Improvements

Monte Vista Avenue Sewer Upgrade - South Montclair (1)

Project Number: 21017
Category: Sewer Improvements
Location: Monte Vista Avenue from Palo Verde Street to Benito Street
Status: Design



[**Pictured Above:** The location of the pending sewer upgrade highlighted in yellow.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. The existing 10-12 inch sewer lines will be replaced with a 15-inch sewer line (2,652 linear feet).

Estimated Project Costs				
	Environmental	Right-of-Way	Design	Construction
Prior	-	-	-	-
FY 24/25	-	-	$107,765	-
FY 25/26	-	-	-	$2,225,221
FY 26/27	-	-	-	-
FY 27/28	-	-	-	-
FY 28/29	-	-	-	-
Subtotal	-	-	$107,765	$2,225,221
			TOTAL	**$2,332,986**

Funding Source		
	SOF	[Unfunded]
Prior Years	-	-
FY 24/25	$107,765	-
FY 25/26	-	$2,225,221
FY 26/27	-	-
FY 27/28	-	-
FY 28/29	-	-
Subtotal	$107,765	$2,225,221

CIP: Sewer Improvements

Monte Vista Avenue Sewer Upgrade - South Montclair (2)

Project Number: NEW
Category: Sewer Improvements
Location: Monte Vista Avenue from Benito Street to Holt Boulevard
Status: Not Started



[**Pictured Above:** The location of the pending sewer upgrade highlighted in yellow.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. Improvements include replacing an 8" sewer line to a 12" sewer line (1,307 linear feet).

Estimated Project Costs				
	Environmental	Right-of-Way	Design	Construction
Prior	-	-	-	-
FY 24/25	-	-	$197,765	-
FY 25/26	-	-	-	-
FY 26/27	-	-	-	$2,825,221
FY 27/28	-	-	-	-
FY 28/29	-	-	-	-
Subtotal	-	-	$197,765	$2,825,221
			TOTAL	**$3,022,986**

Funding Source	
	[Unfunded]
Prior Years	-
FY 24/25	$197,765
FY 25/26	-
FY 26/27	$2,825,221
FY 27/28	-
FY 28/29	-
Subtotal	$3,022,986

CIP: Sewer Improvements

Moreno Street Sewer Upgrade

Project Number: NEW
Category: Sewer Improvements
Location: Moreno Street from Monte Vista Avenue to Fremont Avenue
Status: Not Started



[**Pictured Above:** The location of the pending sewer upgrade.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. Improvements include replacing the existing sewer line which varies from 12" to 15" (1,326 linear feet) with a 15" to 18" sewer line (1,326 linear feet).

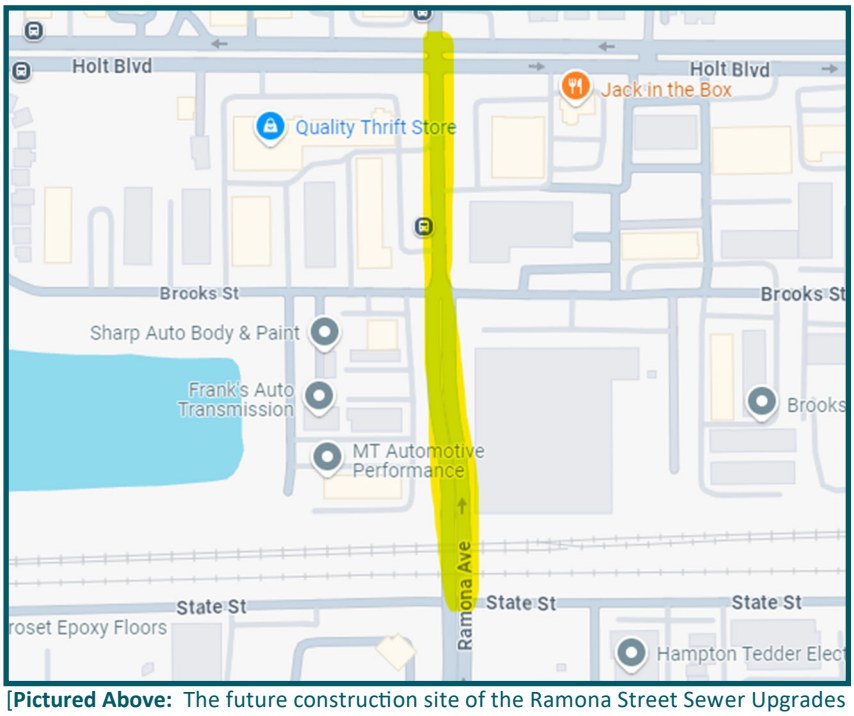
Estimated Project Costs			
	Environmental	Design	Construction
Prior Years	-	-	-
FY 24/25	-	-	-
FY 25/26	-	$91,915	-
FY 26/27	-	-	$1,313,074
FY 27/28	-	-	-
FY 28/29	-	-	-
Subtotal	-	$91,915	$1,313,074
		TOTAL	**$1,404,989**

Funding Source	
	[Unfunded]
Prior Years	-
FY 24/25	-
FY 25/26	$91,915
FY 26/27	$1,313,074
FY 27/28	-
FY 28/29	-
Subtotal	$1,404,989

CIP: Sewer Improvements

Ramona Street Sewer Upgrade

Project Number: NEW
Category: Sewer Improvements
Location: Ramona Street from Holt Boulevard to State Street
Status: Not Started



[**Pictured Above:** The future construction site of the Ramona Street Sewer Upgrades

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. Improvements include replacing the existing sewer line which varies from 15" to 21" with a 24" sewer line (1,428 linear feet).

Estimated Project Costs			
	Environmental	Design	Construction
Prior Years	-	-	-
FY 24/25	-	-	-
FY 25/26	-	-	-
FY 26/27	-	-	-
FY 27/28	-	$158,045	-
FY 28/29	-	-	$2,257,780
Subtotal	-	$158,045	$2,257,780
		TOTAL	**$2,415,825**

Funding Source	
	[Unfunded]
Prior Years	-
FY 24/25	-
FY 25/26	-
FY 26/27	-
FY 27/28	$158,045
FY 28/29	$2,257,780
Subtotal	$2,415,825

CIP: Sewer Improvements

Richton Street Sewer Upgrade

Project Number: NEW
Category: Sewer Improvements
Location: Richton Street from Monte Vista Avenue to Montclair Transcenter
Status: Not Started



[**Pictured Above:** The streets surrounding the Montclair Transcenter and future construction site.]

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. Improvements include replacing the existing sewer line which varies from 15" to 21" with a 24" sewer line (1,428 linear feet).

Estimated Project Costs			
	Environmental	Design	Construction
Prior Years	-	-	-
FY 24/25	-	-	-
FY 25/26	-	$67,058	-
FY 26/27	-	-	$957,972
FY 27/28	-	-	-
FY 28/29	-	-	-
Subtotal	-	$67,058	$957,972
		TOTAL	**$1,025,030**

Funding Source	
	[Unfunded]
Prior Years	-
FY 24/25	-
FY 25/26	$67,058
FY 26/27	$957,972
FY 27/28	-
FY 28/29	-
Subtotal	$1,025,030

CIP: Sewer Improvements

State Street Sewer Upgrade

Project Number: NEW
Category: Sewer Improvements
Location: State Street from Ramona Avenue to Pipeline Avenue
Status: Not Started



[**Pictured Above:** Crews working on the sewer line repair on State Street under the Ramona Avenue overpass.

Sewer mainline improvements were identified in the Sewer Master Plan as being insufficient in size for future growth. Improvements include replacing the existing 24" sewer line with a 27" sewer line (2,110 linear feet).

Estimated Project Costs			
	Environmental	Design	Construction
Prior Years	-	-	-
FY 24/25	-	-	-
FY 25/26	-	-	-
FY 26/27	-	-	-
FY 27/28	-	$222,419	-
FY 28/29	-	-	$3,177,417
Subtotal	-	$222,419	$3,177,417
		TOTAL	**$3,399,836**

*Pursing grant for partial project funding.

Funding Source	
	*[Unfunded]
Prior Years	-
FY 24/25	-
FY 25/26	-
FY 26/27	-
FY 27/28	$222,419
FY 28/29	$3,177,417
Subtotal	$3,399,836

CIP: Sewer Improvements

SECTION 8

- ❖ Sewer System Management Plan Audits

Once an audit is complete, copies of the audit will be stored in this section.