

Appendix X



Convention and Event Center Project Wastewater System Technical Report



**Convention and Event Center Project
Wastewater System Technical Report
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1.0 INTRODUCTION

1.1 Project Description

The Convention and Event Center Project (hereafter referred to as the “Proposed Project”) consists of the following three components: (1) expansion and modernization of the Los Angeles Convention Center (hereafter referred to as the “Convention Center”), (2) the construction of a new multi-use entertainment and sports facility (hereafter referred to as the “Event Center”), and (3) related parking and support facilities. The Proposed Project is located within an approximately 68-acre site that includes all of the existing Convention Center property, including the Bond Street Parking Lot and the Cherry Street Parking Garage, STAPLES Center, as well as the air space over Pico Boulevard and LA Live Way (hereafter referred to as the “Project Site”). The Project Site is generally bounded by the following major roadways: the I-110 Harbor Freeway to the west; Chick Hearn Court to the north; Figueroa Street to the east; and Venice Boulevard to the south.

The Proposed Project is proposed to be implemented through adoption of a new Specific Plan and Community Plan Amendment. Although the Specific Plan encompasses the entire Project Site, its primary focus would be on the regulation of the proposed buildings and related features, including signage, as well as the regulation of transportation and parking. Total building square footage to be constructed under the Proposed Project would be approximately 1.74 million square feet of net new gross floor area. A brief overview of each of the Proposed Project’s three components is provided below.

The Proposed Project’s first component would involve the demolition and replacement of the Convention Center’s existing West and Petree Halls. The new structure (hereafter referred to as “New Hall”), would bridge over a portion of Pico Boulevard such that it would adjoin the Convention Center’s existing South Hall and would consist of roughly the same amount of square footage as the former West and Petree Halls. While the total square footage would be comparable, the amount of functional space would substantially increase through a more efficient building design that among other benefits results in a substantial increase in contiguous floor space for the Convention Center.

The Proposed Project’s second component is the development of the Event Center, a multi-purpose, entertainment and sports facility with a potentially retractable roof on the site of the former West and Petree Halls. The approximately 1,750,000 square-foot structure would include approximately 72,000 permanent seats with expandable seating capacity to approximately 76,250 seats for major marquee events, such as a Super Bowl. The Event Center would also be available for use as Convention Center exhibit and meeting room space, when not used for spectator events, providing roughly 245,650 square feet of rentable exhibition and meeting room space.

The Proposed Project's third component would involve the construction of new larger, more efficient parking facilities on the existing Bond Street Parking Lot and Cherry Street Garage sites. As the West Hall would be demolished, the existing 1,625 parking spaces under the West Hall would be removed by the Proposed Project. The existing Cherry Street Garage would be rebuilt and expanded from the existing 858 spaces to approximately 2,950 parking spaces. A new parking garage would be constructed on the existing Bond Street Parking Lot, which would increase parking on that site from approximately 283 to approximately 928 parking spaces. These improvements would result in a net increase of approximately 1,121 parking spaces. Additionally, above-ground pedestrian bridges would provide connectivity between these parking structures and the Event Center and New Hall, as well as to LA Live Way.

In addition to the above improvements, the Proposed Project includes up to approximately 100,000 square feet of renovations to the existing Concourse building. Changes to the Convention Center's existing South Hall would be limited to its interface with the proposed New Hall. Existing parking under the South Hall and in the Convention Center's Venice Garage would not be affected by the Proposed Project. Street vacations involving portions of Pico Boulevard, LA Live Way, Bond Street and 12th Street would also occur under the Proposed Project.

The Proposed Project also includes approximately 4,317 square feet of landscape areas associated with the Event Center Plaza, approximately 69,485 square feet of landscape areas for the Gil Lindsay Plaza, and approximately 40,656 square feet of landscape areas along LA Live Way.

1.2 Scope of Work

This report provides a description of wastewater generation at the Project site and evaluates the capacity of the public sewer system (conveyance and treatment) to meet the Project's wastewater demands.

2.0 ENVIRONMENTAL SETTING

2.1 Regional Conditions

The Bureau of Sanitation of the City of Los Angeles Department of Public Works operates and maintains the wastewater treatment, reclamation and collection facilities serving most of the City of Los Angeles incorporated areas as well as several other cities and unincorporated areas in the Los Angeles basin and San Fernando Valley. The collection infrastructure consist of over 6,500 miles of local, trunk, mainline and major interceptor sewers, five major outfall sewers, and 46 pumping plants. The wastewater generated by the project ultimately flows to Hyperion Treatment Plant (HTP) located in Playa Del Rey. Operational since 1894 and last upgraded in 1998, HTP has a capacity of 450 million gallons per day (mgd) of wastewater for full secondary treatment. The HTP currently processes average wastewater flows of approximately 362 mgd, resulting in a remaining capacity of 88mgd.¹

Sewer permit allocation for projects that discharge into the Hyperion Treatment Plant is regulated by Ordinance No. 166,060 adopted by the City in 1990.² The ordinance established an annual allotment of 5.0 million gallons per day, of which 34.5 percent (1.725 million gallons per day) is allocated for priority projects, 8 percent (0.4 million gallons per day) for public benefit projects, and 57.5 percent (2.875 million gallons per day) for non-priority projects (of which 65 percent is for residential project and 35 percent for non-residential projects).

In 2006 the City approved the Integrated Resources Plan, which incorporates a Wastewater Facilities Plan.³ The Integrated Resources Program was developed to meet future wastewater needs of more than 4.3 million residents expected to live within the City by 2020. In order to meet future demands posed by increased wastewater generation, the City has chosen to expand its current overall treatment capacity, while maximizing the potential to reuse recycled water through irrigation, and other approved uses.

2.2 Local Area Conditions

Figure 1 in the Appendix is a map showing the sewer collection and conveyance infrastructure in the vicinity of the Project Site and consists primarily of the following systems:⁴

- System 1: a 12-inch diameter pipe located in Bond Street and Convention Center Drive south of Pico Boulevard and flowing southerly across the I10/I110 freeway interchanges, increasing in size to 15 inch diameter. This system also includes a 10-inch diameter branch extending to the north in LA Live Way up to about 150 feet

¹ City of Los Angeles Department of Public Works, Bureau of Sanitation. Wastewater: About Wastewater, Facts and Figures. Available at: <http://www.ci.la.ca.us/SAN/wastewater/factsfigures.htm>. Accessed March 5, 2012.

² City of Los Angeles. (1990). Ordinance 166060.

Wastewater Engineering Services Division, B. o. (2011). *Convention Center Modernization and Farmers Field Project - Notice of Preparation EIR Revised*. See Exhibit 2 of the Appendix.

³ CH:CDM. (2005, November). *IRP-Facilities Plan*. Retrieved from <http://www.lacitysan.org/irp/facilitiesplan.htm>

⁴ City of Los Angeles. (n.d.). *NavigateLA*. Retrieved from <http://navigate.la.lacity.org/index01.cfm>

south of Chick Hearn Court, 8 to 10-inch diameter branches extending easterly and westerly along Pico Boulevard, and an 8-inch branch extending easterly in Venice Boulevard.

- System 2: a 63-inch diameter relief sewer flowing easterly in Chick Hearn Court, turning south in an easement through the Staples Center site and increasing in size to 66 inch and then flowing southerly in Figueroa Street.

2.3 On-site Conditions

Existing Wastewater Infrastructure

The Los Angeles Convention Center is currently connected to sewer System 1 described above. The Convention Center South Hall has multiple sewer connections to the 8-inch and 12-inch sewer pipes in Convention Center Drive and to the 8-inch sewer pipe in Venice Boulevard. The Concourse is connected to the 8-inch sewer in Pico Boulevard. The West Hall is connected to the existing 10-inch sewer pipes in LA Live Way and Pico Boulevard.

Staple Center is connected to sewer System 2, the 66-inch diameter relief sewer pipe located in 12th Drive.

The existing parking garages have emergency drains connected to the wastewater system. These drains do not generate wastewater on a regular basis and are used only during emergency conditions.

Per Citadel Environmental Services⁵, existing facilities include the following wastewater clarifier/interceptor systems:

- A kitchen grease interceptor in the “Orange” parking area of the West Hall of LACC, processing kitchen wastewater generated in food preparation.
- Numerous three stage clarifiers in the driveways leading to the parking area of the South Hall of the LACC and in a vehicle wash area to the west of the South Hall.
- Two in-ground grease interceptors and one above-ground grease interceptor at the Staples Center

Existing Wastewater Generation

As shown in Table 1 the total existing wastewater generation at the project site is approximately 15.7 million gallons per year or 42,901 gallons per day (gpd). However, the existing uses to be removed as part of the Proposed project at the existing Convention Center and the STAPLES Center Central Plant generate approximately 18,574 gpd or 6,779,539 gallons of wastewater generation per year as show in Table 2. This daily forecast assumes an average state of operations across the entire year; however, there are days when very little, if any, activity is occurring at the Project Site, so peak day generation would be higher than the average.

⁵ Citadel Environmental Services, Inc. (2011). *DRAFT Phase 1 Environmental Site Assesment Report Los Angeles Convention Center Modernization and Farmers Field Project*. Los Angeles.

Table 1
Existing Project Site Wastewater Generation^a

	Water Use	
	Gallons Per Day	Gallons Per Year
Convention Center ^{b,c}		
West Hall	10,448	3,813,520
All Other Convention Center Facilities	24,327	8,879,355
<i>Convention Center Subtotal</i>	<i>34,775</i>	<i>12,692,875</i>
Central Plants ^d		
Convention Center	7,195	2,626,175
STAPLES Center	931	339,815
<i>Central Plants Subtotal</i>	<i>8,126</i>	<i>2,965,990</i>
Total Existing Project Site Wastewater Generation	42,901	15,658,865
^a Excludes STAPLES Center as no changes are proposed to this facility under the Proposed Project. ^b Total annual water consumption during 2010 less water used for the Central Plant and Irrigation. Based on data provided by the Los Angeles Convention Center Inc., 2011. ^c Includes approximately 74,330 sf of kitchen area, 113,345 sf of meeting room space, and 89,414 sf of office space. ^d Total water consumption based on data presented in WSA. Based on data provided by Syska Hennessy Group, Inc., 2011, 32 percent of existing central plant water usage is discharged to the City's wastewater system. Source: Los Angeles Department of Water and Power, Matrix Environmental, February 2012.		

Table 2
Existing Project Site Uses to be Removed as part of the Proposed Project

Existing Uses to Be Removed	Existing Wastewater Generation	
	Gallons per Day	Gallons per Year
West Hall	10,448	3,813,520
Central Plants ^a	8,126	2,966,019
Total	18,574	6,779,539
^a Includes Convention Center and STAPLES Center Central Plants and accounts for 32 percent of existing central plant water usage that is discharged to the City's wastewater system. Source: LADWP Water Supply Assessment (WSA) for the Convention and Event Center Project.		

3.0 METHODOLOGY

The analysis addresses the impact of the Proposed Project on existing on-site and off-site sewer facilities and identifies necessary improvements needed to accommodate the Project's demands. Based on the existing flow levels within the sanitary sewer system and the Proposed Project's future wastewater generation, an assessment of potential impacts to the local sewer lines and Citywide treatment facilities is conducted. Data regarding the existing physical features and capacity of the system is based on information provided by the City of Los Angeles Bureau of Sanitation. Forecasts of the Proposed Project's wastewater generation uses the analysis conducted in support of the Proposed Project's Water Supply Assessment as discussed further below.

As presented in the Proposed Project's Water Supply Assessment, calculated water demand for the Convention Center using the following two methodologies: (1) using standard City factors, and (2) forecasting based on historical per capita usage at the Convention Center. A comparison of the results of these two analyses indicated that higher water usage, and therefore the more conservative forecast, occurred when the forecast was based on historical usage data. It is conservatively assumed that wastewater generation is equal to water consumption, excluding water used for irrigation purposes and water evaporation and drift⁷ from the on-site central plants that serve the Convention Center and STAPLES Center. Thus, the methodology used in the water analysis is also used for the wastewater analysis. As a result, rather than applying the City's Bureau of Sanitation wastewater generation factors to the floor areas for each of the various land uses of the Proposed Project, the analysis below uses a combination of the per capita generation rates for most Proposed Project uses and the City Bureau of Sanitation factors for those Proposed Project uses for which per capita usage factors are not available.

The analysis of infrastructure capacity is based on comparing the estimated additional demand generated by the Proposed Project with the calculated available capacity of the existing facilities. The City's Bureau of Sanitation, Wastewater Engineering Division made a preliminary analysis of the local sewer conditions to determine if available wastewater conveyance and treatment capacity exists for future Proposed Project development. The methodology used by the Bureau of Sanitation consisted of a study of the worst-case scenario envisioning peak demands from the relevant facilities occurring simultaneously on the wastewater system. A combination of flow gauging data and computed results from the City's hydrodynamic model were used to project current and future impacts due to additional sewer discharge. The analysis presented below is based on the findings of the Bureau of Sanitation's analysis.

⁷ Drift is defined as the water that is carried out of a cooling tower with the exhaust air.

4.0 SIGNIFICANCE THRESHOLDS

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to wastewater. These questions are as follows:

Would the project:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?
- Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

In the context of these questions from the CEQA guidelines, the *City of Los Angeles CEQA Thresholds Guide* states that a project would normally have a significant wastewater impact if:

- The project would cause a measureable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained;⁸ or
- The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its elements.⁹

These thresholds are applicable to the Proposed Project and as such are used to determine if the Proposed Project would have significant wastewater impacts.

⁸ The City of Los Angeles CEQA Thresholds Guide states that a sewer's capacity is considered constrained if the depth of flow is equal to or greater than three-quarters of the sewer's diameter and measurable means any change greater than ½ inch (0.013 meters). However, based the Bureau of Sanitation has determined that a 50 percent threshold is to be used for System 1 and System 2 for the Proposed Project.

⁹ The Wastewater Facilities Plan referenced in the City of Los Angeles CEQA Thresholds Guide has since been superseded by the Integrated Resources Plan.

5.0 PROJECT DESIGN FEATURES

New sanitary sewer connections will be designed to conform to the standards of the Department of Public Works. In particular, the project will avoid direct connections to the 66-inch relief sewer pipe due to odors and other operation and maintenance issues. Instead, the project will connect to a new or existing local sewer line that feeds into the 66-inch line.

Based on the Proposed Project's Sustainability program, the New Hall and the Event Center would achieve an overall water use reduction of 33 and 35 percent, respectively, of the estimated baselines. These water reduction requirements will be met by specific measures identified in the Sustainability Program and may include the water conservation features described in the Water Supply Assessment for the Proposed Project. Although these measures would primarily target water reduction, wastewater generation may also be reduced as a result of implementation of these measures. However, for conservative purposes, the analysis provided herein does not take any credit for the potential reduction from implementation of measures identified in the Sustainability Program and only incorporates a reduction in wastewater generation based on the information provided in the Water Supply Assessment for the Proposed Project.

New proposed facilities will be equipped with grease interceptors and clarifiers as required by code. New and existing interceptors and clarifiers will be maintained through a program of regularly scheduled pumping and maintenance.

6.0 PROJECT IMPACTS

6.1 Construction

Construction activities for the Proposed Project would result in a temporary and incremental increase in wastewater generation as a result of construction workers on-site. However, such use would be temporary and nominal when compared with the wastewater generated by an occupied permanent building. In addition, construction workers would typically utilize portable restrooms which would not contribute to wastewater flows to the City's wastewater system. In the event there is an increase in wastewater flow during construction, this increase would be limited and would be within the capacity of the wastewater facilities that currently serve the Project Site. Thus, wastewater generation from Project construction activities is not anticipated to cause a measurable increase in wastewater flows at a point where, and at a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained. For these same reasons, construction of the Proposed Project is not anticipated to generate wastewater flows that would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the IRP. Therefore, Proposed Project construction impacts to the wastewater system would be less than significant.

Construction impacts associated with infrastructure upgrades would primarily be confined to trenching for the sewer lines that connect the individual buildings to the City's existing in-street infrastructure. An existing 66" PVC lined Reinforced

Concrete Pipe (RCP) Sanitary Sewer line in the northeast corner of the proposed Event Center is owned and maintained by the City of Los Angeles. A portion of this sewer will need to be relocated to accommodate a new connection between the proposed Event Center loading dock and the existing Staples Center loading dock below grade. The relocation will be subject to the review and approval of the City of Los Angeles Department of Public Works under a type B-Permit. Prior to construction the contractor will be required to prepare and implement a sewer bypass and emergency spill prevention plan to the satisfaction of the City Engineer. To reduce any temporary pedestrian and traffic impacts, the contractor would implement a Construction Management Plan, which would ensure safe pedestrian access and vehicle travel in general, and emergency vehicle access, in particular, throughout the construction period. Overall, when considering impacts resulting from the installation of any required wastewater infrastructure, all impacts are of a relatively short-term duration (i.e., months) and would cease to occur once the installation is complete.

6.2 Operation

Wastewater Generation and Infrastructure

The Proposed Project would result in an increase in wastewater flows from a variety of sources during its operation. As discussed above, rather than applying the City's Bureau of Sanitation wastewater generation factors to the floor areas for each of the various land uses of the Proposed Project, the analysis below utilizes the combination of the per capita generation rates for most Proposed Project uses and the City Bureau of Sanitation factors for those Proposed Project uses for which per capita usage factors are not available. As shown in Table 3, the Proposed Project would generate an annual wastewater flow of approximately 70.14 million gallons. When accounting for existing buildings and the central plants which would be removed as part of the Proposed Project (which currently generate an annual flow of approximately 6.78 million gallons), the Proposed Project would result in an annual net increase of approximately 63.36 million gallons.

As shown in Table 4, the Proposed Project would result in a total wastewater generation of 696,015 gpd. Of this total, the Convention Center and its ancillary uses, including the central plant, would generate approximately 16,505 gpd. However, with incorporation of the City's water efficiency requirements and the Applicant's specified project design features, as well as subtracting existing wastewater generation, the net increase in wastewater generation would be 640,754 gpd.

As shown in Table 5, Daily Project Impacts with No Existing Convention Center Activity would generate 775,701 gpd, of which the Convention Center and its ancillary uses, including central plant, would generate approximately 96,191gpd. However, with the incorporation of the City's water efficiency requirements and the Event Center Applicant's specified project design features, as well as subtracting

existing wastewater generation, the net increase in wastewater generation under the Daily Project Impacts with No Existing Convention Center Activity scenario would be 727,635 gpd.

Table 3
Annual Proposed Project Wastewater Generation

Convention Center					
			Per Capita Wastewater Consumption	Forecasted Annual Attendance ^a	Annual Wastewater Generation (Gallons)
Patron Use ^b			4.6874 ^c	4,020,959	18,847,843
	Floor Area	Wastewater Generation/ 1,000 Sq.Ft.	Wastewater Generation/ Day	Annual Days Open for Business	Annual Wastewater Generation (Gallons)
Retail	3,975	80	318	365	116,070
Bike Station ^f	3,250	80	260	365	94,900
Event Deck	8,000	80	640	365	233,600
Convention Center Subtotal					19,292,413
Event Center					
		Per Capita Wastewater Consumption ^c	Forecasted Annual Attendance ^a		Annual Wastewater Use (Gallons)
Spectator and Exhibition Events		8.8778	6,094,190		54,103,000
Central Plant Subtotal ^d					2,157,505
Wastewater Reduction due to City Water Efficiency Requirements and Project Design Features					-5,415,926
Proposed Project Total					70,136,992
Existing Wastewater Generation of the Project Site Uses to be Removed ^e					-6,779,539
Net Increase in Annual Wastewater Demand					63,357,453
^a Based on estimates of annual event days and attendance for spectator events, exhibition events, conventions, trade shows, consumer shows, meeting rooms, banquets, and assemblies/other. ^b Includes all sources of wastewater generation at Convention Center including but not limited to restaurant, commissary, and food court uses. ^c Based on per capita water consumption as set forth in the Project’s WSA. ^d Based on 18.2 percent of water consumption discharged to City wastewater system based on forecast provided by Syska Hennessy Group, Inc., 2012. Supporting documentation for water consumption is provided in the Project’s WSA. ^e Based on existing Project Site uses to be removed as part of the Proposed Project based on Table 2. ^f The Bike Station may be located off-site and the Event Deck is no longer proposed. However, wastewater demand from these uses is included in the wastewater demand for the Proposed Project for the purpose of providing a more conservative analysis.					

Table 4
Daily Proposed Project Impacts

Land Use	Patrons/Employees or Square Feet	Factor (gpd) ^a	Total Wastewater Generated (gpd)
Convention Center^g			
Exhibit/Meeting Rooms	2,550 ^b	4.6874/patron ^{c, d}	11,953
Retail	3985	80/1,000 sf	318
Bike Station	3250	80/1,000 sf	260
Event Deck	8000	80/1,000 sf	640
Central Plant			3,334
Subtotal			16,505
Wastewater Reduction Due to City Water Efficiency Requirements and Project Design Features			-5,654^f
Existing Convention Center Central Plant Wastewater Generation			7,195
Net Convention Center Wastewater Generation			3,656
Event Center			
Patron Use	76,250	8.8778/person ^c	676,932
Central Plant^e			
Event Center			2,144
STAPLES Center			434
Subtotal Proposed Uses			679,510
Wastewater Reduction due to City Water Efficiency Requirements and Project Design Features			-41,481 ^f
Existing STAPLES Center Central Plant Wastewater Generation			-931
Net Event Center + STAPLES Center Central Plant Wastewater Generation			637,098
Net Proposed Project Wastewater Generation			640,754
^a Factors for retail, office, and restaurant uses are based on the City of Los Angeles 2006 CEQA Threshold Guide Sewage Generation Factors. ^b CEQA Guidelines Section 15125(a) states that normally the environmental setting as of the issuance of a project's NOP constitutes the baseline conditions against which the significance of any physical change in the environment that may occur as a result of the project will be measured. Thus, an EIR's analysis should focus on a project's incremental impact above the baseline condition. The existing daily baseline attendance for the Los Angeles Convention Center is estimated to be 17,000 patrons based on parking survey data. Future daily attendance is forecasted to be 15 percent above baseline conditions or 19,550 persons. Thus, Los Angeles Convention Center daily impacts are based to a daily attendance increase of 2,550 patrons (19,550-17,000=2,550). ^c Per capita generation factors based on the LADWP WSA for the Project. ^d Includes all sources of wastewater generation at the Convention Center or the Event Center including but not limited to restaurant, commissary, and food court uses. ^e Based on proposed water use from the Convention Center, Event Center, and STAPLES Center Central plants, as set forth in the WSA, and accounting for 18.2 percent of central plant water consumption that would be discharged to the City's wastewater system less existing water use from the the Convention Center and STAPLES Center Central Plants to be removed as set forth in Table 2. ^f Based on water savings data presented in the LADWP WSA for the Project. ^g The Bike Station may be located off-site and the Event Deck is no longer proposed. However wastewater demand from these uses is included in the wastewater demand for the Proposed Project for the purposes of providing a more conservative analysis.			

Table 5
Daily Project Impacts with No Existing Convention Center Activity

Land Use	Patrons/Employees or Square Feet	Factor (gpd/unit) ^a	Total Wastewater Generated (gpd)
Convention Center^g			
Exhibit/Meeting Rooms	19,550 ^b	4.6874/person ^{c, d}	91,639
Retail	3,975	80/1,000 sf	318
Bike Station	3,250	80/1,000 sf	260
Event Deck	8,000	80/1,000 sf	640
Central Plant			3,334
Subtotal			96,191
Wastewater Reduction Due to City Water Efficiency Requirements and Project Design Features			-5,654^f
Existing Convention Center Central Plant Wastewater Generation			0
Net Convention Center Wastewater Generation			90,537
Event Center			
Patron Use	76,250	8.8778/person ^c	676,932
Central Plants^e			
Event Center			2,144
STAPLES Center			434
Subtotal Proposed Uses			679,510
Wastewater Reduction Due to City Water Efficiency Reduction and Project Design Features			-41,481^f
Existing Wastewater Generation			931
Net Event Center Wastewater Generation			637,098
Net Proposed Project Wastewater Generation			727,365
^a Factors for retail, office, and restaurant uses are based on the City of Los Angeles 2006 CEQA Threshold Guide Sewage Generation Factors.			
^b CEQA Guidelines Section 15125(a) states that normally the environmental setting as of the issuance of a project's NOP constitutes the baseline conditions against which the significance of any physical change in the environment that may occur as a result of the project will be measured. Thus, an EIR's analysis should focus on a project's incremental impact above the baseline condition. The existing daily baseline attendance for the Los Angeles Convention Center is estimated to be 17,000 patrons based on parking survey data. Future daily attendance is forecasted to be 15 percent above baseline conditions or 19,550 persons. Thus, Los Angeles Convention Center daily impacts are based to a daily attendance increase of 2,550 patrons (19,550-17,000=2,550).			
^c Per capita exhibition water consumption factor based on annual Existing General Consumption (see above) divided by estimated existing annual attendance (2,708,262 patrons)			
^d Includes all sources of wastewater generation at the Convention Center or the Event Center including but not limited to restaurant, commissary, and food court uses.			
^e Based on proposed water use from the Convention Center, Event Center, and STAPLES Center Central plants, as set forth in the WSA, and accounting for 18.2 percent of central plant water consumption that would be discharged to the City's wastewater system less existing water use from the the Convention Center and STAPLES Center Central Plants to be removed as set forth in Table 2.			
^f Based on water savings data presented in the LADWP WSA for the Project.			
^g The Bike Station may be located off-site and the Event Deck is no longer proposed. However wastewater demand from these uses is included in the wastewater demand for the Proposed Project for the purposes of providing a more conservative analysis.			

System 1 consists of an 8-inch line on Pico Boulevard and a 10-inch line on Cherry Street which join up at Pico Boulevard and Bond Street through a network of 12-inch reaches that run along Bond Street, Wright Street, Venice Boulevard, Cherry Street, and Washington Boulevard, before discharging into the 20-inch sewer line on Union Avenue. System 2 consists of the 63-inch to 66-inch sewer line located on Chick Hearn Court which runs along a private street between STAPLES Center and the Convention Center's West Hall, then along Figueroa Street, Venice Boulevard, and Grand Avenue.

Refer to Exhibit 2 of the Appendix for a copy of the Bureau of Sanitation's hydraulic assessment. This assessment indicates that the Proposed Project's connection to System 1 would be constrained by the available capacity of the existing 12-inch sanitary sewer pipe located in Washington Boulevard downstream of the Proposed Project. The current flow level (d/D) of this section of the sewer pipe is estimated to be 45 percent. The maximum capacity (at 50 percent d/D) of this pipe section is approximately 0.66 mgd. The spare capacity in this sewer line is approximately 0.11 mgd, per the Bureau of Sanitation's guidelines, an individual project cannot use more than 20 percent of the spare capacity of any individual line, which in this case equates to approximately 0.022 mgd. As the Proposed Project would generate flows greater than this level, if the Proposed Project connects to System 1, all flows above 22,000 gpd would have to be directed to System 2. Applying the same approach to System 2, the incremental discharge available to an individual project would be 4.58 mgd. The Bureau of Sanitation has indicated that per their guidelines a direct connection would not be permitted into a primary (16-inch or larger) line due to odor and other operation and maintenance problems. As such, if the Proposed Project ultimately connects to System 2 a local sewer line would need to be constructed that would feed into the existing 66-inch line.

The Proposed Project is forecasted to result in a total daily increase in wastewater discharge of 0.641 mgd, of which 0.004 mgd is attributable to the expansion of the Convention Center, with the remaining 0.637 mgd being generated by the Event Center. Based on this information, up to 0.022 mgd could discharge to System 1, with the balance discharging to System 2 or the entire Proposed Project could discharge to System 2.

The Convention Center under existing conditions discharges to System 1. As such, sufficient capacity is available in System 1, as shown in Table 6, to accommodate the additional forecasted flows of 0.004 mgd from the Convention Center.

The Event Center, which has a forecasted daily discharge of 0.637 mgd under the Daily Proposed Project Impacts, could discharge a maximum of up to 0.018 to System 1 (assuming the Convention Center would also connect to System 1), which would leave 0.619 that would have to be discharged to System 2 or the entirety of

the Event Center discharge could be directed to System 2. As shown in Table 7, the 66 inch relief pipe serving System 2 has a 50% capacity of approximately 31 mgd with a current flow rate of approximately 8.1 mgd. As indicated by the Bureau of Sanitation, the remaining capacity of System 2 would be able to sufficiently accommodate the increased flow generated by the Proposed Project.¹⁰ As discussed above, the maximum increased daily wastewater flow generated by the Proposed Project for the Event Center would be approximately 0.637 mgd which would correspond to an increase in flow level of 1.0 percent or 0.63 inches as shown in Table 7.

Table 6
System 1 Wastewater Infrastructure Current and Proposed Flow Capacity

System 1 Existing Pipe Capacity (mgd at 50% d/D)	System 1 Baseline Flow (mgd)	System 1 Current Flow Level (d/D)	Additional Projected Flow (mgd)	Current plus Proposed Project Flow	Projected Flow Level (d/D)	Flow Level Change
Daily Proposed Project Impacts						
<i>Convention Center</i>						
0.66	0.550	45.1% (5.41 inches)	0.004	0.554	45.2% (5.42 inches)	0.1% (0.01 inches)
Daily Project Impacts with No Existing Convention Center Activity						
<i>Convention Center</i>						
0.66	0.463 ^a	40.9% (4.91 inches)	0.091	0.554	45.2% (5.42 inches)	4.3% (0.51 inches)
^a Since the No Existing Convention Center Activity scenario assumes no existing load on System 1 from the existing Convention Center a credit of 0.08 has been applied. Existing pipe flow based on Bureau of Sanitation's model is approximately 0.55 mgd based on the assumption that the Convention Center is being used at maximum capacity.						

Table 7
System 2 Wastewater Infrastructure Current and Proposed Flow Capacity

System 2 Existing Pipe Capacity (mgd at 50% d/D)	System 2 Baseline Flow (mgd)	System 2 Current Flow Level (d/D)	Additional Projected Flow (mgd)	Current plus Proposed Project Flow	Projected Flow Level (d/D)	Flow Level Change
Daily Proposed Project Impacts						
31	8.095	24.5% (16.19 inches)	0.637	8.732	25.5% (16.82 inches)	1.0% (0.63 inches)

¹⁰ Written correspondence with Ali Poosti, Acting Division Manager Wastewater Engineering Services Division, Bureau of Sanitation. August 4, 2011 (See Exhibit 2 in the Appendix)

As sufficient capacity is available within System 2, regardless of whether a portion of the Proposed Project connects to System 1 or not, the impacts of the Proposed Project would be less than significant. The final decision as to whether the Proposed Project would connect to a combination of the two systems, or System 2 only would be made at the final design stage based on available capacity and whichever approach is more efficient from a design perspective. Further, as required by the City's Bureau of Sanitation, detailed gauging and evaluation would also be needed as part of the normal permit process to identify a specific sewer connection point.

Wastewater Treatment

Wastewater generated by the Proposed Project would be conveyed via the existing wastewater conveyance systems for treatment at the HTP, which is a component of the HSA. As previously stated, based on the IRP, the existing effective capacity of the HTP is approximately 450 mgd.¹¹

Based on these forecasts the Project's increase in wastewater generation would be adequately accommodated by the HSA. In addition, the City Bureau of Sanitation's analysis confirms that the HTP has sufficient capacity for the Proposed Project. Thus, operation of the Project would have a less than significant impact on wastewater treatment facilities.

Consistency with Regulations

The City's General Plan Framework identifies goals, objectives, and policies for utilities in the City, including wastewater collection and treatment. In accordance with Goal 9A, "Adequate wastewater collection and treatment capacity for the City and in basins tributary to the City owned wastewater treatment facilities", the Proposed Project would connect to the existing sewer system, which has been shown to have adequate capacity to meet the demands of the Proposed Project. Therefore, the Proposed Project would be consistent with the goals of the General Plan Framework.

Pursuant to LAMC Sections 64.11 and 64.12, the Proposed Project would be required to obtain an S-permit and pay a Sewerage Facilities Charge in order to connect to the existing sewer system. Payment of the fees ensures that the Proposed Project would pay for its fair share for any necessary expansions of the sewer system, additional improvements to conveyance, treatment, and disposal facilities. Therefore, impacts relative to consistency with regulations would be less than significant.

¹¹ City of Los Angeles, Integrated Resources Plan, December 2006.

In accordance with LAMC Section 64.15, the City would be required to perform a Sewer Capacity Availability Request (SCAR) analysis to confirm that there is adequate capacity in the sewer collection system to safely convey project-generated wastewater to HTP. This determination would be indicated by acceptance of plans and specifications for plan check and issuance of the Project's S-permit. Additionally, all Project-related wastewater infrastructure improvements and individual building connections would be designed to meet applicable requirements, including those set forth in the Bureau of Engineering's Special Order No. SO06-0691. As such, the Proposed Project's impacts relative to consistency with LAMC regulations would be less than significant.

6.3 Cumulative Impact

The geographic context for the cumulative impact analysis on wastewater conveyance systems is the Project vicinity, and the geographic context for the cumulative impact analysis on wastewater treatment facilities at the HTP. The Proposed Project in conjunction with forecasted growth in the area served by the HTP, inclusive of the related projects, would cumulatively generate wastewater, thus potentially resulting in cumulative impacts on wastewater conveyance and treatment facilities.

Wastewater Conveyance

Related project development would be anticipated to add wastewater flows to System 1 and System 2. New development projects occurring in the Project vicinity would be subject to LAMC Sections 64.11 and 64.12, which require approval of a sewer permit (S-Permit) prior to connection to the sewer system. This would include obtaining approval from the Bureau of Sanitation for available sewer capacity via a Sewer Capacity Availability Request (SCAR) at the time of development. If system upgrades are required as a result of a given related project's additional flow, arrangements would be made between the related project and the Bureau of Sanitation to construct the necessary improvements.

Additionally, to connect to the sewer system, related projects in the City would be subject to payment of the City's Sewerage Facilities Charge. Payment of such fees would help to offset the costs associated with infrastructure improvements that would be needed to accommodate wastewater generated by future growth. At this time it is not possible to determine when construction of the related projects would occur and given the short duration of infrastructure improvements it is not anticipated that such improvement would occur concurrently. Furthermore, any major construction project would include a Construction Management Plan (CMP) that would address construction impacts of a related project and thus in the event infrastructure improvements are concurrent, implementation of the CMP would reduce cumulative impacts to a less than significant level. Therefore, cumulative impacts on wastewater conveyance systems would be less than significant.

Wastewater Treatment

The Bureau of Sanitation's IRP projects wastewater flows and wastewater treatment capacity through 2020. The buildout year for the Proposed Project is 2016. Therefore, cumulative impacts on wastewater facilities were analyzed relative to 2020 growth projected in the HSA. Specifically, the IRP projects average flow for the HTP in 2020 to be approximately 435 mgd. Therefore, based on the HTP's projected design capacity of 450 mgd in 2020 and its projected flow of 435 mgd in 2020, the HTP would have an available capacity of 15 mgd. As discussed above, without accounting for the Proposed Project's water conservation features, the Proposed Project would generate a maximum increase of 0.641 mgd in average daily flows, which increases to 0.728 mgd under the Convention Center with No Existing Activity scenario. The wastewater flows generated by the Proposed Project, under either of these forecasts, combined with the forecasted 2020 flow would increase the total cumulative wastewater flow to less than 436 mgd, well within the HTP's 2020 design capacity of 450 mgd.

The IRP identifies adequate treatment capacity within the City through 2020, adequate capacity would likely be available through 2020. Therefore, cumulative impacts on the wastewater treatment systems would be less than significant.

7.0 LEVEL OF SIGNIFICANCE

Based on the analysis contained in this report no significant impacts have been identified for this project.

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Figure 1: Existing Sewer System Map

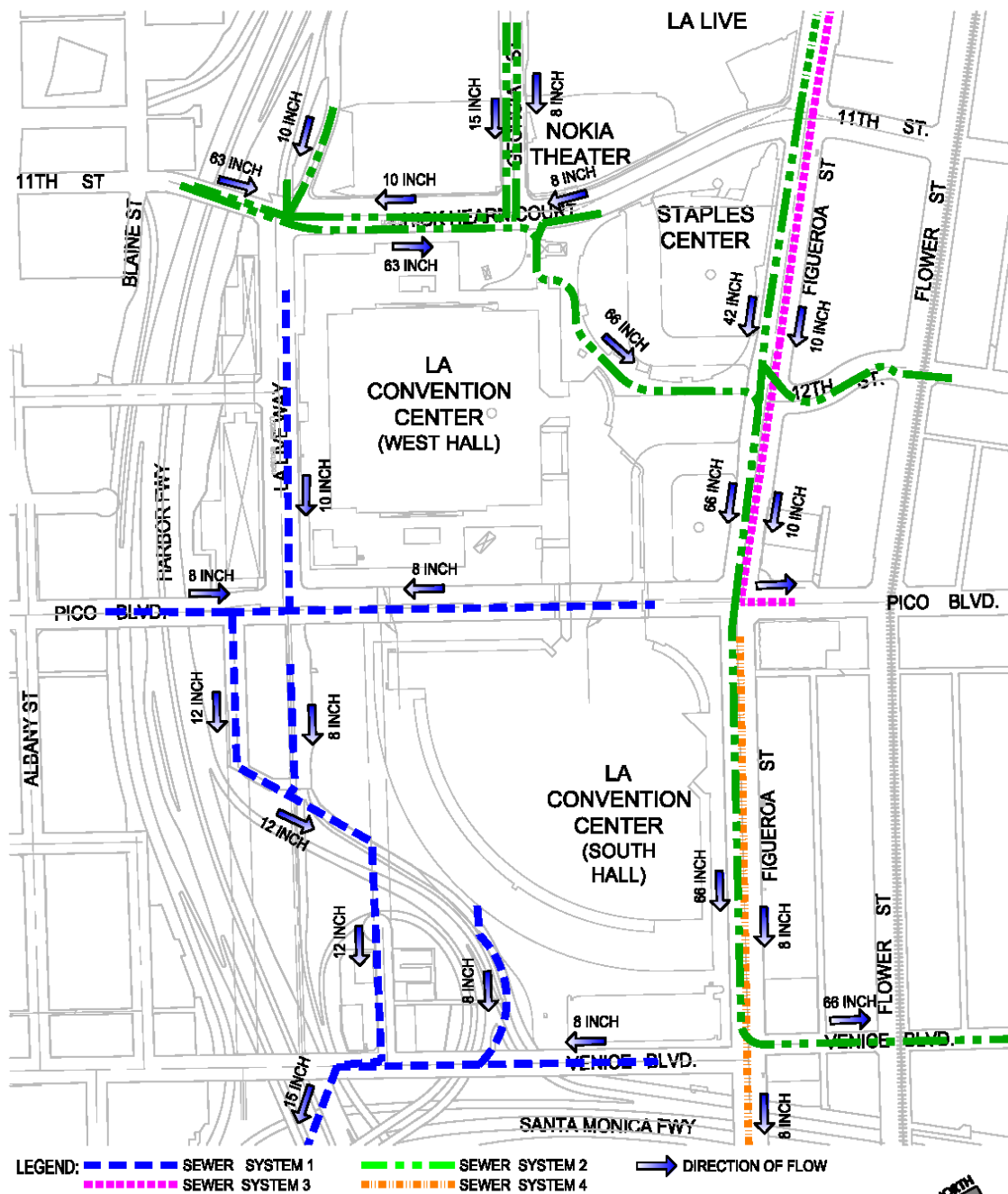


EXHIBIT 1

EXISTING SEWER SYSTEM



Exhibit 1 – Sewage Generation factors

Exhibit M.2-12

SEWAGE GENERATION FACTORS

Type Description	Average Daily Flow (Gpd/unit)
Acupuncture Office/Clinic	150/1000 Gr.sq.ft.
Arcade - Video Games	80/1000 Gr.sq.ft.
Auditorium	4/seat
Auto Parking	20/1000 Gr.sq.ft.
Auto Body/Mech Repair Shop	800/1000 Gr.sq.ft. + Process Flow
Bakery	280/1000 Gr.sq.ft.
Bank: Headquarters	150/1000 Gr.sq.ft.
Bank: Branch	80/1000 Gr.sq.ft.
Banquet Room/ Ballroom	800/1000 Gr.sq.ft.
Bar: Cocktail, Fixed Seat	18/seat
Bar: Juice (No Baking Facilities)	120/1000 Gr.sq.ft.
Bar: Juice (With Baking Facilities)	280/1000 Gr.sq.ft.
Bar: Cocktail Public Table Area	500/1000 Gr.sq.ft.
Barber Shop	100/1000 Gr.sq.ft.
Beauty Parlor	280/1000 Gr.sq.ft.
Building Construction Field Office	150/office
Bowling Alley: Alley, Lanes & Lobby Area	80/1000 Gr.sq.ft.
Bowling Facility: Arcade/ Bar/ Restaurant/ Dancing	See Individual Categories
Cafeteria: Fixed Seat	30/seat
Car Wash: Automatic	Process Flow
Car Wash: Coin Operated Bays	Process Flow
Car Wash: Hand Wash	Process Flow
Car Wash: Counter & Sale Area	80/1000 Gr.sq.ft.
Chapel: Fixed Seat	4/seat
Chiropractic Office	150/1000 Gr.sq.ft.
Church: Fixed Seat	4/seat
Church School: Day Care/elem	8/occupant
Church School: One Day Use/week	200/1000 Gr.sq.ft.
Cocktail Lounge: Fixed Seat	18/seat
Coffee House: No Pastry Baking & No Food Prep.	120/1000 Gr.sq.ft.
Coffee House: Pastry Baking Only	280/1000 Gr.sq.ft.
Coffee House: Serves Prepared Food	30/seat
Cold Storage: No Sales	20/1000 Gr.sq.ft.
Cold Storage: Retail Sales	80/1000 Gr.sq.ft.
Comfort Station: Public	100/fixture
Commercial Use	80/1000 Gr.sq.ft.
Community Center	4/occupant
Conference Room of Office Bldg.	Same as other areas in an office bldg.
Counseling Center ¹	150/1000 Gr.sq.ft.
Credit Union	150/1000 Gr.sq.ft.
Dairy	Process Flow
Dairy: Barn	Process Flow
Dairy: Retail Area	80/1000 Gr.sq.ft.

¹ *Counseling center include marriage counseling centers, alcohol/drug rehabilitation/dependency centers, nutrition center, diet centers, etc.*

Exhibit M.2-12, continued
SEWAGE GENERATION FACTORS

<u>Type Description</u>	<u>Average Daily Flow (Gpd/unit)</u>
Dancing Area of Bar or Nightclub	600/1000 Gr.sq.ft.
Dance Studio	80/1000 Gr.sq.ft.
Dental Office/Clinic	250/1000 Gr.sq.ft.
Doughnut Shop	280/1000 Gr.sq.ft.
Drug Rehabilitation Center	150/1000 Gr.sq.ft.
Equipment Booth	20/1000 Gr.sq.ft.
Film Processing – 1-Hour Photo, etc.	100/1000 Gr.sq.ft.
Film Processing – Industrial	80/1000 Gr.sq.ft. + Process Flow
Food Processing Plant	80/1000 Gr.sq.ft. + Process Flow
Gas Station: Self Service	100/w.c.
Gas Station: Four Bays Maximum	430/station
Golf Course: 18-hole/ 9-hole Green Area	0
Golf Course: Driving Range	0
Golf Course Facility: Lobby/Office/Restaurant/Bar	See Individual Categories
Gymnasium – Basketball, Volleyball	250/1000 Gr.sq.ft.
Hanger (Aircraft)	80/1000 Gr.sq.ft.
Health Club/ Spa ²	800/1000 Gr.sq.ft.
Homeless Shelter	75/bed
Hospital	75/bed
Hospital: Convalescent	75/bed
Hospital: Animal	280/1000 Gr.sq.ft.
Hospital: Psychiatric	75/bed
Hospital: Surgical	450/bed
Hotel: Use Guest Rooms Only	130/room
Jail	85/inmate
Kennel: Dog Kennel/Open Run	100/1000 Gr.sq.ft.
Laboratory: Commercial	250/1000 Gr.sq.ft.
Laboratory: Industrial	Process Flow
Laundromat	170/machine
Library: Public Area	80/1000 Gr.sq.ft.
Library: Stacks, Storage	25/1000 Gr.sq.ft.
Lobby of Retail Area ³	80/1000 Gr.sq.ft.
Lodge Hall	4/seat
Lounge	See Lobby of Retail Area
Machine Shop	80/1000 Gr.sq.ft. + Process Flow
Manufact or Indust Facility	80/1000 Gr.sq.ft. + Process Flow
Massage Parlor	275/1000 Gr.sq.ft.
Medical Building	250/1000 Gr.sq.ft.
Medical Lab in Hospital	250/1000 Gr.sq.ft.

² Health club/spa includes lobby area, workout floors, aerobic rooms, swimming pools, Jacuzzi, sauna, locker rooms, showers, and restrooms. If a health club/spa has a gymnasium facility, use the gymnasium rate for that portion. Gymnasiums include basketball courts, volleyball courts, and any other large open space with low occupancy density.

³ Lobby of retail includes lounges, holding rooms, waiting areas, etc.

Exhibit M.2-12, continued
SEWAGE GENERATION FACTORS

<u>Type Description</u>	<u>Average Daily Flow (Gpd/unit)</u>
Medical Office/ Clinic	250/1000 Gr.sq.ft.
Mini-mall	80/1000 Gr.sq.ft.
Mortuary: Embalming	5/7 Gr.sq.ft.
Mortuary: Chapel	4/seat
Mortuary: Living Area	80/1000 Gr.sq.ft.
Motel: Use Guest Rooms Only	130/room
Museum: All Areas	20/1000 Gr.sq.ft.
Museum: Office over 15%	150/1000 Gr.sq.ft.
Museum: Sales Area	80/1000 Gr.sq.ft.
Office Building	150/1000 Gr.sq.ft.
Office Building with Cooling Tower	180/1000 Gr.sq.ft.
Plating Plant	80/1000 Gr.sq.ft. + Process Flow
Pool Hall (No Alcohol)	80/1000 Gr.sq.ft.
Post Office: Full Service ⁴	150/1000 Gr.sq.ft.
Prisons	175/inmate
Residential Dorm: College or Residential	75/student
Residential: Apt. -Bachelor/single	80/dwelling Unit
Residential: Apt. - 1 Bedroom	120/dwelling Unit
Residential: Apt. - 2 Bedroom	160/dwelling Unit
Residential: Apt. - 3 Bedroom	200/dwelling Unit
Residential: Apt. - >3 Bedroom	40/additional bedroom
Residential: Boarding House	75/bed
Residential: Condo - 1 Bedroom	120/dwelling Unit
Residential: Condo - 2 Bedroom	160/dwelling Unit
Residential: Condo - 3 Bedroom	200/dwelling Unit
Residential: Condo - >3 Bedroom	40/additional bedroom
Residential: Duplex/ Townhouse/ SFD - 1 Bd.	130/dwelling Unit
Residential: Duplex/ Townhouse/ SFD - 2 Bd.	180/dwelling Unit
Residential: Duplex/ Townhouse/ SFD - 3 Bd.	230/dwelling Unit
Residential: Duplex/ Townhouse/ SFD - >3 Bd	50/additional bedroom
Residential: Room Addition – Bedroom	50/additional bedroom
Residential: Room Addition Other Than Bedroom	0
Residential: Room Conversion into Bedroom	50/additional bedroom
Residential: Room Conversion into Other Than Bedroom	0
Residential: Mobile Home	160/dwelling Unit
Residential: Artist 2/3 of Area	250/dwelling Unit
Residential: Artist Residence	80/dwelling Unit
Residential: Guest Home With Kitchen	See Residential: Apartment
Residential: Guest Home without Kitchen	50/bedroom
Rest Home	75/bed
Restaurant: Drive-in	40/stall
Restaurant: Drive-in	20/seat

⁴ Full service post offices include U.S. Postal Service, UPS, Federal Express, and other private express mail services.

Exhibit M.2-12, continued
SEWAGE GENERATION FACTORS

<u>Type Description</u>	<u>Average Daily Flow (Gpd/unit)</u>
Restaurant: Fast Food - Indoor Seat	20/seat
Restaurant: Fast Food - Outdoor Seat	12/seat
Restaurant: Full Service - Indoor Seat	30/seat
Restaurant: Full Service - Outdoor Seat	18/seat
Restaurant: Take-out	300/1000 Gr.sq.ft.
Retail Area	80/1000 Gr.sq.ft.
Rifle Range: Shooting Stalls, Shooting Lanes, Lobby	80/1000 Gr.sq.ft.
Rifle Range Facility: Bar, Restaurant	See Individual Categories
School: Arts/Dancing/Music (Part Time)	80/1000 Gr.sq.ft.
School: Arts/Dancing/Music (Full Time)	See type of school below
School: Day Care Center	8/child
School: Elementary or Junior High ⁵	8/student
School: High School ⁵	12/student
School: Kindergarten	200/1000 Gr.sq.ft.
School: Martial Arts (Part Time)	80/1000 Gr.sq.ft.
School: Martial Arts (Full Time) ⁵	See type of school below
School: Nursery - Day Care	8/child
School: Special Class	8/student
School: Trade or Vocational ⁵	12/student
School: Training ⁵	12/student
School: University or College ⁵	18/student
School: Dormitory ⁶	75/student
School: Stadium, Pavilion	4/seat
Spa/ Jacuzzi: Commercial - with backwash	Process Flow
Spa/ Jacuzzi: Residential, replaceable filter crtrdg	0
Storage: Building/Warehouse	20/1000 Gr.sq.ft.
Storage: Self Storage Bldg.	20/1000 Gr.sq.ft.
Store: Ice Cream/Yogurt	80/1000 Gr.sq.ft.
Store: Retail	80/1000 Gr.sq.ft.
Studio: Film/ TV – Audience Viewing Room	4/seat
Studio: Film/ TV – Regular Use Indoor Filming Area	80/1000 Gr.sq.ft.
Studio: Film/ TV – Indust. Use Film Proc, Machine Shop	80/1000 Gr.sq.ft. + Process Flow
Studio: Recording	80/1000 Gr.sq.ft.
Swimming Pool: Commercial with backwash	Process Flow
Swimming Pool: Residential replaceable filter crtrdg	0
Tanning Salon: Independent, No Shower	80/1000 Gr.sq.ft.
Tanning Salon: Within a Health Spa/Club	800/1000 Gr.sq.ft.

⁵ The sewage generation factor for schools based on student capacity covers the following facilities: classrooms and lecture halls, professors' offices, administration offices, laboratories for classes or research, libraries, bookstores, student/professor lounges, school cafeterias, warehouses and storage areas, auditoriums and gymnasiums. For any facility not listed under "schools" (e.g., stadium), see the generation factor listed for that land use type.

⁶ The sewage generation factor for a college dormitory based on student capacity also includes the sewage generation factor for the dormitory cafeterias.

Exhibit M.2-12, continued
SEWAGE GENERATION FACTORS

<u>Type Description</u>	<u>Average Daily Flow (Gpd/unit)</u>
Theatre: Drive-in	10/vehicle
Theatre: Live/Music/Opera	4/seat
Theatre: Cinema	4/seat
Tract: Commercial/ residential	1/acre
Trailer: Construction/Field Office	150/office
Veterinary Clinic/Office	280/1000 Gr.sq.ft.
Warehouse	20/1000 Gr.sq.ft.
Warehouse with Office	Use Factor for Each Separate Category
Waste Dump: Recreational	430/station
Wine Tasting Room: Kitchen	215/1000 Gr.sq.ft.
Wine Tasting Room: All Areas	80/1000 Gr.sq.ft.

Notes:

Gpd/unit = Gallons per day (gpd) per unit as indicated.

Gr.sq.ft. = Gross Square Feet: area included within the exterior or the surrounding walls of a building excluding courts.

GPM Peak = Peak Flow in gallons per minute. There is an assumption that the peak to average flow ratio is 3.5. Therefore, 1.0 gpm x 1440 minutes/day divided by 3.5 = 412 gpd which is the unit flow factor in the table.

See next page for metric equivalents.

Source: Bureau of Sanitation. Sewerage Facilities Charge, Sewage Generation Factors for Residential and Commercial Categories. Effective June 6, 1996.

Exhibit 2 – Bureau of Sanitation Memo

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

File: SC.CE.

DATE: April 29, 2011

TO: Hadar Plafkin, City Planner
Department of City Planning

FROM: 
Ali Poosti, Acting Division Manager
Wastewater Engineering Services Division
Bureau of Sanitation

SUBJECT: **Convention Center Modernization and Farmers Field Project**

This is in response to your March 17, 2011 letter requesting a review of your proposed project. The Bureau of Sanitation has conducted a preliminary evaluation of the potential impacts to the wastewater system for the proposed project.

WASTEWATER REQUIREMENT

The Bureau of Sanitation, Wastewater Engineering Services Division (WESD) is charged with the responsibility of evaluating the local sewer conditions and to determine if available wastewater capacity exists for future developments. The evaluation will determine cumulative sewer impacts and guide the planning process for any future sewer improvements projects needed to provide future capacity as the City grows and develops.

Projected Wastewater Discharges for the Proposed Project:

Type Description	Average Daily Flow per Type Description (GPD/UNIT)	Proposed No. of Units	Average Daily Flow (GPD)
<i>Proposed</i>			
Stadium	4 GPD/Seat	76,250 Seats	305,000
Exposition Space	80 GPD/1000 SQ.FT	169,650 SQ.FT	13,572
Meeting Room Space	150 GPD/1000 SQ.FT	56,000 SQ.FT	8,400
Total			326,972

SEWER AVAILABILITY

The sewer infrastructure in the vicinity of the proposed project contains two sewer systems. Both sewer systems were evaluated for sewer capacity availability.

Alternative 1

The sewer infrastructure in Alternative 1 is surround by an 8-inch on Pico Bl, and a 10-inch line on Cherry St. Those two lines then join up at Pico and Bond through a network of 12-inch sewer reaches that run along Bond St, Wright St, Venice Blvd, Cherry St, Washington

Blvd, before discharging into a 20-inch sewer line on Union Ave. Figure 1 shows the details of the sewer system within the vicinity of the project.

The current approximate flow level (d/D) and the design capacities at d/D of 50% in the sewer system are as follows:

Pipe Diameter (in)	Pipe Location	Current Gauging d/D (%)	50% Design Capacity
8	Pico Blvd	12	265,000 GPD
10	Cherry St	14	500,000 GPD
12	Bond St	*	615,000 GPD
12	Wright St	22	427,000 GPD
12	Cherry St	*	675,000 GPD
12	Washington Blvd	45**	660,000 GPD
20	Union Blvd	33**	1.95 MGD

* No gauging available; ** projected model flows

Based on your estimated flows, the initial hydraulic assessment indicates that the sewer system will not be able to accommodate your proposed discharge along Alternative 1 route.

Alternative 2

This alternative will connect your project to the existing 66-inch primary sewer line located on 12th Dr. The 66-inch primary line runs along a private street between the Staples Center and the existing Convention Center (West Hall), then along Figueroa St, Venice Blvd., and Grand Ave. Figure 1 shows the details of the sewer system within the vicinity of the project.

The current projected model flow level (d/D) and the design capacities at d/D of 50% in the sewer system are as follows:

Pipe Diameter (in)	Pipe Location	Projected Model d/D (%)	50% Design Capacity
66	12 th Dr	25	31 MGD
66	Figueroa St	22	60 MGD
66	Venice Blvd	22	63 MGD
66	Grand Ave	22	63 MGD

Based on the estimated flows, it appears the sewer system will be able to accommodate the total flow for your proposed project along Alternative 2. However, our guidelines do not allow a direct connection into a primary line due to odor and other operation and maintenance problems. Therefore, the developer will be required to build and connect to a local sewer line that will feed into the existing 66-inch primary line. For more information on design criteria please contact the Bureau of Engineering at 213-482-7030.

Further detailed gauging and evaluation will be needed as part of the permit process to identify a specific sewer connection point. If the public sewer has insufficient capacity then the developer will be required to build sewer lines to a point in the sewer system with sufficient capacity. A final approval for sewer capacity and connection permit will be made at that time. Ultimately, this sewage flow will be conveyed to the Hyperion Treatment Plant, which has sufficient capacity for the project.

If you have any questions, please call Kwasi Berko of my staff at (323) 342-1562.

STORMWATER REQUIREMENTS

The Bureau of Sanitation, Watershed Protection Division is charged with enforcement of the provisions of the National Pollutant Discharge Elimination System (NPDES) permit.

SUSMP AND STORM WATER INFILTRATION

The proposed project is subjected to Standard Urban Stormwater Mitigation Plan (SUSMP) regulations. The proposed project is required to incorporate measures to mitigate the impact of stormwater runoff as outlined in the guidance manuals titled "*Development Best Management Practices Handbook – Part B: Planning Activities*". In addition the "*SUSMP Infiltration Requirements and Guidelines*" prioritizes the use of infiltration and bio-filtration systems as the preferred methods to comply with SUSMP requirements. These documents can be found at: www.lastormwater.org/Siteorg/businesses/susmp/susmpintro.htm. It is advised that input regarding SUSMP requirements be received in the early phases of the project from SUSMP review staff.

GREEN STREETS

The City is developing a Green Street Initiative that will require projects to implement Green Street elements in the parkway areas between the roadway and sidewalk of the public right-of-way to capture and retain stormwater and urban runoff to mitigate the impact of stormwater runoff and other environmental concerns. If the proposed project includes public right-of-way improvements and presents an opportunity to include Green Street elements as part of the project. The goals of the Green Street elements are to improve the water quality of stormwater runoff, recharge local ground water basins, improve air quality, reduce the heat island effect of street pavement, enhance pedestrian use of sidewalks, and encourage alternate means of transportation. The Green Street elements may include infiltration systems, biofiltration swales, and permeable pavements where stormwater can be easily directed from the streets into the parkways. For more information regarding implementation of Green Street elements, please call Wing Tam at (213) 485-3985.

WET WEATHER EROSION CONTROL

A Wet Weather Erosion Control Plan is required for construction during the rainy season (between October 1 and April 15 per Los Angeles Building Code, Sec. 7002). For more

information, please see attached Wet Weather Erosion Control Guidelines.

STORM WATER POLLUTION PREVENTION PLAN

A Storm Water Pollution Prevention Plan (SWPPP) is required for land disturbance activities over one acre. The SWPPP must be maintained on-site during the duration of construction.

WPD staff is available at your request to provide guidance on stormwater issues. Should you have any questions, please contact Kosta Kaporis or my staff at (213) 485-0586.

Attachments:
Wet Weather Erosion Control
Figure 1 – Sewer Map

cc: Kosta Kaporis, BOS
Daniel Hackney, BOS
Rowena Lau, BOS
Eduardo Perez, BOS
Kwasi Berko, BOS

Wet Weather Erosion Control

The official rainy season in the City of Los Angeles is from October 1st to April 15th. During the rainy season, developers are required to provide erosion control measures at their construction sites to prevent dirt and debris from the spilling out into adjacent properties and the public right-of-way.

The procedures for enforcing erosion control requirements are specified below:

1. Department of Building and Safety, Grading Division provides a list of on-going grading projects (projects with active grading permits) to the Bureau of Contract Administration.
2. Bureau of Engineering provides a list of on-going B-permit projects for work in the public right of way to the Bureau of Contract Administration.
3. Contract Administration sends a letter to all developers that have an active grading permit and/or B-permit and that are determined to have a potential for erosion or flood hazard stating that the permittee must prepare an erosion control plan.
4. The erosion control plan must be designed in accordance with standards maintained by the City Engineer and must be prepared by a licensed engineer registered in the State of California.
5. Erosion control plans shall be submitted to the Bureau of Engineering for review and approval no later than September 1st. The plans shall be submitted to the Permit Section of the Bureau of Engineering's district office in which the project is located.
6. Erosion control plans submitted to the Bureau of Engineering will be forwarded to the Grading Division of the Department of Building and Safety for review and comments.
7. Permittees shall make the required revisions to the erosion control plans as indicated by both the Bureau of Engineering and the Department of Building and Safety.
8. Approved erosion control plans will be forwarded from the Bureau of Engineering to the Bureau of Contract Administration and to the Department of Building and Safety.
9. Approved erosion control plans must be maintained on-site prior to September 15th and throughout the entire rainy season.
10. Erosion control inspection will be made primarily by Contract Administration inspectors with assistance from Building and Safety grading inspectors.
11. Violators of erosion control requirements will be cited and grading and/or construction work will be terminated.
12. Debris from construction sites not complying with erosion control measures shall be cleaned up by the developer. If the permittee is non-compliant, the Bureau of Street Services will provide street maintenance and will charge the developer for the cost of clean up.



FIGURE 1
Convention Center Moderization
& Farmers Field Project
Sewer Map

Wastewater Engineering Services Division
Bureau of Sanitation
City of Los Angeles

