

J. UTILITIES AND INFRASTRUCTURE

This section describes existing utility systems in the vicinity of the project site, discusses policies relevant to these systems, evaluates potential impacts resulting from implementation of the proposed project, and identifies mitigation measures to reduce the significance of potential impacts. The analysis examines water supply, wastewater, storm drainage, solid waste and energy.

1. Setting

This section describes existing conditions, as they relate to the proposed project, of the water supply, treatment, and distribution system; the wastewater treatment and collection system; solid waste collection and disposal; storm drainage; natural gas and electric utilities; and telecommunications services in the City of Oakland. Relevant planning policies are also described.

a. Utilities and Infrastructure. A description of the utility infrastructure serving the project site and vicinity is provided below.

(1) Water. The project site is served by existing water supplies, treatment facilities, and distribution systems, which are operated and managed by the East Bay Municipal Utility District (EBMUD) as described below. Information in this section is based on information provided in the EBMUD *Urban Water Management Plan*¹ and the Water Supply Assessment (WSA)² prepared for the proposed project and included as Appendix D.

Water Supply. EBMUD provides potable water to approximately 1.3 million people throughout portions of Alameda and Contra Costa counties, including the City of Oakland. EBMUD obtains approximately 90 percent of its water from the Mokelumne River watershed, and transports it through pipe aqueducts to temporary storage reservoirs in the East Bay hills. EBMUD has water rights and facilities to divert up to a daily maximum of 325 million gallons per day (mgd) from the Mokelumne River.³ However, this allocation may be constrained by: upstream water use by prior water right holders; downstream water use and other downstream obligations, including protection of public trust resources; drought, or less-than-normal rainfall for more than a year; and emergency outage.

¹ East Bay Municipal Utility District, 2005. *Draft Urban Water Management Plan 2005*. September.

² East Bay Municipal Utility District, 2005. *Water Supply Assessment for MacArthur Transit Village Project, Oakland*. September 11.

³ East Bay Municipal Utility District, 2005, op. cit.

Average daily water demand within the EBMUD service area was 211 mgd in 2006.⁴ This demand is adjusted for conservation and recycled water program savings. Demand is projected to increase to 258 mgd by 2010 and 277 mgd by 2020.⁵ The Mokelumne River can no longer meet EBMUD's projected customer demands during drought periods, even with 25 percent rationing imposed on total customer demand.⁶

EBMUD is actively involved in securing supplemental water supplies to meet customer demands during drought periods. In dry years, the Freeport Regional Water Project (FRWP) would deliver up to 100 mgd of water from the Sacramento River to EBMUD customers. The FRWP is anticipated to be in service by 2009. Implementation of this and other water supply projects would reduce the potential for severe water rationing and associated economic losses during drought periods.

Water Treatment Facilities. There are six water treatment plants in the EBMUD water supply and distribution system. Combined, the six plants have a treatment capacity of over 375 mgd. The Orinda Water Treatment Plant (WTP) supplies water to portions of Oakland, including the project site. The Orinda WTP has the largest output of EBMUD's treatment plants with a peak capacity of 200 mgd and is currently operating at approximately 70 percent capacity.⁷ At the treatment plant, water is subject to coagulation, filtration, and disinfection prior to being distributed to the public.

Water Distribution Systems. Water distribution systems in Oakland are divided into pressures zones covering approximately 200-foot elevation ranges. As a result, water pressure ranges from 40 to 130 pounds per square inch (psi). The project site is located in the Central Pressure Zone, which provides water service to customers within an elevation range of 0 to 100 feet. Water pressure is generally adequate throughout the City, but pressure may be reduced in some locations with older water mains if they are not sized based on current standards or have lost capacity due to deterioration. Typically, required pipeline relocations and extensions, in addition to other water distribution infrastructure improvements, are made at the expense of the project applicant in consultation with EBMUD's New Business Office.

The project area is served by 6-inch water mains located beneath 39th Street and Apgar Street. The Oakland Fire Department maintains a minimum fire flow standard of 1,500 gpm

⁴ East Bay Municipal Utility District, 2006. *Annual Report 2006*.

⁵ East Bay Municipal Utility District, 2005, op. cit.

⁶ Ibid.

⁷ East Bay Municipal Utility District, 2005. *Daily Water Supply Report*. August 5.
http://www.ebmud.com/water_&_environment/water_supply/daily_reports/default.htm.

and these lines and associated minor water line connections, are anticipated to have an available capacity.

(2) Wastewater System. The project sites are located in areas served by existing wastewater treatment facilities and collection systems operated and managed by EBMUD.

Wastewater Treatment Facility. EBMUD provides wastewater services to approximately 642,000 people in Alameda and Contra Costa counties.⁸ Wastewater collected by interceptors in the EBMUD service area Special District No. 1, which includes the City of Oakland, flows to the Main Wastewater Treatment Plant (MWWTP), which is located in Oakland near the eastern entrance of the San Francisco-Oakland Bay Bridge. Additionally, EBMUD has two wet weather wastewater treatment facilities (WWF) in Oakland, the San Antonio Creek WWF and the Oakport WWF.

The MWWTP provides both primary and secondary treatment of wastewater. Primary treatment involves the removal of floating materials, oils and greases, sand and silt, and organic solids sufficiently heavy to settle in water. Secondary treatment involves the removal of suspended organic and chemical impurities. The MWWTP has a primary treatment capacity of 320 mgd and a secondary treatment capacity of 168 mgd. Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd. The average annual daily flow into the MWWTP is approximately 80 mgd, representing 48 percent of the plant's secondary treatment capacity.⁹ Treated effluent is disinfected, dechlorinated, and discharged through a deep-water outfall 1 mile off the East Bay shoreline into San Francisco Bay.

In addition, EBMUD has been recycling water at its main wastewater treatment facility since the early 1970s. Recycled water is suitable for land uses that do not require potable water sources, such as golf courses, some agricultural areas, and industrial uses. EBMUD provided more than 8 mgd of recycled water to customers in 2004 and has a goal to recycle 14 mgd by 2020.¹⁰ Incentives used by EBMUD to encourage customers to utilize recycled water include rate discounts on recycled water and low-interest loans used to retrofit buildings so that they can accommodate recycled water.

In January 2002, the City adopted a dual plumbing ordinance, which requires new development to use recycled water provided by EBMUD, and to install a dual plumbing system if recycled water is anticipated to be available. The multi-phased East Bayshore

⁸ East Bay Municipal Utility District, 2005, op. cit.

⁹ East Bay Municipal Utility District, 2005. Wastewater Treatment. <http://www.ebmud.com/-wastewater/treatment/>. August 23.

¹⁰ East Bay Municipal Utility District, 2005, op. cit.

Recycled Water Project will supply up to 2.5 mgd of recycled water to portions of Alameda, Albany, Berkeley, Emeryville, and Oakland.

Recycled water use is not planned within the project area.

Wastewater Collection System. The City owns and maintains approximately 1,000 miles of sewer collection pipelines and 7 pump stations within Oakland. Most of the City's wastewater collection system is 50 years old and some of the existing infrastructure is as old as 100 years. The sewer system is connected to trunk lines which convey flows to EBMUD's wastewater interceptors, which consist of 29 miles of reinforced concrete pipes ranging from 1 to 9 feet in diameter. Wastewater from the project site is conveyed through these interceptors to the MWWTP.

The project site is currently served by existing sewer infrastructure located beneath surrounding roadways. Existing infrastructure consists of 36-inch pipelines located beneath 34th, 36th, and 40th Streets and Telegraph Avenue and an 8-inch pipeline located beneath West MacArthur Boulevard. Lateral connections from existing and proposed buildings must be a minimum of 4 inches in diameter. The project site is situated in sewer Sub-basins 50-01 and 50-04. Connections to the sewer system in Telegraph Avenue are part of Sub-basin 50-04 and connections to the sewer system in 40th Avenue are part of Sub-basin 50-01.¹¹

The City of Oakland's infiltration/inflow correction program consists of a 25-year capital improvement program to rehabilitate the existing system in cost-effective areas and add capacity where needed. This program anticipates a 20 percent growth rate throughout Oakland. Mitigation fees are assessed to all new development or redevelopment in sub-basins that have a growth rate greater than 20 percent. This fee represents the development's pro-rata share of the improvements identified by the 25-year plan in anticipation of the greater-than-20 percent development.

(3) Stormwater. The Alameda County Flood Control District was created in 1949 by the State Legislature to provide flood control services to Alameda County. The District's flood control infrastructure includes hundreds of miles of pipelines, channels, creeks, erosion control measures and pump stations. The City of Oakland is within Zone 12, which also includes the City of Emeryville, and is the largest of the District's zones. Zone 12 has approximately 50 miles of closed conduit, approximately 10 miles of earthen and concrete channels, as well as the existing natural waterways, which move stormwater to the San Francisco Bay.¹² Four pump stations (Lake Merritt, Ettie, McKillop, and Temescal) lift

¹¹ Santoso, Gunawan, 2007. Civil Engineer, City of Oakland Engineering Design and ROW Management. Written communication with LSA Associates Inc. July 11.

¹² Alameda County Flood Control and Water Conservation District, 2005. *Report to the Community, Fiscal Year 2005*.

stormwater to the Bay. The project site is within the 14th Avenue Creek, San Antonio, and Damon Slough Watershed.

Recent Flood Control District projects include: modifying Lake Merritt Pump Station for increased channel flow and ease of maintenance; repairs to Glen Echo Creek (Line B); \$7.8 million upgrades to Trestle Glen Creek (line D) and Line D-1 in the Lake Merritt area; restoration of Sausal Creek, Peralta Creek and Arrojo Viejo Creek; realignment of Lions Creek (Line J); repair of pump 4 at Ettie Street Pump Station; coordinating restoration designs for Peralta Creek (Line F). Fiscal Year 2006 projects planned for Zone 12 include: Pump 3 rehabilitation at the Ettie Street Pump Station; restoration and gate reconstruction on Lion Creek (Line J); and rehabilitation of Lake Merritt Pump Station.

The City of Oakland's storm drainage system consists of more than 300 miles of storm drainpipes and 15,000 structures (mostly inlets, manholes, and catch basins). The storm drain system is a network of disjointed private and public drainage ways. City-owned drainage systems are improved drainage facilities located within easements and rights-of-way.¹³ Runoff on the impervious portions of the site is directed by sheetflow primarily towards curbside storm drains. Existing storm drainage facilities within the vicinity of the project site include 36-inch conduits located beneath Telegraph Avenue.¹⁴

(4) Solid Waste. Solid waste and yard trimmings within the City of Oakland are collected by Waste Management of Alameda County. These materials are taken to the Davis Street Transfer Station in San Leandro. The Transfer Station, which has a maximum allowable capacity of 5,600 tons of waste per day, received an average of 3,028 tons per day in 2003.¹⁵ The facility can process up to 320 tons per day of concrete, asphalt, dirt, bricks, wood, and metal. After undergoing processing, waste from the Transfer Station is delivered to the Altamont Landfill in eastern Alameda County. The landfill comprises approximately 2,170 acres (480 acres of permitted landfill area) and has a permitted maximum daily disposal of 11,150 tons per day and an average input of 7,505 tons per day. The landfill is projected to have sufficient capacity to operate until at least 2031 and potential to operate through 2071, depending on waste flows and waste reduction measures.¹⁶

¹³ City of Oakland, 2004. *Public Works Agency Standards, Storm Drainage Design Guidelines*. November.

¹⁴ Oakland, City of, 1974. *Sewer and Storm Drainage Infrastructure Maps*. Revised June 19.

¹⁵ Alameda County Waste Management Authority, 2003. *Alameda County Integrated Waste Management Plan*. February 26.

¹⁶ *Ibid.*

In 1989, the California Legislature enacted the California Integrated Waste Management Act (AB 939), which requires the diversion of waste materials from landfills in order to preserve the decreasing capacity of landfills. Cities and counties in California were required to divert 25 percent of solid waste by 1995, and 50 percent of solid waste by the year 2000. The City of Oakland met this requirement by diverting 65 percent or greater of its waste from 2000 through 2004.^{17,18} AB 939 further requires every city and county to prepare two documents demonstrating how the mandated rates of diversion will be achieved. The Source Reduction and Recycling Element describes the chief source of the jurisdiction's waste, the existing diversion programs, and current rates of waste diversion and new or expanded diversion programs. The Household Hazardous Waste Element describes each jurisdiction's responsibility in ensuring that household hazardous wastes are not mixed with non-hazardous solid wastes and subsequently deposited at a landfill. Oakland's Source Reduction and Recycling Element and its Household Hazardous Waste Element were approved in 1995 by the California Integrated Waste Management Board.¹⁹

The City provides curbside recycling within the City, including the project site. Curbside recycling includes the following materials: glass, aluminum and tin, motor oil, cardboard, magazines and newsprint, and plastic. Recyclable materials are delivered to the Davis Street Transfer Center where they are processed.

Oakland Municipal Code Chapter 15.34 requires building permit applications for new construction, demolition, or alterations and additions (with a valuation of \$50,000 or greater) to be accompanied by an approved Waste Reduction and Recycling Plan (WRRP). The WRRP is required to document the ways that the applicant will reduce the quantity of construction and demolition debris disposed at landfills by 65 percent or more. The City does not approve building permits for projects until the WRRP is approved.

The California Integrated Waste Management Board (CIWMB) estimates an average waste generation rate of 2.5 pounds per 1,000 square feet of commercial use²⁰ and 5 pounds per unit per day for multi-family residential uses.²¹

¹⁷ California Integrated Waste Management Board, 2005. *Jurisdiction Profile for City of Oakland, Waste Stream Information Profiles*. www.ciwmb.ca.gov/profiles/.

¹⁸ Mosley, Ferial, Recycling Specialist, 2007. Written communication with RRM Design Group, October 22.

¹⁹ California Integrated Waste Management Board, 2005, op. cit.

²⁰ Integrated Waste Management Board, 2007. *Estimated Solid Waste Generation Rates for Commercial Establishments*. Website: www.ciwmb.ca.gov/WasteChar/WasteGenRates/Commercial.htm. June.

²¹ Integrated Waste Management Board, 2007. *Estimated Solid Waste Generation Rates for Residential Developments*. Website: www.ciwmb.ca.gov/WasteChar/WasteGenRates/Residential.htm. June.

(5) Energy. The Pacific Gas & Electric Company (PG&E) provides electricity and natural gas service to the City of Oakland, including the project site. Most of Oakland's electrical power is delivered via 12-kilovolt (kV) transmission lines from PG&E Substation L. Substation L receives 155 kV and distributes power to upper downtown Oakland and West Oakland. Local electric and gas distribution lines are located within the project sites. PG&E charges connection and user fees for all new development in addition to sliding rates for electrical and natural gas service based on use. These services are currently available at the project site.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, details requirements to achieve minimum energy efficiency standards of the State of California. The standards apply to new construction of both residential and nonresidential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating and lighting. Compliance with these standards is verified and enforced through the local building permit process.

b. Regulatory Setting. The main documents that are applicable to utilities and infrastructure within and around the project site are the Land Use and Transportation Element of the General Plan and Standard Conditions of Approval.

(1) Oakland General Plan. The Land Use and Transportation Element of the Oakland General Plan includes the following policies related to the provision of utilities and infrastructure:

- Policy N.12.4: Electrical, telephone, and related distribution lines should be undergrounded in commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires make this unneeded. They should also be underground in appropriate institutional, industrial, and other areas, and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward the eventual undergrounding of all existing lines in such places. Where significant utility extensions are taking place in these areas, such as in new subdivisions, utilities should be installed underground at the start.

(2) City of Oakland's Standard Conditions of Approval. The City's Standard Conditions of Approval relevant to this impact topic are listed below for reference. The conditions of approval will be adopted as requirements of the proposed project if the project is approved by the City to help ensure no significant impacts (for the applicable topic) occur, as a result they are not listed as mitigation measures.

COA UTIL-1: Waste Reduction and Recycling. The project applicant will submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an Operational Diversion Plan (ODP) for review and approval by the Public Works Agency.

Prior to issuance of demolition, grading, or building permit. Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition (C&D) recycling. Affected projects include all new construction, renovations/alterations/modifications with construction values of \$50,000 or more (except R-3), and all demolition (including soft demo). The WRRP must specify the methods by which the development will divert C&D debris waste generated by the proposed project from landfill disposal in accordance with current City requirements. Current standards, FAQs, and forms are available at www.oaklandpw.com/Page39.aspx or in the Green Building Resource Center. After approval of the plan, the project applicant shall implement the plan.

Ongoing. The ODP will identify how the project complies with the Recycling Space Allocation Ordinance, (Chapter 17.118 of the Oakland Municipal Code), including capacity calculations, and specify the methods by which the development will meet the current diversion of solid waste generated by operation of the proposed project from landfill disposal in accordance with current City requirements. The proposed program shall be implemented and maintained for the duration of the proposed activity or facility. Changes to the plan may be re-submitted to the Environmental Services Division of the Public Works Agency for review and approval. Any incentive programs shall remain fully operational as long as residents and businesses exist at the project site.

COA UTIL-2: Storm Water and Sewer. *Prior to completing the final design for the project's sewer service.* Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the City. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

2. Impacts and Mitigation Measures

This section discusses potential impacts to infrastructure and utility systems that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, if appropriate. Stormwater and storm drain-related impacts are discussed in Section IV.H, Hydrology and Water Quality.

a. Criteria of Significance. The proposed project would have a significant impact on the City's infrastructure and utility systems if it would:

- Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Violate applicable federal, State, and local statutes and regulations related to solid waste;
- Violate applicable federal, State and local statutes and regulations relating to energy standards; or
- Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.

b. Less-than-Significant Utilities and Infrastructure Impacts. Development of the proposed project would result in the following less-than-significant impacts to utilities and infrastructure.

(1) Water Supply and Distribution. California Senate Bill 610 (SB 610) requires that water retailers demonstrate whether their water supplies are sufficient to meet the projected demand of certain large development projects. In accordance with SB 610, EBMUD prepared a Water Supply Assessment (WSA)²² for the proposed project. In the WSA, EBMUD determined that the project's estimated water demand is accounted for in EBMUD's 2030 water demand projections. According to EBMUD, at buildout, the total increase in water demand resulting

²² East Bay Municipal Utility District, 2005. *Water Supply Assessment for MacArthur Transit Village Project, Oakland*. September 11.

from the proposed project would be approximately 134,300 gpd, an increase of approximately 127,000 gpd over the existing on-site demand of 7,300 gpd. The proposed project would not change EBMUD's 2030 water demand projection and would not result in a new significant increase in water use. While the project would require water main extensions to create service connections to new buildings on each development site, which would be coordinated and financed by the project sponsors, the project would not exceed existing or projected water supply or result in the need for new or expanded water facilities.

In addition, the City's master planning for the distribution system that conveys potable water to customers takes into account future demand projected in the *Urban Water Management Plan*. Adequate capacity of existing water mains to accommodate increased demand generated by the proposed project would be assessed prior to approval of final development plans.²³ If line improvements are required due to the age and condition of the existing lines, upgrades would be made during the project construction period and would not be anticipated to result in significant environmental impacts. Increased water deliveries to the project site would not require additional storage or pumping capacity or require substantial modifications to the existing water lines located within the project site. As such, the proposed project would have a less-than-significant impact on water distribution infrastructure.

Additionally, minimum fire flow requirements (for the purpose of fighting fires) would be assessed at the time of project funding. As previously described, the OFD maintains a minimum fire flow standard of 1,500 gpm.

(2) Wastewater Treatment and Collection. The City of Oakland *Sanitary Sewer Design Guidelines* include average daily flow rates for specific types of development. The average daily flow rate for apartments/condominiums ranges between 150 and 250 gallons per day per unit (gpd/unit)²⁴ for residential uses and 100 gallons per day per 1,000 gross square feet of commercial uses. Average daily flow rates for the proposed project are shown in Table IV.J-1. As shown, development of the proposed project would result in the generation of approximately 134,250 gpd of wastewater (approximately 0.13 mgd).

Wastewater generated by the proposed project represents less than 0.07 percent of the MWWTP's secondary treatment capacity. This wastewater would be accommodated by the MWWTP, which is currently operating at 48 percent of its secondary treatment capacity. The increase in wastewater generated by the proposed project is not substantial in the context

²³ Kirkpatrick, William R., 2007. Manager of Water Distribution Planning, East Bay Municipal Utility District. Letter to Charity Wagner, Contract Planner, City of Oakland. Comments on Revised Notice of Preparation of a Draft EIR for the MacArthur Transit Village Project. June 22.

²⁴ City of Oakland, 2005. *Public Works Agency Standards, Sanitary Sewer Design Guidelines*, Effective: November 2004, revised August 18.

of the entire volume of wastewater processed by EBMUD’s Main Wastewater Treatment Plant. EBMUD has sufficient capacity to treat wastewater flows from the proposed project during dry weather²⁵ and would not require or result in construction of new wastewater treatment facilities or expansion of existing facilities. As such, the proposed project would have a less-than-significant impact on wastewater treatment facilities.

The proposed project would connect to existing 36-inch sanitary sewer lines located beneath 40th Streets and Telegraph Avenue. Wastewater would flow to 36-inch lines beneath 34th and 36th Streets, which empty into EBMUD’s interceptors. The project site is located in Subbasin 50-01 and 50-04, and the City of Oakland PWA has indicted that these basins do not have enough capacity to take the project’s projected sewer base flow. In response, PWA has indicated that the project sponsor would be required to pay for an off-site sewer rehabilitation project to off-set the increase in sewer flow.

The subbasin allocation system is the method by which EBMUD and the City of Oakland ensure that the City does not exceed its city-wide allocation as part of the Wet Weather program. The City has determined that with the proposed project it would exceed its subbasin allocation. Therefore, portions of unused allocation would be re-allocated, through coordination with agreements with EBMUD, to the relevant subbasins to accommodate the project’s projected demand. As of the date of publication of this Draft EIR, this re-allocation has not occurred. As there is sufficient system-wide conveyance and treatment capacity dedicated to the City of Oakland, the fact that the project would cause Subbasin 50-01 and 50-04 to exceed its wet weather allocation prescribed by the City, is not a physical impact.

Implementation of the City’s Stormwater and Sewer Standard Condition of Approval (see COA UTIL-2 on page 388) would ensure that the required impact fees are paid and no significant physical impacts occur.

In addition, all new and upgraded sanitary sewer infrastructure would be designed in accordance with the City’s *Sanitary Sewer Design Guidelines* and would adhere to accepted

Table IV.J-1 Projected Wastewater Generation

Proposed Use	Number of Units/Square Footage	Generation Rate	Total GPD ^a
1-Bedroom Condo	203 Units	150 gpd	30,450
2-Bedroom Condo	382 Units	200 gpd	76,400
3-Bedroom Condo	90 Units	250 gpd	22,500
Commercial	44,000 Sq.Ft.	100 gpd per 1,000 Sq.Ft.	4,400
Community Space	5,000 Sq.Ft.	100 gpd per 1,000 Sq.Ft.	500
Total			134,250

^aGPD = gallons per day.
 Source: City of Oakland, 2005. *Public Works Agency Standards, Sanitary Sewer Design Guidelines.*

²⁵ Kirkpatrick, William R., 2007, op. cit.

engineering principles. In all newly developed areas and/or in all existing area where new sanitary sewers are required, the design is required to include the provisions that the sewer system size and capacity can adequately accommodate the ultimate anticipated conditions.

(3) **Storm Drainage.** The proposed project is not expected to substantially change the amount of impervious surface cover on the project site. However, new or reconfigured storm drainage facilities may be required to direct stormwater to the City-maintained storm drain located beneath Telegraph Avenue. The project applicant would comply with the City's *Storm Drainage Design Guidelines* and any facility improvements would be reviewed by the Public Works Agency as part of the standard approval process. Implementation of the City's Stormwater and Sewer Standard Condition of Approval (see COA UTIL-2 on page 388) would ensure that the construction of new or reconfigured storm drainage facilities would result in a less-than-significant impact.

(4) **Solid Waste.** The proposed project would be served by landfills with the capacity to handle solid wastes generated by both the demolition and operational phases of the proposed project.

As previously described, the CIWMB estimates an average waste generation rate of 2.5 pounds per 1,000 square feet per day for commercial uses and 5 pounds per multi-family residential unit per day. Although solid waste generation rates can vary substantially by specific use, these generation rates can be used to approximate the amount of waste that would be generated by the proposed project. The proposed project would result in the construction of up to 675 high density residential units and approximately 49,000 square feet of commercial uses (including a 5,000 square foot community center space). This would amount to an estimated addition of 3,498 pounds per day (approximately 1.75 tons per day) of solid waste. This represents less than 0.03 and 0.02 percent of the total daily permitted throughput for the Davis Street Transfer Station and the Altamont Landfill, respectively. The amount of solid waste generated by operation of the proposed project would not exceed the capacity of the Davis Street Transfer Station or the Altamont Landfill and would therefore not require the construction or expansion of landfill facilities. As such, operation of the proposed project would have a less-than-significant impact on solid waste facilities.

Demolition activities associated with the removal of existing structures, paved asphalt areas, and utilities would be subject to City of Oakland waste reduction and recycling requirements. Compliance with the City's Waste Reduction and Recycling Standard Condition of Approval (see COA UTIL-1 on page 387) and the Oakland Municipal Code Chapter 15.34, which requires implementation of a Recycling and Waste Reduction Plan for construction and demolition activities, would reduce the amount of waste generated during the construction phase of the proposed project.

In addition, California Waste Solutions currently provides recycling services to the project site. These services contribute to a reduction in solid waste generated by proposed development. The design and location of on-site recycling bins serving new development would be subject to City review and approval prior to issuance of building permits. The proposed project would comply with existing solid waste reduction requirements and would not violate applicable federal, State, and local solid waste statutes and regulations.

(5) Energy. The proposed project would be subject to Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings and would not violate applicable regulations related to energy standards. The proposed project is located in an area that currently receives electrical and natural gas services. Connecting new buildings to existing lines would involve relatively minor improvements to the existing energy infrastructure. Energy consumption would primarily be associated with the provision of housing and commercial uses on the site. The project components would not require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects. As such, the proposed project would have a less-than-significant impact on the provision of electrical services and energy consumption.

c. Significant Utilities and Infrastructure Impacts. The proposed project would not result in any significant impacts to utilities and infrastructure. Implementation of the City's Standard Conditions of Approval would ensure that potential impacts associated with storm drainage, sanitary sewer infrastructure, and demolition wastes are reduced to a less-than-significant level.

d. Cumulative Utilities and Infrastructure Impacts. The following paragraphs provide the cumulative analysis, including a description of the geographic area for each of the utility and infrastructure topics discussed above.

(1) Water Supply and Distribution. The geographic area considered for cumulative water supply impacts is the planning area for EBMUD as it is the water district that serves the City of Oakland and many other East Bay cities. As discussed above, EBMUD accounted for water demands associated with the project within the 2005 Urban Water Management Plan (UWMP), and has prepared a water supply assessment confirming that there is an adequate water supply and infrastructure to accommodate the proposed development together with past, present, existing, pending and reasonably foreseeable future development projects. The UWMP includes an analysis of past, present, existing, pending and reasonably foreseeable future development projects based on the Association of Bay Area Governments' (ABAG's) Projections 2005. Based on the ABAG Projections, the UWMP acknowledges that Oakland is continuing to see revitalization of its downtown area and additional redevelopment is forecasted, with the City of Oakland accounting for the largest share of Alameda County's household growth. The UWMP assumes that almost 45,000

households will be added to Oakland between 2000 and 2030. As a result, no significant cumulative impacts related to water are anticipated to occur.

(2) **Wastewater.** The geographic area considered for the wastewater treatment cumulative analysis is the City of Oakland as the City owns, operated and maintains the wastewater collection system for the City of Oakland. The project site is located within Sub-basin 50-01 and 50-04. EBMUD allocates a certain amount of sewer flow that may be discharged into the interceptor system. Each sub-basin encompasses a specific physical area, and its sewer flows are assigned to a single discharge point from the City's collection system into the EBMUD South Interceptor. The sub-basin allocation system is the method by which EBMUD and the City of Oakland ensure that the City does not exceed its city-wide allocation as part of the Wet Weather program. The City has determined that with the proposed project would exceed its sub-basin allocation. Therefore, portions of unused allocation would be re-allocated, through coordination with agreements with EBMUD, to the relevant sub-basins to accommodate the project's projected demand. As there is sufficient system-wide conveyance and treatment capacity dedicated to the City of Oakland, the fact that the project would cause Subbasin 50-01 and 50-04 to exceed its wet weather allocation prescribed by the City, is not a physical impact and it would not be considered a significant cumulative impact. The allocation system utilized enables EBMUD to ensure that the capacity of its wastewater transport and treatment system is adequate to serve past, present, existing, pending and reasonably foreseeable future development projects.

Inabilities to handle wet weather flows are also a concern of EBMUD. The City of Oakland implements an inflow and infiltration correction program (IICP) to reduce wet weather overflows into its sanitary sewer system. The IICP sets a maximum allowable peak wastewater flow from each sub-basin within the City. The IICP is expected to increase the capacity of the collection system to allow an approximately 20 percent increase in wastewater flows. The City's Public Works Department has stated that it can accommodate the Project-related increases in sewer flows, both under average dry-weather and peak wet weather conditions, within their existing sewage collection and transport system. Similarly, EBMUD has also stated that it can accommodate the projected increases in sewer flow within their wastewater treatment system. Furthermore, the City's implementation of its Standard Conditions of Approval and adherence to the provisions of the IICP would help decrease the amount of inflow and infiltration into the existing wastewater transport system. As a result, past, present, existing, pending and reasonably foreseeable future development projects are not anticipated to require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities; as a result, no significant cumulative impact would occur.

(3) **Solid Waste.** The proposed project together with past, present, existing, pending and reasonably foreseeable future development projects would result in a net increase of solid waste. As discussed above, the waste generated by the proposed project would

amount to an estimated addition of 3,498 pounds per day (approximately 1.75 tons per day) of solid waste. This represents less than 0.03 and 0.02 percent of the total daily permitted throughput for the Davis Street Transfer Station and the Altamont Landfill, respectively. The amount of solid waste generated by operation of the proposed project together with past, present, existing, pending and reasonably foreseeable future development projects is would not exceed the capacity of the Davis Street Transfer Station or the Altamont Landfill and would therefore not require the construction or expansion of landfill facilities. The landfill is projected to have sufficient capacity to operate until at least 2031 and potential to operate through 2071, depending on waste flows and waste reduction measures. As such, the project would not result in a significant cumulative impact related to solid waste. Additionally, demolition activities associated with the removal of existing structures, paved asphalt areas, and utilities for development projects would be subject to City of Oakland waste reduction and recycling requirements. Compliance with the City's Waste Reduction and Recycling Standard Condition of Approval (see COA UTIL-1 on page 387) and the Oakland Municipal Code Chapter 15.34, which requires implementation of a Recycling and Waste Reduction Plan for construction and demolition activities, would help reduce the amount of waste generated during the construction of all new development projects.

(4) Energy. The proposed project together with past, present, existing, pending and reasonably foreseeable future development projects would increase demand for electricity and natural gas as land uses intensify and covert to higher density uses within the City of Oakland, but not to the extent that energy providers have identified a significant adverse cumulative impact. As discussed above, the project would be required to meet current state and local codes concerning energy consumption, including Title 24 of the California Code of Regulations enforced by the City's Department of Building Inspection. The project therefore would not violate applicable statutes and regulations related to energy standards. No significant adverse cumulative energy impacts are expected and the project would not be expected to cause or contribute to any such impact.

