

M E M O R A N D U M

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TO: Commissioners and
Interested Persons

DATE: February 11, 1998

FROM: Staff

FILE NO: F9559/6-86-651-A13

SUBJECT: Annual Report - Relocation of Sludge Facilities

Attached is the City of San Diego's annual report regarding its efforts to relocate the existing sludge processing facilities from Fiesta Island. The report is required by a condition of Coastal Development Permit #F9559/6-86-651 (as amended), which permitted an expansion of the sludge beds on January 23, 1981.

Based on decisions reached during 1991, the City's Waste Management Department prepared a General Development Plan (GDP) for the siting of new facilities at Miramar NAS. These would include solid waste disposal, in addition to sludge processing. A Record of Decision on both the programmatic EIR/EIS for the GDP and a site-specific EIR/EIS for the Metro Biosolids Center was signed by the Navy on September 30, 1994. The City Council certified the environmental documents in December, 1994, and approved the first construction contract at that time. Construction on the replacement facilities began in December, 1994, and is substantially complete; the plant is undergoing functional testing at this time.

Three other related projects are required to complete the overall system before the existing sludge facilities on Fiesta Island can be abandoned and the area restored. These include the Point Loma Sludge Pump Station, the North City Raw Sludge and Water Pipeline and the Fiesta Island Replacement Project Phase II Sludge Pipeline. Construction of all three items is now complete, as is testing of the pump station facility. As soon as the Miramar facilities come on-line, the entire system will be operational.

During 1992 and 1993, the Commission granted permits for mechanical dewatering equipment at Fiesta Island. When the Commission authorized the first permit in 1992 (#6-92-75-G), it expected that the use of mechanical equipment would reduce the number of air-drying beds required on Fiesta Island and allow some restoration activities to begin. In conjunction with the second permit (#6-93-143-G) which authorized seven additional belt filter presses, and by action of the City Council, six previously-existing drying beds were vacated in the spring of 1994; restoration of that portion of the sludge facility was completed on June 21, 1995, when the Park and Recreation Department formally accepted the forty-acre land transfer. An additional eighteen acres of prior sludge drying facilities were abandoned and restored by the end of 1996. According to the current annual report, mechanical dewatering continues to be successful, and the City has not used the remaining air-drying beds at all in

1997. Recently, the Commission granted a non-material amendment to the permit to authorize restoration activities on the remaining acreage, based on a schedule incorporated into a Memorandum of Understanding between the Metropolitan Wastewater Department and the Parks and Recreation Department, with the Parks Dept. assuming full control of the site in December, 1998.

In April, 1996, the City was granted an additional two-year extension of time for removal of the sludge beds and retention of the mechanical dewatering equipment. All Fiesta Island sludge activities are anticipated to cease prior to expiration of the permit, such that no further amendments will be required. However, due to the City's failure to meet the original relocation deadline of January, 1987, and a notable lack of progress in relocation efforts until the past few years, the Commission has been assessing a penalty fee since 1989. Originally this was set at \$1,000,000 a year, but was raised to \$2,000,000 in 1992. The monies are transferred from the Metropolitan Wastewater Department to the City's Parks and Recreation Department, and expended for public access and recreation projects in Mission Bay Park.

For the past few years, the City has petitioned for relief from the sludge mitigation fee in conjunction with its request for time extensions and/or its annual reports. In 1995, the Commission approved an amendment to incorporate a reduction in the mitigation penalty fee from \$2,000,000 to \$1,500,000 annually, based on the significant progress towards relocation demonstrated in 1994. Subsequent requests to either eliminate the fee altogether or further reduce it have been denied, with the Commission confirming its position that the continuance of the mitigation fee is appropriate as long as the public is denied access to existing dedicated public parklands.

If the City maintains its current projections for operation of the new Miramar facility, there will be no further mitigation requirements. Approximately a year ago, the Commission approved the Fiscal Year 1998 Sludge Mitigation Fund Work Program, which constituted allocation of the final year of required mitigation funds. However, because some projects have been completed under budget, and because the funds are kept in an interest-bearing account, there remains a small amount of unallocated monies. Thus, the City will come before the Commission at some future date to propose additional Mission Bay Park projects utilizing the "leftover" funds.

There are a number of attachments/exhibits to the annual report, demonstrating the status of various project components necessary to effect the removal of the sludge facilities from Fiesta Island in Mission Bay Park. Also attached to the annual report are June and September, 1997 accountings of sludge mitigation projects.



THE CITY OF SAN DIEGO



December 29, 1997

RECEIVED

DEC 31 1997

CALIFORNIA
COASTAL COMMISSION
SAN DIEGO COAST DISTRICT

Mr. Chuck Damm, District Director
California Coastal Commission
State of California
3111 Camino del Rio North, Suite 200
San Diego, CA 92108

SUBJECT: Fiesta Island Sludge Processing Facility, Mission Bay, San Diego,
Coastal Development Permit No. 6-86-651, Annual Report

Dear Mr. Damm:

Enclosed is the annual report of the City of San Diego regarding the relocation of sludge processing facilities from Fiesta Island. We expect the new Metro Biosolids Center located at MCAS Miramar to start processing sludge prior to the expiration of our current operating permit at Fiesta Island.

1997 has been a long awaited year of completions for our Department. We have new state-of-the-art facilities substantially complete which will ably meet San Diego's demands through the first half of the next century. We are proud of our work and appreciate the Coastal Commission's role in helping us achieve our goals. I hope you and your staff will be able to join us at two upcoming celebrations: the Fiesta Island Demolition Kick Off this winter (date to be set) and the Metro Biosolids Center Grand Opening in mid-April 1998. We will send detailed information on these events under separate cover.



Metropolitan Wastewater • Public Works

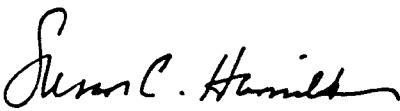
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Tel (619) 533-4200 Fax (619) 533-4267

Mr. Chuck Damm
December 29, 1997
Page 2

Should you have any questions about the attached report, please contact Bill Pearce at (619) 533-5213.

Sincerely,

for 
F.D. SCHLESINGER
Director

WRP:mr:oc

Enclosure: Annual Report

cc: Deborah Lee, California Coastal Commission (w/encl.)
Ellen Lirley, California Coastal Commission (w/encl.)

[MW1-48456-1]

ANNUAL REPORT
FIESTA ISLAND RELOCATION PROJECT
(F9559)

December 29, 1997

Introduction and Table of Contents

In response to the Coastal Commission's directive to relocate the City's sludge drying beds from Fiesta Island on Mission Bay and return the island to recreational use, the City has continued an aggressive construction effort on the Metro Biosolids Center (MBC) during 1997. The City's construction schedule this year has led to the completion of \$329 million (see Figure 1) of projects related to the relocation of the sludge processing facilities. Projects have also been developed for the restoration of the remaining sludge bed areas of Fiesta Island during 1998. This 1997 Annual Report provides a summary of activities associated with the removal of sludge processing facilities from Fiesta Island.

This report contains the following sections:

- I. Background
- II. New Facilities
 - Metro Biosolids Center (MBC)
 - Point Loma Sludge Pump Station
 - Sludge Pipeline Connecting Point Loma Wastewater Treatment Plant (PLWTP) and MBC
 - Raw Sludge Pipeline connecting North City Water Reclamation Plant (NCWRP) and MBC
- III. Fiesta Island Activities
 - Current Operations
 - Fiesta Island Demobilization Operation (FIDO)
 - MOU with Park and Recreation
 - Permit Amendments
- IV. Biosolids Beneficial Use/Disposal
 - Beneficial Use Plan
 - Privatization Projects
 - Offsite Beneficial Use/Disposal
 - Information Exchange
- V. Sludge Mitigation Fund Projects
- VI. Conclusion

Attachment A	Status of Mission Bay Sludge Mitigation Programs, June 20, 1997
Attachment B, D-F	Recent Photos of Metro Biosolids Center
Attachment C	Recent Photo of Point Loma Sludge Pump Station Pumps

- Figure 1 Cost Summary
- Figure 2 Metro System Sludge Processing 1997
- Figure 3 Metro Biosolids Center Site Plan
- Figure 4 Sludge Projects Location Map
- Figure 5 Fiesta Island - Remaining Sludge Processing Facilities
- Figure 6 Fiesta Island - Phase III Final Grading Plan

BACKGROUND

The Metropolitan Sewerage System ("Metro") has been providing wastewater treatment for the City of San Diego ("City") and other local agencies since 1963. Major facilities include the Point Loma Wastewater Treatment Plant (PLWTP) and ocean outfall, a sludge drying facility at Fiesta Island, and a number of pump stations and connecting interceptors. The City began its most recent efforts to upgrade and expand the sewerage system in 1987. This upgrade will increase the capacity from the current 219 million gallons per day (mgd) to 340 mgd (in 2050), enhance the City's water supply through the use of water reclamation, and comply with all state and federal standards.

On November 9, 1995, the Environmental Protection Agency and the Regional Water Quality Control Board approved the City's application for a waiver from secondary treatment requirements and issued a National Pollutant Discharge Elimination System (NPDES) Permit for advanced primary treatment at the Point Loma Wastewater Treatment Plant. The application for the waiver included a commitment by the City to implement 45 mgd of water reclamation capacity by 2010 and to reduce the suspended solids discharged into the marine environment. The City also committed to achieving removal of not less than 58% of the biological oxygen demand (on an annual average) and removal of not less than 80% of the total suspended solids (on a monthly average).

During 1997, the Point Loma Wastewater Treatment Plant met 100% of the compliance requirements stipulated in the NPDES permit. The 30 mgd North City Water Reclamation Plant began the treatment of wastewater on April 24, 1997, thereby moving us closer to our goal of 45 mgd water reclamation capacity by 2010.

On January 23, 1981 Coastal Development Permit #F9559/6-86-651, which allowed for expansion of the sludge beds on Fiesta Island, required that the City diligently pursue the relocation of the entire sludge operation outside of Mission Bay Park. Following numerous studies and Environmental Impact Reports, on October 21, 1991, the City Council adopted Resolution RR-278873 and selected the NAS (now "MCAS") Miramar West site as the location for the Fiesta Island Replacement Project/Northern Sludge Processing Facility (FIRP/NSPF), now known as the Metro Biosolids Center (MBC). Maintaining schedule has been a priority for both MBC design (beginning December 1992) and construction (beginning January 1995).

NEW FACILITIES

Metro Biosolids Center - \$241 million

The Metro Biosolids Center (MBC) is the largest infrastructure project ever undertaken by the City of San Diego. Construction of this facility is substantially complete, and the plant is currently undergoing functional testing. The Operations Building was completed and occupied in September. Site utilities (water, sewer, electricity, gas, telephone), a sludge storage tank and chemical storage and transport systems are all functional. Upon completion of the remaining functional testing, the digested sludge from the PLWTP, currently being dewatered and dried at Fiesta Island, will be pumped to MBC for centrifuge dewatering. Sludge produced at the North City Water Reclamation Plant (NCWRP) and the proposed Mission Valley Water Reclamation Plant will undergo centrifuge thickening and anaerobic digestion at MBC before being dewatered by centrifuges. See Figure 2 for a schematic diagram of sludge processing. Figure 3 provides a plan view of the MBC. Privatized cogeneration facilities have also been located at the MBC and are discussed under "Biosolids Beneficial Use/Disposal".

During 1997, construction was focused on completing the mechanical, electrical, instrumentation, and control systems of this very complex plant. MBC has 231 pumps, over 1,500 motor-operated valves, and more than 2,000 instruments. There are 120 miles of electrical conduit at MBC, enough to connect San Diego to downtown Los Angeles. The MBC has 6,000,000 feet of wire, enough to run from San Diego to the Canadian border. Despite the employment of energy-saving measures, the plant is anticipated to use 5 megawatts, enough to supply power to 1,500 average size homes. Attachments B and D-F show some of the completed facilities.

The MBC, combined with the adjacent landfill, will form an integrated waste management complex. The facilities will be powered and heated by a privatized cogeneration plant running on digester and landfill gas. The beneficially usable sludge cake product (also called biosolids) will be trucked offsite for use as a soil amendment and may also be composted or pelletized.

In June 1997, the Association of Energy Engineers, San Diego Chapter, selected MBC as the "Environmental Project of the Year."

The MBC is one of four projects needed to successfully relocate the sludge processing facility at Fiesta Island (see Figure 4). A description of the other projects follows.

Point Loma Sludge Pump Station - \$38.8 million

Located at the Point Loma Wastewater Treatment Plant (PLWTP), this facility will pump digested sludge currently going to Fiesta Island the additional distance to MBC. This Capital Improvement Project includes the sludge pump station, a sludge holding tank, a sludge blending tank, and extension of the existing underground pipe gallery, a retaining wall and the 12-inch diameter sludge force main leading from the pump

station at PLWTP. This is the second largest pump station of its kind in the United States, and the pumps are the largest ever constructed for this kind of service. Figure C shows the three 34,000 lb pumps.

The pump station was tested twice pumping water to MBC manually on November 1, 1997 and again fully automated on December 2, 1997. The pump station will begin pumping biosolids upon completion of functional testing at MBC.

Sludge Pipeline Connecting PLWTP and MBC (FIRP Phase II Sludge Pipeline) - \$30.6 million

This pipeline will convey digested sludge produced at the PLWTP from the Sunset Cliffs Bridge (near Fiesta Island) to the MBC. On July 6, 1995, the Coastal Commission issued Coastal Development Permit #6-95-40 for construction of approximately 10 miles of the 14-inch diameter sludge pipeline, two subterranean pigging stations, thirteen isolation valve vaults and 22 associated operational valve vaults. Construction began in June of 1996 and was completed in May of 1997.

Raw Sludge Pipeline Connecting NCWRP and MBC - \$12.3 million

This 16" pipeline will carry raw sludge generated at the NCWRP along a 22,200 foot route to the MBC. The project also includes the 20-inch pipeline which will carry centrate from the MBC centrifuges to the North City Water Reclamation Plant pipelines. Both of these pipelines have been completely installed and tested, including five tunnels under sensitive environmental areas at MCAS Miramar. The centrate pipeline will begin carrying centrate when MBC starts processing biosolids. The North City Raw Sludge Pump Station will begin pumping sludge through the sludge pipeline in January 1998.

FIESTA ISLAND ACTIVITIES

Current Operations

Mechanical dewatering activities continued through calendar year 1997. The remaining sludge beds have not been used for sludge drying this year. The City will continue to operate the mechanical sludge dewatering equipment (belt filter presses) at the Fiesta Island Facility until such time as the City is successfully operating the MBC.

Fiesta Island Demobilization Operation (FIDO) - \$2.4 million

In March of 1995 and again in December of 1996, the MWWWD returned parcels of 40 acres and 18 acres respectively to the City's Park & Recreation Department (P&RD). The final 65 acres (see Figure 5) will be returned to P&RD under conditions described in a Memorandum of Understanding (MOU) between MWWWD and P&RD.

The MOU, signed September 26, 1997, established restoration activities to be completed by MWWWD and the associated schedule. MWWWD will use three contracts for the restoration. The first contract provides for the sale and removal of all equipment associated with the current dewatering operations. A second contract includes demolition of concrete curbs, foundations and equipment supports, and covering the concrete slabs with soil by April 1998. The final contract, advertised on November 13, 1997, will run from April 1998 to December 1998. It will complete all grading, drainage, and hydroseeding improvements (see Figure 6).

On October 28, 1997, MWWWD requested an amendment to Coastal Development Permit #6-86-651-A12 to allow for the return of the final 65 acres in accordance with the MOU described above.

BIOSOLIDS BENEFICIAL USE/DISPOSAL

Beneficial Use Plan

In keeping with the City's Biosolids Beneficial Use Plan, all of the biosolids generated by the City have been put to beneficial use in 1997. The material consistently met the federal, state, and local quality requirements making it suitable for direct application to farm land. The biosolids were applied to land in southern California and Arizona. An agronomic demonstration project using San Diego biosolids has continued in California's Imperial Valley as a means to expand the market for biosolids in that region and further goals of the Beneficial Use Plan.

Privatization Projects

On May 30, 1997, the City dedicated and switched on a 6.4 MW privatized cogeneration plant built and operated by Minnesota Methane to serve the MBC and landfill operations facilities. Neo Corporation has designed, constructed, and is operating a landfill gas collection system in the Miramar Landfill. The gas has been sold to Minnesota Methane for use in power production. Methane gas, a by-product of the MBC facility will also be used by Minnesota Methane for power generation at the MBC. The waste heat from the power generation process will be used in warming the anaerobic digester tanks. This facility received the "1997 Golden Watchdog" award from the San Diego County Tax Payers Association.

San Diego City Council approved a contract for the North City Cogeneration Facility in February 1997. This 3.8 MW facility, also owned and operated by Minnesota Methane, will use landfill gas piped to the NCWRP site to provide low cost electricity for the water reclamation plant.

An additional privatization project was pursued to convert dewatered biosolids into dried pellets. However, it is not currently being pursued due to cost considerations. Alternative biosolids processing systems continue to be evaluated in order to lower the cost of beneficial use to the City.

Off-Site Beneficial Use/Disposal

The City currently directs 100% of its biosolids to agricultural beneficial use sites in the State of Arizona and in Riverside and San Diego Counties. All of the biosolids beneficially used are incorporated into the soil after dewatering and supplemental drying on Fiesta Island. While none of the biosolids were landfilled in 1997, biosolids can be disposed of in landfills using our emergency backup landfill hauling contract, if the beneficial reuse option is temporarily interrupted due to weather or other conditions beyond the City's control.

Information Exchange

City staff participated in the first annual California Biosolids Conference in January 1997 in Sacramento. Topics included state and local biosolids regulations, public policy issues, recycling industry directions, the impact of biosolids on the land, and grower experiences. MWWD staff delivered two papers at the Water Environment Federation's Annual Biosolids Specialty Conference. MWWD staff also serve as an officer of Biosolids Recyclers of Southern California, Inc. Information exchange also continues via the City's participation in TriTAC, the Southern California Alliance of POTWs (SCAP), the Biosolids Producers of Southern California, and the Association of Metropolitan Sewerage Agencies (AMSA).

SLUDGE MITIGATION FUND PROJECTS

A separate list and status of these projects are attached to this report (Attachment A) from John Leppert, Assistant to the City Manager, to Ellen Lirley, Coastal Commission staff. The Fiesta Island Improvement Reserve currently maintains a balance of \$3,998,000. A design consultant will be selected to detail improvements as outlined in Mission Bay Park Master Plan Update, as adopted by the City Council and the California Coastal Commission.

CONCLUSION

During the past year the City has continued to demonstrate its commitment to the relocation of the sludge drying facilities on Fiesta Island. The resulting facility, the Metro Biosolids Center, will accommodate the region's needs for many years to come. The 1998 calendar year will be dedicated to the restoration of Fiesta Island to the people of San Diego.

FILE NO. : SLDGMIT. STA

DATE: JUNE 20, 1997

TO: Ellen Lirley, California Coastal Commission

FROM: John Leppert, Assistant to the City Manager

SUBJECT: Status Report - Sludge Mitigation Fund Projects

COMPLETED PROJECTS:

Natural Resource Signage	\$ 2,500	(Nov '90)
Bonita Cove Playground Equipment	40,000	(Sep '91)
Santa Clara Point Parking Lot Study	10,000	(Jan '91)
Tecolote Shores Parking Lot Const.	250,000	(July '92)
Sea World Drive Tree Planting Ph I & II	45,000	(Apr '92)
Fiesta Island Waterline	12,000	(Aug '92)
Bonita Cove Parking Lots Safety Lighting	100,000	(Dec '93)
Wildlife Preserve Sidewalk & Platform	90,000	(Apr '94)
Acquisition of Frost Property	1,610,000	(Mar '93)
S. W. Vacation Isle Parking Lot Safety Lights	22,000	(Apr '93)
W. Mission Bay Dr. Walkway Ph I	80,000	(June '93)
Sail Bay Briarfield Cove Bridge	200,000	(Apr '94)
Hospitality Point Picnic Shelter	70,000	(June '94)
Tecolote Shores ADA Playground & Park	582,500	(June '94)
Sea World Dr. Tree Planting Ph III	30,000	(July '94)
Mission Bay Park Master Plan Update	500,000	(Aug '94)
South Crown Point Walkway	150,000	(Feb '95)
N. Crown Point Access Improvements	10,000	(Nov '95)
W. Mission Bay Dr. Sidewalk Ph II	105,000	(Nov '95)
N. Ski Beach Picnic Shelter	100,000	(Nov '95)
E. Shore Parking Lots Safety Lights	180,000	(June '95)
Vacation Isle Playground	100,000	(Dec '95)
Mariner's Point Picnic Shelter	100,000	(Dec '95)
Mission Pt. Playground to ADA Standards	80,000	(Dec '95)
Bonita Cove Playgrounds ADA Upgrade	160,000	(Apr '96)
Ski Beach Restrooms	300,000	(May '96)
South Shores Phase III	2,350,000	(May '96)
Fiesta Island Youth Camping Facilities	35,000	(July '96)
Water Quality Testing Program	150,000	(Dec '96)
Crown Point Salt Marsh	40,000	(Mar '97)
DeAnza Cove Parking Lot Safety Lighting	100,000	(June '97)

STATUS REPORT

PROJECTS IN PROCESS OF DEVELOPMENT OR UNDER CONSTRUCTION:

Picnic Shelters - \$600,000. Sunset Point, DeAnza Cove, LaPlaya Cove, South Crown Point and Ventura Point have been grouped into one contract. Sites have been selected. Bidding process will be in July '97, with completion scheduled for late Fall '97.

Crown Point Shores Parking Lots Safety Lighting - \$100,000. Under construction. Completion scheduled for July '97.

Bicycle/Pathway Improvements - \$80,000. Rose Creek pathway improvements made. South Shores connection to Fiesta Island completed. Other projects in study stage with additional funding opportunities being sought.

Sail Bay Lighting & Landscaping - \$150,000. Research of previous plans completed. Project will be separated into two contracts. Some community review may be required. Completion scheduled for late Fall '97 on the lighting phase, and Spring of '98 for the landscaping phase.

Information Center Playground ADA Upgrade - \$100,000. Construction scheduled to start in July '97 with completion in September.

Crown Point Playground ADA Upgrade - \$50,000. Project scheduled to be completed in the Spring of '98.

Stormdrain Education Program - \$100,000. Informational educational signage designed and completed with the assistance of the San Diego Zoo. Construction of pedestals for the displays being designed, with placement at 8 locations in the Park now scheduled for late Fall of '97. Additional funding may be required.

Fiesta Island Improvement Reserve - This reserve will reach \$3,998,000 in Fiscal '98. Funds will be used for public improvements on Fiesta Island when the sludge treatment facilities are removed from the island in the next fiscal year, and the area returned to the control of the Park & Recreation Department. Steps are now being made to select a design consultant team to carry out the improvements contained in the approved Mission Bay Park Master Plan Update, as adopted by the City Council and California Coastal Commission. Emphases will be on the improvements proposed in the Master Plan for the southern areas of Fiesta Island.

PROJECTS IN THE FISCAL '98 BUDGET:

With approval of the Fiscal '98 Budget commencing July first, the following projects will begin the development stages:

STATUS REPORT

Picnic Shelters - \$300,000. Three new shelters at the following locations - Central Crown Point, South West Vacation Isle, and South Shores Lagoon Swimming Beach.

Playground ADA Upgrades - \$250,000. Funds included for Bonita Cove, Fanuel Park and at La Playa. Priorities may be reexamined at Bonita Cove, and some shifting of funding recommended at a later date.

Fiesta Island Group Camping Area - \$150,000. Activity Center/Shelter and landscaping improvements.

Parking Lot Safety Lighting - \$100,000. Installation at South Cove, NE Vacation Isle and Sunset Point.

South Shores Phase IV - \$75,000. Development of a General Development Plan for the final development of the area east of the boat launching ramp/lagoon/swimming beach developed areas.

Nature Center - \$50,000. Development of site and construction plans for a nature center facility to be located adjacent to the Northern Wildlife Preserve and new Salt Marsh. Additional funding is being sought.

Fiesta Island Causeway Parking Lot - \$25,000. Existing dirt lot is unusable after wet weather. Project will include more durable surfacing and the installation of lighting if possible. Area is heavily used by bikers, joggers and exercise walkers.

Palm Tree Landscaping, Phase IV - \$25,000. Continuation of landscaping along the flood control channel pathway adjacent to the Robb Field area of the Park.

Bicycle/Walkways Extensions - \$25,000. Additional funding required for planning of a bicycle/walkway entrance to the south end of the bridge over the flood control channel along Sunset Cliffs Blvd.

SLUDGE MITIGATION FUND AUDIT REPORT:

The latest recap report for Period 11 of the current fiscal year is attached.

JOHN C. LEPPERT

cc: Jack McGrory, City Manager
Marcia McLatchy, Park & Recreation Director
Frank Belock, Engineering & Capital Projects Director
Dave Schlesinger, Metropolitan Wastewater Director

**Status of Mission Bay Sludge Mitigation Programs
As Of Period 3 (9/19/97), Fiscal Year 1998**

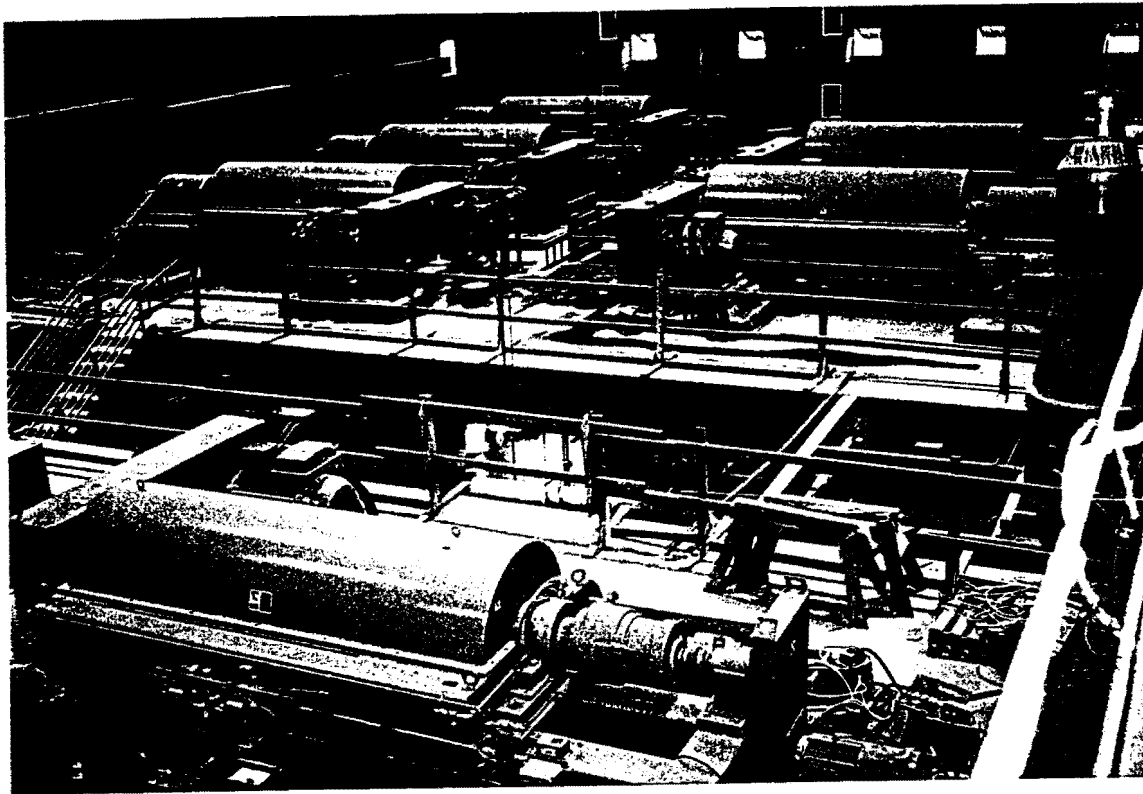
Source: Grant/Projects Status Report C40-320

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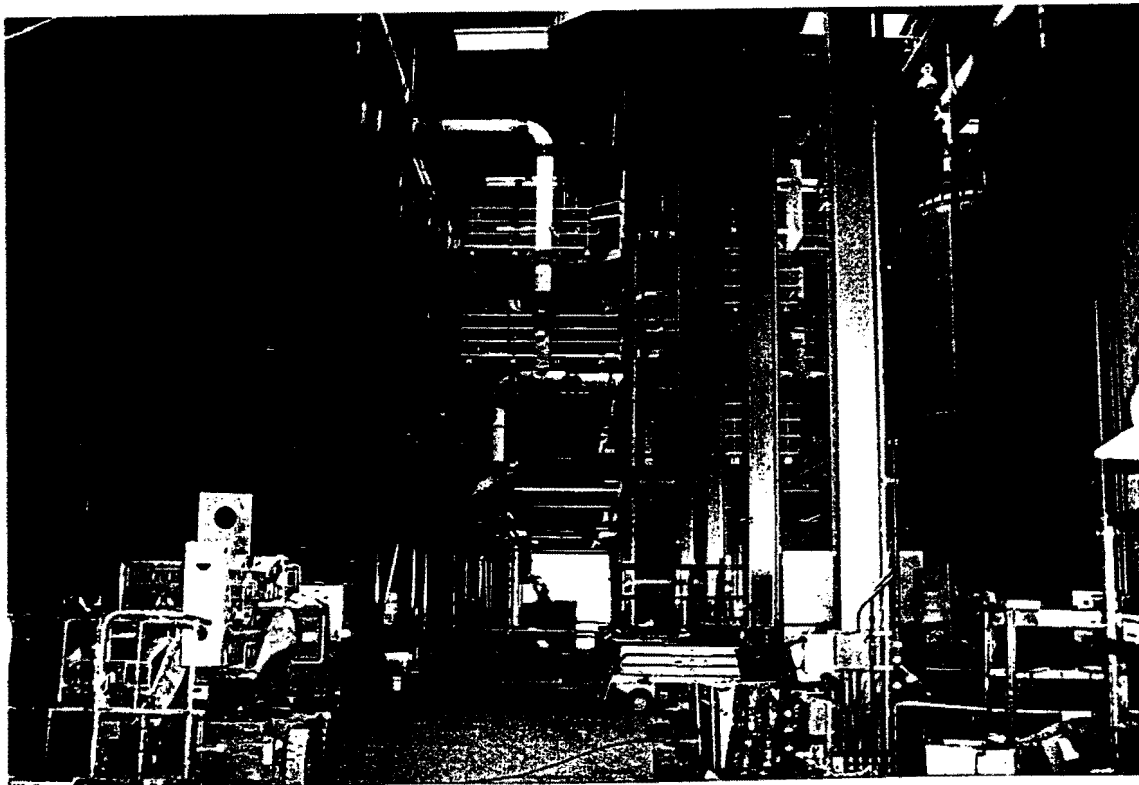
**JOB ORDER
NUMBER**

JOB ORDER		EXPENDITURES											(B)		(A)-(B)	
NUMBER		Appropriations											EXP & ENCUMB		Project to date	
		FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	Encumb					
000001	SURPLUS DUE TO SAVINGS FROM CIP	324,479.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	324,479.58	
000002	SLUDGE FUND INTEREST EARNINGS	765,088.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	765,088.15	
120760	MB WATER QUALITY TESTING	150,000.00	0.00	0.00	0.00	0.00	85,130.67	12,355.16	0.00	0.00	0.00	0.00	97,485.83	52,514.17		
120770	MB STORM DRAIN EDUCATION PROGRAM	100,000.00	0.00	0.00	0.00	28,512.96	6,863.33	0.00	4,768.33	0.00	36,768.34	76,912.96	23,087.04			
220242	S. SHORES DEVELOPMENT PH 2 (MITG. SIGNAGE)	2,500.00	0.00	1,310.70	1,189.30	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00	0.00			
220243	SOUTH SHORES DEVELOPMENT PH 3	2,350,000.00	0.00	0.00	0.00	0.00	164,697.32	1,558,389.11	321,349.12	0.00	256,223.58	2,300,659.13	49,340.87			
220760	SAIL BAY DEVELOPMENT PH 4	200,000.00	0.00	0.00	0.00	0.00	196,337.71	3,662.29	0.00	0.00	0.00	200,000.00	0.00			
220790	NO. WILDLIFE RESERVE REQ. (SIDEWALK & PLATFORM)	85,074.28	0.00	1,800.00	15,081.75	30,458.38	37,734.15	0.00	0.00	0.00	0.00	85,074.28	0.00			
220800	SANTA CLARA PT PARKING LOT (STUDY)	10,000.00	0.00	5,200.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	10,000.00	0.00			
220810	TECOLOTE SHORES PARKING LOT	172,516.57	0.00	8,482.42	135,856.87	28,177.28	0.00	0.00	0.00	0.00	0.00	172,516.57	0.00			
220820	TECOLOTE SHORES DISABLED PLAY AREA	677,119.08	0.00	2,352.03	(2,348.63)	1,504.00	286,129.79	231,760.30	57,719.59	0.00	0.00	677,119.08	0.00			
220830	BONITA COVE IMPROVEMENT (PLAYGROUND EQUIPMENT)	29,775.26	0.00	0.00	29,775.26	0.00	0.00	0.00	0.00	0.00	0.00	29,775.26	0.00			
220840	MB TREE PLANTING (PALM TREES PH 1)	14,216.03	0.00	0.00	14,216.03	0.00	0.00	0.00	0.00	0.00	0.00	14,216.03	0.00			
220850/51	MB MASTER PLAN UPDATE / CONSULTANT SERVICES	600,000.00	10,000.00	3,494.45	351,903.93	58,743.95	24,473.54	26,590.66	20,028.68	(4,850.26)	9,614.85	500,000.00	0.00			
220860	FIESTA ISLAND IMPROVEMENT RESERVE	1,498,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,498,000.00			
220870	BONITA COVE PARKING LOT LIGHTS (SW VACATION ISLDS)	169,711.06	0.00	0.00	0.00	165,888.44	2,233.36	1,589.26	0.00	0.00	0.00	169,711.06	0.00			
220880	SKI BEACH RESTROOMS	242,243.03	0.00	0.00	36,104.03	2,989.15	2,824.69	17,300.26	163,763.38	19,261.52	0.00	242,243.03	0.00			
220890	HOSPITALITY POINT PICNIC CENTER	64,191.92	0.00	1,799.80	8,377.79	15,077.90	8,282.56	26,175.84	4,478.03	0.00	0.00	64,191.92	0.00			
220900	MB PARK TREE PLANTING (PALM TREES PH2 & PH0)	60,783.97	0.00	0.00	28,500.00	0.00	0.00	31,763.18	0.00	0.00	0.00	60,783.97	520.79			
220920	SOUTH CROWN POINT WALKWAY	140,924.02	0.00	0.00	5,003.14	12,033.90	21,590.87	95,946.39	6,349.72	0.00	0.00	140,924.02	0.00			
220930	WEST MISSION BAY DRIVE SIDEWALK	78,357.16	0.00	0.00	11,992.12	49,322.73	17,042.31	0.00	0.00	0.00	0.00	78,357.16	0.00			
229180	MB NORTH WILDLIFE EXPANSION (FROST ACQUISITION)	1,602,369.64	0.00	0.00	0.00	1,598,369.64	0.00	0.00	0.00	0.00	0.00	1,598,369.64	4,000.00			
229190	VACATION ISLAND PLAYGROUND	94,616.00	0.00	0.00	0.00	0.00	5,844.95	12,672.42	71,844.21	138.37	0.00	90,499.95	4,116.05			
229200	NORTH CROWN PT. - ACCESS AND LANDSCAPE IMPROVE	10,097.88	0.00	0.00	0.00	0.00	2,466.40	3,436.65	4,124.49	70.34	0.00	10,097.88	0.00			
229210	WEST MISSION BAY DRIVE SIDEWALK PH 2	106,000.00	0.00	0.00	0.00	0.00	4.20	244.00	31,040.00	62,618.24	0.00	93,906.44	11,093.56			
229220	MARINERS POINT PICNIC SHELTER	92,988.00	0.00	0.00	0.00	0.00	980.12	14,746.37	69,312.74	333.77	0.00	85,373.00	7,615.00			
229230	NORTH SKI BEACH PICNIC SHELTER	101,603.59	0.00	0.00	0.00	0.00	966.23	18,706.05	80,949.31	331.36	0.00	100,952.95	650.64			
229240	BONITA COVE PLAYGROUNDS ADA UPGRADE	109,354.00	0.00	0.00	0.00	0.00	1,128.12	17,919.56	68,072.69	17,344.11	0.00	104,464.48	4,889.52			
229250	MISSION POINT PLAYGROUND ADA UPGRADE	53,934.00	0.00	0.00	0.00	0.00	841.41	12,366.66	36,056.58	432.68	0.00	49,697.33	4,236.67			
229260	FIESTA ISLAND GROUP CAMPING SITE IMPROVEMENTS PH	35,000.00	0.00	0.00	0.00	0.00	0.00	22,437.96	4,733.00	0.00	0.00	27,170.96	7,829.04			
229270	EAST SHORE PARKING LOTS - SAFETY LIGHTS	132,432.54	0.00	0.00	0.00	0.00	125.19	52,478.41	66,264.09	2,233.16	606.31	121,707.16	10,725.38			
229280	BICYCLE / WALKWAY IMPROVEMENTS	80,000.00	0.00	0.00	0.00	0.00	0.00	10,295.41	0.00	0.00	0.00	10,295.41	69,704.59			
229290	SUNSET POINT PICNIC SHELTER	100,000.00	0.00	0.00	0.00	0.00	0.00	1,267.41	7,683.89	365.36	1,653.75	10,970.41	89,029.59			
229300	LA PLAYA COVE PICNIC SHELTER	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	7,336.84	488.70	1,653.75	9,479.29	90,520.71			
229310	VENTURA POINT PICNIC SHELTER	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	7,271.26	488.89	1,653.75	9,413.90	90,586.10			
229320	MISSION BAY INFORMATION CENTER PLAYGROUND	100,000.00	0.00	0.00	0.00	0.00	0.00	1,554.38	14,041.47	2,796.53	3,082.83	21,475.21	78,524.79			
229330	CROWN POINT PLAYGROUND UPGRADE	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	4,620.41	196.82	5,716.95	10,534.18	39,465.82			
229340	DEANZA COVE SAFETY LIGHTING	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	73,191.75	2,282.02	7,075.71	82,549.48	17,450.52			
229350	SAIL BAY WALKWAY LIGHTING AND LANDSCAPING	150,000.00	0.00	0.00	0.00	0.00	0.00	5,999.04	5,607.85	0.00	11,606.89	138,393.11	0.00			
229360	TECOLOTE SHORES PICNIC SHELTER	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	6,976.41	677.06	1,653.77	9,307.24	90,692.76			
229370	SOUTH CROWN POINT PICNIC SHELTER	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	7,314.42	365.23	614.79	8,294.44	91,705.56			
229380	DEANZA PARK PICNIC SHELTER	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	7,453.14	660.21	614.80	8,728.15	91,271.85			
229390	CROWN POINT SAFETY LIGHTING	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	43,637.11	463.43	0.00	44,100.54	55,899.46			
229400	DEANZA PARK PLAYGROUND UPGRADE	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	4,630.70	148.76	5,716.95	10,496.41	39,503.59			
229410	CROWN POINT SALT MARSH	40,000.00	0.00	0.00	0.00	0.00	0.00	0.00	24,959.21	0.00	14,137.15	39,096.36	903.64			
274920	PMT TO BOY SCOUTS FOR FIESTA ISLAND WATER LINE	12,000.00	0.00	0.00	12,000.00	0.00	0.00	0.00	0.00	0.00	0.00	12,000.00	0.00			
J:\Sldge\Reports\Cityrpt.wk4		13,154,375.76	10,000.00	24,439.40	647,653.59	1,967,365.37	441,180.85	1,039,163.00	2,272,260.47	639,146.39	14,540.86	7,402,537.21	5,751,838.55			

ATTACHMENT B
METRO BIOSOLIDS CENTER



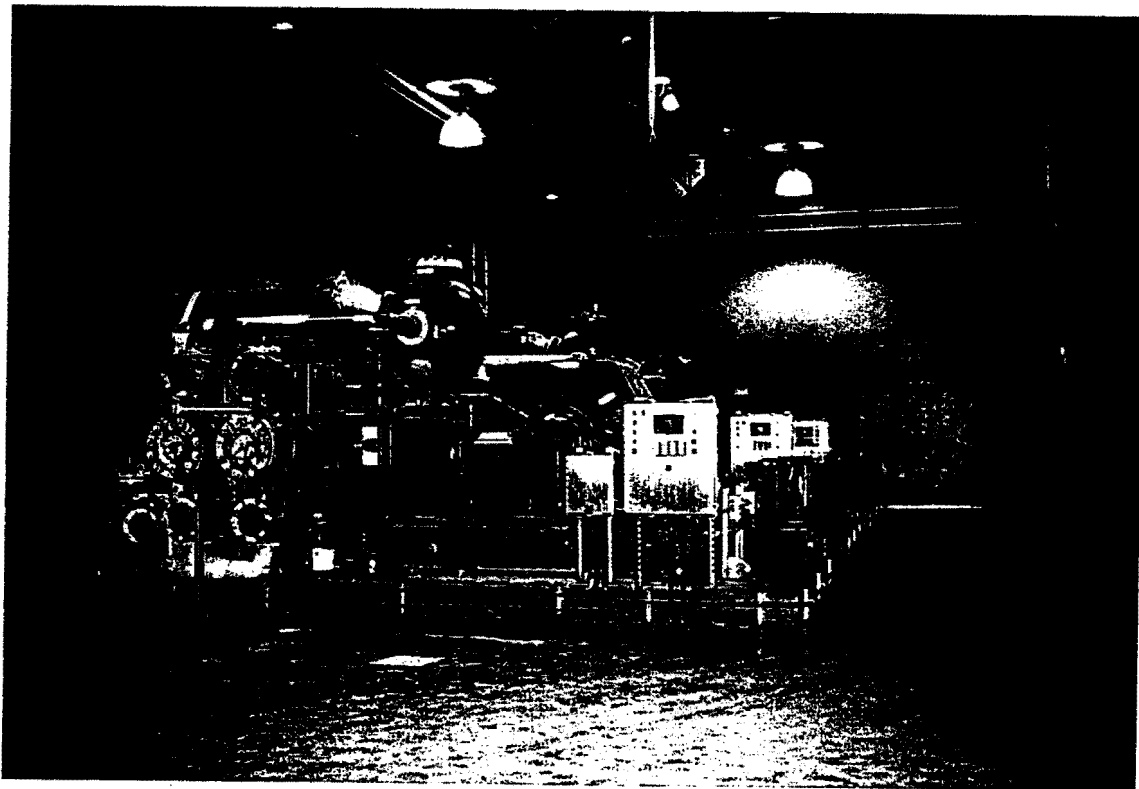
CENTRIFUGE DECK



BIOSOLIDS LOADOUT AREA

ATTACHMENT C

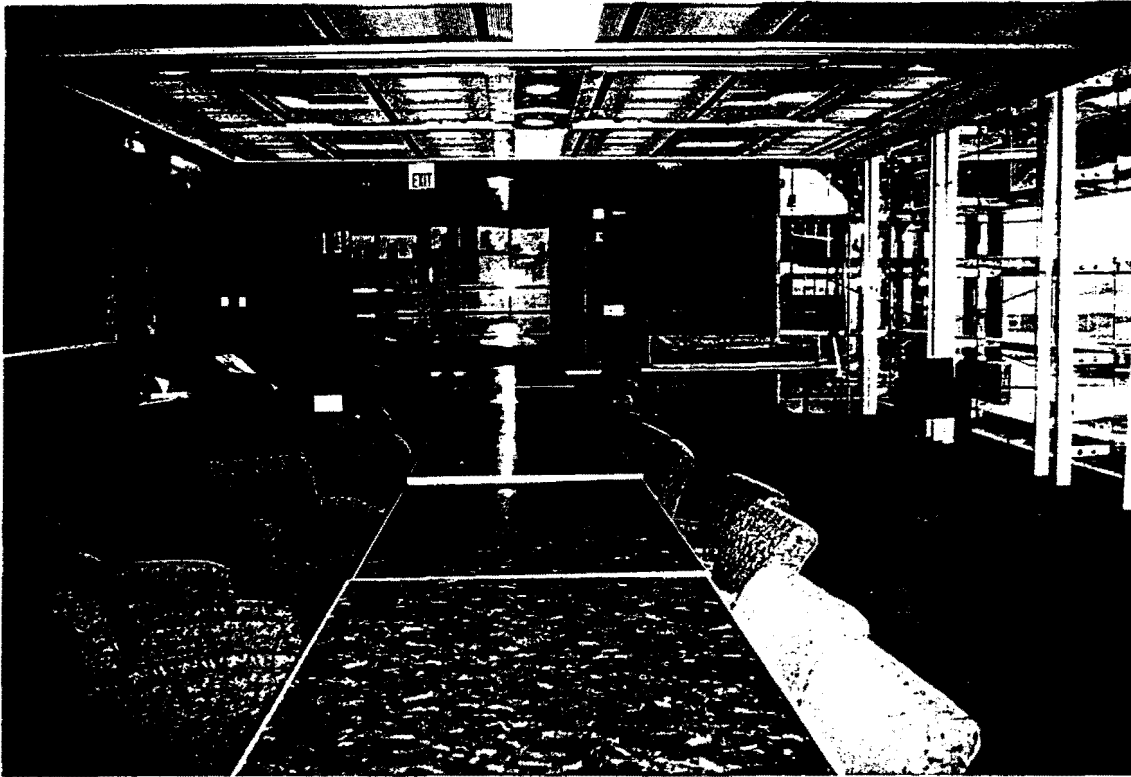
POINT LOMA SLUDGE PUMP STATION



THREE ABEL PUMPS

ATTACHMENT D

METRO BIOSOLIDS CENTER



OPERATIONS BUILDING CONFERENCE ROOM



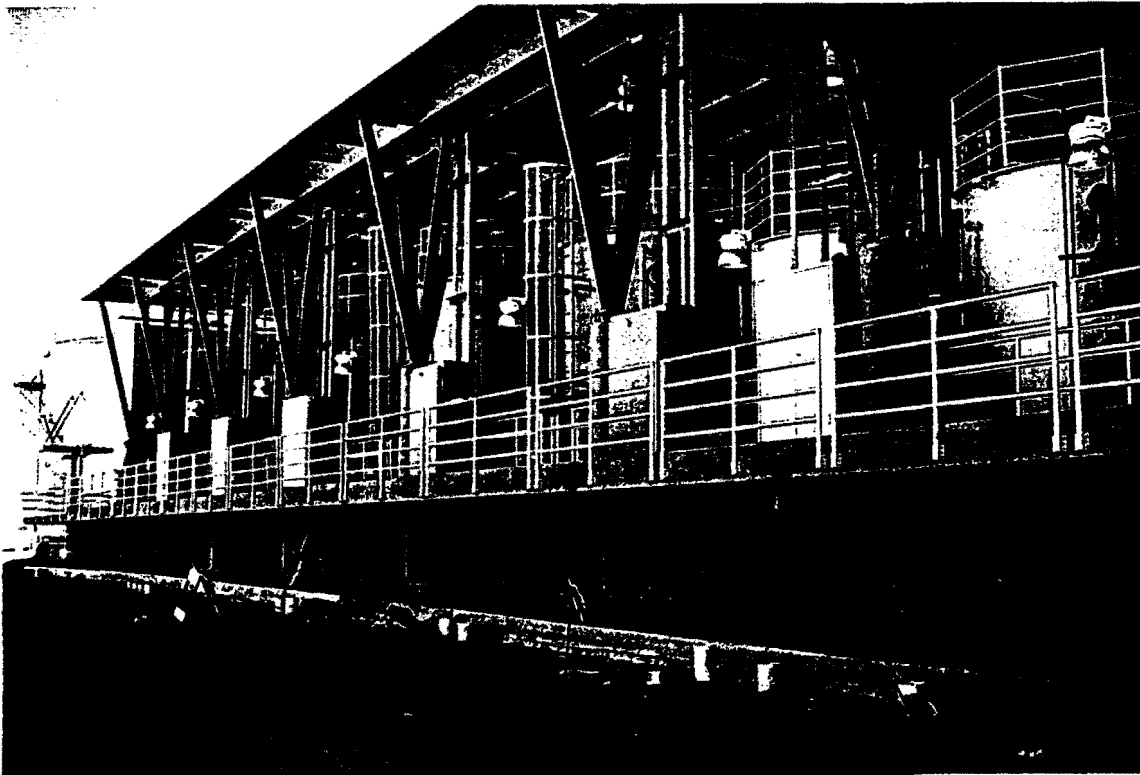
OPERATIONS BUILDING HALLWAY

ATTACHMENT E

METRO BIOSOLIDS CENTER



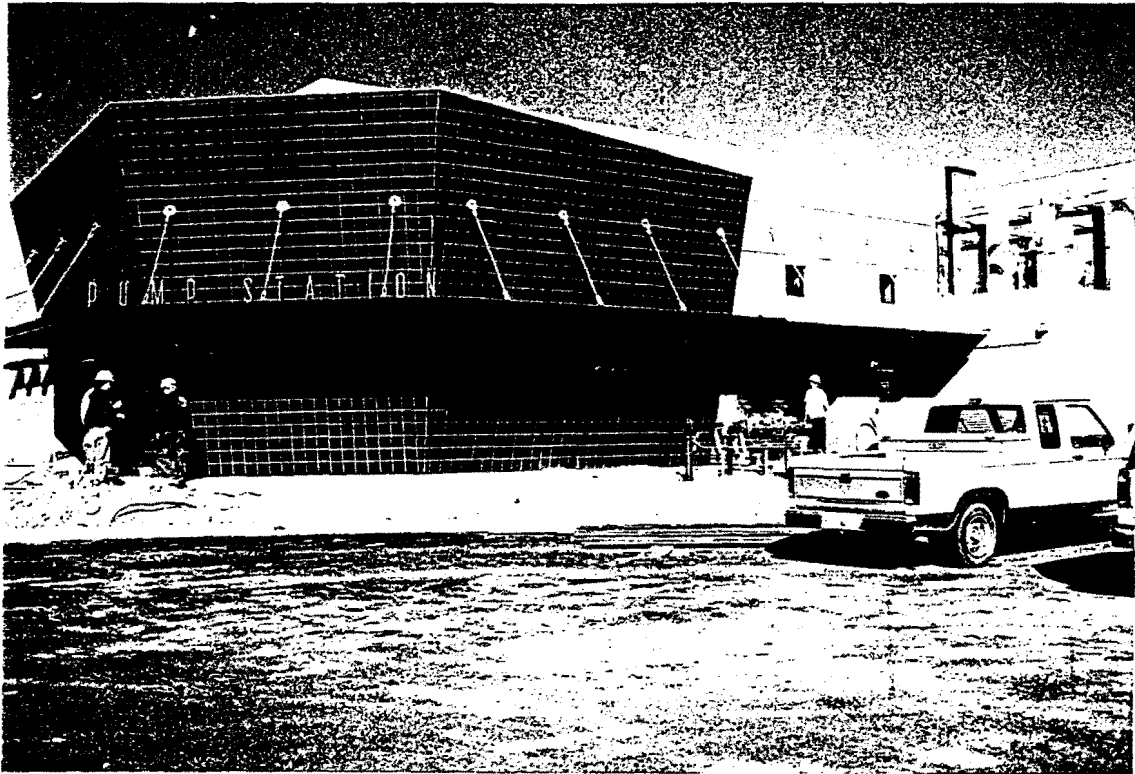
OPERATIONS BUILDING CONTROL ROOM



CHEMICAL BUILDING STORAGE TANKS

ATTACHMENT F

METRO BIOSOLIDS CENTER



SITE PUMP STATION



COGENERATION PLANT

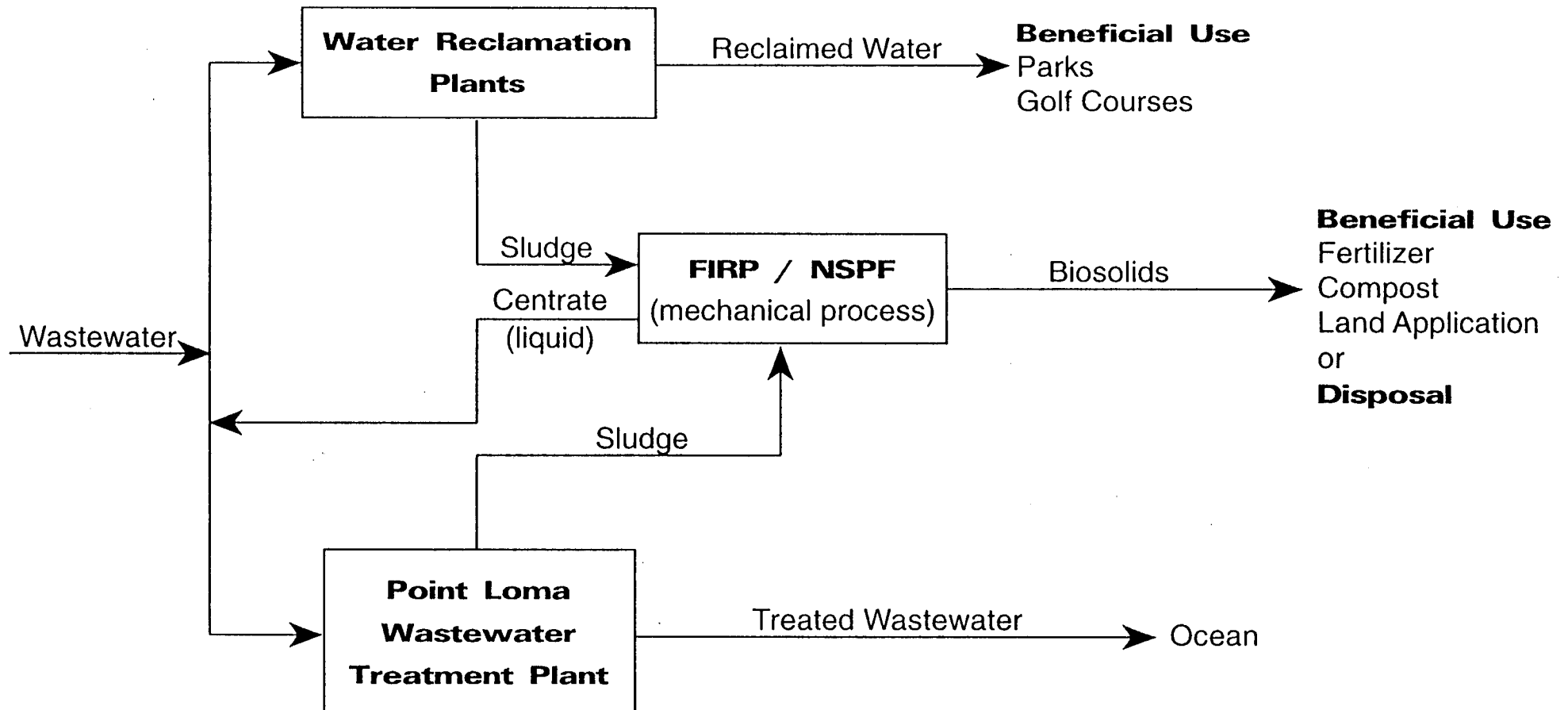
FIGURE 1
CITY OF SAN DIEGO
METROPOLITAN WASTEWATER DEPARTMENT

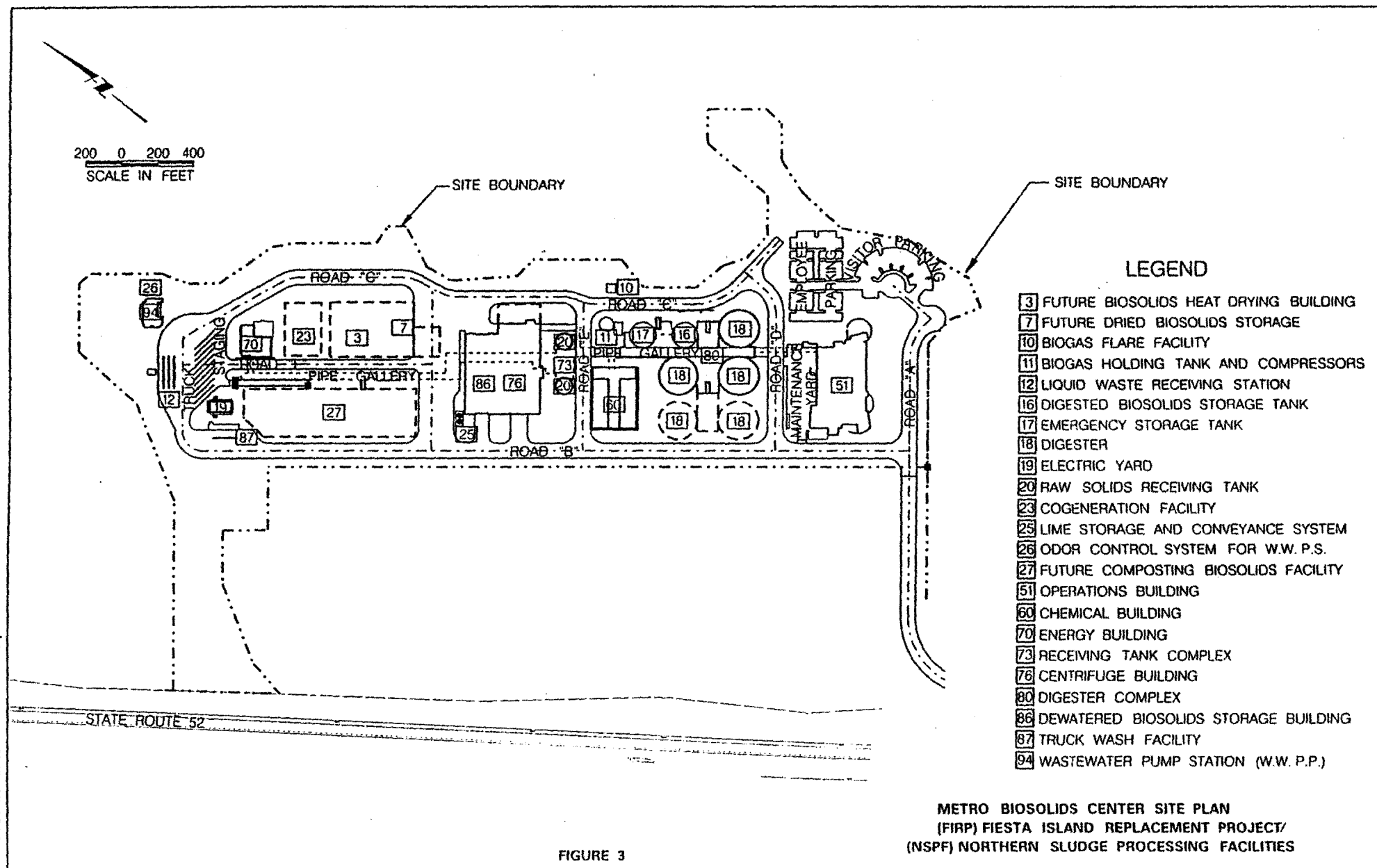
COST SUMMARY FOR MWWD BIOSOLIDS PROCESSING PROJECTS
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PROJECTS	COST
Metro Biosolids Center	\$241.0 Million
Pt. Loma Sludge Pump Station	\$38.8 Million
FIRP Phase I Digested Sludge Pipeline	\$3.9 Million
Sludge Pipeline Connecting PLWTP and MBC	\$30.6 Million
Raw Sludge Pipeline Connecting NCWRP and MBC	\$12.3 Million
Fiesta Island Demobilization Operation (FIDO)	\$2.4 Million
Total	\$329.0 Million

Figure 2

Metro System Sludge Processing (Beginning 1997)





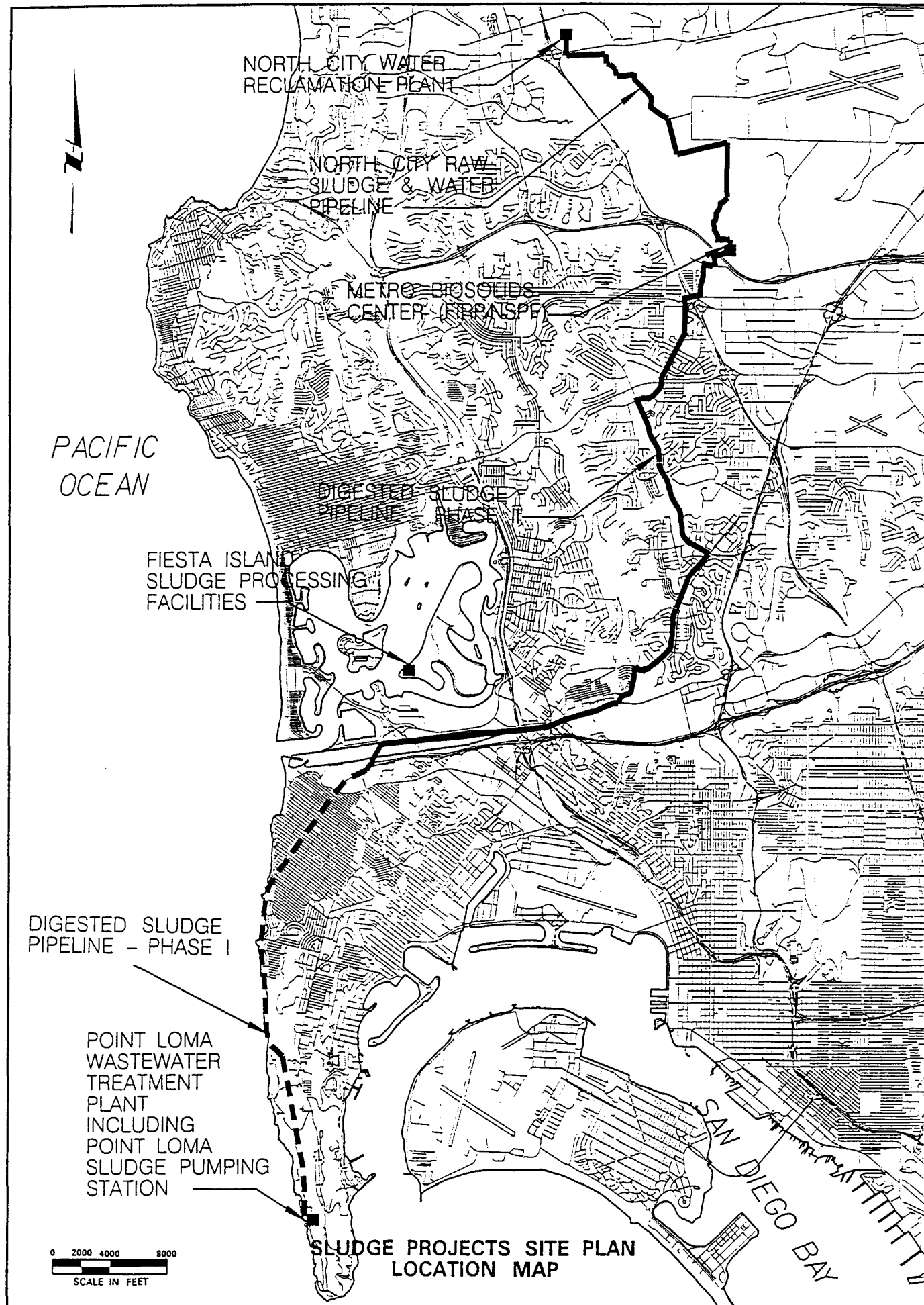


Figure 4

Figure 5



TRUE NORTH

18 Acres Returned
to Park & Rec. Dept.
January, 1997

40 Acres Returned
to Park & Rec. Dept.
March, 1995

PRESERVE

SLUDGE
DRYING
BEDS

BELT
FILTER
PRESSES

OVER
THE
LINE
AREA

AQUATIC FACILITY

PACIFIC PASSAGE

Figure 5: Fiesta Island - Remaining
Sludge Processing Facility

PACIFIC PASSAGE

Figure 6

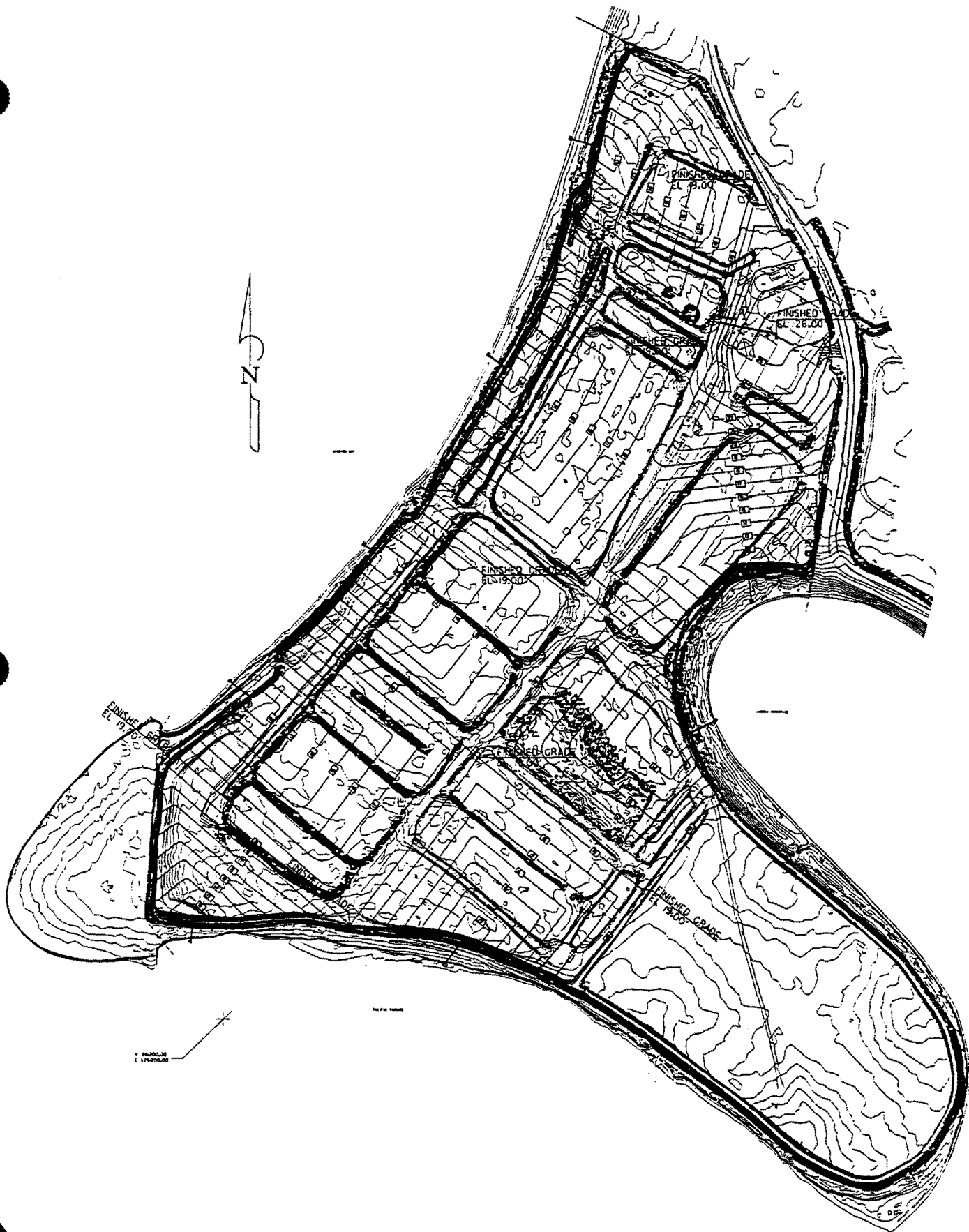


Figure 6: Fiesta Island - Phase III
Final Grading Plan

