

RESOLUTION NO. 1-93

A RESOLUTION APPROVING AND AUTHORIZING EXECUTION OF
AMENDMENT TO AGREEMENT FOR DESIGN SERVICES, SUBJECT TO
CONDITIONS

RESOLVED by the Board of Directors of the Sewer Authority Mid-Coastside, San Mateo County, California, as follows:

WHEREAS, this Board is endeavoring to enlarge the Authority's wastewater treatment facilities consistent with the approved service needs for the area comprising the Authority's three member agencies;

WHEREAS, in furtherance thereof, and after approval by each member agency of a budget therefor, this Board did, by its Resolution 4-91, undertake the final design thereof and entered into an agreement with John Carollo Engineers for such services, entitled "Final Design of Wastewater Treatment Plant Enlargement" (Agreement);

WHEREAS, John Carollo Engineers has advised the Authority that in completing the design services under the Agreement it was necessary to undertake additional services, that it incurred added cost as a result thereof, and that such additional services have been completed;

WHEREAS, such additional services were necessary and appropriate;

WHEREAS, to authorize such additional services it is necessary to amend the Agreement;

WHEREAS, staff has presented to this Board a budget for the additional scope of the design services (Budget) and transmitted it to each of the member agencies;

WHEREAS, such additional scope of design services can only be approved after a budget therefor has been approved by each member agency;

WHEREAS, the City of Half Moon Bay has approved its share of the Budget;

WHEREAS, the Granada Sanitary District (GSD) approved its share of the Budget, provided, however that payment not be made by GSD until funds become available to GSD from special assessment proceedings presently contemplated to be conducted by GSD;

WHEREAS, the Montara Sanitary District (MSD) approved its share of the Budget, provided the special assessment and assessment bond proceedings to fund the sewer treatment plant expansion are completed and funds become available to pay MSD's share. If the special assessment and assessment bond proceedings are not completed, MSD assumes no obligation to pay its share of the Budget; and

WHEREAS, there has been submitted to this Board a proposed amendment to the Agreement by and between the Authority and John Carollo Engineers for the expanded scope of design services;

NOW, THEREFORE, IT IS FOUND, DETERMINED, AND ORDERED as follows:

1. The above recitals are true and correct.
2. The Budget is hereby approved, provided, the conditional provisions stipulated by the Granada Sanitary District and the Montara Sanitary District in the ninth and tenth WHEREAS above, respectively, are met.
3. That certain amendment to the Agreement, entitled "Amendment No. 1 to Task Order No. 6 - Final Design of Wastewater Treatment Plant Enlargement", by and between the Authority and John Carollo Engineers, a copy of which has heretofore been presented to this Board, is hereby, approved, provided, that the provisions stipulated by the Granada Sanitary District and the Montara Sanitary District in the ninth and tenth WHEREAS above, respectively, are met.
4. The Chairman is hereby, authorized and directed to execute said amendment to the Agreement on behalf of the Authority, and the Secretary is hereby authorized and directed to countersign same.
5. A certified copy of this resolution shall be provided to each of the member agencies and John Carollo Engineers.

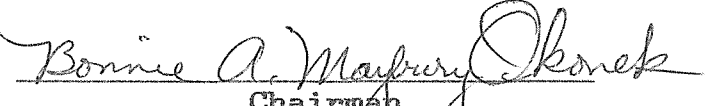
* * * * *

I hereby certify that the foregoing is a full, true and correct copy of a resolution duly and regularly adopted by the Board of Directors of the Sewer Authority Mid-Coastside, San Mateo County, California, at its meeting held on the 22nd day of March, 1993, by the following vote of its members:

AYES, Members: PROSSER, PASTORINO, PATTERSON, WALL, BRIODY
OKONEK

NOES, Members: NONE.

ABSENT, Members: NONE.



Chairman
Sewer Authority Mid-Coastside



Secretary
Sewer Authority Mid-Coastside

AMENDMENT NO. 1 TO TASK ORDER NO. 6 - FINAL DESIGN
OF WASTEWATER TREATMENT PLANT ENLARGEMENT

SEWER AUTHORITY MID-COASTSIDE
AND
JOHN CAROLLO ENGINEERS

ADDITIONAL FINAL DESIGN SERVICES
AND DEFERRAL OF BIDDING SERVICES

This Agreement No. 1 to Task Order No. 6 - Final Design of Wastewater Treatment Plant Enlargement is issued by the Sewer Authority Mid-Coastside (SAM) and accepted by John Carollo Engineers (ENGINEER) pursuant to the mutual promises, covenants, and conditions contained in the Agreement between the above named parties dated February 26, 1990.

PURPOSE

To perform additional final design services for the wastewater treatment plant enlargement project as described in Appendix A and to delete Task 4.0 - Bidding Services. Bidding services will be considered in a future task order for construction management services.

SCOPE OF SERVICES

Task 1.0 - Prepare additional drawings and specifications for the

following items:

- a. Demolition of the existing chlorine contact tanks in their entirety and replace them with two new chlorine contact tank.
- b. A new digester gas holder to dampen gas production fluctuations.
- c. Conversion of the existing sludge decant tank to a sludge holding tank.
- d. A new No. 1 / No. 2 water pump station to replace the existing station to be demolished.
- e. A new flammable material storage building to replace the existing structure to be demolished.
- f. Additional retaining walls to gain space within the plant site.

- g. Plant drain metering station to provide separate flow accounting from influent flows.
- h. Odor control unit water treatment system to enable use of final effluent for scrubbing solution.
- i. Automatic fire protection system (halon and sprinkler systems) to protect new facilities.

Task 2.0 - Perform additional engineering studies and assistance

to SAM as follows:

- a. Prepare a sludge cake handling study to evaluate alternatives to reduce hauling costs in case federal sludge disposal regulations do not permit disposal of sludge locally in the future.
- b. Provide technical assistance to SAM in preparing the Coastal Development and Bay Area Air Quality Management District permits.
- c. Perform analysis of alternative plant layouts to accommodate larger new aeration basins and anaerobic digesters as required by higher influent loadings.
- d. Obtain and test additional soils borings as required to sample soils beneath new structure locations dictated by the revised plant layout.
- e. Chlorine contact tank analysis to compare alternatives for strengthening the existing tank walls versus constructing all new chlorine contact tanks.

PAYMENT TO ENGINEER

Compensation for engineering services under this Amendment shall be on an hourly basis in accordance with the fee schedule contained in Task Order No. 6.

The cost for services performed under this Amendment is \$188,933, as itemized in Exhibit 1.

The maximum budget cost shall be revised as follows:

Original Task Order No. 6 Maximum Budget Cost	\$1,168,000
Deleted Task No. 4 - Bidding Services	(55,439)
Amendment No. 1 to Task Order No. 6	<u>188,933</u>
Revised-Task Order No. 6 Maximum Budget Cost :	\$1,301,494

See "CONDITION OF PAYMENT" below for special conditions regarding the rendering of payment.

EFFECTIVE DATE

This Amendment No. 1 to Task Order No. 6 is effective as of the 22nd day of MARCH 1993, subject to the "CONDITION OF PAYMENT" below.

CONDITION OF PAYMENT

1. The additional scope of design services can only be approved after a budget therefor has been approved by each SAM member agency.
2. The SAM member agencies have taken the following action regarding authorization of payment:
 - a. The City of Half Moon Bay has approved its share of payment.
 - b. The Granada Sanitary District (GSD) approved its share of payment, provided, however that this payment not be made by GSD until funds become available to GSD from special assessment proceedings presently contemplated to be conducted by GSD.
 - c. The Montara Sanitary District (MSD) approved its share of payment, provided the special assessment and assessment bond proceedings to fund the sewer treatment plant expansion are completed and funds become available to pay MSD's share. If the special assessment and assessment bond proceedings are not completed, MSD assumes no obligation to pay its share of the payment;

3. In accordance with 1 and 2 above, payment for Amendment 1 to Task Order No. 6 by SAM to the Engineers will not be made unless, and until such time as, the aforementioned conditions of the Granada Sanitary District and the Montara Sanitary District are met.
4. It is agreed that no payment made hereunder shall be subject to any late charge pursuant to Section 2.5 of the Agreement dated February 26, 1990.


* * * * *

IN WITNESS WHEREOF, duly authorized representatives of SAM and the ENGINEER have executed the Amendment No. 1 to Task Order No. 6 evidencing its issuance by the SAM and acceptance by the ENGINEER.

JOHN CAROLLO ENGINEERS

SEWER AUTHORITY MID-COASTSIDE

By 
Walter A. Bishop
Partner

By 
Chairperson

By 
Partner

By 
Secretary

EXHIBIT 1

ESTIMATED COSTS FOR AMENDMENT NO. 1 TO TASK ORDER NO. 6

Task	Classification: Rate:	Partner \$125.40	Project Manager EVII \$117.60	Project Engineer EVI \$107.40	Discipline Engineer EVI \$107.40	Design Engineer EIV \$88.30	Design/ Drafting DES.V \$61.70	Word Process WP \$47.00	Total Hours	Total Costs
Task 1 - Additional Drawings										
a. Chlorine Contact Tank		1	4	8	7	14	32	4	70	\$ 5,713
b. Digester Gas Holder		3	7	18	14	28	63	7	140	11,325
c. Sludge Holding Tank		3	7	18	14	28	63	7	140	11,325
d. Relocated 1W/2W Building		4	14	35	27	54	122	14	270	21,886
e. Flammable Storage Bldg.		1	3	8	6	12	27	3	60	4,848
f. Additional Retaining Walls		3	7	18	14	28	63	7	140	11,325
g. Plant Metering Station		1	4	8	7	14	32	4	70	5,713
h. Odor Control Unit Water Treat.		2	6	16	12	24	54	6	120	9,697
i. Fire Protection System		2	6	16	12	24	54	6	120	9,697
Subtotal Task 1		20	56	147	113	226	510	58	1,130	\$ 91,529
Task 2 - Engineering Studies and Assistance										
a. Sludge Cake Handling Study		4	24	80	32	80	120	0	340	\$ 29,731
b. Permit Assistance		4	30	8	0	8	4	0	54	5,842
c. Revised Plant Layout Analysis		4	40	110	24	110	60	0	348	33,102
d. Additional Soils Borings			(Harza Kaldveer)							2,765
e. Chlorine Contact Tank Analysis		4	16	80	60	80	24	0	264	25,964
Subtotal, Task 2		16	110	278	116	278	208	0	1,006	97,404
Totals		36	166	425	229	504	718	58	2,136	\$188,933

APPENDIX A

FOR

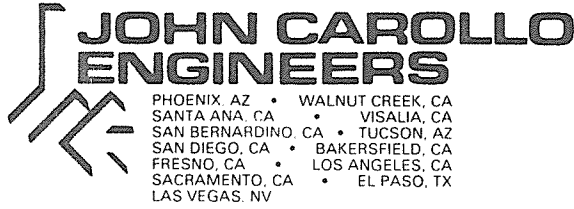
AMENDMENT NO. 1

TO

TASK ORDER NO. 6

**FINAL DESIGN OF THE WASTEWATER
TREATMENT PLANT ENLARGEMENT PROJECT**

*APPENDIX A IS THE INFORMATION THAT WAS PRESENTED IN THE
SEPTEMBER 1992 SAM BOARD PACKET.



RECEIVED

SEP 24 1992

SEWER AUTHORITY MID-COASTSIDE

September 23, 1992

Sewer Authority Mid-Coastside
P.O. Box 3100
Half Moon Bay, California 94019

Attention: Mr. Gary Valladao, Manager

Subject: Wastewater Treatment Plant Enlargement
Task Order No. 6 Final Design

Gentlemen:

Thank you for requesting our estimate of proposed scope changes on the Sewer Authority Mid-Coastside (SAM) wastewater treatment plant enlargement final design project.

Our design team has worked diligently and efficiently throughout the project to produce a detailed, high quality design. We are very pleased that difficult design challenges, complicated by a very small and congested site, have been overcome. However, our design has required more effort than originally anticipated, and our budget will be exceeded before the project is complete.

In preparing our final design fee estimate, we credited the full amount of our preliminary design costs (\$199,603) on the assumption that all the predesign effort could be applied to final design. Actually, much of the preliminary design became unusable and resulted in additional effort. Higher influent loadings, as determined by the Design Criteria Review Study, required larger aeration basins and digesters than stated in the preliminary design report. Thus, the plant layout, individual layouts of unit processes, paving and grading, sizing of facilities and other work had to be redone. The revised plant layout was particularly difficult because the site is congested and severely constrained.

In addition, we experienced design changes that evolved from changed existing conditions, more in-depth analysis of complex problems, and our on-going review process with SAM. We have made every effort to absorb these changes, but have been unable to do so. In the interest of keeping the project advancing, we did not feel it was appropriate to request additional compensation as each change occurred. Notwithstanding, we have made the changes as required for the benefit of the project.

Mr. Gary Valladao
Sewer Authority Mid-Coastside
September 23, 1992
Page 2

We believe we have incurred additional effort in the following areas:

- Unanticipated extra effort to revise the plant layout in a very congested site to accommodate the new larger aeration basins and anaerobic digesters
- Additional studies to identify required changes to predesign concepts in the interest of saving operating costs
- Additional new facilities to enhance the reliability of the expanded plant
- Additional new facilities required for the project but not anticipated at the predesign stage

Our proposed scope changes are itemized in the enclosed five attachments. Attachment A provides a detailed description of the scope changes and justifications for the changes. Estimated costs for the changes are summarized in Attachment B. Attachment C is an estimate of labor hours required to add new design drawings. Attachments D - Revised Project Elements List and Attachment E - Original versus Final Drawing Lists, are included to document impacts to the project scope.

We appreciate the opportunity to submit the proposed scope changes, and look forward to presenting them to you and the SAM Board of Directors on September 28.

Very truly yours,

JOHN CAROLLO ENGINEERS



Walter A. Bishop, Jr.
Partner



Michael J. Britten
Project Manager

WAB:MJB/bp

ATTACHMENT A

PROPOSED SCOPE ADDITIONS

1. Design Drawings and Specifications Changes (Please Refer to Attachment C):

a. New Chlorine Contact Tank:

Reason for change: During predesign, as-built drawings of the existing chlorine contact tank were unavailable. However, it was assumed that the chlorine contact tanks could be expanded by adding on to the existing structure. During final design, we obtained as-built drawings and determined that the existing chlorine contact tank walls were not designed to withstand increased forces that would occur during construction. Thus, adding on to the existing tanks would require major modifications to strengthen the walls and would be more costly than constructing an entirely new chlorine contact tank.

Impact:

- 1) Studies made to determine the most feasible and cost effective approach to increasing chlorine contact time. (See Item 7 of Attachment A).
- 2) Yard piping revisions to accommodate the new chlorine contact tank.

b. Digester Gas Holder:

Reason for change: A digester gas holder is required to equalize gas production and prevent pressure surges in the new high efficiency boiler, high-tech waste gas flare, and cogeneration system. The need for a gas holder was not determined until final design. The gas holder allows storage of gas without the associated leakage of gas into the atmosphere which occurs with floating domes on digesters.

Impact: One additional drawing.

c. Sludge Holding Tank:

Reason for change: A sludge holding tank was added to improve the operating efficiency of the sludge dewatering system and allow weekend storage of sludge to be dewatered. Without a sludge holding tank, dewatering would be required seven days a week, increasing operating labor costs. The tank also simplifies the operation of the anaerobic digesters, which reduces the likelihood of operator error and release of odors.

Impact: One additional design drawing.

d. Relocated 1 Water/2 Water (potable water) Building:

Reason for change: The plant layout was revised to accommodate larger new aeration basins. Larger aeration basins were required to accommodate the higher loadings established during the Design Criteria Review Study. As a result, the plant road and the existing 1W/2W building at the northeast corner of the site must be demolished and rebuilt at a new location. This was not anticipated during predesign because it was not known at the time that the plant layout would be revised.

Impact: Additional mechanical, structural, and electrical drawings for construction of a new building.

e. Flammable Materials Storage Building:

Reason for change: This structure was added to meet federal requirements for safe storage of flammable materials. The existing flammable materials building will be demolished to make room for the new odor scrubber. Due to the revised plant layout, no other free space was available. The need for a new flammable materials building was not anticipated during development of the final design scope of services.

Impact: Design drawings for a new concrete slab, paving and grading, and electrical in addition to preparation of specifications for the prefabricated building.

f. Additional Retaining Walls:

Reason for change: Additional retaining walls were required to increase the level space on the plant site to accommodate the revised plant layout. A new retaining wall was added at the northwest corner of the plant to increase the space needed for sludge hauling trucks. A retaining wall was also required to gain additional space for the chemical storage/pump area and the new digester gas holder.

Impact: Additional structural drawings of the retaining walls.

g. Plant Drain Metering Station:

Reason for change: This structure was added to improve plant operating efficiency by measuring the recycle flow rate to the head of the plant. Recycle flows are necessary to determine actual influent flows to the treatment process and actual final effluent discharge flows. Recycle flow metering was not anticipated during predesign.

Impact: A portion of an additional design drawing.

h. Odor Control Unit Water Treatment System:

Reason for change: An odor control unit water treatment system was added to reduce the amount of potable water use. JCE normally designs scrubber systems to use potable water for the scrubbant solution to prevent clogging the media. Other sources, such as treated effluent, contain particulants and may eventually clog the scrubber. The scrubber will operate 24 hours a day and use approximately 43,000 gallons per day. This amounts to nearly 20 times the current potable water use by SAM. Thus, a water filtration and softening system was added to allow use of final effluent and will save significant amounts of potable water.

Impact: Additional drawing details and specifications for a package type unit.

2. Sludge Cake Handling Study

Reason for change: A study was made to evaluate alternatives to improve sludge cake handling beyond the scope described in the preliminary design report. The study evaluated the concept of using large capacity hauling trucks to haul sludge to outlying sites, such as Novato. Large trucks would be necessary to save hauling costs in case the Ox Mountain site could no longer accept SAM's sludge because of potentially more strict disposal requirements mandated by the Regional Board. After studying alternative layouts, it was concluded that the original debris box transport concept should be retained for the time being to avoid high costs for more sophisticated cake handling

equipment. The need for updated sludge cake handling facilities should be revisited if Ox Mountain can no longer receive SAM's sludge.

Impact: Labor hours associated with this change are itemized in Attachment B.

3. Permit Assistance

Reason for change: Assistance in obtaining the Coastal Development Permit and Bay Area Air Quality Management District permit was provided in areas where design expertise was required. Significant time was spent addressing detailed comments by the Coastal Commission and providing extra information to meet changing air permit requirements. Our scope of design services did not include permit assistance.

Impact: Additional time for the design team as itemized in Attachment B.

4. Revised Plant Layout Analysis

Reason for change: Higher loadings determined from the Design Criteria Review Study necessitated larger new aeration basins and digesters than stated in the preliminary design report. The need for the revised layout was not discovered until final design began. The larger aeration basins and digesters caused shifting of most of the new structures in order to fit within the existing plant boundaries. The layout analysis resulted in a delay of approximately one month.

Impacts: Labor hours to study layout alternatives and meet with SAM are itemized in Attachment B.

5. Additional Soils Borings

Reason for change: In revising the plant layout, some structure locations changed. Two new borings were required to sample soil beneath the secondary clarifiers and sludge dewatering facilities. Our soils subconsultant, Harza/Kaldveer, recommended obtaining the new samples because the underlying soil characteristics vary substantially, and extrapolating existing soil boring data would be risky.

Impact: Cost of borings and laboratory testing per the attached invoice.

6. Chlorine Contact Tank Analysis

Reason for change: A study was made to review alternatives for expanding the chlorine contact tanks. Please see Item A.1 of this attachment.

Impact: Additional labor hours as itemized in Attachment B.

7. Automatic Fire Protection Systems

Reason for change: Sophisticated automatic fire protection systems were provided for new structures and electrical equipment to comply with the local fire marshal's requirements. Automatic systems are not normally provided and were not included in our design scope.

Impact: Research of available systems, preparation of specifications and control diagrams, and additional yard piping design.

ATTACHMENT B

ESTIMATED COSTS FOR ADDITIONAL SCOPE ITEMS

Task	Classification: Rate:	Partner \$125.40	Project Manager EVII \$117.60	Project Engineer EVI \$107.40	Discipline Engineer EVI \$107.40	Design Engineer EIV \$88.30	Design/ Drafting DES.V \$61.70	Word Process WP \$47.00	Total Hours	Total Costs
1. Additional Drawings										
a. Chlorine Contact Tank		1	4	8	7	14	32	4	70	\$ 5,713
b. Digester Gas Holder		3	7	18	14	28	63	7	140	11,325
c. Sludge Holding Tank		3	7	18	14	28	63	7	140	11,325
d. Relocated 1W/2W Building		4	14	35	27	54	122	14	270	21,886
e. Flammable Storage Bldg.		1	3	8	6	12	27	3	60	4,848
f. Additional Retaining Walls		3	7	18	14	28	63	7	140	11,325
g. Plant Metering Station		1	4	8	7	14	32	4	70	5,713
h. Odor Control Unit Water Treat.		2	6	16	12	24	54	6	120	9,697
i. Fire Protection System		2	6	16	12	24	54	6	120	9,697
Subtotal		20	56	147	113	226	510	58	1,130	\$ 91,529
2. Sludge Cake Handling Study		4	24	80	32	80	120	0	340	\$ 29,731
3. Permit Assistance		4	30	8	0	8	4	0	54	5,842
4. Revised Plant Layout Analysis		4	40	110	24	110	60	0	348	33,102
5. Additional Soils Borings		(Harza (Kaldveer)								2,765
6. Chlorine Contact Tank Analysis		4	16	80	60	80	24	0	264	25,964
Subtotal, Items 2 - 7		16	110	278	116	278	208	0	1,006	97,404
Totals		36	166	425	229	504	718	58	2,136	188,933

ATTACHMENT C

DESIGN DRAWING AND SPECIFICATIONS CHANGES

<u>Item</u>	<u>Drawings</u>	<u>Estimated Hours</u>
1a. Chlorine Contact Tank (original scope - retro- fit existing contact tanks)	C-1 Demolition Plans & Sections	80
	C-2 Plans & Sections	120
	C-3 Sections & Details	120
	C-4 Sections & Details	<u>120</u>
	Subtotal	440
All New Chlorine Contact Tank	C-1 Plans & Sections	120
	C-2 Sections & Details	120
	C-3 Sections & Details	120
	DM-6 Chlorine Contact Tank Demolition	100
	E- (50% of Drawing)	<u>50</u>
Subtotal	510	
	Net Increase	70
1b. Digester Gas Holder	D-11 Digester Gas Holder	140
1c. Sludge Holding Tank	SD-9 Sludge Holding Tank	140
1d. Relocated 1 Water/2 Water Building	PW-1 1W & 2W Pump Station	160
	E-5 1W & 2W Pump Station Single Line	10
	E-17 1W & 2W Pump Station Schem	50
	I-15 P&ID 1W & 2W Pump Station	<u>50</u>
Subtotal	270	
1e. Flammable Storage Building	Y-7 (25% of Drawing)	35
	E- (25% of Drawing)	<u>25</u>
	Subtotal	60
1f. Additional Retaining Walls	Y-6, Y-7 (50% of Each Drawing)	140
1g. Plant Drain Metering Station	Y-7 Misc. Structures (50% of Drawing)	70
1h. Odor Control Unit Water Processing System	OCU-1, OCU-2	120
1i. Fire Protection System	Y-1, Y-2 Piping Plans, E-16	<u>120</u>
	Total Labor Hours	1,130

ATTACHMENT D
REVISED PROJECT ELEMENTS LIST⁽¹⁾

1.0 Headworks

- 1.1 New influent flow meter (Parshall flume) and influent channel modifications.
- 1.2 Two mechanically cleaned raw sewage bar screens and one manually cleaned bar screen, and associated screenings handling equipment consisting of a belt conveyor and portable dumpster.
- 1.3 Two influent pumps plus space for a future pump and associated piping modifications, including a new separate discharge header for the new pumps.

2.0 Primary Clarifiers

- 2.1 Conversion of the existing rectangular secondary clarifiers to primary clarifiers, including extension of the existing primary pipe gallery.
- 2.2 Channel aeration for the influent feed channels.
- 2.3 Replace existing primary scum pneumatic ejector with a progress cavity pump.

3.0 Aeration Basins

- 3.1 Retrofit the existing aeration basins with fine bubble diffusion systems.
- 3.2 Two new aeration basins equipped with fine bubble air diffusers. ~~Existing blowers will be utilized.~~ **One blower will be added. Existing aeration basins will be approximately 25 percent larger than the existing basins.**

4.0 Final Clarifiers

- 4.1 Two circular clarifiers with conventional center well feed and bottom sludge removal systems.
- 4.2 Final clarifiers will be designed for peak wet weather flow conditions (15 mgd).

5.0 Return Activated Sludge (RAS)/Waste Activated Sludge (WAS) Pump Station

- 5.1 A RAS/WAS pump station enclosed in a building. Pumps will be variable speed controlled with variable frequency drives.

6.0 Chlorine Contact Tank

- 6.1 ~~One new chlorine contact tank basin with concrete dividing walls located between the existing chlorine contact tanks.~~ **Two new chlorine contact tanks constructed in place of existing tanks.**
- 6.2 ~~New concrete dividing walls to replace the existing plastic baffles.~~
- 6.3 ~~Modifications to the existing chlorine contact bottom drain system to allow complete drainage of the tanks.~~
- 6.4 ~~Demolition of the existing tank drain pump station and addition of a new tank drain pumping station.~~

7.0 Anaerobic Digesters

- 7.1 Two new anaerobic digesters with fixed covers.
- 7.2 Ferrous chloride injection system to control sulfides.
- 7.3 Sludge heating system consisting of spiral heat exchangers, and a boiler fueled by digester gas.
- 7.4 Digesters will be mixed by pump mixing.

8.0 Sludge Dewatering

- 8.1 One additional belt filter press and new belt conveyor installed in the existing Mechanical Building.
- 8.2 Conversion of the two existing belt filter presses from aerobic sludge dewatering to anaerobic sludge dewatering.
- 8.3 Mechanical Building ventilation system and odor scrubbing system.
- 8.4 Extension of the Mechanical Building to house the new belt filter press and a future third belt filter press.
- 8.5 New sludge cake hopper facilities and enclosure for odor control.

9.0 Sludge Thickening

- 9.1 A dissolved air flotation (DAF) thickener to thicken waste activated sludge.
- 9.2 New thickening building and odor control system.

10.0 Chlorination System Improvements

- 10.1 Design of sodium hypochlorite and sodium bisulfate chlorination/dechlorination system, including storage tanks, metering pumps, and controls. The new chlorination system will be located in the area of the existing decant tank. The existing chlorine storage area will be converted to ~~an odor scrubbing facility.~~ **a standby generator building.**
- 10.2 Removal of chlorinators and sulfonators in existing chlorine analyzer room. Chlorine analyzers will remain in place.

11.0 Effluent Pump Station

- 11.1 ~~Replacement of the existing effluent pumps and~~ A third new effluent pump ~~all~~ with variable frequency drive.
- 11.2 ~~Extension of the existing effluent pump station building and wet well to~~ accommodate the third effluent pump.

12.0 Workshop

- 12.1 Structural modifications to the existing building to improve seismic resistance.
- 12.2 Minor interior improvements including demolition of existing sludge box.

13.0 Operations Center

- 13.1 Prefabricated Operations Center to include office space, computer room, and training room.

14.0 Miscellaneous Improvements

- 14.1 One additional grit pump to be used as a standby unit.
- 14.2 One progressive cavity primary scum pump to replace the existing scum ejector system and one recessed impeller pump to pump septage wastes.
- 14.3 One cushioned check valve for the No. 3 water system pump and one automatic strainer.
- 14.4 Improvements to existing piping and equipment coating systems where necessary.
- 14.5 Improvements to the potable water system.
- 14.6 **Additional retaining walls to increase area of level space.**

14.7 Automatic fire protection systems (halon and sprinkler systems for all new buildings and electrical equipment).

15.0 Data Transmission System

15.1 A data transmission system to monitor major equipment status and operating parameters. The data transmission system will use radio telemetry signals transmitted from major process centers throughout the plant. The data transmission system will be housed in the Administration Building. Existing radio telemetry and computer equipment will be used as much as possible. The Scope of Services does not include changes to the existing computer or existing software.

16.0 Digester Gas Holder

16.1 One low pressure digester as holder to store digester gas and reduce fluctuation of gas flow to the digester gas-fired boiler and future cogeneration system.

17.0 Sludge Holding Tank

17.1 Conversion of the existing decant tank to store digested sludge prior to dewatering.

18.0 Relocated 1-Water/2-Water Building

18.1 One new 1-water/2-water building to replace the existing building which will be demolished to make room for a relocated plant road.

19.0 Flammable Materials Storage Building

19.1 A prefabricated flammable materials storage building to house paints and lubricants. Building will be mounted on a new concrete slab.

20.0 Plant Metering Station

20.1 A new Parshall flume metering vault to meter plant recycle flows to the headworks.

21.0 Odor Control Unit Water Treatment System

21.1 A skid-mounted pressure filtration system to treat plant effluent prior to use for scrubbant solution.

(1) Bold face type denotes additions to the scope. Lined-through items denote deletions.

ATTACHMENT E

ORIGINAL VS. FINAL DRAWING LIST

Original Drawing List per Task Order No. 6			Final Drawing List		
Sheet No.	Dwg No.	Description	Sheet No.	Dwg No.	Description
<u>General</u>			<u>General</u>		
1	G-1	Cover Sheet	1	G-1	Cover Sheet and Location Maps
2	G-2	Location Maps and Drawing Index	2	G-2	Drawing Index and Design Criteria
3	G-3	Flow Schematic and Design Criteria	3	G-3	Flow Schematic and Hydraulic Profile
4	G-4	Hydraulic Profile	4	G-4	Existing Treatment Facilities Plan
5	G-5	Existing Treatment Facilities Plan			
<u>Typical</u>			<u>Demolition</u>		
6	T-1	Typical Details			Included in Specs
7	T-2	Typical Details			Included in Specs
8	T-3	Typical Details			Included in Specs
9	T-4	Typical Details			Included in Specs
10	T-5	Typical Details			Included in Specs
11	T-6	Typical Details			Included in Specs
12	T-7	Typical Details			Included in Specs
13	T-8	Typical Details			Included in Specs
14	T-9	Typical Details			Included in Specs
15	T-10	Typical Details			Included in Specs
16	T-11	Typical Details			Included in Specs
17	T-12	Typical Details			Included in Specs
18	T-13	Typical Details			Included in Specs
19	T-14	Typical Details			Included in Specs
20	T-15	Typical Details			Included in Specs
21	T-16	Typical Details			Included in Specs
<u>Yard</u>			<u>Yard</u>		
22	Y-1	Paving, Grading, & Drainage	14	Y-1	Paving, Grading, Drainage, & Landscaping
23	Y-2	Piping Plan No. 1	15	Y-2	Piping Plan No. 1
24	Y-3	Piping Plan No. 2 and Details	16	Y-3	Piping Plan No. 2 and Details
25	Y-4	Piping Profiles No. 1	17	Y-4	Piping Profiles No. 1
26	Y-5	Piping Profiles No. 2	18	Y-5	Piping Profiles No. 2
27	Y-6	Misc. Structures, Plans, Sections, Details No. 1	19	Y-6	Piping Sections
28	Y-7	Landscaping Plan and Details	20	Y-7	Misc. Structure and Details

Original Drawing List per Task Order No. 6			Final Drawing List		
Sheet No.	Dwg No.	Description	Sheet No.	Dwg No.	Description
					<u>1W and 2W Pump Station</u>
			21	PW-1	Plans, Sections, & Details
		<u>Headworks</u>			<u>Headworks</u>
29	H-1	Demolition Plan, Sections, and Details	22	H-1	Plan, Sections, and Details
30	H-2	Plan, Sections, and Details	23	H-2	Plan, Sections, and Details
31	H-3	Plan, Sections, and Details	24	H-3	Sections and Details
32	H-4	Sections and Details	25	H-4	Details
33	H-5	Sections and Details			
		<u>Primary Clarifiers - Conversation of Existing Secondary Clarifiers</u>			<u>Primary Clarifiers 3 & 4</u>
34	P-1	Demolition Plan and Sections	26	P-1	Top Plan and Sections
35	P-2	Demolition Sections and Details (See Clarifiers A-B)	27	P-2	Sectional Plan and Sections
36	P-3	Plan and Sections (Primary Clarifiers C-D)	28	P-3	Sections-Clarifiers 3 & 4
37	P-4	Sections and Details (Primary Clarifiers C-D)	29	P-4	Sections
38	P-5	Pump Gallery Plans and Sections	30	P-5	Sections-Pump Rooms
39	P-6	Pump Gallery Sections and Details	31	P-6	Sections and Details
		<u>Aeration Basins</u>			<u>Aeration Basins</u>
40	AB-1	Demolition Plan and Section (Basins A and B)	32	AB-1	Top Plan and Sections-Basins 1 and 2
41	AB-2	Plans, Modified Basins A and B	33	AB-2	Sectional Plan and Sections-Basins 1 and 2
42	AB-3	Sections and Details, Modified Basins A and B	34	AB-3	Sections-Basins 1 and 2
43	AB-4	Sections and Details, Modified Basins A and B	35	AB-4	Sections and Details-Basins 1 and 2
44	AB-5	Plan and Sections, Basins C and D	36	AB-5	Top Plan-Basins 3 and 4
45	AB-6	Plan and Sections, Basins C and D	37	AB-6	Sectional Plans-Basins 3 and 4
46	AB-7	Sections and Details, Basins C and D	38	AB-7	Sections and Details-Basins 3 and 4
47	AB-8	Sections and Details, Basins C and D	39	AB-8	Sections and Details-Basins 3 and 4
48	AB-9	Distribution Structure Plan and Sections	40	AB-9	Sections and Details-Basins 3 and 4
49	AB-10	Fire Bubble Diffusion Air Schematic and Miscellaneous Details			
		<u>Final Clarifiers</u>			<u>Secondary Clarifiers</u>
50	FC-1	Plan and Sections	41	SC-1	Plan and Sections
51	FC-2	Sections and Details	42	SC-2	Sections and Details
52	FC-3	Splitter Box - Sections and Details			
		<u>RAS/WAS and Chemical Feed Building</u>			<u>Mechanical Building 2 and DAFT</u>
53	RS-1	Plan and Sections	43	MBD-1	Plan and Sections
54	RS-2	Sections and Details	44	MBD-2	Sections and Details
55	RS-3	Sections and Details	45	MBD-3	Sections and Details
56	RS-4	Sections and Details	46	MBD-4	Sections and Details
57	RS-5	Elevations and Architectural	47	MBD-5	Architectural Elevations and Details
58	RS-6	Schedules, Sections, and Miscellaneous	48	MBD-6	Structural Sections and Details
			49	MBD-7	Schematics

Original Drawing List per Task Order No. 6			Final Drawing List		
Sheet No.	Dwg No.	Description	Sheet No.	Dwg No.	Description
<u>Chlorine Contact Tank</u>			<u>Chlorine Contact Tank</u>		
59	C-1	Demolition Plans and Sections	50	C-1	Plan and Sections
60	C-2	Plan and Sections	51	C-2	Sections and Details
61	C-3	Sections and Details	52	C-3	Sections and Details
62	C-4	Sections and Details			
<u>Effluent Pumping Station</u>			<u>Effluent Pumping Station</u>		
63	EP-1	Demolition Plan and Sections	53	EP-1	Elevations and Details
64	EP-2	Plans, Sections and Details			
<u>Anaerobic Digestion System</u>			<u>Anaerobic Digestion System</u>		
65	D-1	Plans, Sections and Details	54	D-1	General Plan and Details
66	D-2	Plans, Sections and Details	55	D-2	Architectural Plans and Elevations
67	D-3	Plan and Sections	56	D-3	DCB Basement Plan and Sections
68	D-4	Plan and Sections	57	D-4	DCB Ground Floor Plan and Sections
69	D-5	Plan and Sections	58	D-5	DCB Sections
70	D-6	Elevations, Sections and Details	59	D-6	Digester Plans
71	D-7	Sections and Details	60	D-7	Digester Sections and Details
72	D-8	Sludge Schematic	61	D-8	Details
73	D-9	Sludge, Gas and Hot Water Schematics	62	D-9	Digester Piping Schematic
74	D-10	Schedules and Details	63	D-10	Digester Gas and Hot Water Schematics
75	D-11	Flare Plan Sections and Details	64	D-11	Digester Gas Holder , Flair Plan, Plans and Sections
			65	D-12	Sections and Details
<u>Sludge Dewatering System</u>			<u>Sludge Dewatering System</u>		
76	SD-1	Demolition Plan and Sections	66	SD-1	Plan, Sections and Details (Winklepress)
77	SD-2	Plan and Sections	67	SD-2	Plan, Sections, and Details (Andritz)
78	SD-3	Sections and Details	68	SD-3	Sections
79	SD-4	Sections and Details	69	SD-4	Sections and Details
80	SD-5	Sections and Details	70	SD-5	Architectural Elevations and Sections
81	SD-6	Elevations, Details, Schedules	71	SD-6	Schematics
82	SD-7	Schematics	72	SD-7	Sections and Details
83	SD-8	Sections and Miscellaneous	73	SD-8	Sections and Details
			74	SD-9	Sludge Holding Tank
<u>Workshop</u>			<u>Workshop</u>		
84	W-1	Plans, Sections, Details	75	W-1	Plans, Sections, and Details
85	W-2	Elevations and Details			
<u>Operations Center</u>			<u>Operating Building</u>		
86	OP-1	Floor Plans, Sections and Details	76	OP-1	Floor Plans, Sections, and Details
			77	OP-2	Sections and Details
<u>Sludge Thickening</u>			<u>Sludge Thickening</u>		
87	ST-1	Plan and Section			(Included in MBD Drawings)
88	ST-2	Sections and Details			
89	ST-3	Sections and Details			

Original Drawing List per Task Order No. 6			Final Drawing List		
Sheet No.	Dwg No.	Description	Sheet No.	Dwg No.	Description
<u>Odor Control</u>			<u>Chemical Storage and Feed Area</u>		
90	OC-1	OCU Location and Ducting Plan	78	CA-1	Plans and Sections
91	OC-2	Demo Plan; OCU Blower Plan	79	CA-2	Sections and Details
92	OC-3	Blower Building Sections and Details	80	CA-3	Sections and Details
93	OC-4	Main OCU Packed Tower and Activated Carbon Scrubber Plan	81	CA-4	Piping and Process Schematic #1
94	OC-5	Main OCU Sections and Details	82	CA-5	Piping and Process Schematic #2
95	OC-6	Main OCU Sections and Details			
96	OC-7	Duct Run Sections and Details			
97	OC-8	Thickener OCU Plan and Sections			
98	OC-9	Thickener OCU Sections and Details			
<u>Chemical Storage</u>			<u>Odor Control</u>		
99	CS-1	Bisulfite and Acid Storage Facility Plan	83	OC-1	OCUMB 1 Plans and Sections
100	CS-2	Bisulfite and Acid Storage Facility Sections and Details	84	OC-2	OCUMB 1 Elevations and Sections
101	CS-3	Bisulfite and Acid Storage Facility Sections and Details	85	OC-3	OCUMB 1 Sections and Details
			86	OC-4	OCUMB 1 Schematic and Details
<u>Electrical, I and C</u>			<u>Electrical Building</u>		
102	E-1	General Notes and Legend	87	EB-1	Plans, Sections, and Details
103	E-2	Site Plan (Duct Banks)			
104	E-3	Details			
105	E-4	Details			<u>Electrical</u>
106	E-5	Single Line Diagrams	88	E-1	General Notes and Legend
107	E-6	Single Line Diagrams	89	E-2	Site Plan (Duct Banks)
108	E-7	Plans and Details	90	E-3	Single Line Diagram and Elevation
109	E-8	Plans and Details	91	E-4	Single Line Diagram
110	E-9	Plans and Details	92	E-5	Single Line Diagram and Elevation
111	E-10	Plans and Details	93	E-6	Single Line Diagram and Elevation
112	E-11	Plans and Details	94	E-7	Single Line Diagram and Elevation
113	E-12	Plans and Details	95	E-8	Mechanical Building 2
114	E-13	Plans and Details	96	E-9	Digester Control Building
115	E-14	Plans and Details	97	E-10	Mechanical Building 1 Equipment Layout
116	E-15	Schematics	98	E-11	Chemical Storage Feed Area
117	E-16	Schematics	99	E-12	Operations Building and Workshop
118	E-17	Schematics	100	E-13	Secondary Clarifiers
119	E-18	Schematics	101	E-14	Headworks/Primary Clarifiers
120	E-19	Schematics	102	E-15	Plans-Aeration Basins
121	E-20	Schematics	103	E-16	Plans-Odor Control Units-Fire Alarm
122	E-21	Panels	104	E-17	Plans-1W/2W PS, Effluent PS
123	E-22	Panels	105	E-18	Schematics
124	I-1	Instrumentation Legend, Symbols	106	E-19	Schematics
125	I-2	P&ID No. 1	107	E-20	Schematics
126	I-3	P&ID No. 2	108	E-21	Schematics
127	I-4	P&ID No. 3	109	E-22	Schematics
128	I-5	P&ID No. 4	110	E-23	Panels and Board Schedule
129	I-6	P&ID No. 5	111	E-24	Lighting Fixture Schedule
130	I-7	P&ID No. 6			
131	I-8	Data Acquisition System Diagram			
132	I-9	Data Acquisition System Operations Room			
133	I-10	Data Acquisition System Details			

Original Drawing List per Task Order No. 6			Final Drawing List		
Sheet No.	Dwg No.	Description	Sheet No.	Dwg No.	Description
					<u>Instrumentation</u>
			112	I-1	Symbols and Legend
			113	I-2	P&ID Headworks
			114	I-3	P&ID Primary Treatment Process
			115	I-4	P&ID Secondary Treatment Process
			116	I-5	P&ID Process Air Distribution
			117	I-6	P&ID Effluent and No. 3 Water Pumping
			118	I-7	P&ID WAS Thickening
			119	I-8	P&ID Anaerobic Digesters Heating Waste Gas
			120	I-9	P&ID Anaerobic Digesters Feeding and Mixing
			121	I-10	P&ID Belt Press System
			122	I-11	P&ID Chemical Feed System
			123	I-12	P&ID Odor Control System
			124	I-13	P&ID Polymer System
			125	I-14	P&ID Control System Block Diagram
			126	I-15	P&ID 1W/2W Pump Station, Local Panel
			127	I-16	CRT Plant Process Display
			128	I-17	Existing Control Panel Modification-1
			129	I-18	Existing Control Panel Modification-2
Total Drawings Not Including Typical Details - 117			Total Drawings Not Including Typical Details - 129		

*Additional drawings or drawings affected by changes.

RESOLUTION NO. 993

A RESOLUTION APPROVING AND AUTHORIZING AMENDMENT NO. 1 TO
TASK ORDER NO. 6 - AGREEMENT FOR FINAL DESIGN OF WASTEWATER
TREATMENT PLANT ENLARGEMENT, SEWER AUTHORITY MID-COASTSIDE

RESOLVED, by the Sanitary Board of the Montara Sanitary District,
a Public Agency in the County of San Mateo, as follows:

WHEREAS, this Board did approve that certain agreement "Task
Order No. 6 - Final Design of Wastewater Treatment Plant Enlarge-
ment, Sewer Authority Mid-Coastside" (Design Services) by and between
the Sewer Authority Mid-Coastside (SAM) and John Carollo Engineers;

WHEREAS, this Board did approve a budget for the aforementioned
Design Services (Budget);

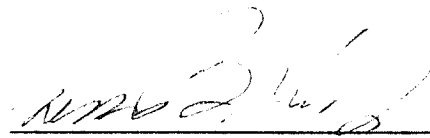
WHEREAS, this Board has been presented with amendments to the
Design Services and Budget;

NOW, THEREFORE, it is determined and ordered that:

1. The above recitals are true and correct.
2. The amendments to the Design Services and Budget set forth
in that certain document "Amendment No. 1 to Task Order No. 6 - Final
Design of Wastewater Treatment Plant Enlargement," Exhibit A hereto,
are hereby adopted by this Board.
3. This Board agrees it will be responsible for its share of
the increased amended budget amount, twenty percent (20%), up to the
maximum amount of \$26,699 as called for in the amended agreement,
provided the special assessment and assessment bond proceedings to
fund the sewer treatment plant expansion are completed and funds
become available to pay such District share. If the special assess-
ment and assessment bond proceedings are not completed this District
assumes no obligation to pay the costs of said Amendment No. 1 to
Task Order No. 6.
4. The President is hereby authorized and directed to execute
said Amendment No. 1 to Task Order No. 6 on behalf of the Sanitary
District and the Secretary is directed to countersign same.
5. A certified copy of this Resolution shall be provided to
the Sewer Authority Mid-Coastside.

COUNTERSIGNED:


Secretary


President

PASSED
COUNCIL
Oct 20, 1992
D. Robles
CITY CLERK

RESOLUTION C-68-92

A RESOLUTION OF THE CITY COUNCIL OF HALF MOON BAY APPROVING AND AUTHORIZING AMENDMENT NO. 1 TO TASK ORDER NO. 6 - AGREEMENT FOR FINAL DESIGN OF WASTEWATER TREATMENT PLANT ENLARGEMENT, SEWER AUTHORITY MID-COASTSIDE

WHEREAS, the City Council did approve that certain agreement "Task Order No. 6 - Final Design of Wastewater Treatment Plan Enlargement, Sewer Authority Mid-Coastside" (Design Services) by and between the Sewer Authority Mid-Coastside (SAM) and John Carollo Engineers; and

WHEREAS, the City Council did approve a budget for the aforementioned Design Services (Budget); and

WHEREAS, The City Council has been presented with amendments to the Design Services and Budget,

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Half Moon Bay that

1. The above recitals are true and correct.
2. The amendments to the Design Services and Budget set forth in that certain document "Amendment No. 1 to Task Order No. 6 - Final Design of Wastewater Treatment Plan Enlargement" Exhibit A, hereto, are hereby adopted by this Council.
3. This Council agrees it will be responsible for its share of the amendment budget amount, fifty percent (50%), up to the maximum amount of \$66,467 as called for in the amendment agreement.
4. The Mayor is hereby authorized and directed to execute the agreement on behalf of the City and the City Clerk is directed to countersign same.
5. A certified copy of this Resolution shall be provided to the Sewer Authority Mid-Coastside.

I hereby certify that the foregoing is a full, true and correct copy of the Resolution duly passed and adopted by the City of Half Moon Bay at a regular City Council meeting thereof held on the 20 day of October, 1992, by the following vote:

AYES, Councilmembers Iverson, Ruddock, Patridge, Pastorino &

NOES, Councilmembers: Mayor Patterson

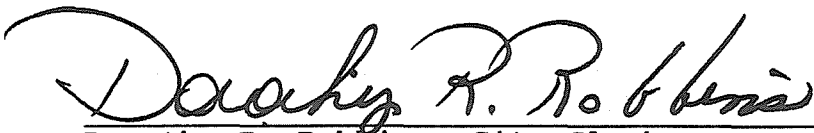
ABSENT, Councilmembers: _____

ABSTAIN, Councilmembers: _____



Larry Patterson, Mayor

ATTEST:



Dorothy R. Robbins, City Clerk

RECEIVED

NOV 17 1992

SEWER AUTHORITY MID-COASTSIDE

GRANADA SANITARY DISTRICT

Resolution No. 574

**RESOLUTION APPROVING AND AUTHORIZING AMENDMENT NO. 1
TO TASK ORDER NO. 6 - AGREEMENT FOR FINAL DESIGN OF
WASTEWATER TREATMENT PLANT ENLARGEMENT,
SEWER AUTHORITY MID-COASTSIDE**

RESOLVED, by the District Board of Granada Sanitary District, a Public Agency, in the County of San Mateo, as follows:

WHEREAS, this Board did approve that certain agreement "Task Order No. 6 - Final Design of Wastewater Treatment Plant Enlargement, Sewer Authority Mid-Coastside" (Design Services) by and between the Sewer Authority Mid-Coastside (SAM) and John Carollo Engineers;

WHEREAS, this Board did approve a budget for the aforementioned Design Services (Budget);

WHEREAS, this Board has been presented with amendments to the Design Services and Budget;

NOW THEREFORE, it is determined and ordered that:

1. The above recitals are true and correct.
2. The amendments to the Design Services and Budget set forth in that certain document "Amendment No. 1 to Task Order No. 6 - Final Design of Wastewater Treatment Plant Enlargement" Exhibit A, hereto, are hereby adopted by this Board.
3. The District will be responsible for its share of the increased amended budget amount, thirty percent (30%), up to the maximum amount of \$40,048 as called for in the amended agreement, provided, however, that payment shall not be made by the District until funds become available to the District from the special assessment proceedings presently contemplated to be conducted by the District.
4. The President is hereby authorized and directed to execute the agreement on behalf of the Sanitary District and the Secretary is directed to countersign same.
5. A certified copy of this Resolution shall be provided to the Sewer Authority Mid-Coastside.

* * * * *

I hereby certify that the foregoing is a full, true and correct copy of a resolution duly and regularly adopted and passed

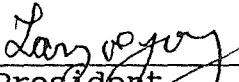
at a meeting of the District Board of the Granada Sanitary District, San Mateo County, California, held on the 14th day of October, 1992.

AYES, and in favor thereof, Directors: De Young, Okonek, Murphy and Hall

NOES, Directors: None


ABSENT, Directors: Prosser

ABSTAIN, Directors: None



President
Granada Sanitary District

COUNTERSIGNED:



Secretary
Granada Sanitary District