Pinole / Hercules
Wastewater Subcommittee
AGENDA
8:30 a.m.
April 17, 2014
Pinole City Hall
2131 Pear Street
Pinole, CA 94564

1	**CALL TO ORDER**
2	**FLAG SALUTE**
3	**INTRODUCTION OF PARTICIPANTS**
4	**PUBLIC COMMENTS**
5	**APPROVAL OF THE FEBRUARY 2014 MINUTES**
6	**PEER REVIEW AND VALUE ENGINEERING REVIEW OF PLANT UPGRADES** *Recommendation: Receive a PowerPoint report on the Peer Review and Value Engineering Report*
7	**PROCUREMENT OF CONSTRUCTION MANAGEMENT SERVICES** *Recommendation: Receive a report on the status of the procurement process for a Project Manager for the Plant Upgrades*
8	**FY 2014 -15 Budget** *Recommendation: Receive a copy of the draft budget for FY 2014 – 15*
9	**STANDING ITEM – PROJECT STATUS** *Recommendation: Receive verbal update*
10	**STANDING ITEM – STATUS OF STATE REVOLVING LOAN FUND APPLICATION** *Recommendation: Receive verbal report on the status of the loan application*

11	**FOLLOW – UP ITEMS** See attached spreadsheet
12	**COMMENTS FROM BOARD MEMBERS AND STAFF**
13	**ADJOURNMENT** Adjourn to the next meeting regular meeting on May 15, 2014 meeting

POSTED: Friday April 11, 2014 @ 1:00 p.m.

Ana Morales, Administrative Secretary

PINOLE / HERCULES
Wastewater Subcommittee

Draft Minutes prepared by: Anita Tucci-Smith DRAFT
February 27, 2014
8:30 A.M.

The meeting was hosted by the City of Pinole in the City Council Chambers of City Hall.

Debbie Long, Mayor of Pinole, called the meeting to order at 8:32 A.M.

1. CALL TO ORDER

Subcommittee Members Present:
Debbie Long, Mayor, City of Pinole
Roy Swearingen, Councilmember, City of Pinole
Sherry McCoy, Councilmember, City of Hercules
Dan Romero, Councilmember, City of Hercules

Subcommittee Members Absent:
None

Staff Present:
Belinda Espinosa, City Manager, Pinole
Dean Allison, Public Works Director/City Engineer, Pinole
Ron Tobey, Plant Manager, Pinole
Phil Batchelor, Interim City Manager, Hercules
Jeff Brown, Interim Public Works Manager, Hercules

Member(s) of the Public:
Chris Davenport, The Covello Group
Brian Danley, Harris & Associates
William Silva, Bay Area Construction Manager
James Tillman, Pinole Resident

2. FLAG SALUTE

Hercules Councilmember McCoy led the Pledge of Allegiance.

3. INTRODUCTION OF PARTICIPANTS

4. PUBLIC COMMENTS

Jim Tillman, Pinole, asked if the project was fully funded, for answers with respect to the 2001 contract between Hercules and Pinole, the history of the contract, the writer of the contract, and who had reviewed the contract as to form and legal adequacy as well as how to protect the funds from State takeover.

DRAFT

Mr. Tillman also asked for clarification as to whether or not the Wastewater Subcommittee was a legal Joint Powers Authority (JPA).

Pinole City Manager Belinda Espinosa advised that the Wastewater Subcommittee had never been a Joint Powers Authority; it was a Joint Powers Agreement. She stated that she would meet with Mr. Tillman to respond to his questions and provide responses in writing.

5. APPROVAL OF THE OCTOBER 17, 2013 AND NOVEMBER 2, 2013 MINUTES

Jim Tillman, Pinole, referred to his comments on the second page of the October 17, 2013 minutes and requested the following amendment:

> **Jim Tillman, Pinole**, referenced the July 18, 2013 meeting when a representative from the Rodeo Sanitary District had spoken to the contract with Pinole, Hercules, and Rodeo for the outfall pipeline to the Bay, and had expressed concern that the Wastewater Subcommittee was not a Joint Powers Authority (JPA).

Action: Motion by Hercules Councilmember McCoy, seconded by Hercules Councilmember Romero to approve the minutes of the October 17, 2013 minutes, as amended, and the November 2, 2013 minutes, as submitted, carried by the following vote:

Ayes:	McCoy, Romero, Long
Noes:	None
Abstain:	Swearingen
Absent:	None

6. PEER REVIEW AND VALUE ENGINEERING REVIEW OF PLANT UPDATES

Chris Davenport, The Covello Group, presented the final peer review and value engineering review of plant upgrades and responded to questions from the Wastewater Subcommittee.

Wastewater Subcommittee members requested the following:

- Address community impacts in more detail;
- Solicit response and analysis from HDR, Inc. to the recommendations, in similar format;
- Identify cost of stainless steel clarifiers;
- Identify cost of the holding tank; and
- Clarify proposed Trojan technology skid as related to what currently existed at the wastewater treatment plant.

DRAFT

Jim Tillman, Pinole, agreed with the efforts to keep costs down, and asked again how medical waste would be treated and whether storm drains had been appropriately designed for off-weather service.

Dean Allison, Public Works Director/City Engineer, Pinole, advised that storm drains were a separate issue as was what could be dumped into the Bay.

Ron Tobey, Plant Manager, Pinole, reported that current wastewater technologies and the current process did not treat for medical waste which would be addressed prior to entering the system.

The Wastewater Subcommittee received the report, asked that the information requested be provided in the future, and asked that a representative from HDR attend the next meeting to address the comments in the peer review.

7. STANDING ITEM – PROJECT STATUS

Dean Allison, Public Works Director/City Engineer, Pinole, presented a PowerPoint to identify the project schedule which was currently in final engineering design, and while the intermediate deadlines would not be met, the final deadline for project completion by June 2017 could be met and was expected to be on track and in compliance with the final deadline, a situation the State Regional Water Quality Control Board was expected to acknowledge in writing. He also detailed the status of the $39 million total project budget.

The Wastewater Subcommittee received the report and requested that all costs associated with the project be identified.

8. STANDING ITEM: STATUS OF STATE REVOLVING LOAN FUND APPLICATION

Mr. Allison reported that both cities had submitted their applications to the State Revolving Loan Fund; environmental questions related to the application had to be addressed and an environmental consultant had been engaged to help resolve the issues, expected by April 2014. He emphasized that both cities were working together.

When asked about the backup plan with respect to the issuance of short-term bonds, **Ms. Espinosa** stated that the City of Pinole was ready to proceed with bonds, if necessary.

Mr. Batchelor advised that the City of Hercules was not in a position to issue bonds at this point.

9. FOLLOW-UP ITEMS

DRAFT

Hercules Councilmember Romero asked about the status of governance language with respect to the sharing of costs and reimbursement of the revolving loan fund.

Ms. Espinosa advised that issue was being discussed.

10. COMMENTS FROM BOARDMEMBERS

Hercules Councilmember Romeo asked for action minutes only for the Wastewater Subcommittee in the future.

Pinole Councilmember Swearingen referred to the item related to the Santa Paula letter, and Mr. Allison clarified the situation with respect to the Santa Paula situation.

Chair Long read an email from PERC Water to clarify that PERC Water was not a partner with the Santa Paula water recycling facility.

The Wastewater Subcommittee found no reason to concern itself with that situation.

11. ADJOURNMENT

The meeting was adjourned at 10:10 A.M. to a regular meeting on March 20, 2014 at 8:30 A.M. in the City of Hercules if the appropriate recording equipment was available at that time, and if not the meetings would be held in Pinole with each city chairing every other meeting.

AGENDA ITEM 6

TO: **WASTEWATER SUBCOMMITTEE**

SUBMITTED BY: **DEAN ALLISON**

MEETING DATE: **APRIL 17, 2014**

SUBJECT: **PEER REVIEW AND VALUE ENGINEERING REVIEW OF PLANT UPGRADES**

RECOMMENDATION

Receive a presentation on the Peer Review / Value Engineering Review

DISCUSSION

The design of plant upgrades included a Peer Review/Value Engineering review of the preliminary engineering study. The review was conducted by The Covello Group, and consisted of a panel of wastewater professionals reviewing the preliminary design, and making recommendations to improve the design, or reduce costs. In total, the report made 75 recommendations, the majority of which have been or will be included in the final design.

At the February 20, 2014 meeting, the subcommittee discussed the review. After discussions, the subcommittee requested that the item be brought back at this time.

ATTACHMENTS

December 2013 Peer Review of Pre-Design Documents
PowerPoint presentation

AGENDA ITEM 6

TO: **WASTEWATER SUBCOMMITTEE**

SUBMITTED BY: **DEAN ALLISON**

MEETING DATE: **APRIL 17, 2014**

SUBJECT: **PEER REVIEW AND VALUE ENGINEERING REVIEW OF PLANT UPGRADES**

RECOMMENDATION

Receive a presentation on the Peer Review / Value Engineering Review

DISCUSSION

The design process for plant upgrades included a Peer Review/Value Engineering review of the preliminary engineering study prepared by HDR Engineering, Inc. The review was performed by The Covello Group, and consisted of a panel of wastewater professionals reviewing the preliminary design, and making recommendations to improve the design, or save costs. In total, the report made 75 recommendations, the majority of which have been or will be included in the final design.

At the February 20, 2014 meeting, the subcommittee discussed items included in the review, such as the effluent pumping stations, and material specifications. After those discussions, the subcommittee requested that the item be brought back at this time for additional discussions.

ATTACHMENTS

December 2013 Peer Review of Pre-Design Documents
PowerPoint presentation

Discussion

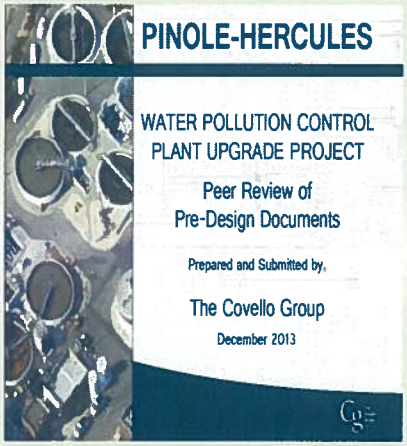
- Peer Review Report
  - ✓ Objectives
  - ✓ Process Undertaken
  - ✓ Comments Provided
- Responses to Comments

HDR

2

Peer Review Objectives

- Fatal flaw analysis
- High level constructability review
- Identify potential construction and operational cost savings



HDR

3

Peer Review Comments

- 75 comments provided
  - ✓ Biddability/Constructability
  - ✓ Facilitate construction
  - ✓ Improve plant operation
  - ✓ Reduce construction cost

HDR

4

Response to 75 Comments

- 56 Comments were evaluated, discussed with Project Team, and will be incorporated
- 19 Comments were evaluated, discussed with Project Team and will not be incorporated

HDR

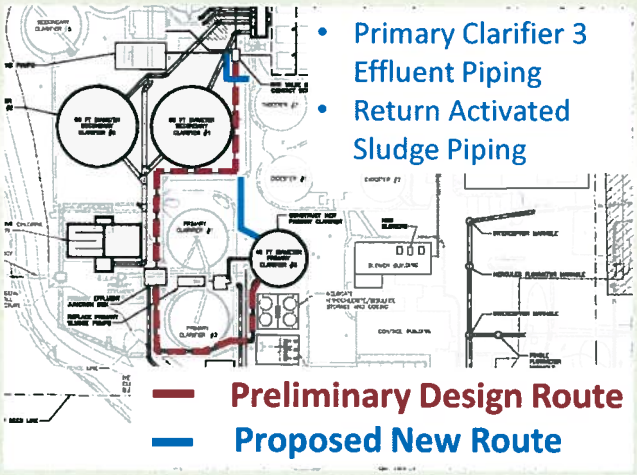
5

Comments Evaluated with Project Team and Incorporated

6

Recommendation: Modify Yard Piping

- Reduces Cost
- Facilitates Construction



HDR

7

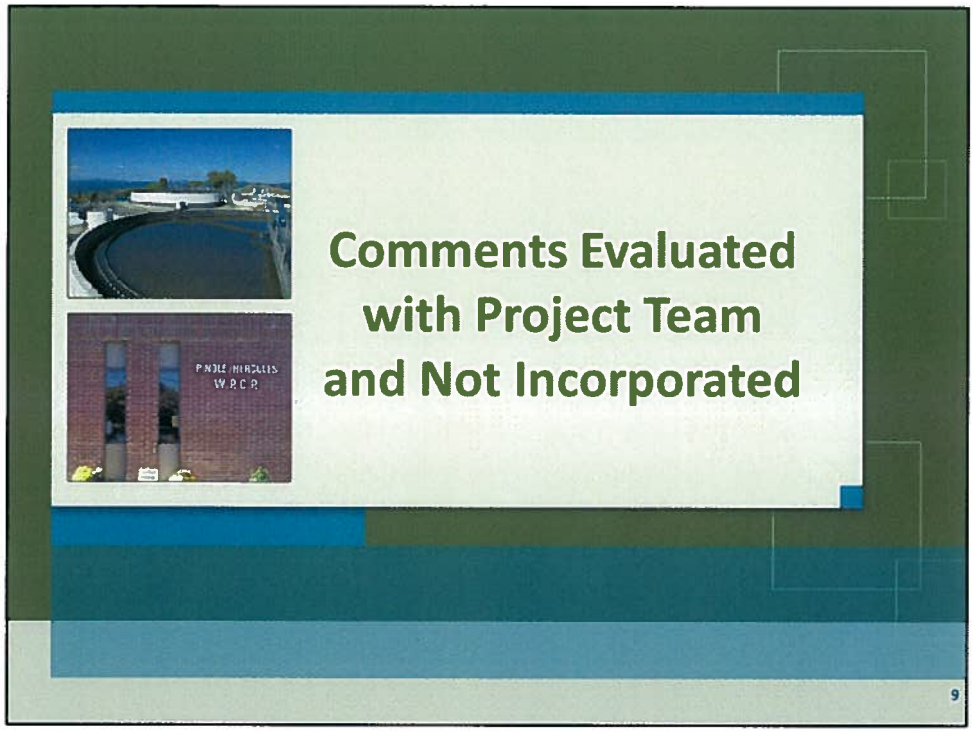
Recommendation: Change PC Materials

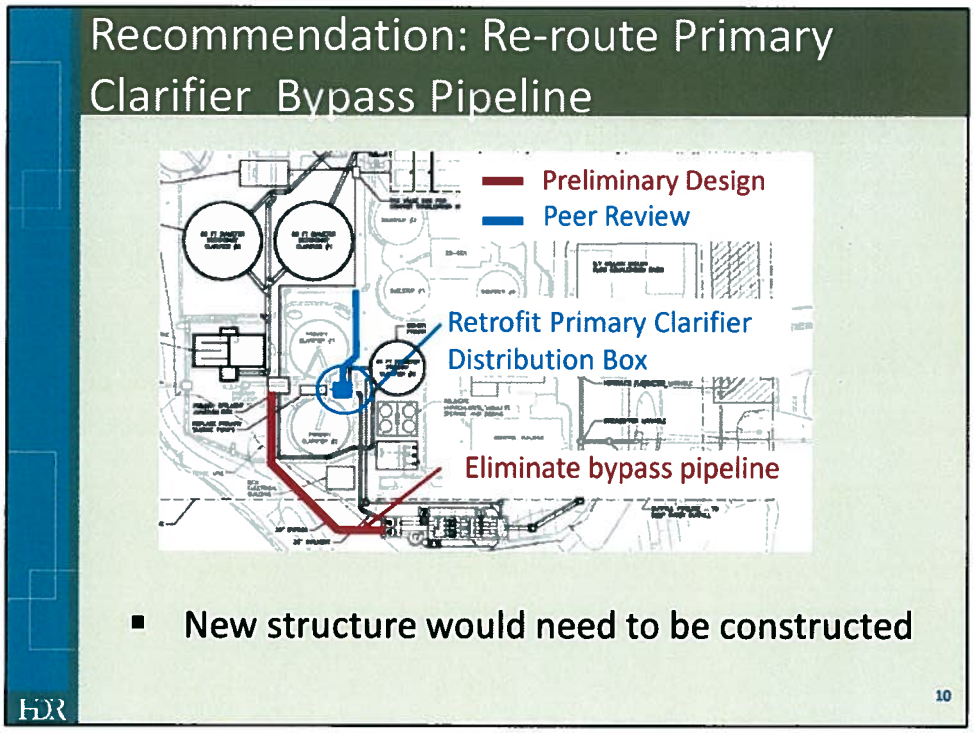
- Stainless Steel vs. Painted Steel Mechanism

- Specifications will include Alternate Bid Item
- Evaluate and Select Material After Bid Opening

HDR

8


Comments Evaluated
with Project Team
and Not Incorporated
9


Recommendation: Re-route Primary Clarifier Bypass Pipeline
Preliminary Design
Peer Review
Retrofit Primary Clarifier Distribution Box
Eliminate bypass pipeline
New structure would need to be constructed
10

Recommendation: Install Smaller Effluent Pump

Preliminary Design: 3-400 HP Pumps	• Provides pump redundancy to reliably meet permit conditions • Adequate turn down for low flow conditions
Peer Review Recommendation: 2-400 HP Pumps + 1-200 HP Pump	• Does not provide pump redundancy to reliably meet permit conditions

HDR

Recommendation: Construct 200,000 Gallon Solids Holding Tank

- Gravity thickener to be constructed at lower cost than proposed tank
- Improves operational flexibility

HDR

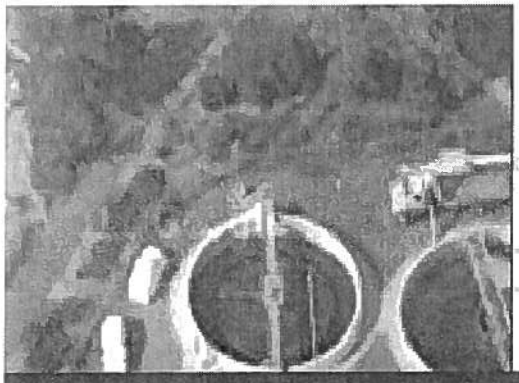
12

Conclusion

- 75 Comments Provided by the Peer Review Team
  - ✓ 56 comments were evaluated, discussed with the Project Team, and will be incorporated
  - ✓ 19 comments were evaluated, discussed with the Project Team, and will not be incorporated
- Project Team is in agreement with responses to comments

HDR

13



PINOLE-HERCULES

WATER POLLUTION CONTROL PLANT UPGRADE PROJECT

Peer Review of Pre-Design Documents

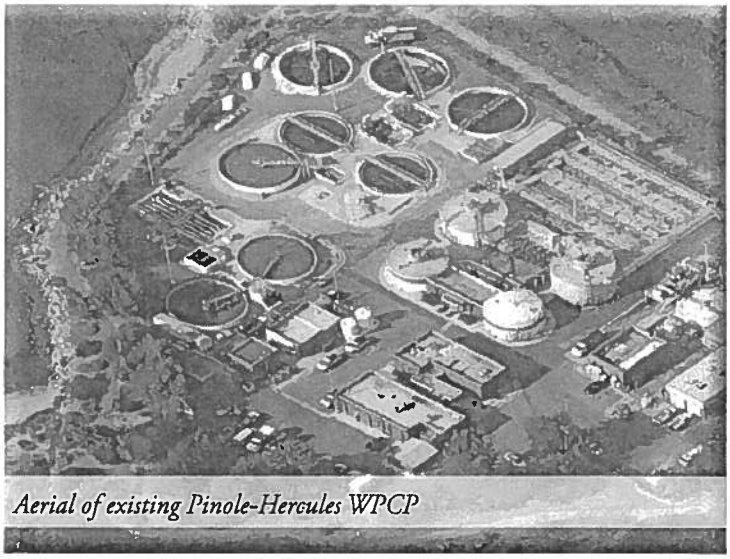
Prepared and Submitted by,

The Covello Group

December 2013

Introduction

The City of Pinole (City), in conjunction with the City of Hercules, must complete upgrades to their water pollution control plant (WPCP)to comply with the requirements of their National Pollutant Discharge Elimination System (NPDES) discharge permit. To that end, the City retained the design firm of HDR to complete the pre-design for the Pinole-Hercules Water Pollution Control Plant Upgrades Project (Project). The project is one of the City's largest capital improvement undertakings and as such retained The Covello Group to perform a Peer Review (Review) of HDR's pre-design. The two goals of the review were to do the following:



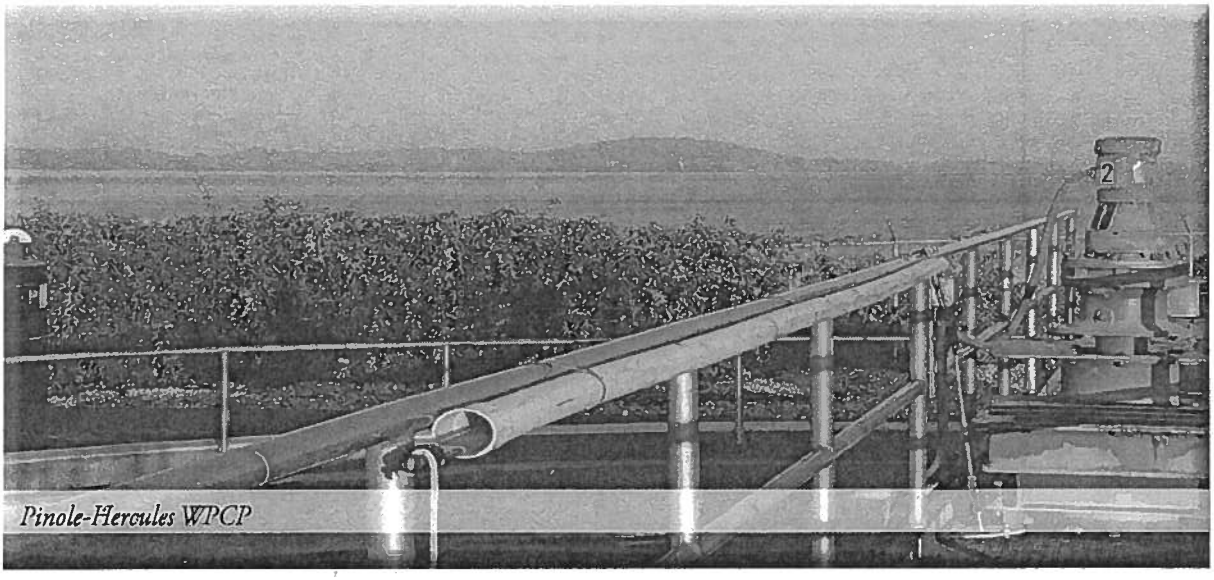
Aerial of existing Pinole-Hercules WPCP

1. Validate the Pre-design Approach
2. Identify potential areas of the design that could be modified that would enhance the function and constructability of the treatment facilities

To accomplish the Review, The Covello Group assembled a team of highly respected industry professionals, each who has an extensive background in one of the major facets of this project type; process, design, construction and operations. The team members each were allotted up to eight hours to review the pre-design package prior to convening for a two-day workshop held on October 15 and 16, 2013. During the two-day workshop, the members reviewed each process stream and working together as a team, assessed the overall design approach for reasonableness and adequacy and developed and analyzed alternatives that had the potential of saving construction time, reducing capital costs and improving efficiency to make best use of costs.

Outside Review Team Members	
Christopher Davenport, P.E. (Team Leader)	**Lea Fisher, P.E.**
Specialty- Constructability and Sequencing The Covello Group, Inc.	Specialty- Process Wm. Lea Fisher, Consulting Engineer
Levi Fuller	**Jean-Marc Petit, P.E.**
Specialty- Operations Dublin San Ramon Services District WWTP Operations Supervisor	Specialty- Design Carollo Engineers, Inc.

The City of Pinole's WWTP Manager (Ron Tobey) and Operations Manager (Tim Harless) also participated in the review, joining the team during the two-day workshop, providing important historical background and input on current and future operational goals.



The workshop followed the below agenda:

Day 1 (Tuesday October 15, 2013):

Morning – HDR's Design Team presented an overview of the pre-design to the Review Team. After the presentation, the Review Team toured the plant site with Pinole's Operations and Plant Managers.

Afternoon – The Review Team started their review effort and focused on the following:

- Headworks: Influent Pumps, Screening and Grit Removal
- Flow Equalization (including Primary Treatment)
- Solids Handling
- Aeration Basins and Blowers
- Plant Utilities and Yard Piping

DAY 2:

Morning – The Review Team continued pre-design analysis and focused on the following:

- Secondary Clarifiers and Return Activated Sludge/Waste Activated Sludge (RAS/WAS) Pumping
- Effluent Pumping
- Disinfection System
- Electrical Distribution System
- Construction Phasing

Afternoon – The Review Team met with the HDR Design Team and provided an overview of the Review Team's efforts and initial findings.

The findings and recommendations developed during the workshop are summarized in the following pages of this Report. This Report is broken up into the following four sections:

1. **Summary of Findings and Major Recommendations**
2. **Detailed Discussion**
3. **Conclusion**
4. **Appendix**

1. Summary of Findings and Major Recommendations:

Findings

- **Pre-Design Approach-** The Review Team concluded that HDR's reasoning was sound, their process recommendations are consistent with standards of the industry and found no reasons that should preclude HDR from proceeding with the 65% design effort. The recommended processes are currently being used by other Northern California agencies to successfully treat wastewater to meet similar discharge water quality standards as is currently required of the City.

Recommendations

- **Headworks-** The Review Team recommends the deletion of the bypass weir downstream of the influent pump discharge point and relocate the gate to keep the existing grit process bypass channel. Downstream of the grit process, conveys all flow through one pipe to the existing primary influent box. Swap locations of the grit and bypass channel and move all new grit equipment to the north side of the new structure. Combine all grit and screenings by conveying to a single dumpster.

  Estimated Capital Savings = *$0*
  Estimated Operational Savings = *$15,000 per year*

- **Yard Piping-** Delete 30-inch diameter bypass pipeline from the new Headworks structure to the existing primary effluent junction box, modify existing primary influent box to allow diversion of the overflow to the Aeration Basins, install new pipeline from modified primary influent box to new junction structure to connect to existing primary effluent pipeline, reroute 24-inch diameter effluent pipe from new Primary Clarifier No. 3 (PC3) to proposed new primary effluent junction box, shorten RAS return pipeline and connect it to the proposed new primary effluent junction box.

  Estimated Capital Savings = *$90,500*
  Estimated Operational Savings = *$0*

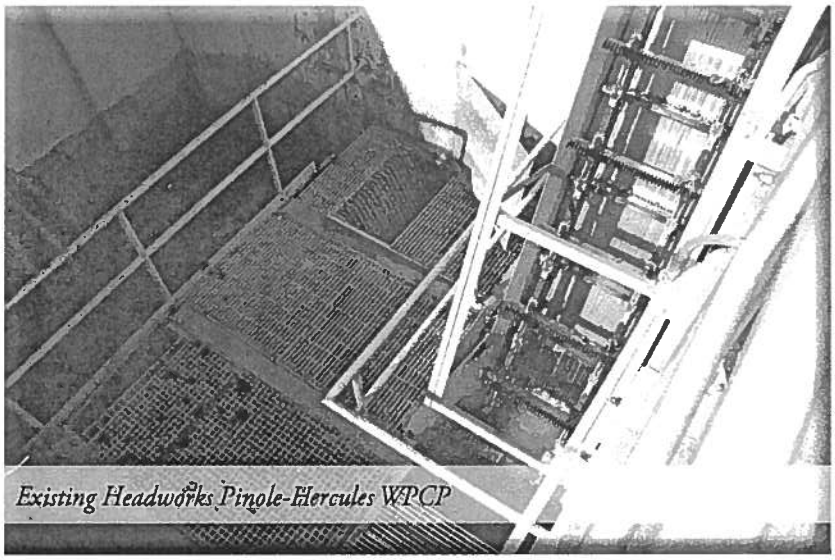
- **Effluent Pumping-** Reduce the size of one or two pumps from 400 to 200 Hp. If wet weather redundancy is a high priority, then install two 200 Hp and two 400 Hp pumps; the additional 400 Hp pump can be installed in a separate can if necessary.

  Estimated Capital Savings = *$194,00*
  Estimated Operational Savings = *$117,000 per year*

Total of Estimated Potential Savings
Capital Savings = $284,500
Operational Savings = $132,000 per year

2. Detailed Discussion:

The following sections provide a list of the Review Team's recommendations for each process area. Many of the sections include expanded detail and figures to better illustrate the Review Team's ideas.



Existing Headworks Pinole-Hercules WPCP

Headworks

The Review Team identified and discussed the following:

Recommendations to the Headworks (HW)	
HW- 1	Eliminate 30-inch diameter bypass pipeline and weir downstream of the influent pumps. Maintain bypass gate to isolate inlet of bypass channel from grit chamber feed.
HW- 2	To increase redundancy and reliability, offset screen location, allow discharge from the washer compactors to be individually conveyed to the screening dumpster.
HW- 3	Change orientation of grit tank to north side of the new Headworks Structure to improve access for Plant Staff and to keep construction confined within the current fence line.
HW- 4	Combine washer compactor screenings and grit into a single dumpster.
HW- 5	Reduce the number of bends in the grit system piping by adding an additional suction line and dedicated discharge from each pump to each cyclone.
HW- 6	Provide additional space for Ferrous/Ferric Tank next to the grit chamber (6,000 gallon).
HW- 7	Suggest roughing out the footprint for bio-filter. Due to space constraints, a similar odor control system as called for the solids handling may be required at Headworks.
HW- 8	Evaluate odor control for the grit and rag bins.
HW- 9	Consensus on the recommended size of screen openings was not achieved. However, the majority of the Review Team recommends that the 65% design consider using small screen openings (1/8 or 1/4-inch) to improve capture of non-organic material. This will reduce downstream problems caused by 'ragging' of equipment and taking up digester capacity.
HW- 10	The 65% design should consider using heavier duty screens such as the Mahr type, and constructed of all 316 stainless steel. Representative manufactures of this screen type include Huber, Headworks and Vulcan.

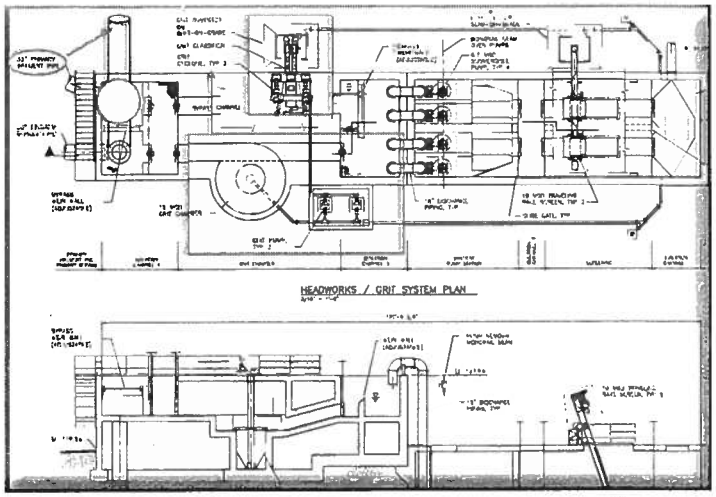
Existing Bar Screen Structure at Pinole-Hercules WPCP

The Review Team's primary recommendation for this area is ***HW-1***, to eliminate the 30-inch diameter bypass weir and pipeline from the design. Instead of routing two 30-inch diameter pipelines from the Headworks Structure, the Review Team recommends that HDR consider designing one pipeline to the Primary Clarifier Splitter box and modify the splitter box to handle the additional flow. The flow will then be routed through a new pipeline that connects with the existing Primary effluent pipeline, located southeast of new Secondary Clarifier No.1 (SC1). This re-routing will eliminate the new 30-inch diameter bypass piping, that is now shown to be installed outside of the plant fencing under the adjoining pedestrian pathway and PC3's effluent discharge pipeline, refer to attached *figure 5.5* for more detail.

Recommendations HW- 2 through HW- 5 focus on reconfiguring the grit system and equipment. Relocating all of the equipment to the north side of the new structure will provide better access for the WPCP's Operations and Maintenance Staff. The new location will also result in the installation of a conveyance system that can consolidate the rags and grit into a single container, covered with odor control ducting. Refer to attached *Figure 5.5* for more detail.

Recommendation HW-6 is only possible if HDR can incorporate ***Recommendation HW- 1*** into their design. The ability to store the chemical directly adjacent to the dosing point will benefit plant operations and minimize potential service interruptions due to potential pipeline leaks.

The balance of the items are topics that the Review Team recommends for HDR's consideration when working on their 65% design. The Review Team recommends that HDR brief the City on how each item was addressed during the design development.

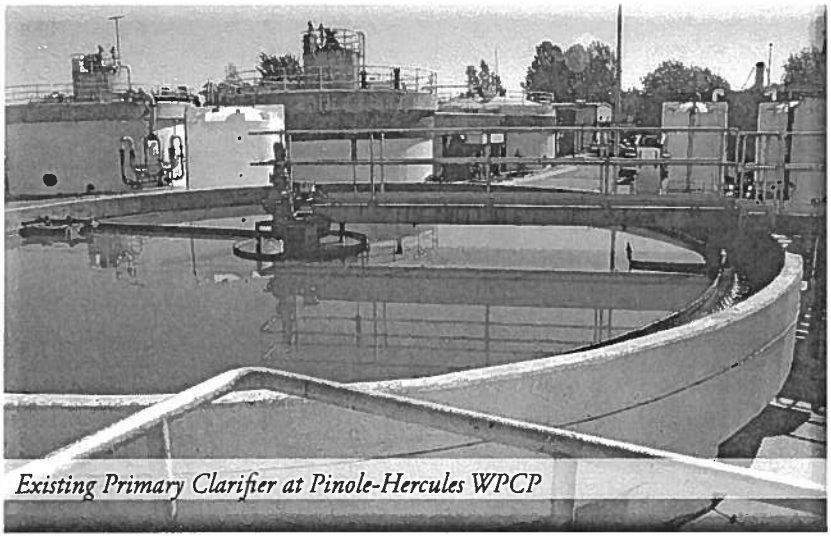


Excerpt from Figure 5-5; Alternative 1 HW Changes (full size available in Appendix)

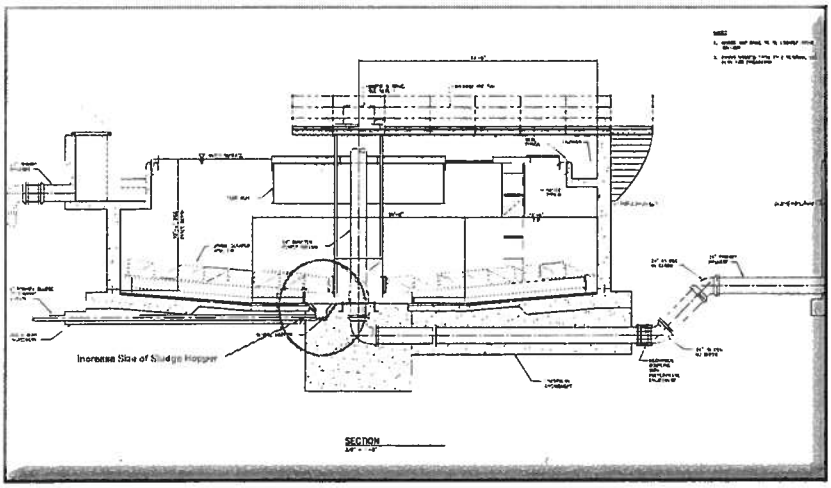
Primary Clarifiers

The Review Team identified and discussed the following:

Recommendations to the Primary Clarifiers (PC)	
PC- 1	Build PC3 in Stage 2
PC- 2	Enlarge the sludge hopper for new PC3. Refer to *Figure 8-13* for detail.
PC- 3	Consider Stainless Steel over painted steel for the clarifier mechanism
PC- 4	All nuts and bolts should be stainless steel.
PC- 5	Add scum pumping to PC3 and route to digesters.



Existing Primary Clarifier at Pinole-Hercules WPCP



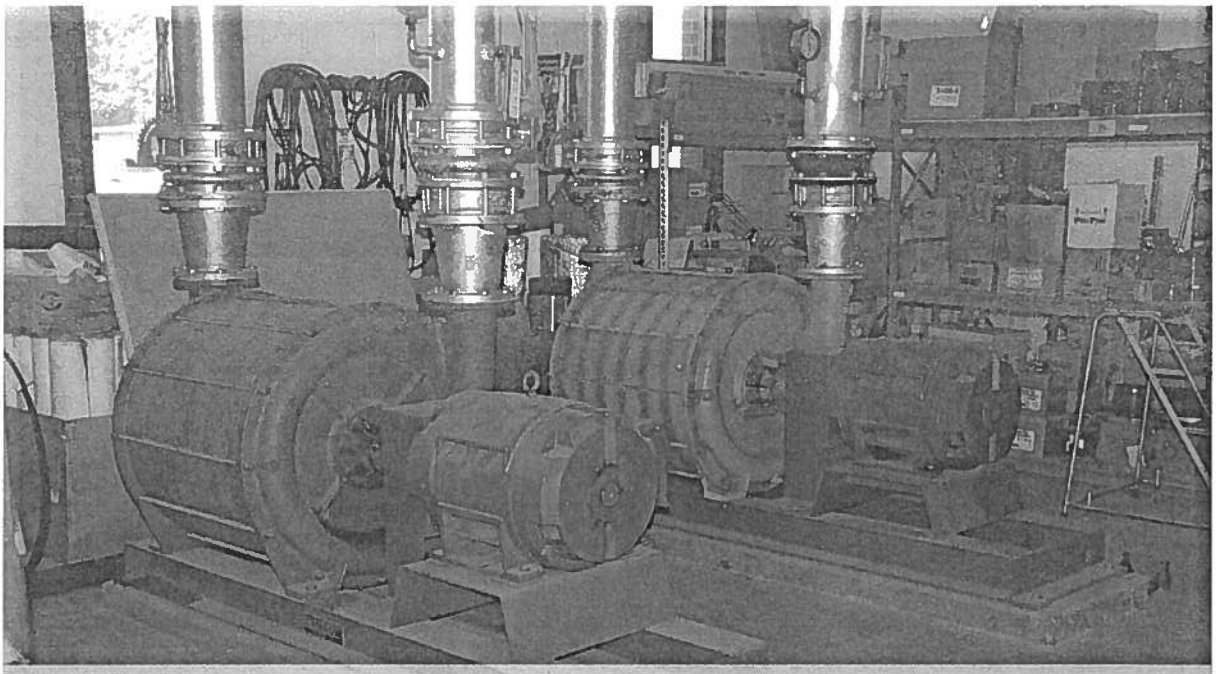
Excerpt from Figure 8-13; PC3 (full size available in Appendix)

Recommendation PC- 1, has the biggest potential to lower initial construction cost by allowing the contractor to build PC3 earlier than currently planned. The advantages are further detailed in the Construction Sequencing Section.

Recommendation PC- 2, enlarging PC3's sludge hopper will help better achieve the design and operational goal of thickening the sludge in the primary process. A larger hopper will also allow a more consistent rate of pumping sludge to the Solids Handling facility.

Recommendations PC- 3 and PC- 4, stainless steel mechanism and hardware will increase the initial capital costs but has the potential to save coating and corrosion costs over the average 25- year design life of the mechanism. Additionally, the State of California continues to enact more stringent regulations that limit the available coating materials once prevalent in the wastewater industry thereby reducing the viable coating alternatives.

Aeration Basins

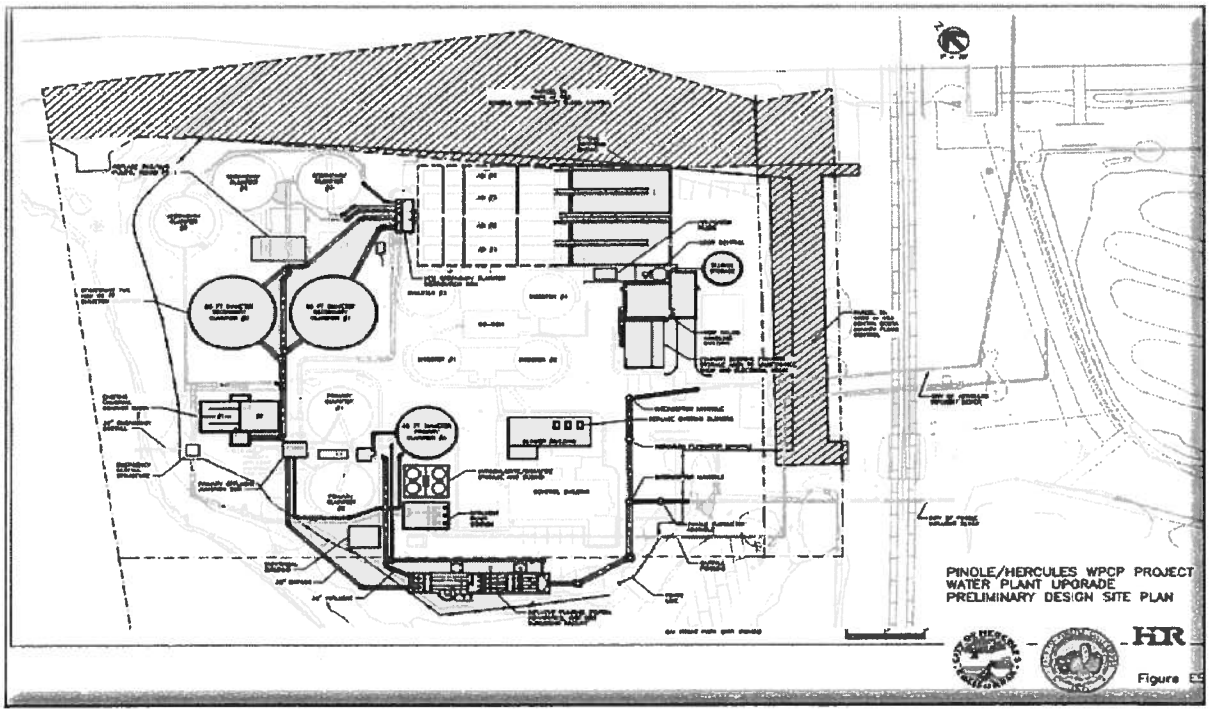


Existing Aeration Blowers at Pinole-Hercules WPCP

The Review Team identified and discussed the following:

Recommendations to the Aeration Basins (AB)	
AB- 1	Adjusting design discharge pressure for the blowers from 10 psi to 7.5 psi to match design criteria.
AB- 2	Reconfigure blower, air intake for blowers including filtering. As currently configured, the high-speed turbo blowers will be using ambient air from within the blower room. Rather, the Review Team recommends using the filtered outside intake which provides better quality air to the blowers, keeps dust down and avoids creating a negative pressure atmosphere in the blower room.
AB- 3	Add automated control of gates and valves to switch from plug flow to contact stabilization. Reduce the number of existing step feed gates. Consider eliminating the y-wall configuration for the new extended ABs and use a pipeline to handle step feed for contact stabilization.
AB- 4	Suggest adding a sump in each of the new ABs to aid in dewatering. Need to discuss pump down system with Operations; one idea is to install permanent piping to allow easy hookup for existing trash pump.
AB- 5	Build extensions to AB and call for one train to be temporarily placed in service while completing the entire retrofit and upgrade to the other side.

AB- 6	Recommend having manufacturer perform analysis to determine proper sizing for propeller mixers; there is concern that one mixer, is not large enough to handle mixing of a rectangular shaped anoxic zone. The Review Team's recommendation is to consider adding a lifting device at each mixer to facilitate an easier removal.
AB- 7	Control Strategies need to address both Dissolved Oxygen (DO) and Air Flow for each aeration zone.
AB- 8	Explore the installation of Total Suspended Solids (TSS) meters to measure RAS and Mixed Liquor Suspended Solids (MLSS) concentrations. This will provide Operations more information to make finer process adjustments and eventually the ability to control the Solids Retention Time (SRT) automatically.
AB- 9	Existing 18- inch pipeline currently shown incorrectly on *Figure 8-14* at the end of the new extended aerators versus at the end of the existing aeration basins. Need to consider air-piping modifications.
AB- 10	APG-Neuros' cost estimate does not include many of the needed options (master control panel, harmonic filters, etc.) that are recommended to run the system as described in the pre-design report. An updated cost estimate is needed to reflect the total blower equipment cost inclusive of all options and then include those same requirements in the 65% design specifications. To keep APG-Neuros competitive, the Review Team recommends naming additional blower manufactures such as HSI (Atlas-Copco) and ABB.
AB- 11	Design needs to coordinate with Operations to determine optimal and safest way to access bottom of basins to conduct routine maintenance, inspect fine bubble diffusers and any other required work.



Excerpt from Pinole-Hercules WPCP Project Preliminary Design Site Plan

Existing Aer tio i Basin at Pinole-Hercules WPCP

The Review Team did not find many areas of the AB design that could be optimized or changed to reduce initial construction or long-term operational costs. The Review Team discussed the merits of requiring one AB to be totally completed and placed into service early and subsequently building the extension on the second AB. There was concern that the Contractor would prefer to proceed with building both new basin extensions at the same time, therefore, at this time there is no recommendation to spend additional design time to detail this phased approach.

It is worth to note that when checking the Project Drawings from the previous clarifier project, the Review Team noted that the AB Effluent and Clarifier No. 5 feed influent piping around the existing SC splitter box was different than shown in the pre-design report. This led the group to conclude that HDR may have used the design (and not the record drawings) to develop the pre-design report. Therefore, it is recommended that HDR work with WPCP Plant Staff to get copies of all past project record drawings.

The listed items are areas that need further consideration that HDR should address during their 65% design effort.

Secondary Clarifiers

Existing RAS Pump Station at Pinole-Hercules WPCP

The Review Team identified and discussed the following:

Recommendations to the Secondary Clarifiers (SC)	
SC- 1	Further review access around new clarifiers to allow for boom truck to access existing clarifiers and other equipment.
SC- 2	Consider offsetting new clarifiers by moving SC2 north and move the new SC1 and SC2 closer together to improve access around and to get to the remaining clarifiers.
SC- 3	Add a single point of chlorination for RAS system on return line to Headworks.
SC- 4	Add a second skimmer to each new clarifier mechanism, resulting in two skimmers on each mechanism.
SC- 5	Side water depth should be 18-feet per hydraulic profile not 12-feet as shown.
SC- 6	Confirm actual piping sizes and hopper configuration for RAS to match design criteria because the information currently shown appears smaller than required.
SC- 7	Add a scum pump system to each secondary clarifier to be able to pump scum to solids handling area. Need to consider scum piping route(s). One possible alignment is in the outside y-wall of aerators.
SC- 8	Recommend removing one pump from the RAS pump station for SC1 and SC2; and use SC3 instead of SC4.
SC- 9	Need to consider algae control in secondaries, brushes or chlorine injection.

Existing SC3 through SC5 are located in the far northwest corner of the treatment plant with minimal access. The access will be further impacted during construction and potentially long term if the new facilities are not situated to maintain the current access. To maximize access to this area of the plant, the group recommends offsetting the two new clarifiers, as described in ***Recommendation SC- 2***.

The Review Team also recommends adding a system to pump secondary scum to the sludge holding tank. This will add to the initial construction cost, yet, it will result in reduced long-term maintenance and operational costs by eliminating the need to rod and flush the existing gravity drain system.

Disinfection System

The Review Team identified and discussed the following:

Recommendations to the Disinfection System (DS)	
DS- 1	Recommend installing a concrete channel (east and south walls) to convey all secondary flow to disinfection channel instead of a new pipe. Move chlorination point to just north of new SCs. (This measure is recommended only if replacement of the 42-inch diameter pipeline is required, as shown on the current project documents.) This will also require re-routing the effluent pipeline from SC5 to north of new SC2.

The current design includes minor modifications to the existing chlorine contact basin and disinfection system. Consequently there were limited opportunities to review alternatives to what is currently shown in the pre-design report. The one area on which the Review Team, was the new 42-inch secondary effluent pipeline. The pre-design document shows the installation of a new 42-inch secondary effluent pipeline from a point just north of the two new SCs to the inlet of the existing chlorine contact tank; this would require the Contractor to set up temporary pumps to handle all of the WPCP's flow for an extended period of time and may not be possible due to interference with existing structures. In addition, to facilitate construction, a portion of the Primary Effluent Junction Box may need to be demolished. To avoid these and many of the issues associated with temporary pumping and provide Operations future flexibility, the Review Team arrived at the idea of installing a new concrete box channel around the existing 42-inch pipeline that would eventually become the effluent conduit once the 42-inch pipeline was removed. The new effluent conduit would be divided into two channels, providing operational flexibility by allowing WPCP staff the ability to clean one channel at a time without taking the plant out of service. The new SCs, along with the SC5 can be connected to the concrete channel; proposed location is north of the new facilities. This would allow the chlorine injection point to be moved several hundred feet upstream of the current point, providing approximately three extra minutes detention time.

Existing Chlorine Contact at Pinole-Hercules WPCP

Solids Handling

The Review Team identified and discussed the following:

Recommendations to the Solids Handling (SH)	
SH- 1	Connect area drains to downstream of Hercules metering manhole, The proposed location of the Hercules metering manhole may need to be moved further upstream. (see *p. 16 Yard Piping* of this document for further detail).
SH- 2	To meet the operational goal to continuously pump primary and WAS sludge will require a larger holding tank of 180,000 to 200,000 gallons. All sludge goes to the holding tank first, then to rotary screen thickener (RST) and then to Digesters. Control strategies to allow for 24- hour operation of RSTs eventually but always allows for wasting from main process stream.
SH- 3	Add ability for Operations to mix and feed alkaline chemicals (such as sodium bicarbonate) to the Digesters
SH- 4	Consider lining sludge holding tank to reduce corrosion degradation.
SH- 5	The Mixing Pump for sludge tank should not be a positive displacement pump; the Review Team recommends a Vaughn chopper pump or Hidrostal pump.
SH- 6	Bridge crane on second story of building should be extended to allow for loading to a truck or reorient the bridge crane so it can lower loads through the floor to the existing truck bay.
SH- 7	Confirm no issues with BCDC on height of building.

This process is one of the areas that The Review Team spent considerable time discussing with the WPCP Operations Personnel. The current approach is to feed digesters during the day, when the plant is staffed. The Plant staff would really like to be able to feed the digesters more consistently and ***Recommendation SH- 2*** focused on meeting this desire. The Plant has plenty of digester capacity. Designing the system now to allow plant staff the ability to feed the digesters continuously using automatic controls will improve digester performance, gas production and overall solids handling, which in the long run will lower operational and maintenance needs of this system.

Existing Solids Handling at Pinole-Hercules WPCP

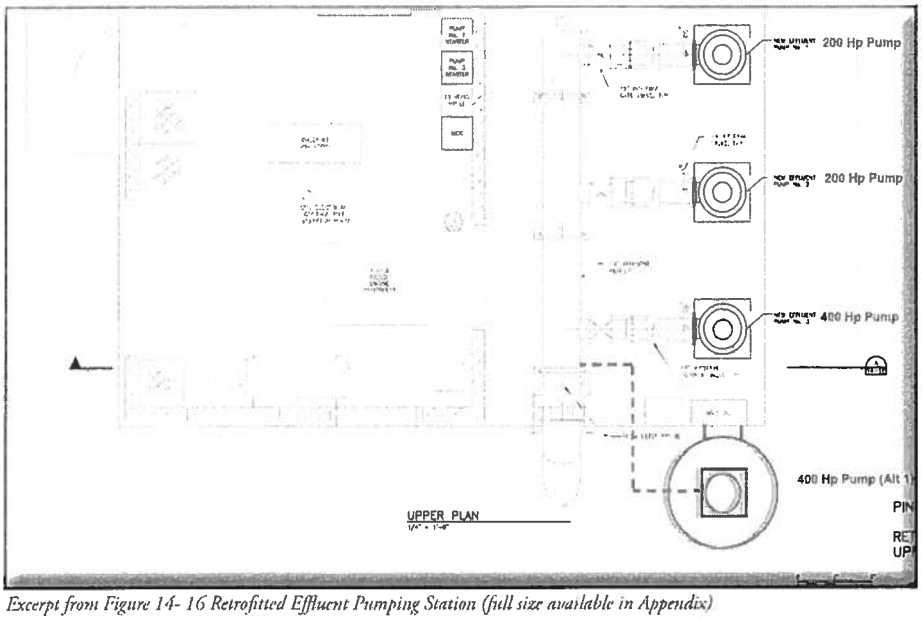
The other listed items are areas that need further consideration that HDR should address during their 65% design effort.

Effluent Pumping

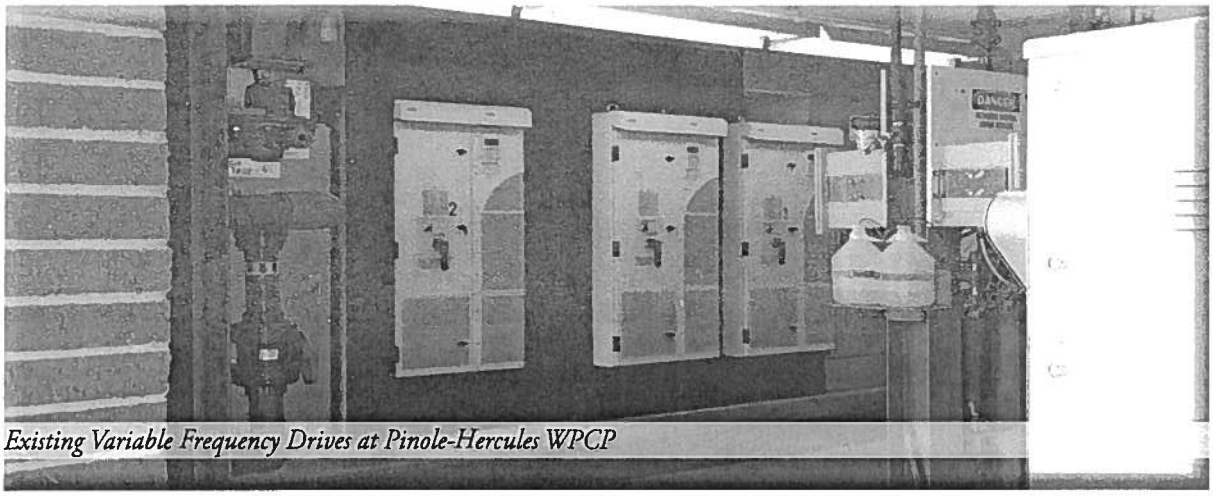
The Review Team identified and discussed the following:

Recommendations to the Effluent Pumping (EP)	
EP- 1	Change three pump configuration from three 400Hp motors to one 200Hp motor and two 400Hp motors or two 200Hp motors and one 400Hp motor. Another option is to add an external steel can and fourth pump and then tee into the discharge header. This limits concrete deck mods and lowers energy demand for majority of operating conditions.
EP- 2	Need to add ability to add Caustic for pH control to offset the reduction in alkalinity caused by nitrification and maintain the effluent pH above that which could cause potential damage to the asbestos cement effluent pipeline.
EP- 3	Confirm that the final sampling point is located past the de-chlorination injection point.

Recommendation EP- 1 is an area that has large potential cost savings over a 20- year operational horizon. The pre-design requires the addition of three new 400-hp motors to pump anticipated wet weather flows while maintaining appropriate redundancy. The Review Team confirmed with WPCP Operations that it is very rare, in the current plant configuration to operate more than one 200Hp. Existing and predicted future minimum night flows are approximately 1.5 mgd, which with the new proposed 400Hp configuration has the high potential to operate on a start stop sequence. This is based on a review of the pump data, which shows that the 1.5 mgd is below the effective turn down rate of the new pumps. The Review Team recommends a minimum of one lower flow pump be maintained (and possibly two), which would handle approximately 90% of the pumping conditions. The third pump would be used during maximum wet weather flows. If there is concern with wet weather pumping redundancy, then the Review Team recommends initially installing another 400 Hp pump in its own steel can connected to the existing wet well. The costs of the additional pump will be offset by the energy savings of using the smaller pumps during the vast majority of the year. See *Figure 14-16* for additional detail.



Excerpt from Figure 14- 16 Retrofitted Effluent Pumping Station (full size available in Appendix)



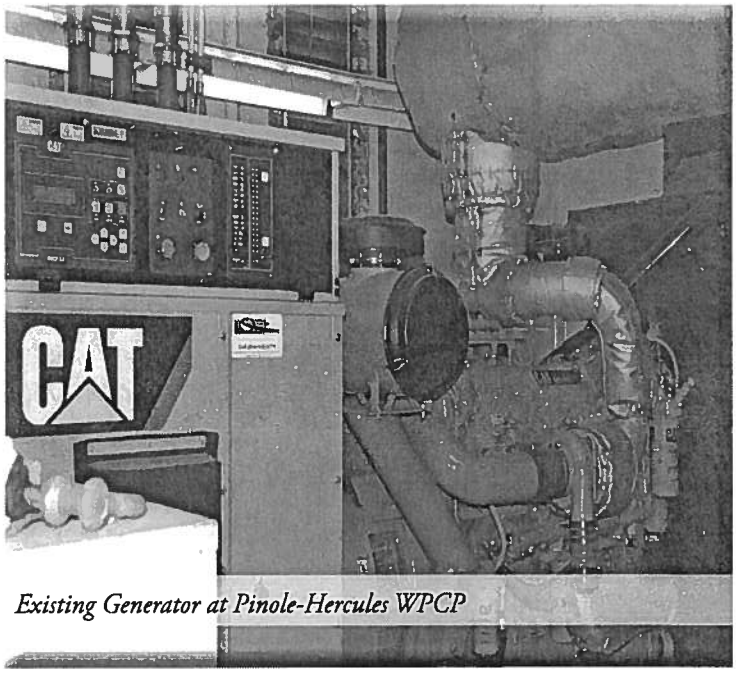
Existing Variable Frequency Drives at Pinole-Hercules WPCP

Electrical System

The Review Team identified and discussed the following:

Recommendations to the Electrical System (ES)	
ES- 1	Conduit routing scheme to new electrical building and existing transformer is not identified in pre-design documents. The Review Team presumes it will run underground, not overhead. Route adjacent to new influent piping a consideration.
ES- 2	Consider developing load-shedding protocols when using emergency generators. WPCP Operations preference is to power influent pumps first and everything else second (i.e. do not run large effluent pumps at the cost of losing an influent pump).

The Review Team did not find many areas of the Electrical System design that could be optimized or changed to reduce initial construction or long-term operational costs. WPCP Operations staff did voice concerns of, *"developing some type of load shedding protocol in the event that the new standby generation system could not handle required plant electrical loads."* This statement is focused on the new electrical building that will be backed up by two 800 Hp generators. If one of the standby generators goes fails, WPCP Operations want to maintain the ability to pump into the plant.



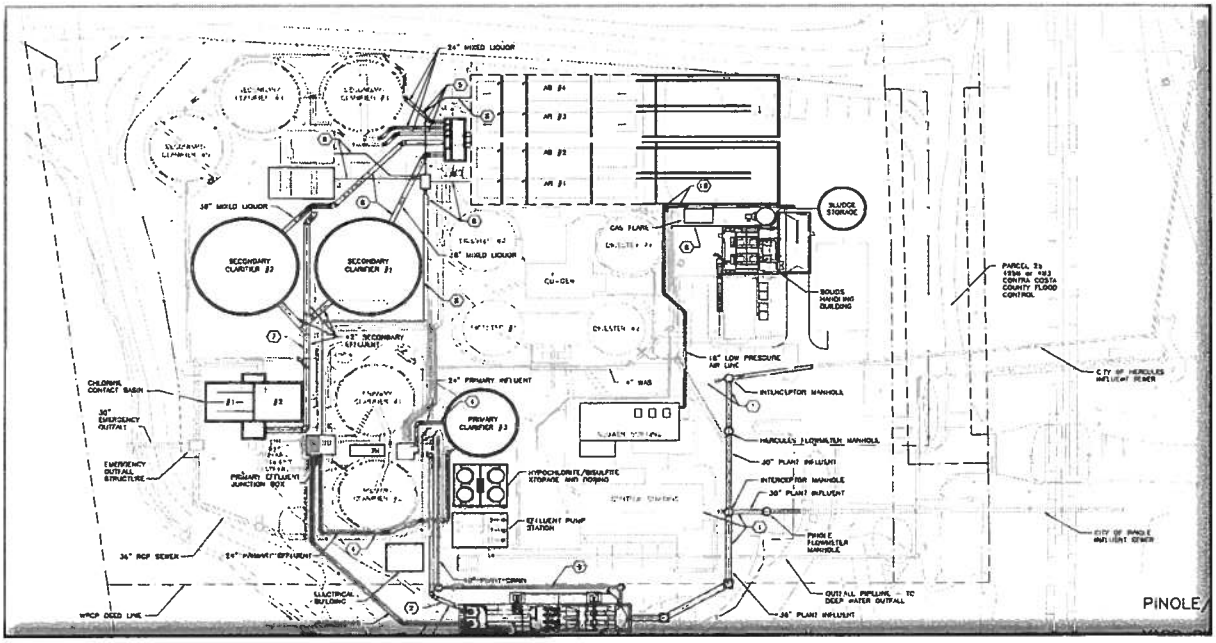
Existing Generator at Pinole-Hercules WPCP

Yard Piping

The Review Team identified and discussed the following:

Recommendations to the Yard Piping (YP)	
YP- 1	Eliminate 30- inch diameter Bypass Piping from Headworks to Primary Effluent Box.
YP- 2	Re-route 24- inch diameter PC3 effluent pipeline from bypass structure to proposed new bypass pipe.
YP- 3	Reduce RAS feed line length and connect to new primary bypass pipe.
YP- 4	Re-route the effluent line from SC5 north of SC1 if the secondary effluent channel is constructed.
YP- 5	Route plant drain from solids handling area to new influent sewer line, downstream of Hercules meter.
YP- 6	Eliminate plant drain from existing discharge point (at existing influent wet well) to new Headworks. Instead, install a new wet well at the existing low point and pump discharge into primary clarifier feed distribution box.
YP- 7	Use PVC or HDPE for large diameter low head pipelines instead of steel, dip or rccp.

Recommendations YP- 1 and ***YP- 2*** were presented in the Headworks section on p.5 and p.6 of this document. If this concept can be incorporated, this will enable the existing bypass structure to be modified, demolishing the bypass side giving the Contractor more room to install the new Chlorine Contact piping/box channel connection. ***Recommendation YP- 3*** can be accommodated by routing the new RAS/WAS feed to the new bypass line, thus eliminating the pipe to the primary effluent junction structure. See attached marked up *Figure 19-1* for illustrative information.



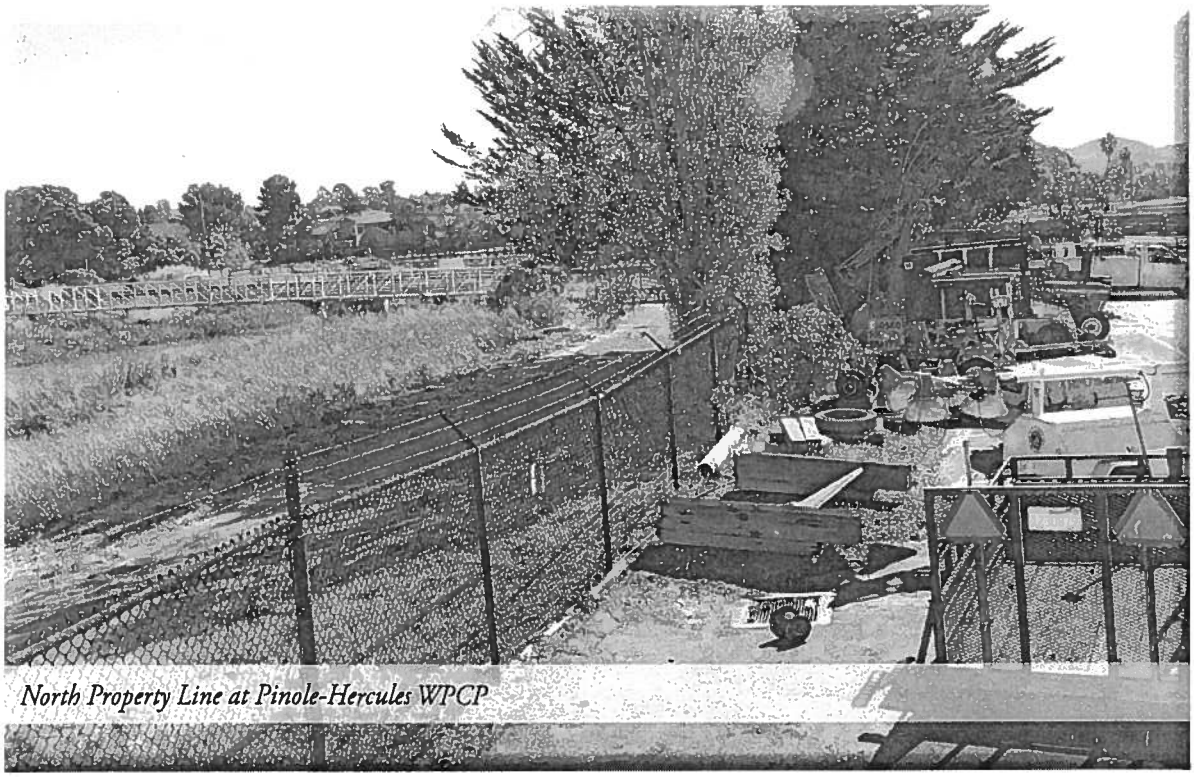
Excerpt from Figure 19 - 1 Yard Piping (full size available in Appendix)

Recommendations YP- 4 and ***YP- 5*** provide alternatives to current plan of installing a new drain line connecting the current low point to the Headworks facility. The Review Team's concern is that the new drain would need to be installed under the existing plant effluent pipeline, the new PC3 influent and effluent pipes and new electrical duct banks. Because this area is already crowded and the existing condition of the final effluent is not know, we recommend not pursuing this option. The solids handling area produces the majority of drain volume and can be routed so it drains via gravity to the Headworks. The expected volume of flow conveyed in the remaining drain system for the vast majority of time is low and can easily be handled by a small lift station, installed in the manhole adjacent to the existing Headworks facility. An extra pump can be placed in the pump station to handle storm water flows. The drain water could then be pumped directly into the primary influent distribution box.

The Review Team recommends that HDR consider non-ferrous plastic materials (such as PVC or HDPE) as alternatives for the large pipe. Plastic pipe is made in the required diameters and provide excellent corrosion resistance to both outside soils and internal sewer gasses.

Recommendations for Further Consideration

The Review Team identified and discussed additional items beyond what was presented in the pre-design report. Each of the items noted below posed problems or are areas of potential challenges based on similar project experience. The Review Team recommends addressing these items in the early design phase to reduce their impact during the construction or operation phase of the Project.

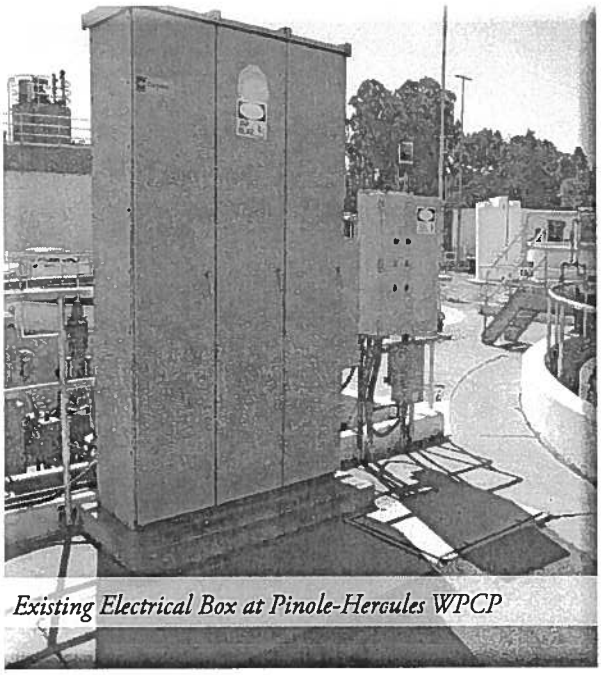


North Property Line at Pinole-Hercules WPCP

Recommendations for Further Consideration (FC)	
FC- 1	3W routing and operation.
FC- 2	Electrical outlet placement and size; discuss adding 480v and 220v plugs.
FC- 3	New Air Board (BAAQD) permits for digester gas flare relocation. There is concern that Air Board will require an enclosed flare and additional generator.
FC- 4	Confirm no National Fire Protection Association (NFPA)requirement to sprinkler chemical areas.
FC- 5	Recommend negotiating a contract with a System Integrator and assign to the General Contractor to minimize coordination concerns during construction.
FC- 6	Need to define work along the north side of the WPCP; the block wall for creek. Can the area between new wall and plant be filled in with excavated soils from site?
FC- 7	Recommend checking Record Drawings against original designs.
FC- 8	Not sure where temporary facility costs are reflected. Expect extensive use of shoring (sheet piles or slurry walls) around the site.
FC- 9	Railroad trestle height limitation of 13 feet 6 inches on Tennet Drive. Access is limited and needs to be noted.
FC- 10	Due to proximity to the neighborhood, need to consider work hour constraints and parking restrictions in final documents.
FC- 11	Consider locating and securing the use of temporary offsite storage prior to bid. This can also include space for work force parking since it appears there will not be enough space on the plant site and parking in the park will not be allowed.

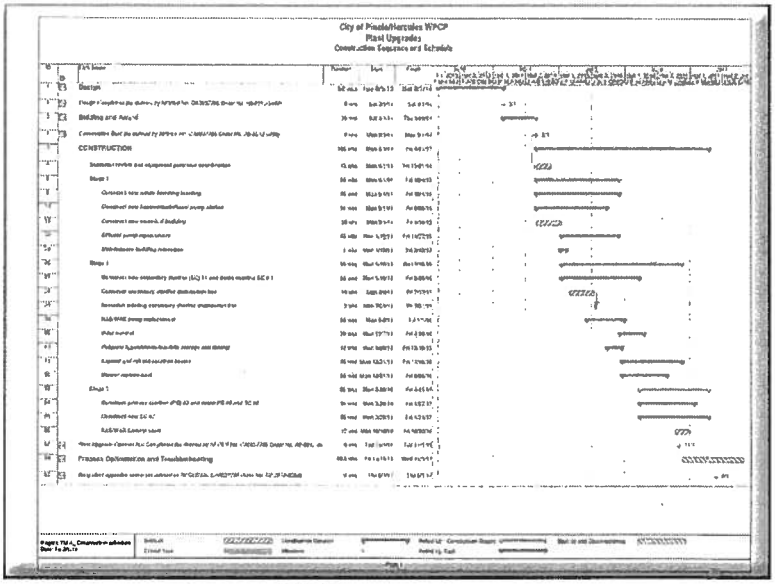
Construction Phasing:

The WPCP is a confined site bordered by the San Francisco Bay to the west, a flood control channel to the north, active railroad tracks to the east and a City owned park to the south. The City's Police Department stores impounded vehicles on the site and the City's Public Works' Field Crews park vehicles and store materials at the site as well. There is very little room to add new facilities without impacting the current plant operations, which is why Construction Phasing is one of the most important aspects of this Project. The Review Team kept this in mind when discussing the individual process areas; looking for alternatives to the proposed sequencing that would allow efficient construction without reducing the plant capacity or impair the current treatment processes.



Existing Electrical Box at Pinole-Hercules WPCP

The WPCP Staff indicated that the minimum facilities needed to handle dry weather flows are two PCs and four SCs. It was also noted that one of the new SCs will have approximately 2.5 times more treatment capacity as the existing SC. Using that information as a basis, the Review Team looked at different scenarios with the intent of moving more of the construction into the first two stages of the three stages of construction, which has the potential to shorten the overall schedule and more importantly, putting more of the new systems in service earlier. These new systems will increase plant treatment efficiencies, provide the needed redundancies and bring the plant into compliance with its permit requirements prior to the mandated deadline of June 2017.



Pre-Design Construction Sequence and Schedule

After reviewing the each of the processes, and considering the Plant Staff's input, the group came up with the following recommendations:

Recommendations for Construction Phasing (CP)	
CP- 1	Build new Secondary Clarifier distribution box in Stage 1
CP- 2	Build PC3 and SC2 in Stage 2
CP- 3	Connect SC5 during Stage 2
CP- 4	Start work on new AB Extensions in Stage 1
CP- 5	Make modifications to existing primary effluent junction box after new Headworks is in service

Recommendation CP- 1 - It is recommended that the new Secondary Influent splitter box be built in Stage 1. WPCP Record Drawings show the existing splitter box is fed from the ABs by two 30-inch diameter and two 24-inch diameter pipelines. WPCP staff confirmed that they only use the two 24-inch diameter pipes thus allowing the Contractor to plug and remove the 30-inch pipe from the existing box and connect to the new box. The Contractor can then build all of the new feed influent lines to each of the Secondary Clarifiers and connect them during subsequent dry weather seasons.

Recommendation CP- 2 - Once the new Headworks is operational, the old Headworks facility becomes obsolete and can be demolished. At this time the Contractor will have to either install

a temporary pumping system to handle the existing plant drain system or have the new drainpipe installed to the new Influent Pump Station. Once the old Headworks facility is demolished the Contractor could start constructing new PC3. Then once the second dry season began, the Contractor could focus on demolishing existing PC3 and existing SC2 and construct new SC2.

Recommendation CP- 3 – If the Contractor is replacing either the 42-inch diameter pipeline or installing a new secondary effluent box channel, the Review Team recommends that existing SC5 effluent line be connected in Stage 2. This will provide the plant adequate treatment capacity in the final Stage to allow the Contractor to demolish and construct new SC1 and connect existing SC4 and SC5.

Recommendation CP- 4 – Once the area in the northeast corner of the plant is cleared the Contractor can start building the new AB extensions. The new extensions can almost be entirely built before doing any connecting to the existing basins. One consideration is that upon extension completion, the Contractor can punch large openings in one of the existing basins to create a temporary connection. This can be done during a nighttime shutdown. Once one extended AB is in service, the plant has enough treatment capacity to allow the Contractor time to completely renovate the existing half of the offline basin. Then when that AB is completely renovated and placed in service, the other basin can be renovated.

Recommendation CP- 5 – This work goes in tandem with the Review Team's recommendation to eliminate the separate 30-inch diameter bypass flow pipeline and instead route a pipe from the primary influent feed structure to the existing primary effluent pipeline.

Ideas Discussed and Not Included in Any Recommendations:

Individual review members raised ideas for group consideration. However, the majority of the Review Team did not feel there was either enough information or merit to move forward and develop detailed recommendations based on the suggestions. Although the items were not included in the above sections, the Review Team agreed, that because there was some discussion, they should be listed in the report.

Additional Ideas	
1	DAFT instead of RST and holding tank for thickening.
2	Eliminate PC3 and use Aerators to handle the additional solid loading and treatment.
3	Instead of adding PC3 use a Salness type system. Trojan Technologies manufactures a unit that they report has the hydraulic capacity of 3 mgd and a TSS removal rate of 40%. The cost for the unit is $260,000. To help with construction phasing, the Review Team discussed using a unit during construction. Trojan rents a smaller unit for approximately $6,000/week that would require temporary piping, flat area and 50-600 gpm variable speed pump. Additional information is included in the Appendix.
4	Consider potential location of direct nitrification treatment (example: Anammox) of solids side streams.

3. Conclusion:

The Review Team reviewed each section of the pre-design report (dated March 2013) for the Pinole-Hercules Water Pollution Control Plant Upgrades Project prepared by the design firm of HDR. Based on this Review, the Review Team concluded there were minimal issues related to design. The confined site, capacity constraints and condition of the existing facilities reduced the potential treatment alternatives available for HDR's consideration. Adding the short duration available for compliance, the team determined HDR's approach reasonable and appropriate.

It was clear to the Review Team that the WPCP Staff positively partlcipated in the pre-design effort. During the two-day workshop, they provided (operational) context to help the Review Team understand the historical data used as the basis for the pre-design report. Their participation was invaluable and their collaborative frankness was refreshing. It was apparent from the Workshop discussion that the pre-design does not incorporate all of Operations requests. The Review Team presumes that this was a result of HDR trying to balance the limited Project budget and resources. Understanding that the greatest cost of any project is the long-term operations and maintenance, the Review Team presented several recommendations that if instituted, has the potential to maximize operations and the longevity of the plant with slight capital cost increase.

HDR's recommendations are based on reasonable assumptions and engineering practices and we see no reason why they should not proceed using the pre-design report as the basis for the 65% design.

We suggest that HDR and the representatives of Pinole and Hercules consider the recommendations contained in this report during the 65% design effort. Accepting and incorporating the recommendations will benefit the Pinole-Hercules Water Pollution Control Plant Upgrade Project during construction and throughout the useful life of the facility.

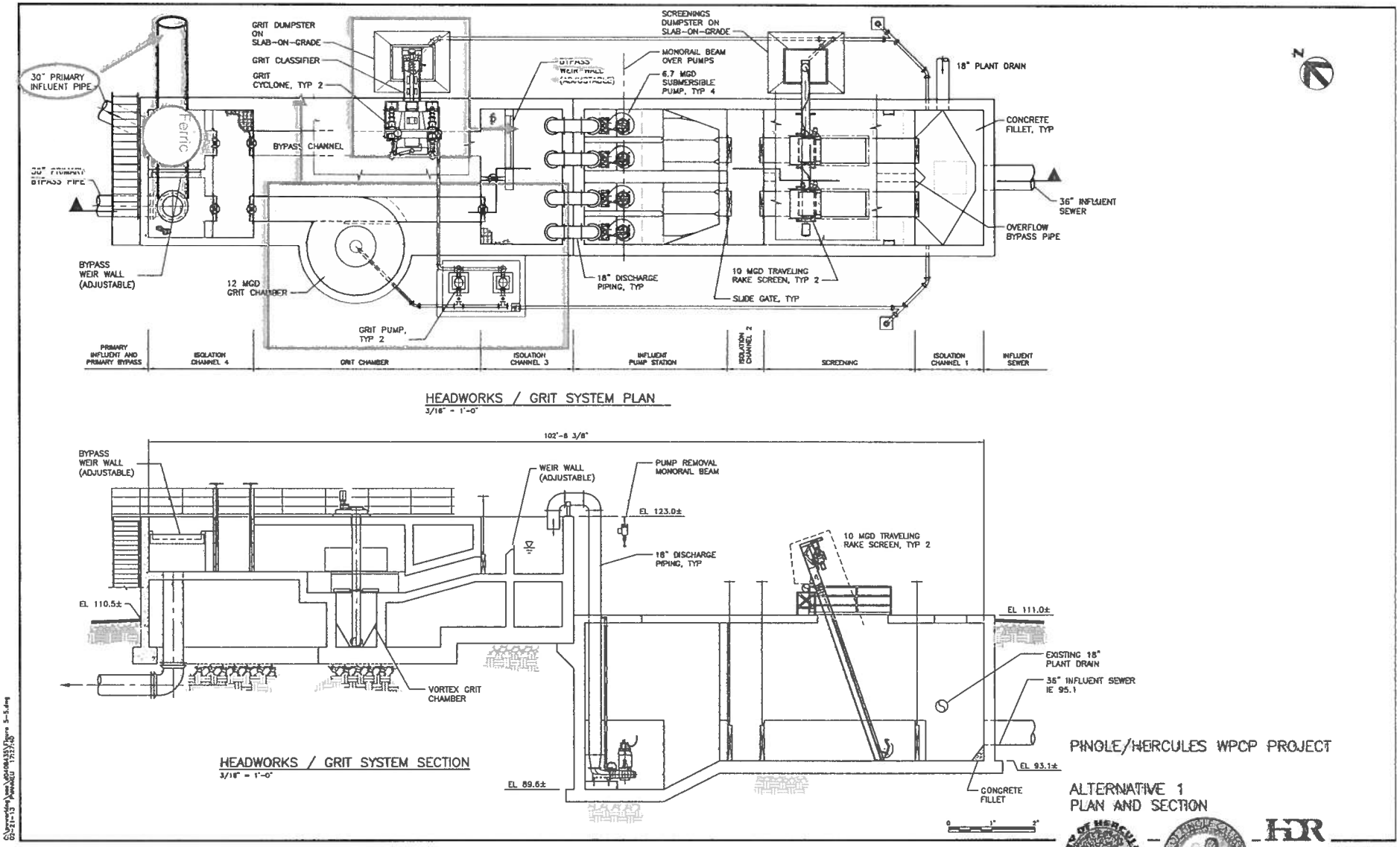
Christopher Davenport, P.E.

Lea Fisher, P.E.

Levi Fuller

Jean- Marc Petit, P.E.

4. Appendix:

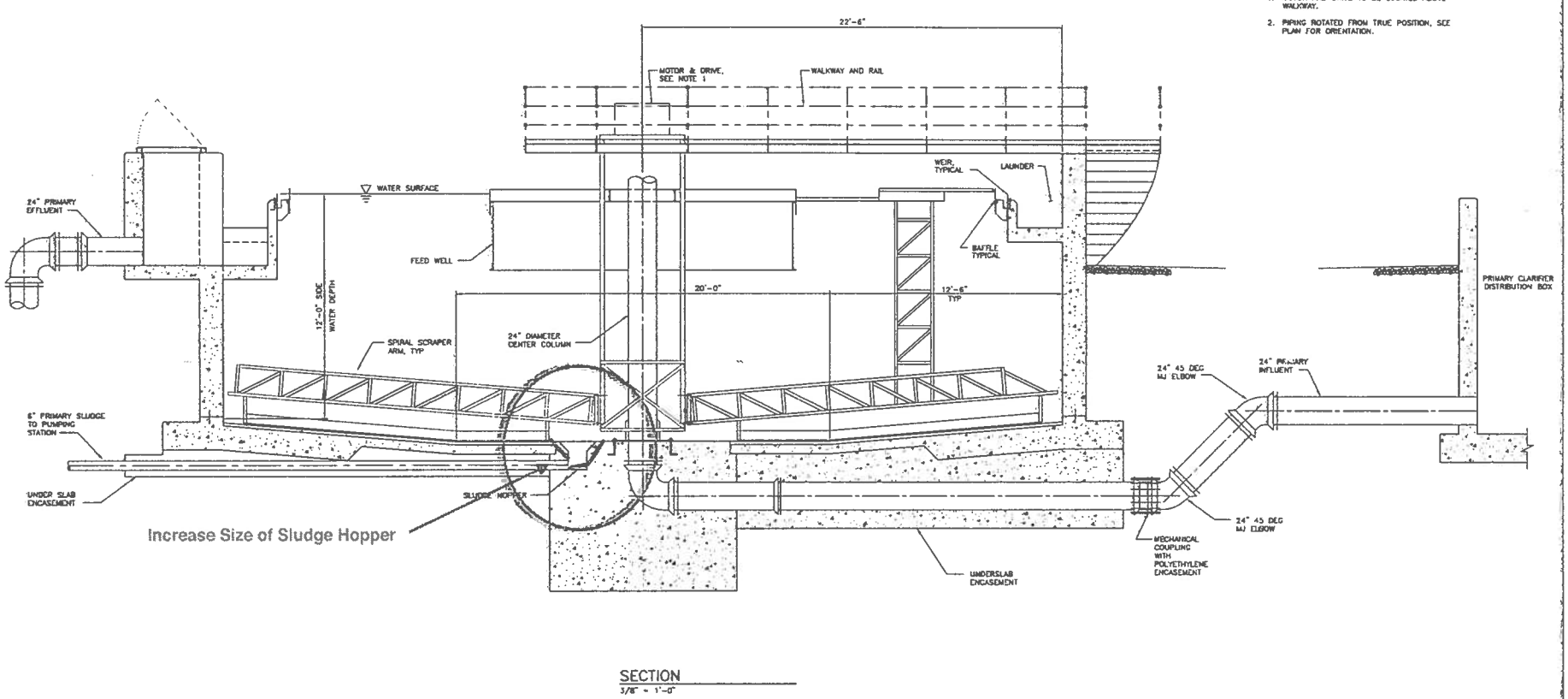


PINOLE/HERCULES WPCP PROJECT

ALTERNATIVE 1
PLAN AND SECTION

HDR

FIGURE 5-5



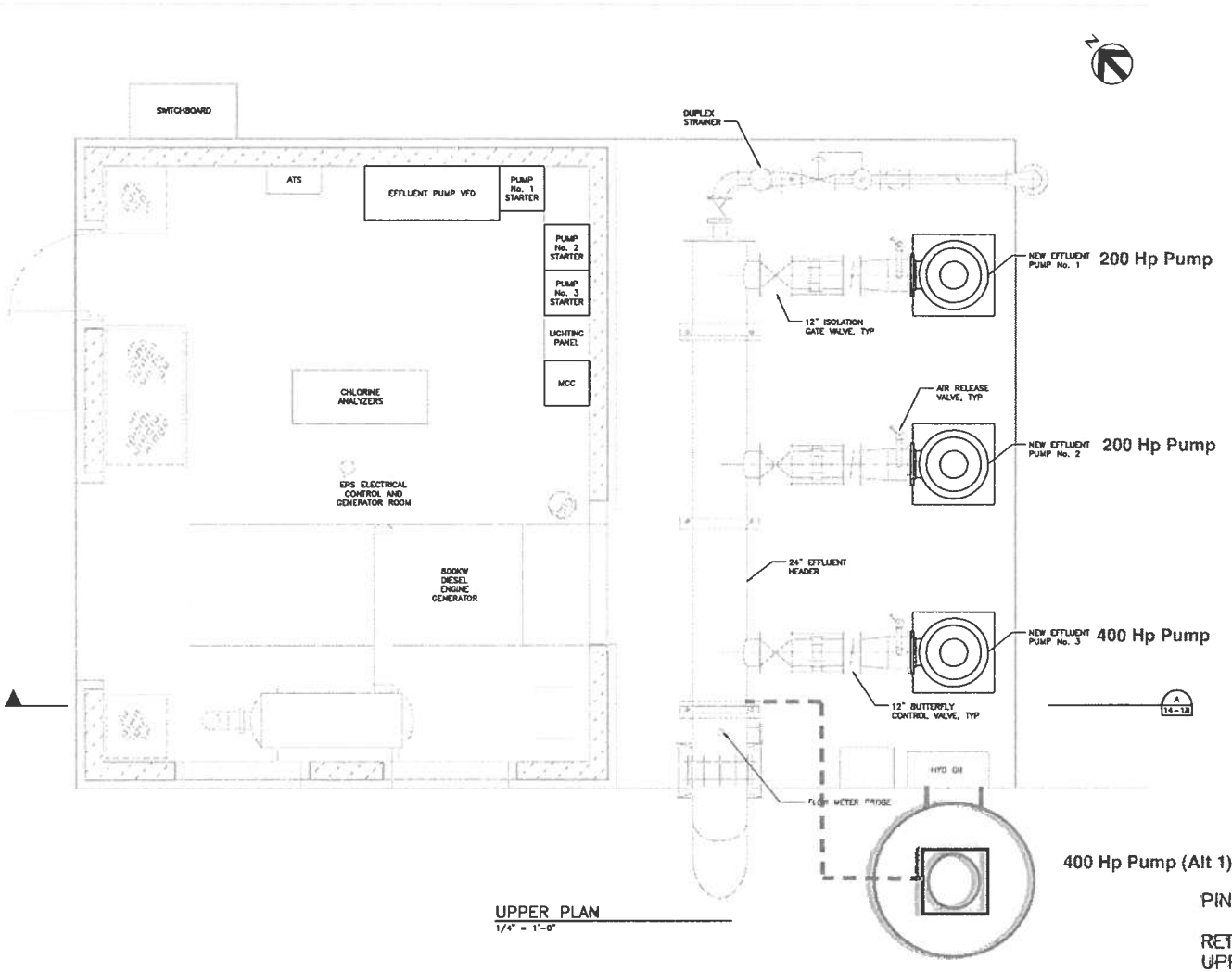
SECTION
3/8" = 1'-0"

PINOLE/HERCULES WPCP PROJECT

PRIMARY CLARIFIER NO 3 SECTION

HDR

Figure 8-13



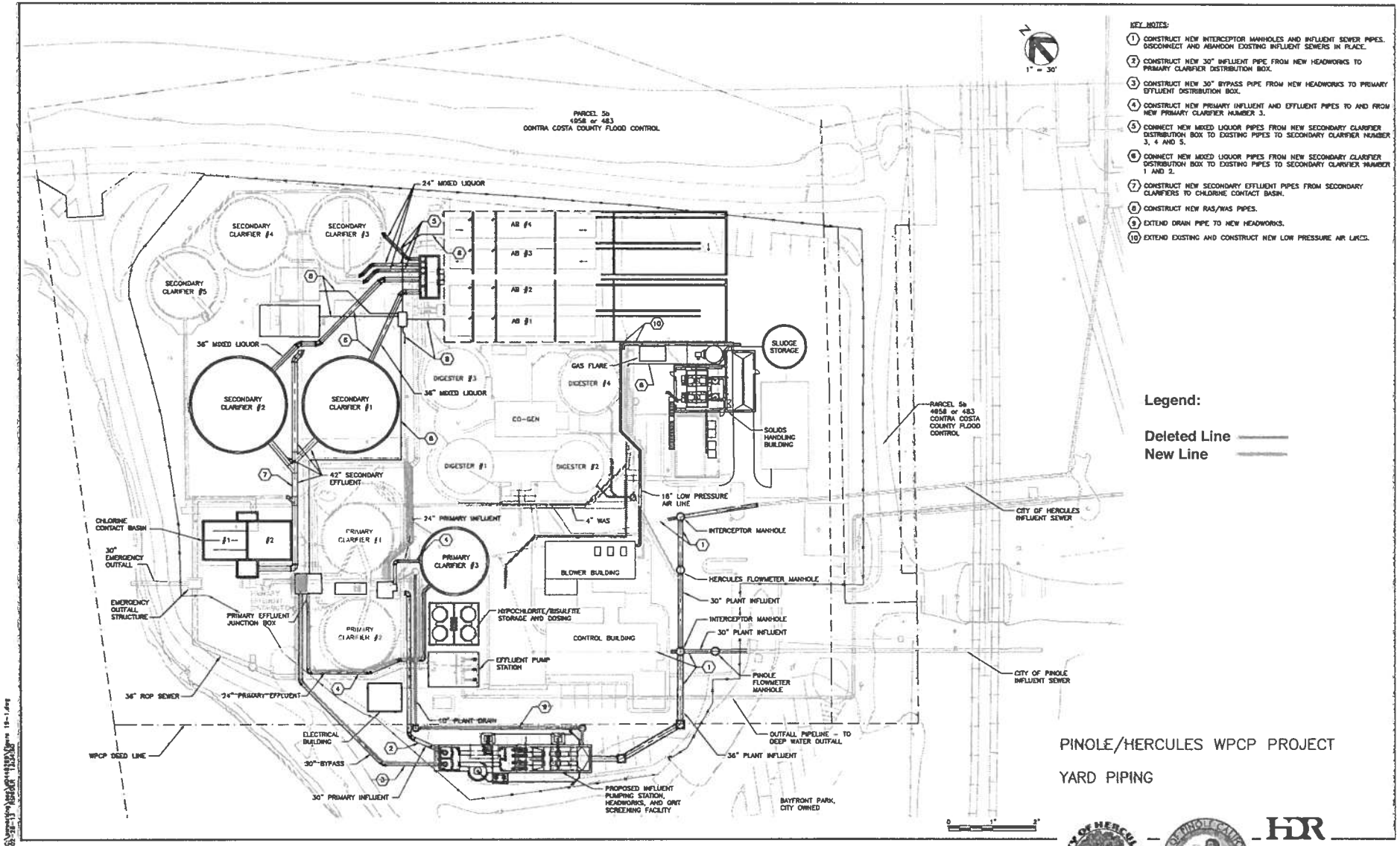
UPPER PLAN
1/4" = 1'-0"

PINOLE/HERCULES WPCP PROJECT

RETROFITTED EFFLUENT PUMPING STATION
UPPER PLAN

HDR

Figure 14-16



PINOLE/HERCULES WPCP PROJECT

YARD PIPING

HDR

Figure 19-1

- End of Document-

AGENDA ITEM 7

TO: **WASTEWATER SUBCOMMITTEE**

SUBMITTED BY: **DEAN ALLISON**

MEETING DATE: **APRIL 17, 2014**

SUBJECT: **CONSTRUCTION MANAGEMENT SERVICES**

RECOMMENDATION

Discuss the procurement process for Construction Management Services

DISCUSSION

The procurement of a Construction Manager is the next critical step for the upgrade project. Once hired, the Construction Manager will assume a key role in the project. The Construction Manager will be integrated into the design team and provide input on project specifications, sequencing, and other construction related issues. The Construction Management firm will perform a Constructability Review when the plans become 65% complete.

Given that the engineering plans are nearing the 65% complete stage, to maintain schedule, a contract for Construction Management services must be awarded and executed with all due haste.

A Request for Proposals (RFP) was circulated to qualified engineering firms in March 2014. On April 10, 2014, proposals were received from four firms: Carollo Engineering, Harris and Associates, The Covella Group, and West Yost and Associates. Staff is currently reviewing the proposals, and will be interviewing firms on April 21, 2014. See schedule below

Staff did not specify in the RFP how construction management services is to be provided, but rather asked each firm to specify a work plan and staffing level. The staffing level varies by firm, however, all firms propose to assign two persons full time to this project for the two-year period during which construction is underway.

The procurement process will focus on evaluating the qualifications, and abilities of those two key individuals that each firm is proposing for this project, rather than the firm itself. The qualifications most desired in a Construction Manager are experience in both wastewater plant operations and construction, and superior communication skills.

Staff is also looking for good value in this contract, and hope that the successful firm can bring efficiencies to the contract.

Staff wants to emphasize the urgency in moving forward with the procurement process, and is requesting that the subcommittee hold special meeting on Thursday May 8, 2014 to meet schedule.

SCHEDULE

Item	Date
Receive RFP	April 10, 2014
Review proposals / Check references	Week of April 14, 2014
Interview firms	April 21, 2014
Select Construction Manager	April 22, 2014
Negotiate final terms	Through April 30, 2014
Bring recommendation to a Special Meeting of the Wastewater Subcommittee*	May 8, 2014
Award by Pinole City Council	May 20, 2014

ATTACHMENT

Request for Proposal

Request for Proposal for Construction Management Services for Plant Upgrades at the Pinole/Hercules Water Pollution Control Plant

PROPOSALS DUE:

APRIL 10, 2014

@ 4:30 PM

March 2014

PROJECT BACKGROUND

The Pinole-Hercules Water Pollution Control Plant (WPCP) is a 4.06 MGD wastewater plant serving the cities of Pinole and Hercules. The plant is located in, and is operated by, the City of Pinole.

In June 2007, the Regional Water Quality Control Board (RWQCB) issued a new operating permit for the plant. The permit identified a number of plant deficiencies and a schedule for their elimination. Beginning in June 2007 the cities conducted a number of engineering studies to investigate options for upgrades.

In June 2009, a report prepared by Dodson Psomas and Associates, evaluated a number of options, and recommended a design. The report was adopted by the two City Councils and was submitted to the RWQCB as the selected project.

In October 2011, the cities circulated a Request for Proposal (RFP) for preliminary engineering design services. The cities received three proposals, and selected HDR as the most qualified.

In March 2013, HDR Inc. completed phase one engineering services. Those services produced an approximately 25% design, and a series of Technical Memorandums:

TM 0-	Executive Summary
TM 1 -	Flows and Loads
TM 2 -	Waste Discharge Requirements
TM 3 -	Treatment Plant Modeling Steady State Mass Balance Model Calibration & Design Conditions
TM 4 -	Construction Phasing
TM 5 -	Headworks: Influent Pumps, Screening, and Grit Removal
TM 8 -	Flow Equalization, Aeration Basins, Blowers, Secondary Clarifiers, and RAS/WAS Pumping
TM 12 -	Disinfection System Alternatives Analysis
TM 13 -	Solids Handling
TM 14 -	Effluent Pumping
TM 15 -	Hydraulic Profile

TM 17 - Plant Control Strategies

TM 18 - Electrical Distribution System and Plant SCADA System Configuration Evaluation

TM 19 - Plant Utilities and Yard Piping

TM 20 - Demolition and Site Work

Appendix A. Geotechnical Report

A copy of the Preliminary Design is available on the City's Website: http://www.ci.pinole.ca.us/publicworks/treat_plant.html

In July 2013 HDR was awarded a contract for final engineering services, and The Covello Group was awarded a contract to conduct a Value Engineering Review, and to assist the City in Project Management services.

A copy of the Value Engineering Report is also posted on the City's website

Engineering plans are approximately 40% complete.

The project schedule is attached

REQUESTED SERVICES

Services are requested from qualified firms to perform a constructability review of engineering plans, and to provide construction management services during the 24 months construction is expected to be underway.

The project will receive Federal Funding from the State Revolving Loan Fund Program, and thus construction and all services must comply with State Revolving Loan Fund and Federal requirements.

Since this is an upgrade to the existing plant that must remain operational during construction, it is essential that the Construction Manager be knowable, and have experience in the principles of both Construction Management and Treatment Plant Operations. The firm selected will be the one that demonstrates offers a team with these credentials that will bring efficiencies, and provide the best value for the two cities.

The Specific Services Requested are as follows:

PART ONE: CONSTRUCTABILITY REVIEW

The constructability review of the 65% complete engineering plans, Is a critical step in the overall design process. It is also a good way for the Construction Manager to integrate into the project team. The constructability services requested include:

- Review Plans and Specifications, including project phasing, for consistency, actual and potential conflicts and constructability issues, including impact on existing treatment plant operations.
- Review Environmental Documents and permits to ensure that plans meet environmental regulations and requirements
- Review and evaluated construction phasing and how it will impact plant operations
- Provide input to the City and the Design Engineer regarding anticipated project schedule and estimate of working days
- Prepare written report based upon review,
- Participate in two design meetings to present constructability review comments.
- Present findings of constructability review to the Pinole/Hercules Wastewater Subcommittee, three meetings.

- Participate in six additional design meetings as part of the project team during the final stages of design

PART TWO: ASSISTANCE DURING ADVERTISING AND AWARD PROCESS

- Maintain a list of bidders
- Prepare pre-bid addenda,
- Conduct pre-Bid Meeting, prepare and distribute responses to bidders Inquires at meeting and during advertising process
- Review and analyze construction bids for irregularities, completeness, responsiveness, bidder capabilities, and for compliance with Federal, State, and Local regulations.
- Review and evaluate bids for compliance with the City of Pinole's Local Hiring Policies.
- Assist Staff in preparing City Council report to award contract.
- Review contractor's contract execution for compliance with Contract Document requirements, State Revolving Loan Fund, and environmental documents
- Coordinate and conduct pre-construction meetings

PART THREE: ASSISTANCE DURING CONSTRUCTION

- Evaluate contractor's schedule, and prepare a project schedule, and monitor project progress
- Prepare a calendar for submittal of progress payments based upon the city's payment practices and schedule
- Maintain Project Diary, and photo documentation of construction
- Provide construction monitoring
- Photo document pre-construction conditions

- Establish and maintain project file system.
- Maintain detailed project records including daily logs, inspection records, photos, measurements, quantities, schedules, correspondence and documentation of major decisions,
- Coordinate special inspectors
- Assure that construction complies with project permits and Mitigation Monitoring Plan
- Manage and coordinate contractors submittals, requests for information
- Maintain site coordination with contractor, plant manager, public works maintenance manager, and city engineer.
- Coordinate weekly site meetings with the Contractor, City Staff; prepare agendas, follow-up items,
- Assure labor compliance tasks in accordance with Davis Bacon, Prevailing Wage requirements
- Verify certified payrolls, DBE utilization, subcontractor utilization
- Conduct labor interviews
- Review contractor submittals for compliance with Contract Documents.
- Prepare weekly working day statement
- Prepare monthly reports to the City Council providing a brief overview of construction completed during the month, and construction to be completed the following month..
- Prepare a more detailed bi-weekly project report to the City Engineer, including a two week look ahead schedule, a list of potential critical issues, documentation of change orders in progress/approved, potential impacts to schedule or budget, and a comparison of amount invoiced to the total authorized budget.
- Review progress payments, with recommendation to City Engineer

- Review and evaluate request for change orders
- Coordinate Material Testing
- Provide Quality Assurance of material testing services
- Review and provide written comments on design engineer's operation and maintenance manuals

SUBMITTAL

PROPOSALS SHALL BE DELIVERED TO:

CITY OF PINOLE

2131 PEAR STREET

PINOLE, CA 94564

ATTENTION: Dean Allison; Director of Development Services / City Engineer

FORMAT

PART ONE: PROPOSAL

- Twelve (12) hard copies in three ring binders
- Three (3) three electronic copies on CD, each in a separate case or envelope
- Each proposal shall be limited to thirty (30) pages exclusive of resumes, insurance certificates, and conflict of interest statements. Text shall be no smaller than 12 point.

PART TWO: FEE ESTIMATE

One (1) copy of the fee estimate for services in a separate sealed envelope marked "Fee Estimate for Pinole-Hercules Water Pollution Control Plant Upgrade"

PART ONE OF THE PROPOSAL SHALL BE IN THE FOLLOWING FORMAT:

Section One: Cover Letter

The cover letter shall be signed by a member of the organization having authority to negotiate and execute contracts on behalf of the firm and include the following topics:

a. Acknowledgment of any addenda issued.

b. Acceptance of the proposed standard contract from the City of Pinole.

c. Conflicts: Disclosure of any actual, apparent, direct or indirect, or potential conflict-of-interest that may exist with respect to the firm, management or employees of the firm, sub-consultants or other persons relative to the service to be provided. The conflict-of-interest statement shall be included in the proposal appendix. If no conflict-of-interest exists, a statement to that effect shall be included.

d. Insurance: Attach a certificate-of-insurance to show compliance with the City's standard insurance requirement contained in the City's standard contract form shown in Appendix . The certificate of insurance shall be included in the proposal appendix.

Section Two: Project Approach

Provide a description of overall project approach, staffing plan at various stages of the anticipated 24 month construction process. If the project will be staffed differently throughout the 24 month construction process, provide the rationale as to why the varying staffing levels are proposed, and how that staffing level my need to change depending on how the project is pursued by the contractor.

Provide detail as to what computer programs will be utilized and how that data may be utilized by city staff. Indicate if your firm will relay on paper or electronic files.

Provide detail as to what files, and in what format, you will provide the city at the completion of construction.

Identify your approach to managing the project team and how you are going to keep the Cities informed and solicit input from the Cities when making key decisions.

Describe how you will manage the project so that it will be completed on schedule and on budget. Describe how you will control cost and quality assurance.

Provide any detail in how your firm will provide management in a unique way, or different from other that are submitting proposals. Provide any of your firm's characteristics that will set it apart from others.

Section Three: Detailed Work Plan

Provide a description of the required tasks, include assumptions made to develop your proposal, and any steps required that have not been specifically identified. Identify any unique approaches or strengths that your firm may have related to the project.

The detailed work plan shall be presented in the form as identified above.

Section Four: Project Team (Including Resumes)

Provide a team organization chart identifying team members assigned key tasks. The organization chart shall show who, on the project team, will have the primary role of interacting with the cities.

This section shall include discussions on proposed staffing levels during different stages of construction, why additional personnel may be required during some portions of the construction.

Any sub-consultants shall be shown and identified.

Provide a description of projects similar in nature and scope that members of the project team worked on in the past five (5) years. Include their role and responsibility. Identify client names and phone numbers who are familiar with the project and the role of proposed team members.

Full resumes of team members assigned to this project

Provide the following information about the key individuals assigned to this project:

Name of Team member	Title	No. of months during 24 month construction process that person will be assigned to this project	% Of work week devoted to this project

THE PART TWO PROPOSAL SHALL BE IN THE FOLLOWING FORMAT:

Fee Estimate
The fee estimate shall be presented in spreadsheet format as follows

ITEM 1.1 CONSTRUCTABILITY REVIEW

Fee Estimate shall be calculated by showing task, job classification, hourly rate, and extension in the following format:

Constructability Review	Hours	Rate	Extension
Job Classification One	H1	R1	Ext1
Job Classification Two	H2	R2	Ext2
Job Classification Three	H3	R3	Ext3
Total			Total

ITEM 1.2 ASSISTANCE DURING ADVERTISING AND AWARD PHASE

	Hours	Rate	Extension
Job Classification One	H1	R1	Ext1
Job Classification Two	H2	R2	Ext2
Job Classification Three	H3	R3	Ext3
Total			Total

ITEM 1.3 ASSISTANCE DURING CONSTRUCTION

Assistance During Construction	Month 1 *(Each month for 24 Months)*			Bring system on line		
	Hours	Rate	Extension	Hours	Rate	Extension
Job Classification One	H1	R1	Ext1	H1	R1	Ext1
Job Classification Two	H2	R2	Ext2	H2	R2	Ext2
Job Classification Three	H3	R3	Ext3	H3	R3	Ext3
Job Classification Four	H4	R4	Ext4	H4	R4	Ext4
			Subtotal			Subtotal

EVALUATION AND SELECTION PROCESS

A selection panel convened by the cities will evaluate and rate each proposal on the following criteria:

Criteria	Weight
Constructability Review	25%
CM Approach	25%
CM Project Team	25%
Interview	25%

Final recommendation will be made by the selection panel based on evaluation of the proposal and interview.

Final negotiations as to scope and fee will take place after selection.

The successful firm will be expected to execute the City of Pinole's standard contract for consultants, a copy of which is included in the Appendix.

Additional Information

The City of Pinole shall furnish a trailer, with electrical services as office space. All computer, copying, scanning, file storage equipment as well as office furniture, shall be the responsibility of the Construction Management Firm.

ATTACHMENTS:

Project Schedule

Proposed Plant Layout

City of Pinole Standard Agreement

AGENDA ITEM 8

TO: **WASTEWATER SUBCOMMITTEE**

SUBMITTED BY: **DEAN ALLISON**

MEETING DATE: **APRIL 17, 2014**

SUBJECT: **FY 2014 – 15 Budget**

RECOMMENDATION

Review and comment on Draft 2014-2015 Budget.

DISCUSSION

The City of Pinole is underway with preparations for the FY 2014 – 2015 budget. Attached is a copy of the draft budgets (operational and capital) for the Water Pollution Control Plant.

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Highlights of the proposed budget:

- The FY 2014 – 2015 Operations Budget will be 1,2% greater than FY 2013 – 14.
- The FY 2014 – 2015 Capital Budget totals $22 M, and includes construction of plant upgrades.

Department/Division: 648 Sewer/Treatment Plant

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Fund 500 Sewer Enterprise

Account and Title:	2010/11 Actual Expended	2011/12 Actual Expended	2012/13 Actual Expended	2013/14 Revised Budget	2014/15 City Manager Recommended
SALARIES					
41101 Salaries	696,183	508,339	651,737	725,150	712,999
41102 Overtime	26,844	24,250	24,389	25,000	26,500
41102x Plant Upgrade Overtime Support	0	0	0	0	9,000
41103 Holiday Premium	18,285	4,610	7,668	0	0
41104 Part-Time	0	330,521	287,925	12,000	12,000
41105 Vacation Accrued	17,984	0	27,070	0	0
41108 Medical Ins.-Retired (OPEB)	281,498	0	0	0	0
Total Salaries	**1,040,794**	**867,720**	**998,789**	**762,150**	**760,499**
SERVICES AND SUPPLIES					
41221 Safety Clothing	12,280	13,317	12,990	15,040	15,040
41231 Equipment Maintenance	451,804	487,900	233,134	269,080	269,080
41232 Maint. Structures/Improvemt./Grounds	5,994	12,746	10,230	30,000	30,000
41233 Memberships	1,532	1,178	1,277	5,000	5,000
41234 Office Expense	4,090	5,234	4,656	5,000	5,000
41235 Professional Services	88,756	91,938	81,153	30,000	35,000
41236 Equipment Rental	1,138	728	0	1,000	1,000
41241 Special Department Expense	0	9,498	840	0	0
41801 WPCP - Sludge Removal	57,002	67,560	53,182	85,000	85,000
41802 WPCP - Chemicals	634,587	643,765	628,159	688,000	688,000
41803 WPCP - Permit Fees	32,403	53,618	48,500	50,000	50,000
41804 WPCP - Lab Operations	108,920	60,774	75,495	100,000	100,000
41246 Compliance Inspection	4,531	11,436	19,040	25,000	25,000
41242 Travel & Training	5,269	1,110	2,753	4,500	4,500
41243 Utilities	492,607	594,471	561,844	625,800	625,800
Total Services & Supplies	**1,900,913**	**2,055,273**	**1,733,253**	**1,933,420**	**1,938,420**
EXPENDITURE TRANSFERS					
41421 Administrative Credits	0	0	(62,751)	0	0
41422 Administrative Charges	174,580	236,243	286,339	202,291	208,470
41423 Benefit & Insurance Charges	382,256	284,619	310,415	352,537	396,410
41424 ISF Charge for Technology	5,537	21,194	24,510	40,351	27,948
41427 Operations Carry Forward					
Total Expenditure Transfers	**562,373**	**542,056**	**558,513**	**595,179**	**632,828**
TOTAL BUDGET	**3,504,080**	**3,465,049**	**3,290,555**	**3,290,749**	**3,331,747**
				Year Over Year Change	**40,998**

648 - SEWAGE TREATMENT PLANT

DRAFT

Mission Statement

The mission of the Sewage Treatment Plant is to produce an effluent that meets or exceeds State and Federal standards, minimize the emission of unpleasant odors, and meet the Air Quality Control Board requirements, while processing solids in a safe manner. Maintain facilities to keep pace with normal depreciation and growth.

Workload Prioritization

◊ Continue to meet deadlines established by the Regional Water Quality Control Board in the permit for the Plant regarding facility upgrades.

Line-item Detail

41101 Salaries $ 712,999

Staffing for the sewer treatment plant consists of the following full-time positions:

1 Treatment Plant Manager
1 Treatment Plant Operations Supervisor
1 Environmental Analyst
1 Environmental Assistant
5 Treatment Plant Operators
1 Maintenance Mechanic

41104 Part-time Salaries $ 12,000

Student Intern for WPCP Operations (temporary unbenefited)	$ 12,000
	$ 12,000

41102 Overtime $ 26,500

41102x Plant Upgrade Overtime Support $ 9,000

41221 Safety Clothing $ 15,040

Includes laundry service for uniforms, safety shoes/boots, gloves, etc.

41231 Equipment Maint. $269,080

Repairs as needed to treatment plant equipment - i.e., pumps, seals, packing, motors, machine work, instrumentation, electric parts, gas, oil, tires and repairs as needed to all plant vehicles, hose replacement, etc.

41232 Maint.-Structures, Improvements, Grounds $ 30,000

Maintenance and repairs to grounds and facilities including janitorial services

Janitorial services.		$ 10,000
Bio-Assay structure refurbishment		20,000
	TOTAL	$ 30,000

41233 Memberships $ 5,000

41234 Office Expense $ 5,000

Basic stationery, supplies, fax paper, copying paper, computer paper, books, maps and periodicals, etc.

41235 Professional Services $ 35,000

Engineering Services	$ 10,000
Attorney Services	25,000
	$ 35,000

41236 Equipment Rental $ 1,000

41801 WPCP - Sludge Removal $85,000
Sludge hauling to EBMUD and Landfill.

41802 WPCP - Chemicals $688,000
Chemicals for Plant Operations

41803 WPCP - Permit Fees $50,000
NPDES renewal with anti-degradation study (SB709), Bay Protection, Aquatic Habitat, Air Quality, County Fuel Tank Fees, and Air Toxic Fees.

41804 WPCP - Laboratory Operations $100,000
Laboratory supplies, testing for metals,

41242 Travel and Training $ 4,500

41243 Utilities $ 625,800
Represents the cost of electricity, gas and water for the treatment plant.

41246 Compliance Inspection Program $ 25,000
Public outreach materials, Sampling and analysis, laboratory supplies and safety equipment.

41422 Administrative Charges (Costs Transferred in from Other Departments) $ 208,470

The Treatment Plant Department benefits from administrative support provided by other Departments. Costs for these services are charged back via this line item.

Position	Salary	Benefits	%	Amount
City Manager	$ 185,185	$ 52,350	0	$ -
Assistant City Manager	$ 163,627	$ 47,584	10	21,121
Finance Director	$ 139,113	$ 58,852	10	19,797
Accounting Specialist	$ 63,035	$ 20,080	10	8,312
Accounting Specialist	$ 73,559	$ 26,663	10	10,022
Accounting Tech	$ 18,190	$ 2,924	15	3,167
HR Specialist	$ 74,174	$ 27,138	10	10,131
Information Systems Coordinator	$ 85,056	$ 29,264	10	11,432
PW Director/City Engineer	$ 154,347	$ 45,510	50	99,929
Administrative Secretary	$ 62,693	$ 35,548	25	24,560
Total Costs Charged				$208,470

41423 Benefit Charges $396,410

This line item represents the Sewer Treatment Plant departmental share of employee benefit costs and insurance. These costs are charged in total to a clearing account and redistributed back to department cost centers based on a cost distribution formula. Costs included for this budget are:

PERS Retirement	$ 92,027
Medical Insurance-Active	129,741
Medical Insurance-Retirees	50,688
Medical Redirect	17,100
Vacation Buy-back	6,227
Life Insurance/A.D.D.	1,160
Unemployment Insurance	782
Long Term Disability Insurance	3,312
Medicare	11,275
Dental Insurance	15,955
Liability Insurance	21,695
Vision Insurance	2,400
Safety Equipment	2,000
Employee Assistance Program	469

Workers Comp. Insurance		41,579
	TOTAL	$ 396,410

41424 ISF Charges for Communication & Technology $ 27,948

This line item represents the departmental share of communication and technology services provided by the Information Services Department. These costs are charged in total to a clearing account (#0121) and redistributed back to department cost centers based on a cost distribution formula.

Mission Statement

The mission of the sewer maintenance treatment plant is to maintain and replace outdated or worn equipment, and to make periodic upgrades to the plant and sewer system to ensure safe and efficient processing while complying with all state and federal standards. The City of Hercules shares the cost of these expenditures on a prorated basis based on usage.

Line-item Detail

41235 Professional Services $ 1,500,000

Final Engineering Design of Improvement to WPCP and Construction Management of Plant Upgrades

41310 Improvements $20,000,000

41312 Equipment $103,000

Equipment Replacement:

Recirculation Pump	$ 20,000
Shredder	10,000
Chemical Feed Pump	7,000
Climate Control System	4,000
Chemical Storage Tank	12,000
General Equipment Replacement	50,000
	$ 103,000

6406x Depreciation $580,000

DRAFT

Department/Division: 651 WPCP / Equipment & Debt Service				Fund 500 Sewer Enterprise	
Account and Title:	2010/11 Actual Expended	2011/12 Actual Expended	2012/13 Actual Expended	2013/14 Revised Budget	2014/15 City Manager Recommended
SERVICES AND SUPPLIES					
41235 Professional Services	0	0	0	0	25,000
					25,000
FIXED ASSETS					
41310 Improvements	15,271	13,739	0	90,000	90,000
41312 Equipment	0	0	2,575	0	0
Total Fixed Assets	**15,271**	**13,739**	**2,575**	**90,000**	**90,000**
EXPENDITURE TRANSFERS					
41502 Debt Service	626,773	628,973	432,991	635,507	638,826
Total Expenditure Transfers	**626,773**	**628,973**	**432,991**	**635,507**	**638,826**
TOTAL BUDGET	**642,044**	**642,712**	**435,566**	**725,507**	**753,826**

Mission Statement

The mission of the sewer maintenance treatment plant is to maintain and replace outdated or worn equipment, and to make periodic upgrades to the plant and sewer system to ensure safe and efficient processing while complying with all state and federal standards. It is also its mission to discharge bonded debt for the construction of the 4th digester.

Line-item Detail

41235	**Professional Services**	**$ 25,000**	
State Water Resources consulting report			
41310	**Improvements**		**$90,000**
	Continue Manhole Lining Project	$15,000	
	Flow Monitoring	$75,000	
		$90,000	
41312	**Equipment**		**$0**
41502	**Wastewater Revenue Bonds, Series 2006**		**$638,826**
	◊ Principal	$230,000	
	◊ Interest	399,648	
	◊ Auditing Services	5,678	
	◊ Trustee Fees	3,500	
		$638,826	

Wastewater Subcommittee Follow - up Items

Meeting Date	Requested by	Description of Request	Assigned to	Remark	Current Status	Completed ?
October 17, 2013	Long	Report on Rodeo Engineering Study	Allison		Ongoing	No
October 17, 2013	Board	Monthly Agenda will include an item on Funding Strategies and the Project Agreement	Allison		On Going	No
February 21, 2013	Long	Location of staging area during construction	Freeman		Underway	No
February 21, 2013	Long	Condition of land outfall	Freeman		Ongoing	No
February 22, 2012	Board	A plan to identify the impacts of the plant to the City of Pinole along with potential mitigation measures	Allison		On going	No
April 27, 2011	De Vera	By-laws / Governance	Legal Counsel		On going	No

ITEM 11