MID-PENINSULA WATER DISTRICT

REGULAR MEETING
BOARD OF DIRECTORS
**THURSDAY, MARCH 22, 2018 – 6:30PM**
3 DAIRY LANE, BELMONT CALIFORNIA

# AGENDA

**1. OPENING**
A. Call to Order
B. Establishment of Quorum
C. Pledge of Allegiance

**2. PUBLIC COMMENT**
*Members of the public may address the Board on the Consent Agenda or any item of interest within the jurisdiction of the Board but not on its agenda today. In compliance with the Brown Act, the Board cannot discuss or act on items not on the agenda. Please complete a speaker's form and give it to the District Secretary. Each speaker is limited to three (3) minutes.*

**3. AGENDA REVIEW: ADDITIONS/DELETIONS AND PULLED CONSENT ITEMS**

**4. ACKNOWLEDGEMENTS/PRESENTATIONS**
A. 15-Year Service Anniversary on March 3, 2018 – Robby Piccolotti
B. 10-Year Service Anniversary on April 1, 2018 - Jeanette Kalabolas

**5. CONSENT AGENDA**
*All matters on the Consent Agenda are to be approved by one motion. If Directors wish to discuss a consent item other than simple clarifying questions, a request for removal may be made. Such items are pulled for separate discussion and action after the Consent Agenda as a whole is acted upon.*

A. Approve Minutes for the Regular Board Meeting on February 22, 2018

B. Approve Expenditures from February 16, 2018 through March 14, 2018
*(Check sequence legend included in Administrative Services Manager's report.)*

C. Consider Resolution 2018-07 Authorizing an ICMA-RC 401 Governmental Money Purchase Plan and Trust as a Voluntary Employee Benefit and Approving the Administrative Services Agreement

**6. HEARINGS AND APPEALS**
None.

**7. MPWD FY 2016-2021 CAPITAL IMPROVEMENT PROGRAM AND 2016 COP (CERTIFICATES OF PARTICIPATION) FINANCING**
None.

## 8. REGULAR BUSINESS AGENDA

A. Discuss Preliminary Revenue Requirements and Water Rate Update for FY 2018/2019

B. Discuss Preliminary WORKING DRAFT MPWD Fiscal Year 2018/2019 Operating and Capital Budget Summaries and Assumptions

C. Receive Structural Review and Retrofit Strategy Report by Cornerstone Structural Engineering Group for the MPWD's Dairy Lane Headquarters Building and Premises

D. Consider Resolution 2018-08 Establishing Surplus Items List 18-01 and Declaring Items in District Inventory as Surplus, and Authorizing Staff to Sell via GovDeals.com

E. Consider Resolution 2018-09 Approving a Salary Adjustment for the General Manager, effective January 1, 2018, and Corresponding Fourth Amendment to the General Manager's Employment Agreement

## 9. MANAGER'S AND BOARD REPORTS

A. General Manager's Report
   1. Supplemented by Administrative Services Manager's Report
   2. Supplemented by Operations Manager's Report
   3. Supplemented by District Engineer's Report

B. Financial Reports for Month Ended February 28, 2018

C. Director Reports

## 10. COMMUNICATIONS

## 11. ADJOURNMENT

This agenda was posted at the Mid-Peninsula Water District's office, 3 Dairy Lane, in Belmont, California, and on its website at www.midpeninsulawater.org.

*ACCESSIBLE PUBLIC MEETINGS*

*Upon request, the Mid-Peninsula Water District will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation (including auxiliary aids or services), to enable individuals with disabilities to participate in public meetings. Please contact the District Secretary at (650) 591-8941 to request specific materials and preferred alternative format or auxiliary aid or service at least 48 hours before the meeting.*

***Next Board Meeting: Thursday, April 26, 2018, at 6:30PM***

REGULAR MEETING
OF THE BOARD OF DIRECTORS
OF THE MID-PENINSULA WATER DISTRICT

February 22, 2018
Belmont, California

## 1. OPENING

**A. Call to Order**:
The regular meeting of the Mid-Peninsula Water District Board of Directors was called to order by President Warden at 6:35PM.

**B. Establishment of Quorum**:
**PRESENT**: Directors Warden, Vella, Stuebing, Zucca and Linvill.

A quorum was present.

**ALSO PRESENT**: General Manager Tammy Rudock, Operations Manager Rene Ramirez, District Secretary/Administrative Services Manager Candy Pina, District Counsel Julie Sherman and District Engineer Joubin Pakpour.

District Treasurer Jeff Ira was absent.

**C. Pledge of Allegiance** – The Pledge of Allegiance was led by District Secretary/Administrative Services Manager Candy Pina.

## 2. PUBLIC COMMENTS

District Engineer Joubin Pakpour introduced Purissima Hills Water District's General Foreman, Phil Witt, in the audience to observe the meeting.

## 3. AGENDA REVIEW: ADDITIONS/DELETIONS AND PULLED CONSENT ITEMS

None.

## 4. ACKNOWLEDGEMENTS/PRESENTATIONS

**A. Research Project Summary Presentation by Rocky Rapids Youth Robotics Team on Lawn Replacement and Water Conservation with Hydrozoning and Xeriscaping**
General Manager Rudock welcomed the team and expressed appreciation for working with the MPWD and Jeanette Kalabolas on a water conservation themed project.

Administrative Specialist, Jeanette Kalabolas gave a brief summary about the project's objective and the team introduced themselves. Each member then proceeded to demonstrate the individual robotic tasks chosen for competition at the First LEGO League challenge in the fall of 2017.

**B. MPWD Certificate of Appreciation Presentation to Rocky Rapids Robotics Team**
President Warden presented a Certificate of Recognition to the team recognizing their effort in the development of a PDF flyer that is now being used in-house at the MPWD as a companion document with the "Lawn Be Gone" Rebate Program application.

The team concluded their presentation by sharing highlights from their display board and PDF created. A brief recess followed for interaction among Directors and the team members and to allow the team to pack up their project.

President Warden reconvened the meeting at 6:53PM.

**5. CONSENT AGENDA**

**A. Approve Minutes for the Regular Board Meeting of January 25, 2018**

Director Stuebing brought to staff's attention that the January 25, 2018 Regular Board Minutes Title Item B under #4 Acknowledgements/Presentations needed to be updated to reflect Vice President Vella as Acting President and Board representative that presented the 2018 Calendar Contest Awards winners with staff, in President Warden's absence. General Manager Rudock recognized and confirmed the minutes would be amended.

**B. Approve Expenditures from January 19, 2018 through February 15, 2018**

Vice President Vella moved to approve the minutes for the Regular Board Meeting on January 25, 2018 and expenditures from January 19, 2018 through February 15, 2018. Director Zucca seconded and it was unanimously approved.

**6. HEARINGS AND APPEALS**

None.

**7. MPWD FY 2016-2021 CAPITAL IMPROVEMENT PROGRAM AND 2016 COP (CERTIFICATES OF PARTICIPATION) FINANCING**

None.

**8. REGULAR BUSINESS AGENDA**

**A. Consider Resolution 2018-02 Adopting a Revised MPWD Cash Reserve Policy**

General Manager Rudock summarized the Cash Reserve Policy and new maximum target of $3 million as discussed at the Board's January 11, 2018 Special Meeting. She then presented the three (3) options for cash reserves on account in excess of the $3 million target, also discussed at the January 11th Special Board meeting. The options included $500,000 to fund the MPWD's approved pay-go Capital program, $1.5 million to fund the MPWD OPEB liability, and $1.6 million to fund the MPWD pension liability in a newly established Pension Rate Stabilization Program with PARS. The proposed plan for funding the liabilities included quarterly contributions.

Board discussion followed and Vice President Vella moved to approve Resolution 2018-02. Director Zucca seconded and it was unanimously approved.

**B. Consider Resolution 2018-03 Authorizing Participation in the PARS Combination IRS Section 115 Trust Plan, including the MPWD Other Post-Employment Benefits (OPEB) Plan and Establishment of a Pension Rate Stabilization Program (PRSP) to Pre-Fund MPWD Pension Liabilities and Authorizing the Transfer of $1,600,000 from MPWD Cash reserves to the MPWD PRSP**

General Manager Rudock revisited the advantages to pre-funding pension liabilities as initially reported and discussed during the January 11, 2018 Board's Special Meeting.

Board discussion followed and Vice President Vella moved to approve Resolution 2018-03. Director Zucca seconded and it was unanimously approved.

**C. Consider Resolution 2018-04 Authorizing the Transfer of $1,500,000 from MPWD Cash Reserves to the MPWD PARS OPEB Plan under the PARS Public Agencies Post-Employment Benefits Trust**

General Manager Rudock summarized the highlights of the recommended transfer to the MPWD PARS OPEB Plan. A question was raised about the use of the funds by the MPWD after transfer. Staff replied that the OPEB Plan funds are and would be restricted for the MPWD's retiree healthcare benefits obligations. As for the previous agenda item and the PRSP, the funds would be restricted for use in payment for the MPWD's pension liabilities, both current and its unfunded accrued pension obligations.

The Board further discussed the accessibility of available funds in excess of the $3 million cash reserves, in the event of an emergency. General Manager Rudock replied that the MPWD had adequate levels of insurance, including excess coverage that would be available in emergency infrastructure and property incidents. She suggested another potential option would be to open a bank line of credit for liquid cash for operations if needed in an emergency and that staff would inquire about the cost and timeline for this option. The Board directed staff to report back on that option.

Director Stuebing moved to approve Resolution 2018-04. Director Zucca seconded and it was unanimously approved.

**D. Consider Resolution 2018-05 Adopting a Debt Management Policy**

General Manager Rudock reported that no further edits had been made to the proposed policy since last November 2017 and advised that comments provided by Director Zucca were incorporated.

Vice President Vella moved to approve Resolution 2018-05. Director Zucca seconded and it was unanimously approved.

**E. Receive Mid-Year Review of MPWD FY 2018/2018 Operating and Capital Budgets and Consider Resolution 2018-06 Approving the Amended Budgets**

General Manager Rudock clarified last month's statement she made about the increased water commodity revenues potentially being related to the installation of new meters. She reported that not enough meters had been installed to make such a difference, and that is was more likely as a result of increased customer consumption. Outsourcing meter installation was briefly discussed by the Board. The General Manager replied that staff would be considering that option during its reorganization planning.

A brief review of the highlights from the proposed mid-year budget changes was presented by staff.

Director Stuebing commented that the mid-year amended budget seemed very conservative. General Manager Rudock responded that it was extremely challenging to

project the water commodity revenues because there was so much precipitation and less water used last fiscal year.

Vice President Vella moved to approve Resolution 2018-06. Director Stuebing seconded and it was unanimously approved.

**F. Review and Approve MPWD Employee Wellness Incentive Program**

General Manager Rudock introduced the proposed new Employee Wellness Incentive Program that was initiated and created from employee ideas, and reviewed by District Counsel.

A brief Board discussion followed and Director Zucca moved to approve. Director Stuebing seconded and it was unanimously approved.

## 9. MANAGER AND BOARD REPORTS

### A. General Manager's Report

General Manager Rudock reported that the District Counsel would be drafting the Board Bylaws from the previous versions by the General Manager and the Board Committee. She further requested input from the Board regarding the comparator agencies for the upcoming Total Compensation Study. Best practices include 10 comparators and the previous study listed 13 public agencies. President Warden confirmed that the Financial Committee would review the comparator agencies with the General Manager and confirm the final list.

Director Linvill asked if staff would be publically addressing the upcoming Board Elections. General Manager Rudock responded that the MPWD website would be updated as the election process grew nearer in order to guide potential candidates to the appropriate San Mateo County Elections Office website for more information. District Counsel Sherman stated that she would provide guidance to the Board and staff with regard to use of public funds for election-related activities.

President Warden commented that the March Agenda may need adjusting due to the large number of discussion items. General Manager Rudock acknowledged and would advise him before agenda preparation.

She also shared details about a recent meeting staff had at the request of the City of Brisbane about the MPWD AMI installation project. A copy of the new Belmont permit card with the MPWD required sign off noticeably included was distributed to the Board. Director Zucca concluded by sharing details about the pairing of the City of Brisbane and MPWD staff.

**1. Supplemented by Administrative Services Manager's Report**

None.

**2. Supplemented by Operations Manager's Report**

Operations Manager Ramirez summarized a few items from his report, including Zone 2 AMI metering, USA tags, and GovDeals.com auction results.

**3. Supplemented by District Engineer's Report**

District Engineer Pakpour shared that the recent meeting between the District and the City of Belmont helped iron out capital project and contractor communications. He also gave a status update on the current CIP project.

**B. Financial Reports**

**1. Receive Financial Reports for Month Ended January 31, 2017**

General Manager Rudock reported that commodity charges continued to come in higher than projected and when reviewing from an operating revenue verses non-revenue perspective, total revenues are about 10% higher than projected. She reminded that the winter months of January through March are upon us and that next month would be informative.

**C. Director Reports**

Director Stuebing reported he recently attended the San Mateo County CSDA Chapter Special Districts meeting, which ultimately ended up being cancelled due to the lack of a quorum. Another meeting he attended was the LAFCO Independent Special District Committee for Consolidated Oversight Board. Eleven of 12 Districts showed up and Menlo Park Fire Protection District was selected as the primary Special Districts' member and San Mateo County Mosquito and Vector Control District was chosen as the alternate; both agencies are recipients of the majority of the revenues managed by the oversight board.

No other Directors had reports.

**10. COMMUNICATIONS**

None.

**11. CLOSED SESSION**

The Board adjourned into Closed Session at 8:24PM to discuss one matter.

**A. PUBLIC EMPLOYEE PERFORMANCE EVALUATION AND ASSOCIATED NEGOTIATIONS**
**Government Code §§54957 and 54957.6**
**Title: General Manager**

The Board came out of closed session at 9:15PM. District Counsel reported that no reportable action had been taken.

**12. ADJOURNMENT**

The meeting was adjourned at 9:16PM.

_____
DISTRICT SECRETARY

APPROVED:

_____
BOARD PRESIDENT

# Accounts Payable

## Checks by Date - Summary by Check Date

User: candyp
Printed: 3/14/2018 1:01 PM


| Check No | Vendor No | Vendor Name | Check Date | Check Amount |
|---|---|---|---|---|
| 1031 | HYDROSCI | HYDROSCIENCE ENGINEERS INC. | 02/21/2018 | 26,575.00 |
| 1032 | PAKPOUR | PAKPOUR CONSULTING GROUP, INC | 02/21/2018 | 26,492.83 |
| 1033 | STOLOSKI | STOLOSKI & GONZALEZ, Inc. | 02/21/2018 | 166,072.66 |
| 1034 | WESTYOST | WEST YOST ASSOCIATES | 02/21/2018 | 2,160.28 |
| 33193 | DBAACCUT | ACCUTITE | 02/21/2018 | 350.00 |
| 33194 | AIRGAS | AIRGAS, LLC | 02/21/2018 | 137.82 |
| 33195 | ATT60197 | AT&T 60197 | 02/21/2018 | 119.74 |
| 33196 | CALCHAME | CALIFORNIA CHAMBER OF COMMER | 02/21/2018 | 399.00 |
| 33197 | CINTASOH | CINTAS | 02/21/2018 | 2,511.26 |
| 33198 | CINTS | CINTAS CORPORATION | 02/21/2018 | 839.02 |
| 33199 | CITYBELM | CITY OF BELMONT | 02/21/2018 | 200.00 |
| 33200 | COMCAST | COMCAST | 02/21/2018 | 318.62 |
| 33201 | COSTELLO | THOMAS COSTELLO | 02/21/2018 | 596.30 |
| 33202 | FOOTHILL | FOOTHILL FIRE PROTECTION | 02/21/2018 | 63.42 |
| 33203 | GRANITE | GRANITE ROCK, INC. | 02/21/2018 | 104.51 |
| 33204 | GRIGOROV | DINA GRIGOROVITCH | 02/21/2018 | 596.30 |
| 33205 | HOMEDEPC | HOME DEPOT | 02/21/2018 | 427.94 |
| 33206 | LEWERIC | ERIC LEW | 02/21/2018 | 596.30 |
| 33207 | OREILLYA | OREILLY AUTO PARTS, INC. | 02/21/2018 | 159.75 |
| 33208 | PACESUPL | PACE SUPPLY CORP | 02/21/2018 | 24.69 |
| 33209 | PACOFFIC | PACIFIC OFFICE AUTOMATION | 02/21/2018 | 224.11 |
| 33210 | PG&E | PG&E CFM/PPC DEPT | 02/21/2018 | 3,884.92 |
| 33211 | PROFORMA | PROFORMA GRAPHICS, INC. | 02/21/2018 | 748.84 |
| 33212 | RECOLOGY | RECOLOGY SAN MATEO | 02/21/2018 | 654.78 |
| 33213 | RANDB | ROBERTS & BRUNE CO. INC. | 02/21/2018 | 14,630.35 |
| 33214 | CYLINDER | SINGLE CYLINDER REPAIR SAN CARI | 02/21/2018 | 180.94 |
| 33215 | STANDINS | STANDARD INSURANCE COMPANY | 02/21/2018 | 967.05 |
| 33216 | UPS | UPS | 02/21/2018 | 13.02 |
| | | | Total for 2/21/2018: | 250,049.45 |
| 680 | ACHRETN | ACH Returns | 02/22/2018 | 59.90 |
| 681 | ACHRETN | ACH Returns | 02/22/2018 | 51.68 |
| 682 | ACHRETN | ACH Returns | 02/22/2018 | 256.84 |
| | | | Total for 2/22/2018: | 368.42 |
| 683 | ADPPRFEE | ADP Payroll Fees | 02/23/2018 | 272.18 |
| | | | Total for 2/23/2018: | 272.18 |
| 666 | CALPERS | CALPERS | 02/28/2018 | 7,653.93 |
| 667 | HEALTHEQ | Health Equity | 02/28/2018 | 642.08 |
| 668 | ICMACONT | ICMA contributions | 02/28/2018 | 716.24 |
| 669 | ADPPAYRL | adp | 02/28/2018 | 37,196.05 |
| 670 | ADPPAYRL | adp | 02/28/2018 | 14,470.33 |
| 676 | CALPERS | CALPERS | 02/28/2018 | 9,302.08 |

| Check No | Vendor No | Vendor Name | Check Date | Check Amount |
|---|---|---|---|---|
| 684 | ICMACONT | ICMA contributions | 02/28/2018 | 2,073.08 |
| 33217 | COASTINC | COAST TO COAST DEVELOPMENT | 02/28/2018 | 3,005.84 |
| 33218 | COMCAST | COMCAST | 02/28/2018 | 262.80 |
| 33219 | DELIADON | DON DELIA | 02/28/2018 | 1,279.09 |
| 33220 | GSFLOWM | GOLDEN STATE FLOW MEASUREMEN | 02/28/2018 | 3,582.75 |
| 33221 | GREENBER | GREENBERG CONSTRUCTION | 02/28/2018 | 2,587.14 |
| 33222 | HOMEDEPC | HOME DEPOT | 02/28/2018 | 21.11 |
| 33223 | LINCOLNL | LINCOLN LIFE | 02/28/2018 | 175.00 |
| 33224 | LYNGSOMA | LYNGSO GARDEN MATERIAL INC | 02/28/2018 | 77.34 |
| 33225 | MADRAHAI | HARMANDEEP MADRA | 02/28/2018 | 4,097.90 |
| 33226 | PAKPOUR | PAKPOUR CONSULTING GROUP, INC | 02/28/2018 | 500.00 |
| 33227 | PG&E | PG&E CFM/PPC DEPT | 02/28/2018 | 9,234.32 |
| 33228 | PRECISE | PRECISE, INC. | 02/28/2018 | 1,644.00 |
| 33229 | SCOTSMAN | WILLIAMS SCOTSMAN | 02/28/2018 | 538.00 |
| 33230 | STATEWAT | STATE WATER RESOURCES CONTROL | 02/28/2018 | 80.00 |
| 33231 | SUTSSUPE | SUPERIOR UNDERGROUND TANK SEI | 02/28/2018 | 1,610.15 |
| 33232 | UPS | UPS | 02/28/2018 | 19.87 |
| 33233 | VALLEYOL | VALLEY OIL COMPANY | 02/28/2018 | 1,878.64 |
| 33234 | VERIZON | VERIZON WIRELESS | 02/28/2018 | 73.68 |
| | | | Total for 2/28/2018: | 102,721.42 |
| 671 | CALPERS | CALPERS | 03/02/2018 | 2,688.21 |
| 672 | ICMACONT | ICMA contributions | 03/02/2018 | 2,073.08 |
| 673 | HEALTHEQ | Health Equity | 03/02/2018 | 200.00 |
| 674 | ADPPAYRL | adp | 03/02/2018 | 10,143.08 |
| 675 | ADPPAYRL | adp | 03/02/2018 | 4,858.05 |
| | | | Total for 3/2/2018: | 19,962.42 |
| 685 | WFBUSCAR | WELLS FARGO BUSINESS CARD | 03/08/2018 | 6,753.51 |
| 33235 | ACCELA | ACCELA, INC. #774375 | 03/08/2018 | 2,795.00 |
| 33236 | ACWA5661 | ACWA JPIA | 03/08/2018 | 43,448.99 |
| 33237 | ALWAYSON | ALWAYS ON TIME CONCRETE & PLUI | 03/08/2018 | 374.00 |
| 33238 | ATT60197 | AT&T 60197 | 03/08/2018 | 1,234.68 |
| 33239 | CINTS | CINTAS CORPORATION | 03/08/2018 | 851.35 |
| 33240 | COMCASTB | COMCAST BUSINESS | 03/08/2018 | 630.00 |
| 33241 | DAVIDSON | JOHN T. DAVIDSON OR DBA JRocket77 | 03/08/2018 | 5,552.21 |
| 33242 | EDDCOGRP | EDCCO GROUP, INC | 03/08/2018 | 1,791.38 |
| 33243 | GSFLOWM | GOLDEN STATE FLOW MEASUREMEN | 03/08/2018 | 22,402.50 |
| 33244 | HANSONBR | HANSON, BRIDGETT | 03/08/2018 | 4,799.00 |
| 33245 | HASSETTH | HASSETT HARDWARE | 03/08/2018 | 23.80 |
| 33246 | HOMEDEPC | HOME DEPOT | 03/08/2018 | 76.48 |
| 33247 | K119OFCA | K-119 OF CALIFORNIA INC. | 03/08/2018 | 129.41 |
| 33248 | LINVELLB | BETTY LINVILL | 03/08/2018 | 2,115.46 |
| 33249 | OFFICEDE | OFFICE DEPOT, INC. | 03/08/2018 | 131.84 |
| 33250 | PAKPOUR | PAKPOUR CONSULTING GROUP, INC | 03/08/2018 | 9,192.77 |
| 33251 | PALOMENT | PALOMINO ENTERPRISES INC. | 03/08/2018 | 10,306.62 |
| 33252 | PG&E | PG&E CFM/PPC DEPT | 03/08/2018 | 2,365.88 |
| 33253 | RANDB | ROBERTS & BRUNE CO. INC. | 03/08/2018 | 2,762.89 |
| 33254 | RUDOCK | TAMMY RUDOCK | 03/08/2018 | 158.16 |
| 33255 | SFWATER | SAN FRANCISCO WATER DEPT | 03/08/2018 | 330,538.70 |
| 33256 | STEPFORD | STEPFORD BUSINESS, INC. | 03/08/2018 | 1,560.00 |
| 33257 | VANGUARI | VANGUARD CLEANING SYSTEMS, IN | 03/08/2018 | 385.00 |
| 33258 | VERIZON | VERIZON WIRELESS | 03/08/2018 | 859.49 |
| 33259 | WATEREDU | WATER EDUCATION FOUNDATION | 03/08/2018 | 600.00 |
| 33260 | XIOINC | XIO, INC. | 03/08/2018 | 808.00 |

| Check No | Vendor No | Vendor Name | Check Date | Check Amount |
|---|---|---|---|---|
| | | | Total for 3/8/2018: | 452,647.12 |
| 33261 | ATT60197 | AT&T 60197 | 03/14/2018 | 40.15 |
| 33262 | BPLANDSC | BAY POINTE LANDSCAPE | 03/14/2018 | 3,250.00 |
| 33263 | CORNERST | CORNERSTONE STRUCTURAL ENGIN | 03/14/2018 | 950.00 |
| 33264 | FASTSIGN | FASTSIGNS | 03/14/2018 | 341.17 |
| 33265 | FERGWATE | FERGUSON WATER INC. | 03/14/2018 | 10,950.00 |
| 33266 | HACHCOMI | HACH COMPANY INC | 03/14/2018 | 1,145.91 |
| 33267 | HOMEDEPC | HOME DEPOT | 03/14/2018 | 104.25 |
| 33268 | LIFTOFFD | LIFTOFF DIGITAL | 03/14/2018 | 705.00 |
| 33269 | LINCOLNL | LINCOLN LIFE | 03/14/2018 | 200.00 |
| 33270 | MOSSRUBB | MOSS RUBBER & EQUIPMENT CORP | 03/14/2018 | 32.33 |
| 33271 | OFFICEDE | OFFICE DEPOT, INC. | 03/14/2018 | 10.88 |
| 33272 | PACWEST | PACIFIC WEST SECURITY, INC. | 03/14/2018 | 2,055.00 |
| 33273 | PRECISE | PRECISE, INC. | 03/14/2018 | 1,123.73 |
| 33274 | sandiear | SANDIE ARNOTT | 03/14/2018 | 3,134.37 |
| 33275 | WATTSCOH | WATTS, COHN AND PARTNERS, INC. | 03/14/2018 | 11,000.00 |
| | | | Total for 3/14/2018: | 35,042.79 |
| | | | Report Total (104 checks): | 861,063.80 |

MID-PENINSULA
WATER DISTRICT

# *AGENDA ITEM NO. 5.C.*

DATE: March 22, 2018

TO: Board of Directors

FROM: Tammy A. Rudock, General Manager

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**SUBJECT: CONSIDER RESOLUTION 2018-07 AUTHORIZING AN ICMA-RC 401 GOVERNMENTAL MONEY PURCHASE PLAN AND TRUST AS A VOLUNTARY EMPLOYEE BENEFIT AND APPROVING THE ADMINISTRATIVE SERVICES AGREEMENT**

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## RECOMMENDATION

Approve Resolution 2018-07 authorizing an ICMA-RC 401 Governmental Money Purchase Plan and Trust as a voluntary employee benefit and approving the Administrative Services Agreement.

## FISCAL IMPACT

There will be an annual cost to the MPWD for the $1,000 Employer Fee. Contributions into the plan will be made on an irrevocable voluntary basis by participating employees and additional compensation to ICMA-RC for administrative services to the Plan will be paid from participant accounts.

## BACKGROUND

The ICMA-RC (International City/County Management Association-Retirement Corporation) is a non-profit independent financial services corporation focused on providing retirement plans and related services for more than a million public sector participant accounts. It was founded in 1972.

The MPWD participates in the ICMA-RC 457 Deferred Compensation Plan, and 14 of 18 employees currently make regular payroll contributions into their accounts. As prescribed by the IRS, normal contribution limits for 457 accounts in 2018 are $18,500, or $24,500 for age 50+ catch-up limit.

Also, the MPWD provides a Lincoln Life voluntary benefit plan for supplemental retirement savings, and three (3) MPWD employees currently participate in it.

**DISCUSSION**

The proposed ICMA-RC 401 Money Purchase Plan is a tax-qualified supplemental retirement savings program that allows employees to make contributions on a pre-tax basis. It would be an added MPWD benefit for voluntary participation. Each current employee (and any new hire) that elects to participate in the plan must make a one-time, irrevocable election to have contributions equal to a specified amount or percentage of the employee's compensation made by MPWD on the employee's behalf to the plan for the duration of the employee's employment. Federal and state income taxes on the amounts contributed to the plan are deferred until an employee becomes eligible for and take a distribution from the plan. For 2018, the total contribution limit for 401(a) plans is $55,000.

The MPWD would serve as a public plan sponsor, and the General Manager will be the coordinator for the program. ICMA-RC will serve as the third-party administrator and VantageTrust will serve as the trustee.

Employees have been briefed about the ICMA-RC 401 Money Purchase Plan.

The General Manager will be authorized to sign the agreement and related documents, subject to final consultation with and review by District Counsel.

Attachment: Resolution 2018-07
ICMA-RC Administrative Services Agreement for 401 Money Purchase Plan

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS____ WARDEN____ VELLA_____ LINVILL_____ ZUCCA_____ STUEBING_____

**RESOLUTION NO. 2018-07**

**RESOLUTION AUTHORIZING AN ICMA RETIREMENT CORPORATION 401 MONEY PURCHASE RETIRMENET PLAN AS A VOLUNTARY EMPLOYEE BENEFIT AND APPROVING THE ADMINISTRATIVE SERVICES AGREEMENT**

**WHEREAS,** the Mid-Peninsula Water District (MPWD) has employees rendering valuable services; and

**WHEREAS**, the establishment of a 401 money purchase retirement plan benefits employees by providing funds for retirement and funds for their beneficiaries in the event of death; and

**WHEREAS,** the establishment of a 401 money purchase retirement plan for such employees further serves the interests of the MPWD by enabling it to provide access to additional retirement security for its employees and will act as a tool for the attraction and retention of competent personnel; and

**WHEREAS,** the MPWD has determined that the establishment of a 401 money purchase retirement plan to be administered by ICMA-RC serves the above objectives; and

**WHEREAS**, the MPWD desires that its 401 money purchase retirement plan be administered by ICMA-RC and that the funds held in such plan be invested in VantageTrust, a trust established by public employers for the collective investment of funds held under their retirement and deferred compensation plans.

**NOW, THEREFORE, BE IT RESOLVED** that the MPWD hereby adopts the establishment of a 401 money purchase retirement plan (the "Plan") in substantially the form provided in Appendix A as the ICMA Retirement Corporation Governmental Money Purchase Plan & Trust, pursuant to the specific provisions of the Adoption Agreement; and

**BE IT FURTHER RESOLVED** that the Plan shall be maintained for the exclusive benefit of eligible employees and their beneficiaries; and

**BE IT FURTHER RESOLVED** that the MPWD hereby adopts the Declaration of Trust of VantageTrust, intending this adoption to be operative with respect to any retirement or deferred compensation plan subsequently established by the MPWD, if the assets of the Plan are to be invested in VantageTrust; and

**BE IT FURTHER RESOLVED** that the General Manager shall be the coordinator for the Plan; shall receive the necessary reports and notices from ICMA Retirement Corporation or VantageTrust; shall cast, on behalf of the MPWD, any required votes under VantageTrust; and may delegate any administrative duties related to the Plan; and

**BE IT FURTHER RESOLVED** that at termination of employment with the MPWD, any accrued vacation pay, sick pay, or back pay may be deferred to the ICMA-RC 401 plan in the manner

provided under the Adoption Agreement for the ICMA-RC 401 plan completed by the MPWD and the tax rules governing 401(a) plans; and

**BE IT FURTHER RESOLVED** that the MPWD will allow unforeseen emergency withdrawals from the ICMA-RC 401 plan by participating employees, in accordance with the Adoption Agreement for the ICMA-RC 401 plan completed by the MPWD and Internal Revenue Service rules. The General Manager will review for approval such requests made by participating employees; and

**BE IT FURTHER RESOLVED** that the MPWD will not allow participating employees to take loans from their ICMA-RC 401 money purchase plan accounts; and

**BE IT FINALLY RESOLVED** that the MPWD hereby authorizes the General Manager to execute all necessary agreements with ICMA Retirement Corporation and VantageTrust incidental to the administration of the Plan.

**REGULARLY PASSED AND ADOPTED** this 22nd day of March 2018, by the following vote:

AYES:

NAYS:

ABSENT:

_____
President, Board of Directors
Mid-Peninsula Water District

ATTEST:

_____
Secretary

# ADMINISTRATIVE SERVICES AGREEMENT

Between

**ICMA Retirement Corporation**

and

Mid-Peninsula Water District

Type: 401

Account #: 109789

# ADMINISTRATIVE SERVICES AGREEMENT

This Administrative Services Agreement ("Agreement"), made as of the day of , 20____ between the International City Management Association Retirement Corporation ("ICMA-RC"), a nonprofit corporation organized and existing under the laws of the State of Delaware, and the Mid-Peninsula Water District ("Employer"), an Entity organized and existing under the laws of the State of California with an office at 3 Dairy Lane, Belmont, California 94002.

## RECITALS

Employer acts as public plan sponsor of a retirement plan ("Plan"), and in that capacity, has responsibility to obtain administrative services and investment alternatives for the Plan;

VantageTrust is a group trust established and maintained in accordance with New Hampshire Revised Statutes Annotated section 391:1 and Internal Revenue Service Revenue Ruling 81-100, 1981-1 C.B. 326, which provides for the commingled investment of retirement funds;

ICMA-RC acts as investment adviser to VantageTrust Company, LLC, the Trustee of VantageTrust;

ICMA-RC has designed, and VantageTrust offers, a series of separate funds (the "Funds") for the investment of plan assets as referenced in VantageTrust's principal disclosure documents, the VantageTrust Disclosure Memorandum and the Funds' Fact Sheets (together, "VT Disclosures"); and

In addition to serving as investment adviser to VantageTrust Company LLC, ICMA-RC provides a range of services to public employers for the operation of employee retirement plans including, but not limited to, communications concerning investment alternatives, account maintenance, account recordkeeping, investment and tax reporting, transaction processing, benefit disbursement, and asset management.

## AGREEMENTS

1. Appointment of ICMA-RC

Employer hereby appoints ICMA-RC as Administrator of the Plan to perform all nondiscretionary functions necessary for the administration of the Plan. The functions to be performed by ICMA-RC shall be those set forth in Exhibit A to this Agreement.

2. Adoption of Trust

Employer has adopted the Declaration of Trust of VantageTrust Company and agrees to the commingled investment of assets of the Plan within VantageTrust. Employer agrees that the investment, management, and distribution of amounts deposited in VantageTrust shall be subject to the Declaration of Trust, as it may be amended from time to time and shall also be subject to terms and conditions set forth in disclosure documents (such as the VT Disclosures or Employer Bulletins) as those terms and conditions may be adjusted from time to time.

3. Employer Duty to Furnish Information

Employer agrees to furnish to ICMA-RC on a timely basis such information as is necessary for ICMA-RC to carry out its responsibilities as Administrator of the Plan, including information needed to allocate individual participant accounts to Funds in VantageTrust, and information as to the employment status of participants, and participant ages, addresses, and other identifying information (including tax identification numbers). Employer also agrees that it will notify ICMA-RC in a timely manner regarding changes in staff as it relates to various roles. This is to be completed through the online EZLink employer contact options. ICMA-RC shall be entitled to rely upon the accuracy of any information that is furnished to it by a responsible official of the Employer or any information relating to an individual participant or beneficiary that is furnished by such participant or beneficiary, and ICMA-RC shall not be responsible for any error arising from its reliance on such information. ICMA-RC will provide reports, statements and account information to the Employer through EZLink, the online plan administrative tool.

Employer is required to send in contributions through EZLink, the online plan administration tool provided by ICMA-RC. Alternative electronic methods may be allowed, but must be approved by ICMA-RC for use. Contributions may not be sent through paper submittal documents.

To the extent Employer selects third-party funds that do not have fund profile information provided to ICMA-RC through our electronic data feeds from external sources (such as Morningstar) or third party fund providers, the Employer is responsible for providing to ICMA-RC timely fund investment updates for disclosure to Plan participants. Such updates may be provided to ICMA-RC through the Employer's investment consultant or other designated representative.

Failure to provide timely fund profile update information, including the source of the information, may result in a lack of fund information for participants, as ICMA-RC will remove outdated fund profile information from the systems that provide fund information to Plan participants.

4. Certain Representations and Warranties

ICMA-RC represents and warrants to Employer that:

(a) ICMA-RC is a non-profit corporation with full power and authority to enter into this Agreement and to perform its obligations under this Agreement. The ability of ICMA-RC to serve as investment adviser to VantageTrust is dependent upon the continued willingness of VantageTrust for ICMA-RC to serve in that capacity.

(b) ICMA-RC is an investment adviser registered as such with the U.S. Securities and Exchange Commission under the Investment Advisers Act of 1940, as amended.

(c) ICMA-RC shall maintain and administer the Plan in accordance with the requirements for plans which satisfy the qualification requirements of Section 401 of the Internal Revenue Code and other applicable federal law; provided, however, ICMA-RC shall not be responsible for the qualified status of the Plan in the event that the Employer directs ICMA-RC to administer the Plan or disburse assets in a manner inconsistent with the requirements of Section 401 or otherwise causes the Plan not to be carried out in accordance with its terms; provided, further, that if the plan document used by the Employer contains terms that differ from the terms of ICMA-RC's standardized plan document, ICMA-RC shall not be responsible for the qualified status of the Plan to the extent affected by the differing terms in the Employer's plan document. ICMA-RC shall not be responsible for monitoring state or local law or for administering the Plan in compliance with local or state requirements unless Employer notifies ICMA-RC of any such local or state requirements.

Employer represents and warrants to ICMA-RC that:

(d) Employer is organized in the form and manner recited in the opening paragraph of this Agreement with full power and authority to enter into and perform its obligations under this Agreement and to act for the Plan and participants in the manner contemplated in this Agreement. Execution, delivery, and performance of this Agreement will not conflict with any law, rule, regulation or contract by which the Employer is bound or to which it is a party.

(e) Employer understands and agrees that ICMA-RC's sole function under this Agreement is to act as recordkeeper and to provide administrative,

investment or other services at the direction of Plan participants, the Employer, its agents or designees in accordance with the terms of this Agreement. Under the terms of this Agreement, ICMA-RC does not render investment advice, is not the Plan Administrator or Plan Sponsor as those terms are defined under applicable federal, state, or local law, and does not provide legal, tax or accounting advice with respect to the creation, adoption or operation of the Plan and its related trust. ICMA-RC does not perform any service under this Agreement that might cause ICMA-RC to be treated as a "fiduciary" of the Plan under applicable law, except, and only, to the extent that ICMA-RC provides investment advisory services to individual participants enrolled in Guided Pathways Advisory Services.

(f) Employer acknowledges and agrees that ICMA-RC does not assume any responsibility with respect to the selection or retention of the Plan's investment options. Employer shall have exclusive responsibility for the Plan's investment options, including the selection of the applicable mutual fund share class. Where applicable, Employer understands that the VT Retirement IncomeAdvantage Fund is an investment option for the Plan and that the fund invests in a separate account available through a group variable annuity contract. By entering into this Agreement, Employer acknowledges that it has received the Important Considerations document and the VT Disclosures and that it has read the information therein concerning the VT Retirement IncomeAdvantage Fund.

(g) Employer acknowledges that certain such services to be performed by ICMA-RC under this Agreement may be performed by an affiliate or agent of ICMA-RC pursuant to one or more other contractual arrangements or relationships, and that ICMA-RC reserves the right to change vendors with which it has contracted to provide services in connection with this Agreement without prior notice to Employer.

(h) Employer acknowledges that it has received ICMA-RC's Fee Disclosure Statement, prepared in substantial conformance with ERISA regulations regarding the disclosure of fees to plan sponsors.

(i) Employer approves the use of its Plan in ICMA-RC external media, publications and materials. Examples include press releases announcements and inclusion of the general plan information in request for proposal responses.

5. Participation in Certain Proceedings

The Employer hereby authorizes ICMA-RC to act as agent, to appear on its behalf, and to join the Employer as a necessary party in all legal proceedings involving the garnishment of benefits or the transfer of benefits pursuant to the divorce or separation of participants

in the Plan. Unless Employer notifies ICMA-RC otherwise, Employer consents to the disbursement by ICMA-RC of benefits that have been garnished or transferred to a former spouse, current spouse, or child pursuant to a domestic relations order or child support order.

6. Compensation and Payment

(a) Plan Administration Fee. The amount to be paid for plan administration services under this Agreement shall be 0.55% per annum of the amount of Plan assets invested in VantageTrust. Such fee shall be computed based on average daily net Plan assets in VantageTrust.

(b) **Compensation for Management Services to VantageTrust, Compensation for Advisory and other Services to the VT III Vantagepoint Funds and Payments from Third-Party Mutual Funds.** Employer acknowledges that, in addition to amounts payable under this Agreement, ICMA-RC receives fees from VantageTrust for investment advisory services and plan and participant services furnished to VantageTrust. Employer further acknowledges that ICMA-RC, including certain of its wholly owned subsidiaries, receives compensation for advisory and other services furnished to the VT III Vantagepoint Funds, which serve as the underlying portfolios of a number of Funds offered through VantageTrust. For a VantageTrust Fund that invests substantially all of its assets in a third-party mutual fund not affiliated with ICMA-RC, ICMA-RC or its wholly owned subsidiary receives payments from the third-party mutual fund families or their service providers in the form of 12b-1 fees, service fees, compensation for sub-accounting and other services provided based on assets in the underlying third-party mutual fund. These fees are described in the VT Disclosures and ICMA-RC's fee disclosure statement. In addition, to the extent that third party mutual funds are included in the investment line-up for the Plan, ICMA-RC receives administrative fees from its third party mutual fund settlement and clearing agent for providing administrative and other services based on assets invested in third party mutual funds; such administrative fees come from payments made by third party mutual funds to the settlement and clearing agent.

(c) **Employer Fee.** There shall be an annual Employer fee of $1,000. The annual Employer Fee will be billed in equal amounts on a quarterly basis and is payable within 30 days after the quarterly billing cycle. The Employer Fee will be charged as long as there are Plan assets, regardless of the status of the participant(s). The Employer acknowledges that, in the event the Employer fails to pay the Employer fee when due, such fee shall be paid directly from assets held on behalf of the Plans(s) under VantageTrust, i.e., deducting the fees from the Plan participant accounts. Plans that are initially established mid-year will be billed on a pro-rata basis.

(d) **Redemption Fees**. Redemption fees imposed by outside mutual funds in which Plan assets are invested are collected and paid to the mutual fund by ICMA-RC. ICMA-RC remits 100% of redemption fees back to the specific mutual fund to which redemption fees apply. These redemption fees and the individual mutual fund's policy with respect to redemption fees are specified in the prospectus for the individual mutual fund and referenced in the VT Disclosures.

(e) **Payment Procedures**. All payments to ICMA-RC pursuant to Section 6(a) shall be paid out of the Plan assets held by VantageTrust or received from third-party mutual funds or their service providers in connection with Plan assets invested in such third-party mutual funds, to the extent not paid by the Employer, to the extent not paid by the Employer. All payments to ICMA-RC pursuant to Section 6(c) shall be paid directly by Employer, and shall not be deducted from Plan Assets. The amount of Plan assets administered by ICMA-RC shall be adjusted as required to reflect any such payments as are made from the Plan. In the event that the Employer agrees to pay amounts owed pursuant to this Section 6 directly, any amounts unpaid and outstanding after 30 days of invoice to the Employer shall be withdrawn from Plan assets.

The compensation and payment set forth in this Section 6 are contingent upon the Employer's use of ICMA-RC's EZLink system for contribution processing and submitting contribution funds by ACH or wire transfer on a consistent basis over the term of this Agreement.

7. Contribution Remittance

Employer understands that amounts invested through VantageTrust are to be remitted directly to VantageTrust in accordance with instructions provided to Employer by ICMA-RC and are not to be remitted to ICMA-RC. In the event that any check or wire transfer is incorrectly labeled or transferred to ICMA-RC, ICMA-RC may return it to Employer with proper instructions.

8. Indemnification

ICMA-RC shall not be responsible for any acts or omissions of any person with respect to the Plan or its related trust, other than ICMA-RC in connection with the administration or operation of the Plan. Employer shall indemnify ICMA-RC against, and hold ICMA-RC harmless from, any and all loss, damage, penalty, liability, cost, and expense, including without limitation, reasonable attorney's fees, that may be incurred by, imposed upon, or asserted against ICMA-RC by reason of any claim, regulatory proceeding, or litigation arising from any act done or omitted to be done by any individual or person with respect to the Plan or its related trust, excepting only any and all loss, damage, penalty, liability, cost or expense resulting from ICMA-RC's negligence, bad faith, or willful misconduct.

9. Term

This Agreement shall be in effect and commence on the date all parties have signed and executed this Agreement ("Inception Date"). This Agreement may be terminated without penalty by either party on sixty days advance notice in writing to the other; provided however, that the Employer understands and acknowledges that, in the event the Employer terminates this Agreement (or replaces the VT PLUS Fund as an investment option in its investment line-up), ICMA-RC retains full discretion to release Plan assets invested in the VT PLUS Fund in an orderly manner over a period of up to 12 months from the date ICMA-RC receives written notification from the Employer that it has made a final and binding selection of a replacement for ICMA-RC as administrator of the Plan (or a replacement investment option for the VT PLUS Fund).

10. Amendments and Adjustments

(a) This Agreement may be amended by written instrument signed by the parties.

(b) ICMA-RC may amend this agreement by providing 60 days' advance written notice to the Employer prior to the effective date of such proposed amendment. Such amendment shall become effective unless, within the 60-day notice period, the Employer notifies ICMA-RC in writing that it objects to such amendment.

(c) The parties agree that enhancements may be made to administrative and operations services under this Agreement. The Employer will be notified of enhancements through the Employer Bulletin, quarterly statements, electronic messages or special mailings. Likewise, if there are any reductions in fees, these will be announced through the Employer Bulletin, quarterly statement, electronic messages or special mailing.

11. Notices

All notices required to be delivered under this Agreement shall be in writing and shall be delivered, mailed, e-mailed or faxed to the location of the relevant party set forth below or to such other address or to the attention of such other persons as such party may hereafter specify by notice to the other party.

**ICMA-RC**: Legal Department, ICMA Retirement Corporation, 777 North Capitol Street, N.E., Suite 600, Washington, D.C., 20002-4240
**Facsimile**; (202) 962-4601

**Employer:** at the office set forth in the first paragraph hereof, or to any other address, facsimile number or e-mail address designated by the Employer to receive the same by written notice similarly given.

Each such notice, request or other communication shall be effective: (i) if given by facsimile, when transmitted to the applicable facsimile number and there is appropriate

confirmation of receipt; (ii) if given by mail or e-mail, upon transmission to the designated address with no indication that such address is invalid or incorrect; or (iii) if given by any other means, when actually delivered at the aforesaid address.

12. Complete Agreement

This Agreement shall constitute the complete and full understanding and sole agreement between ICMA-RC and Employer relating to the object of this Agreement and correctly sets forth the complete rights, duties and obligations of each party to the other as of its date. This Agreement supersedes all written and oral agreements, communications or negotiations among the parties. Any prior agreements, promises, negotiations or representations, verbal or otherwise, not expressly set forth in this Agreement are of no force and effect.

13. Titles

The headings of Sections of this Agreement and the headings for each of the attached schedules are for convenience only and do not define or limit the contents thereof.

14. Incorporation of Schedules

All Schedules (and any subsequent amendments thereto), attached hereto, and referenced herein, are hereby incorporated within this Agreement as if set forth fully herein.

15. Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the State of California, applicable to contracts made in that jurisdiction without reference to its conflicts of laws provisions.

In Witness Whereof, the parties hereto certify that they have read and understand this Agreement and all Schedules attached hereto and have caused this Agreement to be executed by their duly authorized officers as of the Inception Date first above written.

MID-PENINSULA WATER DISTRICT

By _____
Signature/Date

By _____
Name and Title (Please Print)

INTERNATIONAL CITY MANAGEMENT ASSOCIATION RETIREMENT CORPORATION

By _____
Erica McFarquhar
Assistant Secretary

Please return an executed copy of the Agreement to a Delivery Address, either:

(a) Electronically to PlanAdoptionServices@icmarc.org, or

(b) In paper form to ICMA-RC
ATTN: PLAN ADOPTION SERVICES
777 North Capitol Street NE
Suite 600
Washington DC 20002-4240

## Exhibit A

### Administrative Services

The administrative services to be performed by ICMA-RC under this Agreement shall be as follows:

(a) Participant enrollment services, including providing a welcome package and enrollment kit containing instructions and notices necessary to implement the Plan's administration. Employees will enroll online or through a paper form. Employer can also enroll employees through EZLink.

(b) Establishment of participant accounts for each employee participating in the Plan for whom ICMA-RC receives appropriate enrollment instructions. ICMA-RC is not responsible for determining if such Plan participants are eligible under the terms of the Plan.

(c) Allocation in accordance with participant directions received in good order of individual participant accounts to investment funds offered under the Plan.

(d) Maintenance of individual accounts for participants reflecting amounts deferred, income, gain or loss credited, and amounts distributed as benefits.

(e) Maintenance of records for all participants for whom participant accounts have been established. These files shall include enrollment instructions (provided to ICMA-RC through Account Access or EZLink), beneficiary designation instructions and all other documents concerning each participant's account.

(f) Provision of periodic reports to the Employer through EZLink. Participants will have access to account information through Investor Services, Voice Response System, Account Access, TextAccess and through quarterly statements that can be delivered electronically through Account Access or by postal service.

(g) Communication to participants of information regarding their rights and elections under the Plan.

(h) Making available Investor Services Representatives through a toll-free telephone number from 8:30 a.m. to 9:00 p.m. Eastern Time, Monday through Friday (excluding holidays and days on which the securities markets or ICMA-RC are closed for business (including emergency closings), to assist participants.

(i) Making available access to ICMA-RC's web site, to allow participants to access certain account information and initiate certain plan transactions at any time. Account access is normally available 24 hours a day, seven days a week except during scheduled maintenance periods designed to

ensure high-quality performance. The scheduled maintenance window is outlined at https://harper1.icmarc.org/login.jsp.

(j) Maintaining the security and confidentiality of client information through a system of controls including but not limited to, as appropriate: restricting plan and participant information only to those who need it to provide services, software and hardware security, access controls, data back-up and storage procedures, non-disclosure agreements, security incident response procedures, and audit reviews.

(k) Making available access to ICMA-RC's plan sponsor EZLink web site to allow plan sponsors to access certain plan information and initiate plan transactions such as enrolling participants and managing contributions at any time. EZLink is normally available 24 hours a day, seven days a week except during scheduled maintenance periods designed to ensure high-quality performance. The scheduled maintenance window is outlined at https://harper1.icmarc.org/login.jsp

(l) Distribution of benefits as agent for the Employer in accordance with terms of the Plan. Participants who have separated from service can request distributions through Account Access or via form.

(m) Upon approval by the Employer that a domestic relations order is an acceptable qualified domestic relations order under the terms of the Plan, ICMA-RC will establish a separate account record for the alternate payee and provide for the investment and distribution of assets held there under.

(n) Loans may be made available on the terms specified in the Loan Guidelines, if loans are adopted by the Employer. Participants can request loans through Account Access.

(o) Guided Pathways Advisory Services – Participant Advice and Guidance may be made available through a third party vendor on the terms specified on ICMA-RC's website.

(p) ICMA-RC will determine appropriate delivery method (electronic and/or print) for plan sponsor/participant communications and education based on a number of factors (audience, effectiveness, etc.).

MID-PENINSULA WATER DISTRICT

# *AGENDA ITEM NO. 8.A.*

DATE: March 22, 2018

TO: Board of Directors

FROM: Tammy Rudock, General Manager

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**SUBJECT: DISCUSS PRELIMINARY REVENUE REQUIREMENTS AND WATER RATE UPDATE FOR FISCAL YEAR 2018/2019**

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**RECOMMENDATION:**
Discuss preliminary water revenue requirements and the Water Rate Update by Bartle Wells Associates dated March 3, 2018, for Fiscal Year 2018/2019.

**FISCAL IMPACT:**
Preliminary discussion at this time—fiscal impact to be determined.

**BACKGROUND:**
The SFPUC's Annual Meeting for Wholesale Customers and BAWSCA was held on February 15, 2018, wherein projected water rate increases were discussed. Attached for reference are SFPUC's PowerPoint presentation slides numbered 93-103 regarding its budget and water rate projections.

As reported to the Board last month, the projected SFPUC wholesale water rate increase is 0% effective July 1, 2018, meaning that SFPUC's per unit wholesale water rate will remain $4.10CCF for FY 2018/2019. This will be confirmed at the SFPUC's water rate hearing typically scheduled in May.

There were four (4) significant reasons cited for the SFPUC 0% wholesale rate projection for FY 2018/2019:

- New bond issuance: 2017 ABC Bond Series;
- Debt service savings to the wholesale customers from a recent significant SFPUC bond refunding ($25.4 million savings during life of bond);
- Wholesale water sales projections above budget (129.9 MGD vs. 115.0 MGD for estimated $31.4 million above plan); and
- Balancing account projected $66.4 million owed to wholesale customers that will be used to smooth rates over next few years (as required by the Water Supply Agreement).

MPWD's Proposition 218 process was completed in 2015 and water rate adjustments for FY 2018/2019 were approved in the amount of 6%, effective July 1, 2018. Last year there were no increases in MPWD water rates.

FY 2019/2010 is the final year remaining under the MPWD's 2015 Proposition 218 process, and the adopted water rate adjustment was 6%, effective July 1, 2019.

**DISCUSSION**:
The last financial review and water rate update was completed in 2016 by Bartle Wells Associates (BWA), so staff reached out this year to team with them again for an updated financial plan and water rate projections. The Preliminary Draft dated March 15, 2018, is attached and will be presented by Alex Handlers of BWA at the Board meeting.

Key factors to consider and discuss about the MPWD updated multi-year financial plan and cash flow projections:

1. Maintain a 1.3 debt service coverage;
2. Caution about relying on one-time development revenues (Capacity Charges and Water Demand Offset Fees);
3. Additional staffing needed for increased workload (resulting from added development and increased accounting responsibilities) but also for succession planning (in preparation for upcoming retirements)—two (2) Water Service Operators and one (1) Accountant. The ultimate organizational staffing goal would be 19 employees. Currently, there are 18 employees, but adding the permanent position of Accountant would make it 19. The two (2) Water Service Operators would initially train and serve as meter installers to complete the AMI project and learn the system. We would reorganize as operational staff retires. That being said, as previously reported, the pre-funding of MPWD liabilities with cash reserves will result in annual operational cost savings, which can be used for the additional staffing.
4. In the past MPWD has spent closer to $1.5 million per year on capital replacement and capital outlay. That means at a minimum $500,000 should be budgeted each year, along with the $1,045,000 annual debt service payment, to maintain that objective. There should also be consideration for annual inflationary adjustments and whether annual one-time development revenues should be added on top of the $1.5 million capital replacement investment.
5. Recent Board action to fund the OPEB and PRSP liabilities from MPWD cash reserves was included as part of the multi-year financial plan and water rate update.
6. The Project Fund for the 2016 COPs was added to the multi-year financial plan.

As a result of the above assumptions, an overall projected rate increase for FY 2018/2019 would be 4.1%, broken down as follows:

- 2.8% Adjustment in Commodity Charges; and
- Continued minor increases to the monthly fixed system charges.

Please refer to Table 7 in the BWA update. When comparing the updated projected 4.1% water rate increase for FY 2018/2019 to the adopted rate increases for FY 2018/2019, it would actually result in a lesser impact to customers.

*MPWD WATER RATES COMPETITIVENESS*

It is the MPWD's mission to operate the system and serve customers as efficiently and cost-effectively as possible. Three (3) water rate comparison charts among Bay area water suppliers for FY 2017/2018 are included in the BWA attachment:

- Single Family Residential Water Charges – Low Use (3 CCF Monthly)
- Single Family Residential Water Charges – Median Use (6 CCF Monthly)
- Single Family Residential Water Charges – Average Use (7 CCF Monthly)

First, the MPWD has been prudent in its planning to subtly adjust its fixed system charges, because the majority of the 15 agencies surveyed are charging a similar amount, which reflected the MPWD rate is within market. Revenues from MPWD fixed charges represent 22.8% of the estimated water rate revenues. (*Note: 77.2% of the revenues come from consumption charges. Reference Table 3 in the BWA report.*)

Next, for lower tier use, the MPWD ranks among the lowest for serving those customers. While #6 in this group, the MPWD low-tier rates appeared competitive.

Finally, in the median and average use categories, the MPWD ranks competitively (within 10%) along with 9 out of 15 of the water suppliers surveyed.

Given MPWD's history of prudent fiscal stewardship and management, and responsible attention to its capital rehabilitation and replacement programming, it is staff's recommendation that the Board adopt the water rate adjustments in FY 2018/2019 as projected and outlined in the 2018 BWA financial plan and water rate update.

Attachments: SFPUC's PowerPoint presentation slides numbered 93-103 from the 2018 Annual Meeting for Wholesale Customers and BAWSCA
BWA Water Rate Update for the MPWD – Preliminary Draft dated March 15, 2018

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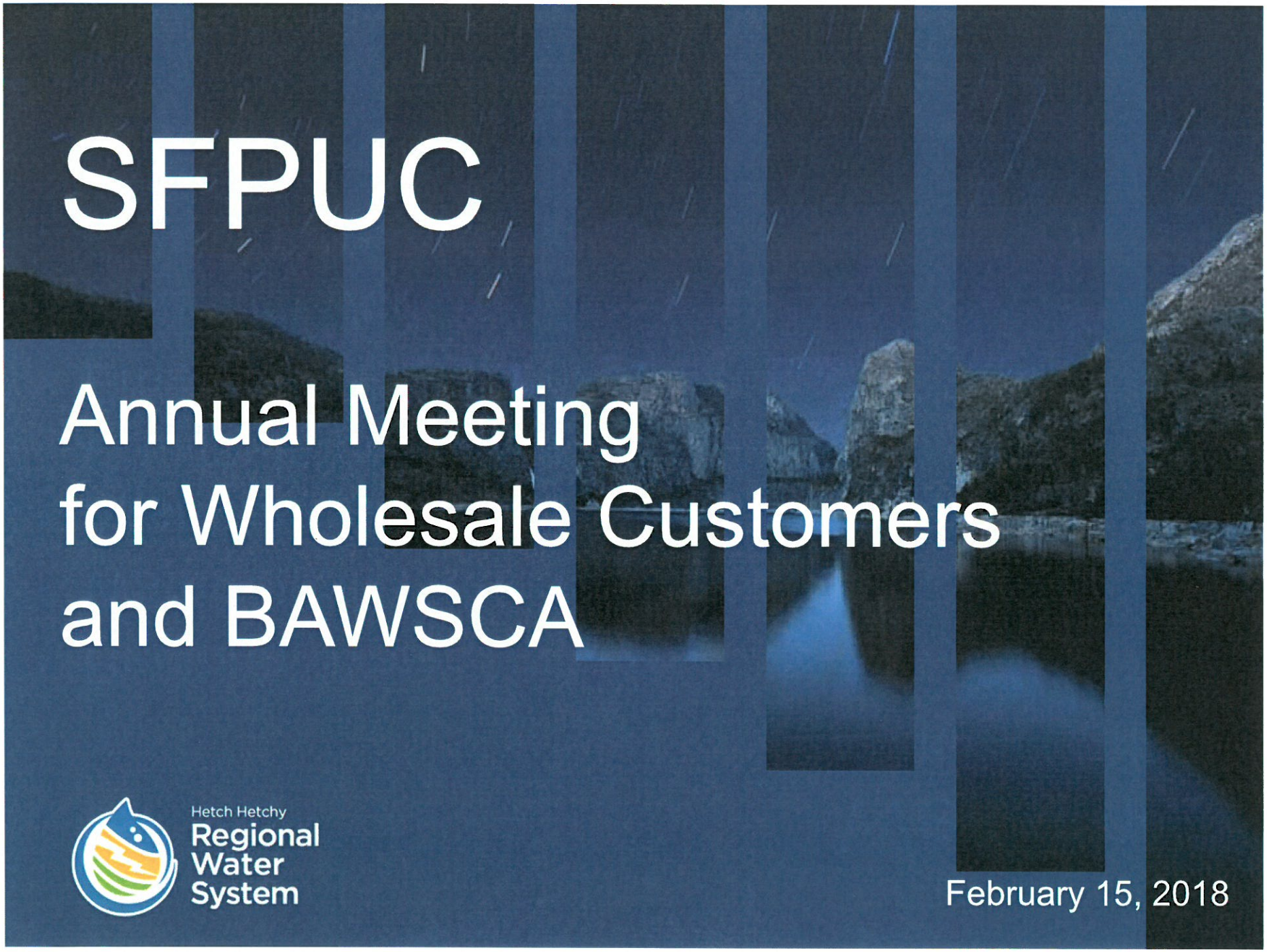
BOARD ACTION: A PPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ WARDEN_____ VELLA_____ LINVILL_____ ZUCCA_____ STUEBING_____


SFPUC
Annual Meeting
for Wholesale Customers
and BAWSCA
Hetch Hetchy
Regional
Water
System
February 15, 2018

Eric Sandler

# Financial Update

93

# Financial Update

- FYE 2016-17 Compliance Audit
- FYE 2017-18 Water Enterprise Results
- Financial Projection & Revenue Requirement
- FYE 2018-19 Projected Wholesale Rates

# FYE 2016-17 Compliance Audit

- Report will be issued in mid-February and posted on sfwater.org
  - Compliance audit adjustments reduced balancing account by $2.38M (1% of the WRR)
- Balancing Account as of 6/30/2017
  - Beginning balance - $15.7M owed to Wholesale Customers
  - Ending balance - $40.2M owed to Wholesale Customers

# FYE 2017-18 Water Enterprise Results

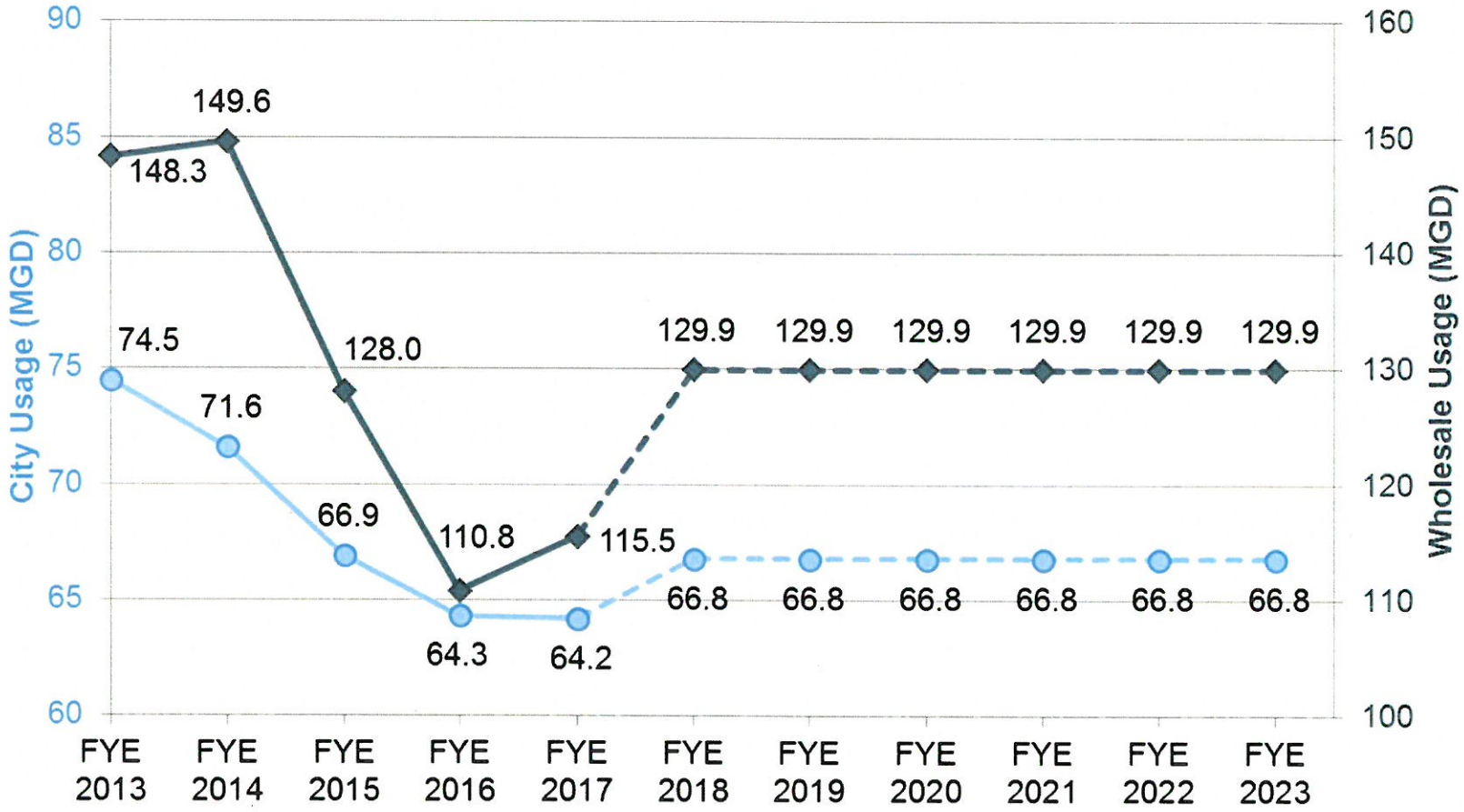
- **New Bond Issuance: 2017 ABC Bond Series = $339.5 million**
  - True interest cost (TIC) of 3.8%
  - Average life of bonds = 20.1 years

- **2017 DFG Refunding Bonds provide debt service savings:**
  - Par Amount = $442.2 million
  - $2.4 million savings for Wholesale Customers in FY 2017-18
  - $25.4 million PV savings for Wholesale Customers during life of bond

- **Water Sales projections above budget**
  - Wholesale sales projected at 129.9 MGD vs. 115.0 MGD used in rate setting
  - Wholesale water revenue estimated $31.4 million above plan

- **Balancing Account projection for 6/30/2018**
  - $66.4 million owed to Wholesale Customers
  - Will be used to smooth rates over next few years

# Water Sales: Actuals and Projections



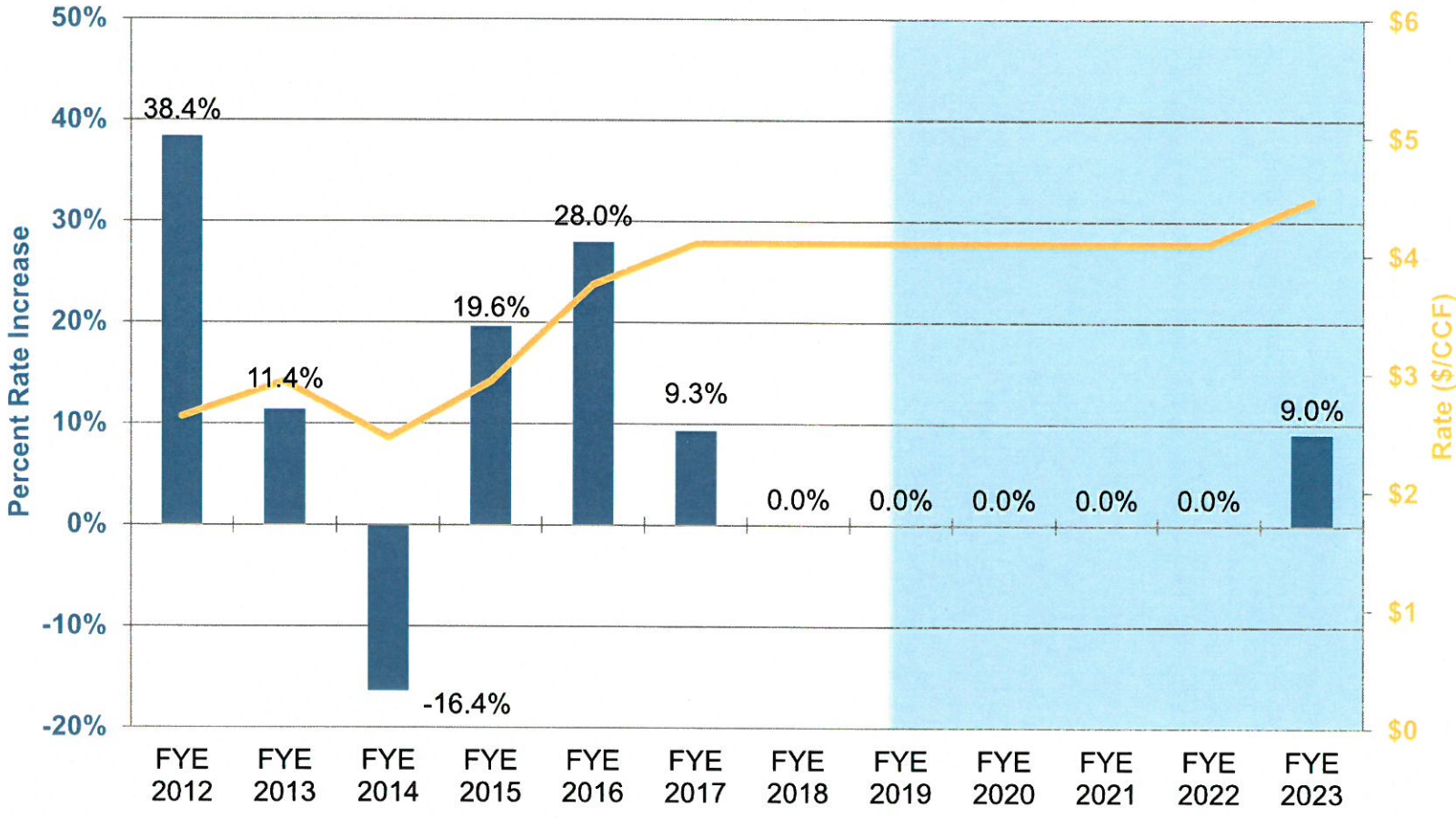
# Water Enterprise Financial Plan

| ($M) | FYE 2019 | FYE 2020 | FYE 2021 | FYE 2022 | FYE 2023 |
|---|---|---|---|---|---|
| **Beginning Fund Balance** | **$ 223.9** | **$ 222.9** | **$ 202.3** | **$ 187.9** | **$ 174.0** |
| **Sources** | | | | | |
| Retail Water Sales | 279.5 | 301.9 | 323.0 | 345.7 | 366.4 |
| Wholesale | | | | | |
| Wholesale Share of Operating Costs | 109.3 | 111.9 | 112.9 | 112.7 | 118.3 |
| Wholesale Share of Capital & Debt | 154.9 | 153.0 | 151.3 | 151.5 | 167.5 |
| Wholesale Water Sales | 264.2 | 264.9 | 264.2 | 264.2 | 285.8 |
| Other Miscellaneous Income | 59.1 | 59.4 | 109.6 | 100.5 | 60.7 |
| **Total Sources** | **$ 602.8** | **$ 626.2** | **$ 696.9** | **$ 710.4** | **$ 712.8** |
| **Uses** | | | | | |
| Operations & Maintenance | 237.7 | 250.5 | 256.8 | 263.4 | 268.3 |
| Hetchy Transfer | 33.6 | 34.6 | 35.6 | 36.7 | 37.8 |
| Debt Service | 283.7 | 306.3 | 320.5 | 332.9 | 358.1 |
| Revenue-Funded Capital - Retail | 30.4 | 30.2 | 88.8 | 79.4 | 55.9 |
| Revenue-Funded Capital - Wholesale | 26.4 | 26.4 | 13.2 | 13.2 | 15.2 |
| **Total Uses** | **$ 611.7** | **$ 648.0** | **$ 715.0** | **$ 725.7** | **$ 735.3** |
| **Net Revenues** | **$ (8.9)** | **$ (21.8)** | **$ (18.1)** | **$ (15.3)** | **$ (22.4)** |
| **Ending Fund Balance** | **$ 215.0** | **$ 201.1** | **$ 184.2** | **$ 172.6** | **$ 151.5** |

# Wholesale Revenue Requirement

| ($M) | FYE 2019 | FYE 2020 | FYE 2021 | FYE 2022 | FYE 2023 |
|---|---|---|---|---|---|
| Operating Costs | 107.9 | 115.3 | 119.2 | 122.8 | 122.5 |
| Debt Service | 126.3 | 131.5 | 146.7 | 152.0 | 161.4 |
| Revenue-Funded Capital | 26.4 | 26.4 | 13.2 | 13.2 | 15.2 |
| **Subtotal WRR** | **$ 260.6** | **$ 273.2** | **$ 279.1** | **$ 288.0** | **$ 299.1** |
| Balancing Account Applied -net | (3.9) | (9.0) | (18.1) | (24.3) | (14.8) |
| Debt Service Coverage | 7.5 | 0.7 | 3.2 | 0.5 | 1.5 |
| **Total** | **$ 264.2** | **$ 264.9** | **$ 264.2** | **$ 264.2** | **$ 285.8** |
| | | | | | |
| Wholesale Rate Increase | 0.0% | 0.0% | 0.0% | 0.0% | 9.0% |
| Rate ($/CCF) | $4.10 | $4.10 | $4.10 | $4.10 | $4.47 |
| Usage Basis (MGD) | 129.9 | 129.9 | 129.9 | 129.9 | 129.9 |

# Wholesale Rates
# Historic and Projected Rate Changes



# Wholesale Rates
# Historic and Projected Rate Changes

Actual

Projected

| Fiscal Year | FYE 2018 Projection | |
|---|---|---|
| FYE 2010 | 15.7% | $1.65 |
| FYE 2011 | 15.2% | $1.90 |
| FYE 2012 | 38.4% | $2.63 |
| FYE 2013 | 11.4% | $2.93 |
| FYE 2014 | -16.4% | $2.45 |
| FYE 2015 | 19.6% | $2.93 |
| FYE 2016 | 28.0% | $3.75 |
| FYE 2017 | 9.3% | $4.10 |
| FYE 2018 | 0.0% | $4.10 |
| FYE 2019 | 0.0% | $4.10 |
| FYE 2020 | 0.0% | $4.10 |
| FYE 2021 | 0.0% | $4.10 |
| FYE 2022 | 0.0% | $4.10 |
| FYE 2023 | 9.0% | $4.47 |
| FYE 2024 | 13.2% | $5.06 |
| FYE 2025 | 5.3% | $5.33 |
| FYE 2026 | 6.9% | $5.70 |
| FYE 2027 | 4.9% | $5.98 |
| FYE 2028 | 6.5% | $6.37 |

Rates shown exclude BAWSCA surcharge for BAWSCA debt service

# Wholesale Rates
# Historic and Projected Rate Changes

Actual

Projected

| Fiscal Year | Wholesale | Retail |
|---|---|---|
| FYE 2010 | 15.7% | 15.0% |
| FYE 2011 | 15.2% | 15.0% |
| FYE 2012 | 38.4% | 12.5% |
| FYE 2013 | 11.4% | 12.5% |
| FYE 2014 | -16.4% | 6.5% |
| FYE 2015 | 19.6% | 12.0% |
| FYE 2016 | 28.0% | 12.0% |
| FYE 2017 | 9.3% | 10.0% |
| FYE 2018 | 0.0% | 7.0% |
| FYE 2019 | 0.0% | 9.0% |
| FYE 2020 | 0.0% | 8.0% |
| FYE 2021 | 0.0% | 7.0% |
| FYE 2022 | 0.0% | 7.0% |
| FYE 2023 | 9.0% | 6.0% |
| FYE 2024 | 13.2% | 5.0% |
| FYE 2025 | 5.3% | 5.0% |
| FYE 2026 | 6.9% | 5.0% |
| FYE 2027 | 4.9% | 5.0% |
| FYE 2028 | 6.5% | 4.0% |
| CAGR | 7.8% | 8.2% |

# FYE 2018-19 Projected Wholesale Rates

- **No change in wholesale rates**
- Rate projection: $4.10/CCF
  - Presented in rate noticing from April 2017
- Rate does not include BAWSCA Bond Surcharge: flat amount of $24.7M each year ($2.1M per month)

MID-PENINSULA WATER DISTRICT

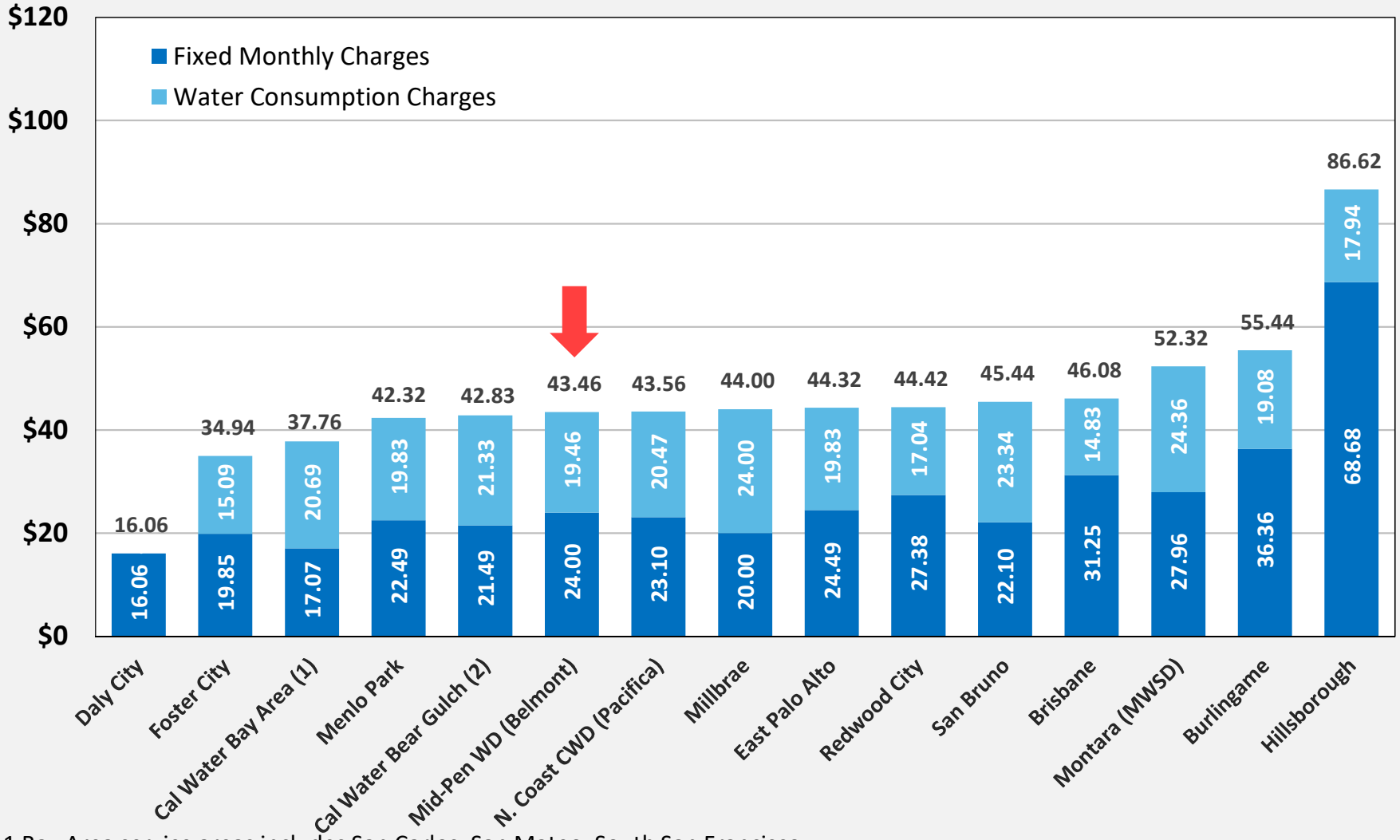
# Water Rate Update

## Preliminary Draft 03-15-18

BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

## Single Family Residential Monthly Water Charges 2017/18

### Low Use: 3 ccf monthly use (74 gpd)



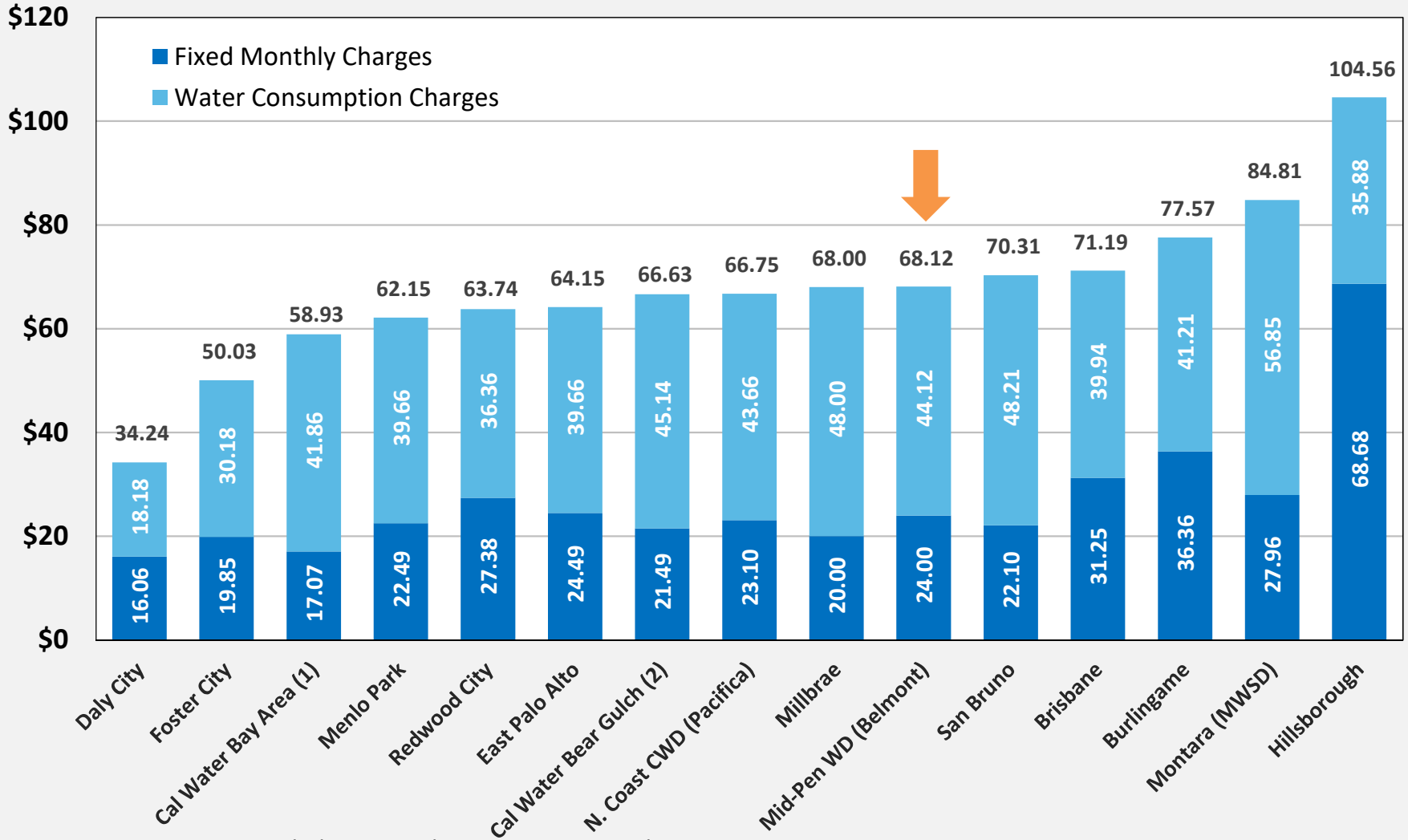

1 Bay Area service areas includes San Carlos, San Mateo, South San Francisco.

2 Bear Gulch service area inlcludes Atherton, Woodside, and part of Menlo Park.

*Rates Effective March 2018*

## Single Family Residential Monthly Water Charges 2017/18

### Median Use: 6 ccf monthly water use (148 gpd)



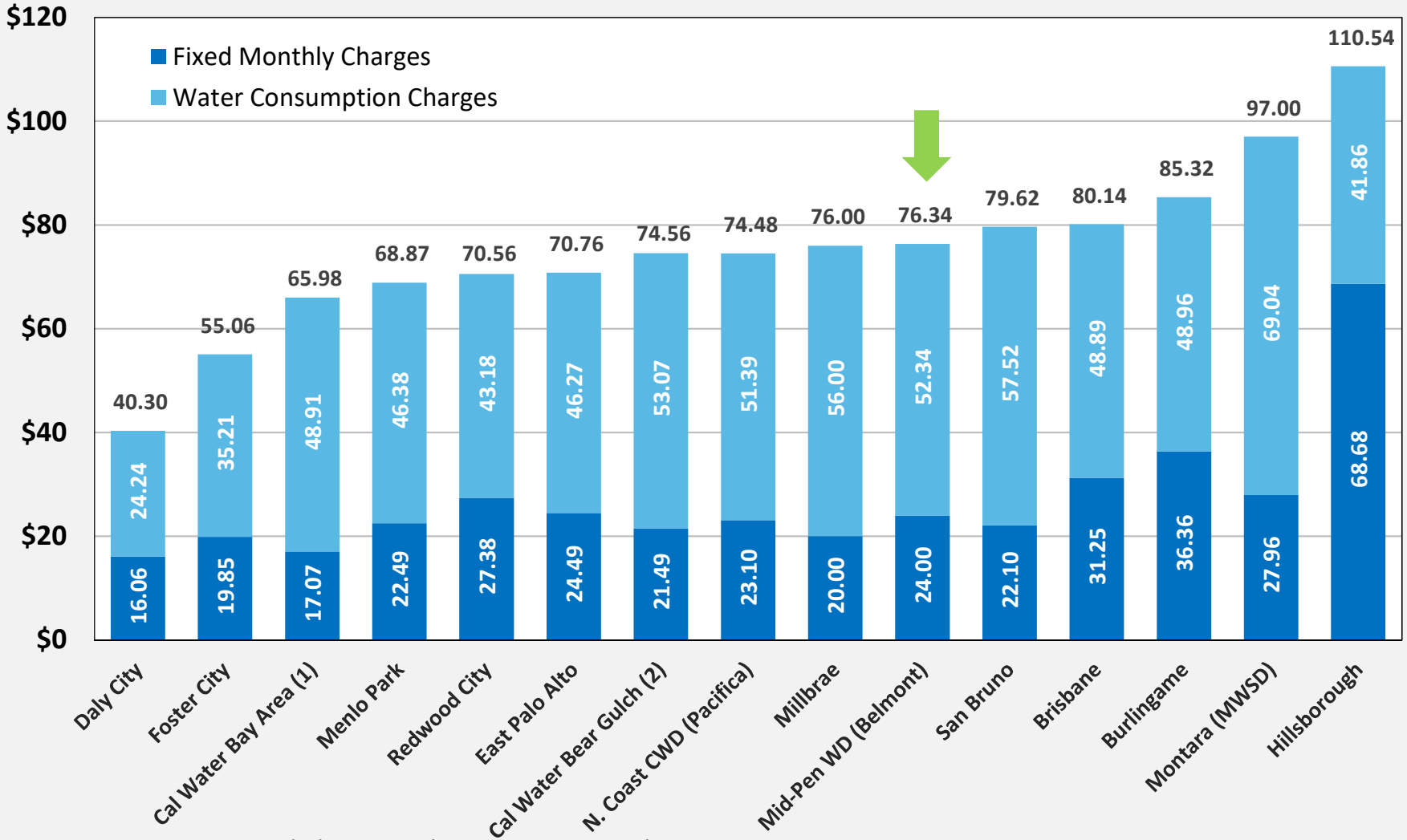

1 Bay Area service areas includes San Carlos, San Mateo, South San Francisco.

2 Bear Gulch service area inlcludes Atherton, Woodside, and part of Menlo Park.

*Rates Effective March 2018*

## Single Family Residential Monthly Water Charges 2017/18

### Average Use: 7 ccf of monthly water use (172 gpd)




1 Bay Area service areas includes San Carlos, San Mateo, South San Francisco.

2 Bear Gulch service area inlcludes Atherton, Woodside, and part of Menlo Park.

*Rates Effective March 2018*

Table 1
Mid-Peninsula Water District
Water Sales by Fiscal Year

*Includes estimates for remainder of fiscal year 2017/18*

| | Water Consumption (hcf) | | | | | |
|---|---|---|---|---|---|---|
| | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 |
| July | 155,974 | 156,081 | 134,669 | 102,202 | 111,110 | 117,761 |
| August | 153,190 | 155,788 | 128,924 | 104,096 | 113,341 | 124,029 |
| September | 145,980 | 145,551 | 118,284 | 101,546 | 112,591 | 127,050 |
| October | 122,618 | 122,117 | 109,652 | 95,095 | 101,247 | 117,970 |
| November | 90,723 | 106,535 | 86,670 | 81,298 | 76,838 | 100,278 |
| December | 80,604 | 94,062 | 72,835 | 67,438 | 66,486 | 76,510 |
| January | 84,202 | 102,910 | 82,360 | 70,890 | 67,261 | 85,964 |
| February | 86,478 | 73,221 | 79,782 | 60,940 | 65,165 | 65,000 |
| March | 106,663 | 89,152 | 102,964 | 65,700 | 63,193 | 63,000 |
| April | 120,265 | 96,019 | 91,491 | 73,821 | 69,702 | 70,000 |
| May | 155,736 | 126,934 | 97,806 | 85,446 | 89,353 | 89,000 |
| June | 150,614 | 139,729 | 103,863 | 108,136 | 108,136 | 108,000 |
| Total | 1,453,047 | 1,408,099 | 1,209,300 | 1,016,608 | 1,044,423 | *1,144,562* |
| % Change | | -3.1% | -14.1% | -15.9% | 2.7% | *9.6%* |

*2017/18 year-to-date water consumption through January 2018 is 15.5% higher than the same period in the prior fiscal year; assuming water use parallels prior year use for the remaining months of the fiscal year, water use will end up about 9.6% higher than 2016/17.*

Table 2
Mid-Peninsula Water District
Water Rates

| | | July 1 2015 | July 1 2016 | | July 1 2017 | | July 1 2018 | July 1 2019 |
|---|---|---|---|---|---|---|---|---|
| | | Adopted & Charged | Adopted | Charged | Adopted | Charged | Adopted | Adopted |
| **Fixed Monthly Charges** | | | | | | *No Increase* | | |
| *Billed based on meter size* | | | | | | | | |
| Meter | Meter Ratio | | | | | | | |
| 5/8" | 1.00 | $22.00 | $24.00 | $24.00 | $26.00 | $24.00 | $28.00 | $30.00 |
| 1" | 1.50 | 33.00 | 36.00 | 36.00 | 39.00 | 36.00 | 42.00 | 45.00 |
| 1 1/2" | 2.50 | 55.00 | 60.00 | 60.00 | 65.00 | 60.00 | 70.00 | 75.00 |
| 2" | 4.00 | 88.00 | 96.00 | 96.00 | 104.00 | 96.00 | 112.00 | 120.00 |
| 3" | 6.00 | 132.00 | 144.00 | 144.00 | 156.00 | 144.00 | 168.00 | 180.00 |
| 4" | 10.00 | 220.00 | 240.00 | 240.00 | 260.00 | 240.00 | 280.00 | 300.00 |
| 6" | 25.00 | 550.00 | 600.00 | 600.00 | 650.00 | 600.00 | 700.00 | 750.00 |
| **Water Consumption Charges** | | | | | | *No Increase* | | |
| *Billed based on monthly metered water use ($/hcf)** | | | | | | | | |
| Residential Use per Tier | | | | | | | | |
| Tier 1 | | 0 - 2 hcf | 0 - 2 hcf | | 0 - 2 hcf | | 0 - 2 hcf | 0 - 2 hcf |
| Tier 2 | | 3 - 9 hcf | 3 - 8 hcf | | 3 - 8 hcf | | 3 - 8 hcf | 3 - 8 hcf |
| Tier 3 | | 10 - 22 hcf | 9 - 20 hcf | | 9 - 20 hcf | | 9 - 20 hcf | 9 - 20 hcf |
| Tier 4 | | >22 hcf | >20 hcf | | >20 hcf | | >20 hcf | >20 hcf |
| | | | | With $0.32 Pass-Through | | | | |
| Residential Rate Tiers | | | | | | | | |
| Tier 1 | | $5.00 | $5.30 | $5.62 | $5.60 | $5.62 | $5.90 | $6.25 |
| Tier 2 | | 7.50 | 7.90 | 8.22 | 8.30 | 8.22 | 8.65 | 9.00 |
| Tier 3 | | 9.00 | 9.50 | 9.82 | 10.00 | 9.82 | 10.50 | 11.00 |
| Tier 4 | | 10.50 | 11.10 | 11.42 | 11.70 | 11.42 | 12.35 | 13.00 |
| Commercial Rate Tiers | | | | | | | | |
| Tier 1 | 0 - 5 hcf | $7.00 | $7.25 | $7.57 | $7.50 | $7.57 | $7.75 | $8.00 |
| Tier 2 | Over 5 hcf | 8.00 | 8.35 | 8.67 | 8.70 | 8.67 | 9.10 | 9.50 |

* 1 hcf = one hundred cubic feet or approximately 748 gallons.

Table 3
Mid-Peninsula Water District
Estimated Water Rate Revenues 2017/18

| | Water Use (hcf) | Usage Charges | Fixed Charges | Total Charges |
|---|---|---|---|---|
| July | 117,761 | $991,425 | $221,480 | $1,212,905 |
| August | 124,029 | 1,058,492 | 221,539 | 1,280,031 |
| September | 127,050 | 1,086,960 | 221,731 | 1,308,691 |
| October | 117,970 | 969,367 | 220,229 | 1,189,596 |
| November | 100,278 | 842,728 | 221,252 | 1,063,980 |
| December | 76,510 | 597,628 | 221,492 | 819,120 |
| January | 85,964 | 460,723 | 221,521 | 682,244 |
| February | 65,000 | 517,000 | 221,500 | 738,500 |
| March | 63,000 | 207,000 | 221,500 | 428,500 |
| April | 70,000 | 555,000 | 221,500 | 776,500 |
| May | 89,000 | 718,000 | 221,500 | 939,500 |
| June | 108,000 | 992,000 | 221,500 | 1,213,500 |
| Total | 1,144,562 | 8,996,323 | 2,656,744 | 11,653,067 |
| *% of Total* | | *77.2%* | *22.8%* | *100.0%* |

Table 4
Mid-Peninsula Water District
Projected vs. Actual SFPUC Wholesale Water Rates

| | July 1 2015 | July 1 2016 | July 1 2017 | July 1 2018 |
|---|---|---|---|---|
| Prior SFPUC Projections (2015 Rate Study) | 3.75 | 3.78 | 3.79 | 4.31 |
| Actual or Updated Wholesale Rates | 3.75 | 4.10 | 4.10 | 4.10 |
| Difference | - | 0.32 | 0.31 | (0.21) |

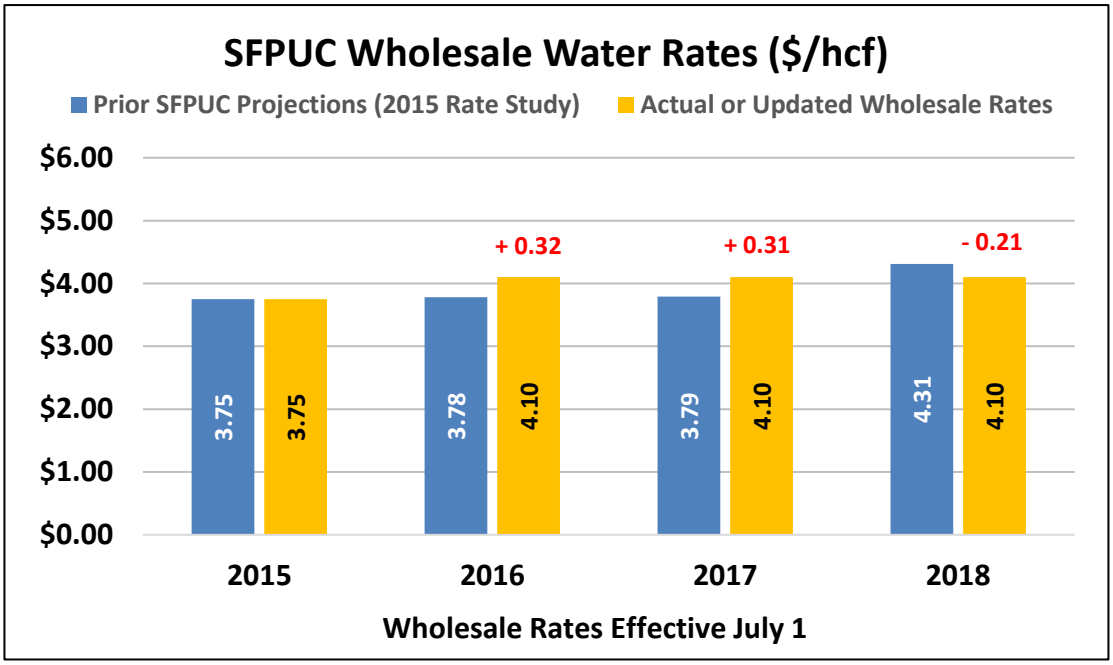


Table 5
Mid-Peninsula Water District
Fund Reserves

| | Fund Reserves as of June 30 | | | | |
|---|---|---|---|---|---|
| | 2013 | 2014 | 2015 | 2016 | 2017 |
| **Cash & Equivalents** | $3,621,126 | $4,465,380 | $3,582,734 | $4,265,885 | $5,203,740 |
| **Plus** | | | | | |
| Accounts Receivable | 916,448 | 849,549 | 679,566 | 973,931 | 1,212,306 |
| Prepaid Expenses & Assets | 115,278 | 92,625 | 135,503 | 255,814 | 231,282 |
| Subtotal | 1,031,726 | 942,174 | 815,069 | 1,229,745 | 1,443,588 |
| **Less** | | | | | |
| Accounts Payable | 162,195 | 422,373 | 185,507 | 206,936 | 236,936 |
| Accrued Expenses/Unearned Revs | 131,706 | 54,431 | 78,189 | 711,290 | 1,512,722 |
| Subtotal | 293,901 | 476,804 | 263,696 | 918,226 | 1,749,658 |
| **Adjusted Total** | **4,358,951** | **4,930,750** | **4,134,107** | **4,577,404** | **4,897,670** |

Source: Audited Financial Statements

# Table 6 - MPWD Cash Flow Projections

Draft 03-15-18

| | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 |
|---|---|---|---|---|---|
| | | Projected | Projected | Projected | Projected |
| Overall Rate Increase | **0.0%** | **4.1%** | **4.1%** | **4.0%** | **6.0%** |
| Consumption Charge Adjustments | **0.0%** | **2.8%** | **3.0%** | **3.0%** | **6.0%** |
| Fixed Rate Adjustments (1-year lag) | **0.0%** | **8.3%** | **7.7%** | **7.1%** | **6.0%** |
| Growth in Service Connections | 32 | 5 | 5 | 1 | 5 |
| Water System Capacity Charge | $9,750 | $9,950 | $10,150 | $10,350 | $10,560 |
| Change in Water Sales | 9.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total Water Sales (hcf) | 1,144,600 | 1,144,600 | 1,144,600 | 1,144,600 | 1,144,600 |
| SFPUC Water Purchases (hcf) +7% | 1,224,700 | 1,224,700 | 1,224,700 | 1,224,700 | 1,224,700 |
| Projected SFPUC Rate per hcf | $4.10 | $4.10 | $4.10 | $4.30 | $4.50 |
| *Prior Est of SFPUC Rate per hcf* | *$3.79* | *$4.31* | *$4.72* | *$4.74* | *$4.90* |
| Interest Earnings Rate | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% |
| Cost Escalation | | 4.0% | 4.0% | 4.0% | 4.0% |
| **Beginning Fund Reserves** | $4,898,000 | $3,729,000 | $2,357,000 | $2,659,000 | $2,781,000 |
| **REVENUES** | | | | | |
| Monthly Service Charges | 2,657,000 | 2,880,000 | 3,104,000 | 3,326,000 | 3,528,000 |
| Water Sales | 8,996,000 | 9,248,000 | 9,525,000 | 9,811,000 | 10,400,000 |
| Subtotal Rate Revenues | 11,653,000 | 12,128,000 | 12,629,000 | 13,137,000 | 13,928,000 |
| *Annual Increase %* | *3.5%* | *4.1%* | *4.1%* | *4.0%* | *6.0%* |
| Interest Revenue | 50,000 | 56,000 | 35,000 | 40,000 | 42,000 |
| Lease of Physical Property | 150,000 | 155,000 | 160,000 | 165,000 | 170,000 |
| Property Taxes | 260,000 | 268,000 | 276,000 | 284,000 | 293,000 |
| Capacity/Demand Offset Charges | 310,000 | 250,000 | 250,000 | 10,000 | 53,000 |
| Other/Miscellaneous Revenues | 295,000 | 65,000 | 67,000 | 69,000 | 71,000 |
| **Total Revenues** | 12,718,000 | 12,922,000 | 13,417,000 | 13,705,000 | 14,557,000 |
| **EXPENSES** | | | | | |
| **Operating & Maintenance** | | | | | |
| Personnel Costs | 2,978,000 | 3,097,000 | 3,221,000 | 3,350,000 | 3,484,000 |
| SFPUC Water Purchases | 5,096,000 | 5,096,000 | 5,096,000 | 5,341,000 | 5,586,000 |
| BAWSCA Bond Surcharge | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 |
| Maintenance & Repair | 654,000 | 680,000 | 707,000 | 735,000 | 764,000 |
| Utilities | 306,000 | 318,000 | 331,000 | 344,000 | 358,000 |
| Professional Services | 406,000 | 422,000 | 439,000 | 457,000 | 475,000 |
| Admin & Equipment | 317,000 | 330,000 | 343,000 | 357,000 | 371,000 |
| Membership & Gov't Fees | 209,000 | 217,000 | 226,000 | 235,000 | 244,000 |
| Other Operating Costs | 400,000 | 416,000 | 433,000 | 450,000 | 468,000 |
| Subtotal | 10,866,000 | 11,076,000 | 11,296,000 | 11,769,000 | 12,250,000 |
| **Debt Service** | 1,052,000 | 1,068,000 | 1,069,000 | 1,064,000 | 1,070,000 |
| **Non-Operating** | | | | | |
| Capital Improvements (Pay-Go) | 419,000 | 600,000 | 750,000 | 750,000 | 1,500,000 |
| OPEB & PRSP Contributions | 1,550,000 | 1,550,000 | 0 | 0 | 0 |
| Subtotal | 1,969,000 | 2,150,000 | 750,000 | 750,000 | 1,500,000 |
| **Total Expenses** | 13,887,000 | 14,294,000 | 13,115,000 | 13,583,000 | 14,820,000 |
| **Revenues Less Expenses** | (1,169,000) | (1,372,000) | 302,000 | 122,000 | (263,000) |
| **Ending Fund Reserves** | 3,729,000 | 2,357,000 | 2,659,000 | 2,781,000 | 2,518,000 |
| *% of O&M+Debt* | *31%* | *19%* | *22%* | *22%* | *19%* |
| Debt Service Coverage | 1.76 | 1.73 | 1.98 | 1.82 | 2.16 |
| **Project Fund for 2016 COPs** | | | | | |
| Beginning Project Fund | 19,225,000 | 15,977,000 | 12,815,000 | 4,217,000 | 1,090,000 |
| Interest Earnings | 200,000 | 143,000 | 85,000 | 26,000 | 5,000 |
| Capital Improvements | 3,448,000 | 3,305,000 | 8,683,000 | 3,153,000 | 1,095,000 *$3M Shortfall* |
| Ending Project Fund | 15,977,000 | 12,815,000 | 4,217,000 | 1,090,000 | 0 |
| *Capital Funding Target* | *3,448,000* | *3,305,000* | *8,683,000* | *3,153,000* | *4,074,000* |

Table 7
Mid-Peninsula Water District
Projected Water Rates

Draft Idea for Discussion
Fixed Charges: Lag Adopted Rate Increases by 1 Year
Usage Charges: Adopted Rates Adjusted by SFPUC Differential

| Proposed Rates Effective July 1, 2018 | | | | | | |
|---|---|---|---|---|---|---|
| | | 2017/18 Current Rates | 2018/19 Adopted Rates | Decrease from Adopted Rates $ | Decrease from Adopted Rates % | 2018/19 Proposed Rates |
| **Fixed Monthly Charges** | | | | | | |
| *Billed based on meter size* | | | | | | |
| Meter | Meter Ratio | | | | | |
| 5/8" | 1.00 | $24.00 | $28.00 | ($2.00) | -7.1% | **$26.00** |
| 1" | 1.50 | 36.00 | 42.00 | (3.00) | -7.1% | **39.00** |
| 1 1/2" | 2.50 | 60.00 | 70.00 | (5.00) | -7.1% | **65.00** |
| 2" | 4.00 | 96.00 | 112.00 | (8.00) | -7.1% | **104.00** |
| 3" | 6.00 | 144.00 | 168.00 | (12.00) | -7.1% | **156.00** |
| 4" | 10.00 | 240.00 | 280.00 | (20.00) | -7.1% | **260.00** |
| 6" | 25.00 | 600.00 | 700.00 | (50.00) | -7.1% | **650.00** |
| **Water Consumption Charges** | | | | SFPUC Rate Differential* | | |
| *Billed based on monthly metered water use ($/hcf)* | | | | | | |
| Residential Rate Tiers | | | | | | |
| Tier 1 | 0 - 2 hcf | $5.62 | $5.90 | (0.21) | -3.6% | **$5.69** |
| Tier 2 | 3 - 8 hcf | 8.22 | 8.65 | (0.21) | -2.4% | **8.44** |
| Tier 3 | 9 - 20 hcf | 9.82 | 10.50 | (0.21) | -2.0% | **10.29** |
| Tier 4 | Over 20 hcf | 11.42 | 12.35 | (0.21) | -1.7% | **12.14** |
| Commercial Rate Tiers | | | | | | |
| Tier 1 | 0 - 5 hcf | $7.57 | $7.75 | maintain current rate | 0.0% | **$7.57** |
| Tier 2 | Over 5 hcf | 8.67 | 9.10 | (0.21) | -2.3% | **8.89** |

Note: 1 hcf = one hundred cubic feet or approximately 748 gallons.

* Accounts for difference between SFPUC's prior projected rate used in the rate study ($4.31), and SFPUC's latest wholesale rate projection for fiscal year 2018/19 (4.10).

Table 8
Mid-Peninsula Water District
Impact of Proposed Rates on Monthly Water Bills

| Impact of Proposed Rates Effective July 1, 2018 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Monthly Use (hcf) | % of Bills in Block | % of Bills at or Below | Monthly Charges | | | Impact of Proposed Rates Compared to | |
| | | | Current | Adopted | Proposed | Current Rates | Adopted Rates |
| 0 | 1.1% | 1.1% | $24.00 | $28.00 | $26.00 | $2.00 | ($2.00) |
| 1 | 2.8% | 3.9% | 29.62 | 33.90 | 31.69 | 2.07 | (2.21) |
| 2 | 5.1% | 9.1% | 35.24 | 39.80 | 37.38 | 2.14 | (2.42) |
| 3 | 7.5% | 16.5% | 43.46 | 48.45 | 45.82 | 2.36 | (2.63) |
| 4 | 9.4% | 26.0% | 51.68 | 57.10 | 54.26 | 2.58 | (2.84) |
| 5 | 9.9% | 35.8% | 59.90 | 65.75 | 62.70 | 2.80 | (3.05) |
| 6 | 9.0% | 44.9% | 68.12 | 74.40 | 71.14 | 3.02 | (3.26) |
| 7 | 7.7% | 52.6% | 76.34 | 83.05 | 79.58 | 3.24 | (3.47) |
| 8 | 6.9% | 59.5% | 84.56 | 91.70 | 88.02 | 3.46 | (3.68) |
| 9 | 5.8% | 65.3% | 94.38 | 102.20 | 98.31 | 3.93 | (3.89) |
| 10 | 5.0% | 70.2% | 104.20 | 112.70 | 108.60 | 4.40 | (4.10) |
| 11 | 4.3% | 74.5% | 114.02 | 123.20 | 118.89 | 4.87 | (4.31) |
| 12 | 3.7% | 78.2% | 123.84 | 133.70 | 129.18 | 5.34 | (4.52) |
| 13 | 3.1% | 81.3% | 133.66 | 144.20 | 139.47 | 5.81 | (4.73) |
| 14 | 2.7% | 84.0% | 143.48 | 154.70 | 149.76 | 6.28 | (4.94) |
| 15 | 2.2% | 86.2% | 153.30 | 165.20 | 160.05 | 6.75 | (5.15) |
| 16 | 1.9% | 88.1% | 163.12 | 175.70 | 170.34 | 7.22 | (5.36) |
| 17 | 1.6% | 89.6% | 172.94 | 186.20 | 180.63 | 7.69 | (5.57) |
| 18 | 1.3% | 91.0% | 182.76 | 196.70 | 190.92 | 8.16 | (5.78) |
| 19 | 1.2% | 92.2% | 192.58 | 207.20 | 201.21 | 8.63 | (5.99) |
| 20 | 1.1% | 93.3% | 202.40 | 217.70 | 211.50 | 9.10 | (6.20) |
| 21 | 0.9% | 94.2% | 213.82 | 230.05 | 223.64 | 9.82 | (6.41) |
| 22 | 0.7% | 94.9% | 225.24 | 242.40 | 235.78 | 10.54 | (6.62) |
| 23 | 0.7% | 95.6% | 236.66 | 254.75 | 247.92 | 11.26 | (6.83) |
| 24 | 0.6% | 96.2% | 248.08 | 267.10 | 260.06 | 11.98 | (7.04) |
| 25 | 0.4% | 96.6% | 259.50 | 279.45 | 272.20 | 12.70 | (7.25) |
| 26 | 0.4% | 97.1% | 270.92 | 291.80 | 284.34 | 13.42 | (7.46) |
| 27 | 0.4% | 97.4% | 282.34 | 304.15 | 296.48 | 14.14 | (7.67) |
| 28 | 0.3% | 97.8% | 293.76 | 316.50 | 308.62 | 14.86 | (7.88) |
| 29 | 0.2% | 98.0% | 305.18 | 328.85 | 320.76 | 15.58 | (8.09) |
| 30 | 0.2% | 98.2% | 316.60 | 341.20 | 332.90 | 16.30 | (8.30) |
| 50 | 31-50: 1.5% | 99.7% | 545.00 | 588.20 | 575.70 | 30.70 | (12.50) |
| 75 | >50: 0.3% | 100.0% | 830.50 | 896.95 | 879.20 | 48.70 | (17.75) |

MID-PENINSULA WATER DISTRICT

# *AGENDA ITEM NO. 8.B.*

DATE: March 22, 2018

TO: Board of Directors

FROM: Tammy Rudock, General Manager
Candy Pina, Administrative Services Manager
Rene Ramirez, Operations Manager

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**SUBJECT: DISCUSS PRELIMINARY WORKING DRAFT MPWD FISCAL YEAR 2018/2019 OPERATING AND CAPITAL BUDGET SUMMARIES AND ASSUMPTIONS**

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**RECOMMENDATION:**
Discuss PRELIMINARY WORKING DRAFT MPWD Fiscal Year 2018/2019 Operating and Capital Budget summaries and assumptions.

**FISCAL IMPACT:**
Preliminary discussion at this time—fiscal impact to be determined.

**DISCUSSION**:
Attached are the PRELIMINARY WORKING DRAFT summary scenarios for FY 2018/2019 Operating and Capital Budgets.

This is an early look at next fiscal year's MPWD operational and capital needs based upon the following assumptions:

*OPERATIONS*

- Projected Water Commodity Charges at $9,100,000 (if the Board approves a 2.3% water rate adjustment effective July 1, 2018).
- Projected Fixed System Charges at $2,880,000 (if the Board approves the nominal adjustments effective July 1, 2018).
- Projected capacity revenues based upon known "pipeline" Belmont projects.
- Projected 3.5% inflationary index on all Operating Expenditures, except water purchases from the SFPUC.
- Maintained Purchased Water expenditure based upon FY 2017/2018 costs.
- Projected a full year of Debt Service expense totaling $1,051,500 from the MPWD 2016 COP Official Statement.
- Increased Depreciation per accounting principles.

Based upon these assumptions, a $650,551 Operating Surplus would be projected for transfer to Capital.

*CAPITAL*

- Carried over the 2017 Joint WMR and Belmont Sewer Rehab Project for an estimated $250,000, from MPWD Cash Reserves as committed.
- AMI Meter Change-Out Program totaling $600,551 (from Operating Surplus).
- Mini-excavator for Operations (to replace surplused backhoe to be sold) estimated at $40,000. Funds would come from auction proceeds.
- Miscellaneous Capital Outlay/Projects for $50,000 (from Operating Surplus).

This is the first of several FY 2018/2019 budget discussions in the coming months. Staff continues to work on refining the budgets for the next round of discussions.

Staff is seeking input from the Board for further FY 2018/2019 budget preparation.

Attachments: PRELIMINARY WORKING DRAFT MPWD Operations Budget for FY 2018/2019
PRELIMINARY WORKING DRAFT MPWD Capital Budget for FY 2018/2019

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BOARD ACTION: A PPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ WARDEN_____ VELLA_____ LINVILL_____ ZUCCA_____ STUEBING_____

# PRELIMINARY WORKING DRAFT

**MID-PENINSULA WATER DISTRICT**
**BUDGET FOR YEAR 2018-2019**
**SUMMARY**

| DESCRIPTION | APPROVED MID-YEAR FY 2017-2018 BUDGET $ | ACTUALS 7/1/2017 2/28/18 | PRELIMINARY FY 2018-2019 BUDGET $ | Increase (Decrease) | Y-T-D % OF BUDGET |
|---|---|---|---|---|---|
| **OPERATING REVENUE** | | | | | |
| WATER COMMODITY CHARGES | 8,700,000 | 6,759,637 | 9,100,000 | 400,000 | 4.6% |
| FIXED SYSTEM CHARGES | 2,663,720 | 1,769,993 | 2,880,000 | 216,280 | 8.1% |
| FIRE SERVICE CHARGES | 14,000 | 10,141 | 14,000 | - | 0.0% |
| SERVICE LINE & INSTALLATION CHGS | 10,000 | 76,762 | 10,000 | - | 0.0% |
| MISCELLANEOUS OPERATING | 10,000 | 44,563 | 10,000 | - | 0.0% |
| PROPERTY TAX REVENUE | 260,000 | 232,505 | 268,000 | 8,000 | 3.1% |
| **TOTAL OPERATING REVENUE** | **11,657,720** | **8,893,601** | **12,282,000** | **624,280** | 5.4% |
| WATER SYSTEM CAPACITY CHARGES | 200,000 | 252,492 | 250,000 | 50,000 | 25.0% |
| WATER DEMAND OFFSET CHARGES | 10,000 | 31,156 | 65,000 | 55,000 | 550.0% |
| MISCELLANEOUS NON-OPERATING | 10,000 | 3,785 | 10,000 | - | 0.0% |
| INTEREST REVENUE - LAIF | 40,000 | 46,144 | 20,000 | (20,000) | -50.0% |
| INTEREST REVENUE - COP | 150,000 | 116,628 | 40,000 | (110,000) | -73.3% |
| LEASE OF PHYSICAL PROPERTY | 150,000 | 107,829 | 155,000 | 5,000 | 3.3% |
| LANDSCAPE PERMIT REVENUE | 11,200 | 11,200 | 5,000 | (6,200) | -55.4% |
| **TOTAL NON-OPERATING REVENUE** | **571,200** | **569,234** | **545,000** | **(26,200)** | -4.6% |
| **TOTAL REVENUE** | **12,228,920** | **9,462,835** | **12,827,000** | **598,080** | 4.9% |
| **OPERATING EXPENDITURES (OP EXP)** | | | | | |
| SALARIES & WAGES | 1,893,566 | 1,064,761 | 1,959,841 | 66,275 | 3.5% |
| PAYROLL TAXES & BENEFITS | 1,084,880 | 631,462 | 1,122,851 | 37,971 | 3.5% |
| PURCHASED WATER | 5,554,624 | 3,846,426 | 5,654,624 | 100,000 | 1.8% |
| OUTREACH & EDUCATION | 92,400 | 31,148 | 95,634 | 3,234 | 3.5% |
| M&R - OPS SYSTEM | 486,598 | 239,944 | 503,629 | 17,031 | 3.5% |
| M&R - FACILITIES & EQUIPMENT | 166,860 | 81,739 | 172,700 | 5,840 | 3.5% |
| MAJOR MAINTENANCE | 30,000 | 12,376 | 31,050 | 1,050 | 3.5% |
| OFFICE SUPPLIES & EQUIPMENT | 317,278 | 175,760 | 328,383 | 11,105 | 3.5% |
| MEMBERSHIP & GOV FEES | 208,613 | 143,181 | 215,914 | 7,301 | 3.5% |
| BAD DEBT & CLAIMS | 17,000 | (2,662) | 17,595 | 595 | 3.5% |
| UTILITIES | 306,200 | 166,786 | 316,917 | 10,717 | 3.5% |
| PROFESSIONAL SERVICES | 406,450 | 240,202 | 420,676 | 14,226 | 3.5% |
| TRAINING/TRAVEL & RECRUITMENT | 45,000 | 20,751 | 61,575 | 16,575 | 36.8% |
| RESTRICTED EARNINGS | 216,000 | 162,772 | 223,560 | 7,560 | 3.5% |
| DEBT SERVICE TRUSTEE FEES & EXP | - | 1,700 | - | - | N/A |
| DEBT SERVICE 2016 COPs | 984,950 | 786,580 | 1,051,500 | 66,550 | 6.8% |
| **TOTAL OP EXP LESS DEPRECIATION** | **11,810,419** | **7,602,926** | **12,176,449** | **366,030** | 3.1% |
| **TOTAL OP REV LESS OP EXP & DEPR** | **418,501** | **1,859,910** | **650,551** | **232,050** | 55.4% |
| DEPRECIATION | 900,000 | 581,286 | 931,500 | 31,500 | 3.5% |
| **TOTAL OP REVENUE LESS OP EXP** | **(481,499)** | **1,278,624** | **(280,949)** | **200,550** | -41.7% |
| **NET TRANSFERS TO CAPITAL** | **481,499** | **(1,278,624)** | **280,949** | **(200,550)** | -41.7% |
| **NET RESULTS OF OPERATIONS** | - | - | - | - | |

# PRELIMINARY WORKING DRAFT

**MID-PENINSULA WATER DISTRICT**
**BUDGET FOR FY 2018-2019**
**Capital Projects**

| DESCRIPTION | APPROVED MID-YEAR FY 2017-2018 BUDGET $ | ACTUAL 7/1/2017 2/28/2018 | **PRELIMINARY FY 2018-2019 BUDGET $** |
|---|---|---|---|
| CAPITAL IMPROVEMENTS - WORK IN PROCESS (WIP) | | | |
| 2017 Joint WMR and Belmont Sewer Rehab Project (Pay-Go Portion) | 375,000 | 13,672 | 250,000 |
| AMI Meter Change Out Program | - | - | 600,551 |
| **CAPITAL IMPROVEMENTS - WIP TOTAL** | **375,000** | **13,672** | **850,551** |
| **CAPITAL OUTLAY** | | | |
| Replacement Mini-Excavator for Operations | - | - | 40,000 |
| Replacement Priinter/Scanner/Copier | 18,504 | 18,504 | - |
| Miscellaneous Capital Outlay/Projects | 25,000 | - | 50,000 |
| **CAPITAL OUTLAY TOTAL** | **43,504** | **18,504** | **90,000** |
| **CAPITAL IMPROVEMENTS & CAPITAL OUTLAY TOTAL** | **418,504** | **32,176** | **940,551** |
| DEPRECIATION | 900,000 | 581,286 | 931,500 |
| TRANSFER FROM OPS | (481,496) | 1,278,624 | (280,949) |
| TRANSFER (TO)/FROM CAPITAL RESERVES | - | (1,827,734) | 290,000 |
| CAPITAL OUTLAY/CAPITAL PROJECTS | (418,504) | (32,176) | (940,551) |
| **NET RESULTS OF CAPITAL** | **-** | **(0)** | **0** |

MID-PENINSULA WATER DISTRICT

# *AGENDA ITEM NO. 8.C.*

DATE: March 22, 2018

TO: Board of Directors

FROM: Rene A. Ramirez, Operations Manager

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**SUBJECT: RECEIVE STRUCTURAL REVIEW AND RETROFIT STRATEGY REPORT BY CORNERSTONE STRUCTURAL ENGINEERING GROUP FOR THE MID-PENINSULA WATER DISTRICT DAIRY LANE HEADQUARTERS BUILDING AND PREMISES**

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## RECOMMENDATION

The Cornerstone Structural Engineering Group has completed an ASCE 41 Tier 1 Seismic Evaluation for Immediate Occupancy of the Mid-Peninsula Water District (MPWD) property located at 3 Dairy Lane as Phase 1 of a rehabilitation project for the headquarters building and premises. It is recommended the Board receive the report, discuss and provide direction to staff.

## FISCAL IMPACT

Cornerstone Structural Engineering Group's costs for the seismic evaluation were $21,000. Romig Engineers' costs for the geotechnical investigation were $9,175.

Cornerstone Structural Engineering Group's evaluation resulted in general and seismic recommendations estimated to cost $800,000. These improvements would require an appropriation, plans, specifications, bidding process and award by the Board, which would be considered in the next phase of the rehabilitation project.

## DISCUSSION

The MPWD's headquarters and corporate yard is located at 3 Dairy Lane. The building was constructed in the 1970s and previously used as a candy factory. It was seismically retrofitted in 1998 before the MPWD purchased the property around 2000. As the principal headquarters for MPWD, a place for customer interaction, the location of the Board Room and other MPWD uses, it is time to evaluate the structural needs and rehabilitative improvements to remain a viable facility for years to come. Staff engaged Cornerstone Structural Engineering Group (CSEG), a structural engineering firm, to assist with the assessment. Their work started with a Tier 1 Life Safety assessment that was completed in the spring of 2017 and reported to the Board. Discussion with the Board and the significance of the property lead to further analysis, an ASCE Tier 1 Seismic Evaluation for Immediate Occupancy (IO). Subsequently, it was

determined that a geotechnical investigation and testing was also required, which was completed in late 2017.

The CSEG stated in the report's introduction that the Tier 1 evaluation is based on a standardized review and analysis "of a structure intended to screen specific types of building systems for potential seismic deficiencies intrinsic to specific structural systems." The Tier 1 IO evaluation took these steps:

- Structural Evaluation
    - Review existing plans and documentation
    - Examine foundation system
    - Investigate vertical load resisting system
    - Investigate lateral load resisting system
    - Observe and note structure conditions
    - Conduct structural evaluation and note positive and negative findings (pages 5 and 6 of the report)

- Seismic Performance
    - Methodology for Tier screening procedure
    - Performance level – Immediate Occupancy (IO)
    - Seismic Source
        - Active faults in region
        - Modified Mercalli Intensity Scale (for intensity and description)
    - Liquefaction, landslide, and other geologic hazards

- Conclusion and Recommendations
    - Expected performance following ASCE 41 Tier 1 Immediate Occupancy review (see pages 9 and 10)
    - General recommendations for conditions found on entire building (page 10 of the report)
    - Seismic recommendations (page 11 of the report)
    - Cost estimate (page 12 of the report)

The MPWD's Dairy Lane property functions under normal circumstances but as expected after almost 20 years' of use, and little to no improvements, is in need of rehabilitation as recommended for safety and longevity. The attached structural evaluation states, though, that if this facility is to be ready for immediate occupancy following a major seismic event, it requires rehabilitation and improvement in the described areas.

Attachments: CSEG – Structural Review and Retrofit Strategy Report (February 22, 2018)
Romig Engineers – Geotechnical Investigation (March 2018)

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BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ WARDEN_____ VELLA_____ STEUBING_____ LINVILL_____ ZUCCA____

CORNERSTONE
structural
engineering
group

# Mid-Peninsula Water District Headquarters Building

**3 Dairy Lane**
**Belmont, CA**

## Structural Review and Retrofit Strategy Report

**February 22, 2018**


**Structural Engineering • Construction Services • Engineering Solutions • Project Management**

40 Federal Street
San Francisco, CA 94107
tel (415) 369-9100
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www.cseg.com

February 22, 2018
2017016

Mid-Peninsula Water District
3 Dairy Lane
Belmont, CA 94002

Attention: Tammy Rudock

Subject: Mid-Peninsula Water District Headquarters Building
Structural Assessment
3 Dairy Lane
Belmont, CA

Dear Tammy:

Cornerstone Structural Engineering Group would like to present this updated structural assessment report and schematic retrofit design for the subject project. In accordance with our proposal, we have performed a cursory structural review and seismic risk assessment for the existing masonry and tilt-up concrete headquarters building. The initial Life Safety seismic assessment was updated to Immediate Occupancy performance level to determine the necessary retrofit strengthening components required to keep the Headquarters building operational after an earthquake.

We completed a site visit on April 3, 2017 and observed the building perimeter, interior, and roof. This review includes a qualitative ASCE 41 Tier 1 seismic evaluation for Immediate Occupancy in addition to a conditional assessment of the building. The Tier 1 assessment includes a general review of the vertical and lateral systems of the structures.

The following report describes the findings of our structural review and seismic risk assessment for the headquarters building as well as our schematic retrofit recommendations and conceptual strengthening sketches.

Sincerely,
CORNERSTONE STRUCTURAL
ENGINEERING GROUP, INC.

Thomas L. Swayze, S.E.
Principal

40 Federal Street | tel (415) 369-9100
San Francisco, CA 94107 | fax (415) 369-9101

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## PART 1: INTRODUCTION

The following represents a general structural conditional and ASCE 41 Tier 1 assessment of the Mid-Peninsula Water District Headquarters building, located at 3 Dairy Lane in Belmont, California. An initial Tier 1 Life Safety assessment was performed on the headquarters building and a draft report submitted. After our report review with the District, it was requested that the building be re-evaluated to the Immediate Occupancy performance level as the Headquarters building was deemed necessary to be operational after an earthquake to provide support for the District. As part of the re-evaluation, a schematic design was also performed on the deficient elements to quantify the scope of work necessary for a future seismic retrofit.

The building consists of two seismically separated single-story concrete tilt-up structures with panelized wood roofs as well as several work platforms and storage mezzanines. The construction date of the building is unknown but appears to have been likely constructed in the 1970's on a flat site and seismically retrofitted in 1998.

An ASCE 41 Tier 1 structural evaluation and conditional assessment was performed for each building based on visual observations conducted by Cornerstone Structural Engineering Group on April 3, 2017 and a review of limited available as-built drawings. The Tier 1 evaluation is a checklist based evaluation of a structure intended to screen specific types of building systems for potential seismic deficiencies intrinsic to specific structural systems. This report describes the findings of our structural review and also contains qualitative recommendations for seismic upgrade and conditional structural repairs as applicable.


**Figure 1: Aerial View of Headquarters Building**

## PART 2: STRUCTURAL EVALUATION

### 2.1 *Documentation*

No original as-built drawings were available for our review. Partial Structural retrofit as-built plans for the headquarters building by Biggs Cardosa Associates Inc., dated December 9, 1997, Sheets S2, S3, S5, and S6.

Romig Engineers produced a geotechnical investigation report for the Headquarters Building, dated September 13, 2017. The geotech report was used to assist

Architectural plans available for our review include: interior improvement plans, new warehouse plans, and architectural floor and 3-dimensional isometric views.

- Interior improvements as-built plans by E.A. Davidovits & Co., Inc., dated July 11, 2002, Sheets A-1 through A-4.
- New warehouse architectural elevations and floor plan by E.A. Davidovits & Co., Inc., dated February 27, 2003, Sheets A-1 & A-2.
- Architectural floor plans and isometric views of the current building layout by Vector Vision PC, dated April 20, 2016, Sheets A-1 through A-3.4.

No structural as-builts drawings of the various mezzanines or work platforms were available for our review.

### 2.2 *Foundation Systems*

From the structural retrofit drawings, the existing foundations for the building appear to consist of shallow continuous cast-in-place reinforced concrete spread footings around the building perimeter. Interior columns are assumed to be supported on isolated spread footings and support roof gravity loads. However, the building could potentially be on drilled piers given the close proximity to the Bay. A reinforced concrete slab-on-grade exists over the extents of the building footprint. The mezzanine structures are assumed to have shallow conventional spread footings beneath the columns.

### 2.3 *Vertical Load Resisting Systems*

The headquarters building (warehouse and office) roof system utilizes a panelized wood roof system at approximately 19 feet above grade. The warehouse building roof consists of plywood sheathing over 2x6 subpurlins at approximately 24 inches which are supported by 4x16 purlins at approximately 8 feet OC. The 4x purlins span between 7x glulam beams that are supported on perimeter concrete pilasters and interior wood posts.

The main mezzanine structure in the back of the warehouse consists of plywood sheathing over 2x joists supported by steel wide flange beams that span between steel wide flange columns. Other mezzanine structures consist on plywood sheathing over 2x joists that are supported on 4x purlins which span to wood columns.

A 3-ton bridge crane is located in the warehouse building. The crane is supported by 8 columns which are supported on assumed isolated shallow spread footings.

The office building consists of plywood sheathing over 2x4 subpurlins at approximately 24 inches OC which are supported on 4x14 purlins at approximately 8 feet OC. The 4x purlins span between 5¼x glulam beams that are supported by perimeter concrete pilasters and interior steel HSS columns. In the office building, there is a vault room constructed out of 8-inch masonry walls with a 6-inch reinforced concrete roof slab.

### 2.4 *Lateral Load Resisting System*

Lateral loads acting on the buildings result from either wind pressure or earthquake-induced inertia forces acting on structural and non-structural elements. Lateral loads acting on each structure are transmitted through the flexible roof diaphragms and transferred to the primary lateral-force resisting system of the structure by collector elements within the roof framing system. The lateral loads transferred to shear walls are then carried down to the strip footings. The primary lateral-force resisting system for the warehouse building consists of 6-inch reinforced concrete shear walls panels which transfer these lateral loads down to the continuous spread footing foundations. The warehouse building is seismically separated from the office building by a 2-inch seismic joint. The primary lateral-force resisting system for the office building consists of 8-inch masonry shear walls. Additional features of the lateral load resisting system are: continuous cross building ties and roof to wall ties. The lateral system is analyzed with D/C (demand/capacity) ratios. When the D/C ratio exceeds 1.0 the probabilistic seismic forces create a demand greater than the expected capacity of the system component.

### 2.5 *Conditional Review*

Building evaluations are limited by the available construction documents and the level of access possible for the observation of structural elements of the building. During the site walk the interior, exterior, and roof of the buildings were observed. Based on our review, the buildings appear to be in general compliance with the codes and standard construction practices in effect at the time of construction with the following specific conditions as noted:

- Existing concrete pilaster appears to have been poorly consolidated with exposed rock pockets. The pilasters are located in a soil storage area and also appear to have been damaged/chipped, see Photos 5, 6, and 7.
- There are signs of ponding water on the roof at the majority of the scuppers. It appears the scuppers are set too high and do not let the water freely drain off the roof, see Photo 8.
- The roofing is showing some signs of minor cracking and bubbles in a few locations along the roof to parapet transition, see Photo 9.
- Some of the multi-story storage rack posts at the back of the warehouse building are showing signs of minor damage from forklift impact. The base connections are adequately anchored to the site slab with some bolts needing nuts to be re-tightened, see Photos 10 and 11.
- The back property line abuts US-101 and a drainage ditch. The pavement is experiencing cracking due to settlement and lateral shifting of the soldier pile wall along the back property line. The retaining wall lagging is showing signs of significant deflection and the posts are leaning as well, see Photos 12 and 13. The failing wall was most likely not designed to resist vehicular loading.
- Excessive amounts of garbage are being stored against the building and between a site retaining wall, see Photo 14.
- Minor damage to interior wood post, see Photo 15.
- The concrete pilaster adjacent to the seismic joint on the northwest side of the building appears to be cracked with some minor spalling, see Photo 18 and 19.

### 2.6 *Structural Evaluation and Findings*

With each building code cycle (approximately every 3 years) building codes for new design are modified to enhance structural performance during seismic events. However, engineering standards developed to evaluate existing buildings have lagged behind in development. ASCE/SEI 41-13 Seismic Evaluation and Retrofit of Existing Buildings has been accepted in the past several years as a baseline standard and is intended to replace previous evaluation guidelines such as FEMA 178 and FEMA 310 as the standard of practice for the seismic evaluation of existing buildings. As described in that document one of the primary goals is to include lessons learned from earthquakes that occurred subsequent to those previous documents (Northridge, Kobe, etc.).
The purpose of this study is to determine whether significant seismic deficiencies exist at the buildings, to determine the potential seismic risk of the buildings, and to provide general recommendations for reduction of seismic risk through mitigation. According to ASCE 41, none of the buildings are classified as a "benchmark building" due to all of them being designed and constructed prior to the bench mark code for tilt-up concrete buildings and reinforced masonry buildings in the International Building Code post 2000. ASCE 41 was used as a tool in assisting the engineer with this review in determining if the building is compliant with the benchmark provisions. A full ASCE 41 compliance review was not intended or performed. The ASCE 41 Basic Structural and Supplemental Structural checklists were utilized when deemed necessary.

The analysis methodology of ASCE 41-13 employs a quick check methodology (Tier 1 analysis). The Tier 1 quick check uses a set of checklists for each building type which contain evaluation statements that help to identify areas of concern with regard to the structure's ability to adequately transmit seismic forces to the foundation and supporting soils.

Findings in this report may be tempered with engineering judgment in determining whether the buildings may maintain their vertical load capacity during a significant seismic event. Based on the ASCE 41 Tier 1 review, the following items are of significance for the performance of these buildings in an earthquake.

**Positive Features**:

<u>Warehouse and Office Building</u>

- Overall building foundations show little or no sign of settlement.
- Shear walls are within allowable stress limits for immediate occupancy performance levels.
- Roof diaphragms have reasonable aspect ratios.
- Roof diaphragm nailing in the N/S direction at both buildings is right at capacity with D/C ratios of 1.01 for immediate occupancy performance levels.
- Roof diaphragm has continuous cross building ties.
- Walls are positively anchored to the roof diaphragm through holdown tension rods at approximately 6 to 8 feet on center.
- The horizontal and vertical geometry of each building is relatively symmetrical for an even distribution of seismic forces.

**Negative Features**:

Warehouse and Office Building

- Roof diaphragm nailing in the E/W direction of both buildings is inadequate to resist lateral seismic forces with D/C ratios of 1.23. This assumes that the existing roof diaphragm nailing is 8d @ 4" OC, which is a reasonable assumption given the type of construction and age of the building.
- Roof to wall anchorage at both buildings is inadequate to resist seismic forces which can lead to potential separation between the exterior walls and roof framing, see photo 24.
- Building is located in within an area that is susceptible to liquefaction with seismic-inducted settlements on the range of 3/4 to 2 1/8 inches with differential settlement on the order of 1 to 1 1/2 inches.

Mezzanines and Canopies

- Outdoor canopy is connected to both buildings across the seismic separation. The diaphragm connection to the walls induces cross-grain bending in the ledger connection which can cause the roof diaphragm to break away from the building, see Photos 3 & 4.
- The southern storage mezzanine lateral force resisting system consists of gypsum sheathed shear walls which have limited capacity. The attachment of the floor mezzanine diaphragm to the concrete wall panels creates cross gain bending in the wood ledger, see Photo 16.
- Wood framed mezzanines do not have adequate diagonal bracing or anchorage to the perimeter walls to resist seismic forces, see Photo 17a.

## PART 3: SEISMIC PERFORMANCE EVALUATION

### 3.1 *Methodology*

The potential damage to a structure in an earthquake can be evaluated provided that, (1) seismic hazards which affect the structure and site can be estimated and, (2) the vulnerability of the structure to those hazards are known or can be estimated.

Seismicity of the Mid-Peninsula Water District Headquarters building was obtained from the geotechnical report. Seismic short period $S_S$ and one second $S_1$ response acceleration parameters were obtained using latitude and longitude coordinates of building location.

Seismic evaluation of the structure was conducted using the ASCE 41-13 – Seismic Evaluation and Retrofit of Existing Buildings. The ASCE 41 provides a three-tiered process for seismic evaluation of existing buildings based on building type and the level of seismicity for the building location. The Tier 1 study is an initial checklist evaluation of structural, non-structural and foundation/geologic hazard elements of a building and site conditions that is intended to screen for potential seismic deficiencies. Tiers 2 and 3 studies are more in-depth analysis procedures for a building or component that is identified by the Tier 1 screening process as structurally deficient.

This assessment utilizes the Tier 1 screening procedure to identify deficiencies as possible with the information available.

### 3.2 *Performance Level*

ASCE 41 evaluation of a building can be performed for either Life Safety (LS) or Immediate Occupancy (IO) performance level.

ASCE 41 generalizes the two performance levels as follows:

- LS Performance Level: At least some margin against either partial or total collapse remains, and that the overall risk of life-threatening injury as a result of structural damage is expected to be low.
- IO Performance Level: After an earthquake, the basic vertical and lateral force-resisting systems retain nearly all of their pre-earthquake strength, very limited damage to structural and non-structural components has occurred and that critical parts of the building are habitable.

The Mid-Peninsula Water District Headquarters building was evaluated using the Immediate Occupancy (IO) performance level criteria.

### 3.3 *Seismic Source*

The general seismicity in the San Francisco Bay region is influenced by several known faults, their potential faulting length, and relative orientation. The San Andreas Fault system, which separates the North American plate from the Pacific plate, is located approximately 7 km west of the structure. Other known, nearest-site faults with recorded activity, such as the Hayward Fault are listed in Table 1 (From Geotechnical Report).

Recent earthquakes in Southern and Central California – namely Coalinga, Whittier Narrows, and Northridge – have occurred along blind-thrust faults. These faults do not have readily identifiable surface features and are not extensively mapped. The potential for strong-ground motion to occur due to blind-thrust faulting in the region is uncertain. Therefore, a moderate to large earthquake centered even closer to the site cannot be completely ruled out.

| Fault | Estimated MCE ($M_W$) | Distance (km) |
|---|---|---|
| San Andreas Fault (Peninsula) [Type A] | 7.9 | 6.8 |
| Hayward Fault (Southern) [Type A] | 7.1 | 23.0 |
| San Gregorio Fault (North) [Type B] | 7.3 | 18.9 |

**Table 1: Active Near Source Faults**

Based on the 2008 USGS mapping, data for the 225-year event and 475-year event was collected. The 225-year earthquake is based on a 20 percent probability of exceedance within a 50 year time frame. This is the basis for a Basic Safety Earthquake-1E (BSE-1E), the standard for an existing structure designed for Immediate Occupancy Performance. However, the accelerations for current code-level forces (475-year event) were used when evaluating the building. The 475-year seismic event is the standard for new construction. The 475-year event peak ground acceleration (PGA) is 0.51g, or 51% gravity. This event represents the peak ground acceleration for 10 percent probability of exceedance within a 50 year time frame. Based on the source information and site conditions, the 475-year event would have a Modified Mercalli Intensity (MMI) of VIII at this site. The MMI Scale is a measure of an earthquake's intensity based on observed effects, including the degree of shaking and amount of damage.

| Intensity Value and Description | |
|---|---|
| I. | Not felt except by a very few under especially favorable circumstances. |
| II. | Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. |
| III. | Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Vibration similar to the passing of a truck. |
| IV. | Felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. |
| V. | Felt by nearly everyone, many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop. |
| VI. | Felt by all. Some heavy furniture moved; a few instances of fallen plaster. Damage slight. |
| VII. | Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motorcars. |
| VIII. | Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. |
| IX. | Damage considerable; well-designed frame structure thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations. |
| X. | Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. |

*Adapted from ATC-13

**Table 2: Modified Mercalli Intensity Scale**

The calculated site specific $S_{DS}$ and $S_{D1}$ response acceleration parameters for the headquarters building are listed in Table 2. The 475-year event accelerations were provided in the geotechnical report, while the 225-year event accelerations were obtained from the USGS . The USGS Soil Type and Shaking Hazard in the San Francisco Bay Area map shows the site on the border between Soil Type D and Soil Type E. It should be noted that a more thorough explanation of soil site classification could be provided by a geotechnical engineer and that this information relies on general published USGS data. Based on $S_{DS}$ and $S_{D1}$ values, ASCE 41 categorizes the seismicity of the structure as 'High.'

| | $S_{DS}$ | $S_{D1}$ |
|---|---|---|
| BSE-1E 225-year event | 0.98g | 0.56g |
| 2016 CBC 475-year event | 1.181g | 0.821g |

**Table 3: Site Specific Response Acceleration Parameters**

### 3.4 *Liquefaction, Landslide, and other Geologic Hazard*

Currently published California Geological Survey (CGS) liquefaction hazard zone maps do not include this part of the San Francisco peninsula yet. However, USGS has published liquefaction susceptibility maps that show the building site is right on the border between a moderate to very high potential for liquefaction. A liquefaction evaluation of the site was performed by the geotechnical engineer and is outlined in their report. Their findings indicate that liquefaction is a possibility at the site when the ground is subjected to a design level earthquake. The potential liquefaction-induced settlement is expected to range between approximately 3/4 to 2-1/8 inches across the site. Potential for differential settlement on the order of 1 to 1 1/2 inches over a horizontal distance of 50 feet is also a possibility from liquefaction during seismic shaking. Due to the proximity to the San Francisco Bay the building site has a good possibility of experiencing liquefaction during a seismic event.

The site is not located near any major changes in ground elevation, and therefore the potential for seismically induced landslide is considered to be minimal. Currently published CGS maps for landslide vulnerability do not include this area yet.

The building site is not located within a Special Study Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act. The potential for surface fault rupture is considered to be low.

It should be noted that a more thorough explanation of site seismicity, liquefaction, and specific faulting hazards can be found in the geotechnical report.

## PART 4: CONCLUSION AND RECOMMENDATIONS

### 4.1 *Expected Performance*

Findings within this report provide a general structural conditional and seismic assessment of the existing headquarters building located at 3 Dairy Lane in Belmont, California. Our evaluation concludes that the two buildings fail to meet full compliance for ASCE 41 Tier 1 Immediate Occupancy performance criteria.

The following structural relative performance descriptions are based on our professional engineering judgment and experience, and are not part of the ASCE 41 Tier 1 checklist. These descriptions are included to provide a general estimation of seismic performance of each structure, based on component evaluations provided by the Tier 1 evaluation procedure. We expect the primary building structure (warehouse and office building) to perform fair to average in comparison to buildings of similar construction when subjected to design level earthquake due to inadequate roof to wall anchorage and diaphragm nailing. However, the secondary ancillary mezzanine and roof canopies are expected to perform below average due to the following deficiencies:

- Roof to wall ties are inadequate for an essential service facility performance level. Walls with inadequate anchorage have the potential to separate from the structure causing a partial collapse of the roof at the failed ties as well as pose a significant falling hazard.
- Inadequate roof diaphragm nailing for an essential service facility performance level will potentially fail the plywood sheathing and nailing causing the nails to separate from the roof framing eliminating the load path for lateral forces to transfer from the roof diaphragm to the lateral shear wall elements and down to the foundation.

- Lack of lateral force-resisting system for the wood framed mezzanine structures, see Photo 17a. These structures will most likely be damaged during an earthquake without remediation and
- The mezzanines are not adequately anchored to the main building shear walls or do not have their own separate lateral system adequate enough to resist code-level seismic forces, see Photos 16, 22, and 23.
- Mezzanine floor and exterior canopy roof ledger attachments are inadequate and can induce cross-grain bending in the ledgers which can potentially lead to partial collapse of the floor or canopy, see Photos 4 and 16. Cross-grain bending of the roof and floor ledgers can lead to the failure of the ledgers and potential separation from the building which could lead to a potential partial collapse of the floor or roof.
- Exterior structural steel canopy columns appear to be undersized with an inadequate lateral system. The attachment of the canopy to the primary structure appears to be insufficient as well, see Photos 20 and 21. This canopy has the potential for partial collapse and separation from the building.
- The building should be able to withstand the potential differential seismic settlement without creating a potential collapse hazard.

### 4.2 *General Recommendation for Conditional Issues*

The following recommendations are provided to address issues concerning the condition of the existing buildings. While none of these issues represent immediate life safety issues, it is recommended that these issues be addressed in the near future to prevent further deterioration from occurring:

- Patch rock pockets and chipped pilasters. Monitor pilasters for further damage.
- Remove stored/piled soil that is up against the building so that the building is not retaining any soil.
- Repair/replace scuppers to allow for water to freely drain off roof. Monitor roof for damage due to ponding water.
- Repair cracked and bubbling roofing at parapet walls.
- Replace the failing soldier pile wall. Restrict vehicular access adjacent to the existing retaining wall, see attached Sketch #1.
- Install cover over gap between building and site wall to help prevent garbage from being tossed between the walls.

### 4.3 *Seismic Recommendations*

The following recommendations are provided to address our opinion of the potential seismic deficiency issues based on the level of analysis performed (ASCE 41-13 Tier 1 screening and engineering judgment). While the recommendations listed below do not represent immediate life safety concerns that warrant facility closure, they do describe building components that are non-compliant per the ASCE 41-13 Tier 1 checklist review or as identified by conditional or systemic deficiencies and should be programmed into the project.

- Renail the roof diaphragm of both buildings along the Northern and Southern walls with 8d@2.5 inches OC at boundaries and panel edges. Renailing shall occur over the first 16 feet out from the exterior walls. See retrofit roof plan.
- Add roof to wall ties at both buildings at 4 to 6 feet on center. Roof to wall ties will be tension tie rods bolted through the existing concrete and masonry walls with holdown anchors to the roof joists. Install continuity straps across discontinuous subpurlins at locations of anchors. See retrofit roof plan and Sketch #2.
- Strengthen existing glulam collector beam connection to masonry wall at the office building. Strengthening element would consist of a flat plate bolted through the glulam beam and run on the face of the masonry wall and bolted through the wall. See retrofit roof plan and Sketch #3.
- Provide adequate roof diaphragm to wall ties using tension tie rods and holdown anchors to the roof joists at the exterior canopy/wood framed mezzanines. Simpson DTT2Z tension ties with ½" diameter rods drilled and epoxied in 3" deep holes at 8 ft OC. Connection detail similar to Sketch #3.
- Provide adequate floor diaphragm to wall ties using tension tie rods and holdown anchors to the roof joists at the wood framed mezzanines. Simpson DTT2Z tension ties with ½" diameter rods drilled and epoxied in 3" deep holes at 8 ft OC. Connection detail similar to Sketch #3.
- Provide independent lateral bracing for the wood framed mezzanines or provide adequate floor to wall anchorage capable of transferring seismic forces from mezzanine floor diaphragms into perimeter shear walls. Sheathe select existing walls with ½" plywood and 10d @ 4" OC nailing. Install Simpson holdowns at either end with isolated shallow pad footings. See retrofit foundation plan for locations.
- Strengthen exterior structural steel canopy to enhance ability to resist lateral seismic forces. Install tension diagonal bracing on all four sides.
- Sheath exterior metal stud wall with ½" plywood and #10 SMS @ 4" OC, see retrofit foundation plan for location.
- Re-install diagonal tension bracing at HSS posts and gussets, see retrofit foundation and roof plan for locations.

Please see the attached retrofit key plan and associated schematic level sketches for strengthening recommendations.

### 4.4 *Cost Estimate*

Although the Headquarters building has performed adequately, we recommend that the building be upgraded to remedy existing structural and conditional issues outlined in the report in order for the building to be operational after an earthquake to provide support for the District. The following cost estimates were provided by Cornerstone and include associated demolition work and 10% mobilization included within the base cost. These costs are for structural costs only and do not include planning or engineering. Please see the attached cost estimate sheets for a more detailed breakdown.

| | |
|---|---|
| Site Work | |
| Soldier Pile Retaining Wall | $150,000 |
| Warehouse and Office Building Retrofit | |
| Roof Re-Nailing | $137,000 |
| Floor/Roof to Wall Ties @ Roofs/Mezzanines/Canopies | $252,000 |
| Plate Strapping/Glulam Connections/Diagonal Bracing | $28,000 |
| Shear Walls and Footings | $98,000 |
| Subtotal | $515,000 |
| 20% Contingency | $135,000 |
| Total | $800,000 |

## PART 5: APPENDIX - PHOTOS

**Photo 1: Front Entry of Office Building**

**Photo 2: Warehouse Building**

**Photo 3: Wood-Framed Canopy Attached to Both Buildings Across Seismic Joint**

**Photo 4: Inadequate Ledger Connection**

**Photo 5: Side Storage Yard**

**Photo 6 and 7: Rock Pockets and Damage at Concrete Pilasters**


**Photo 8: Typical Water Ponding on Roof**

**Photo 9: Typical Cracks and Bubbles in Roofing at Parapets**

**Photo 10: Multi-Story Storage Racks**

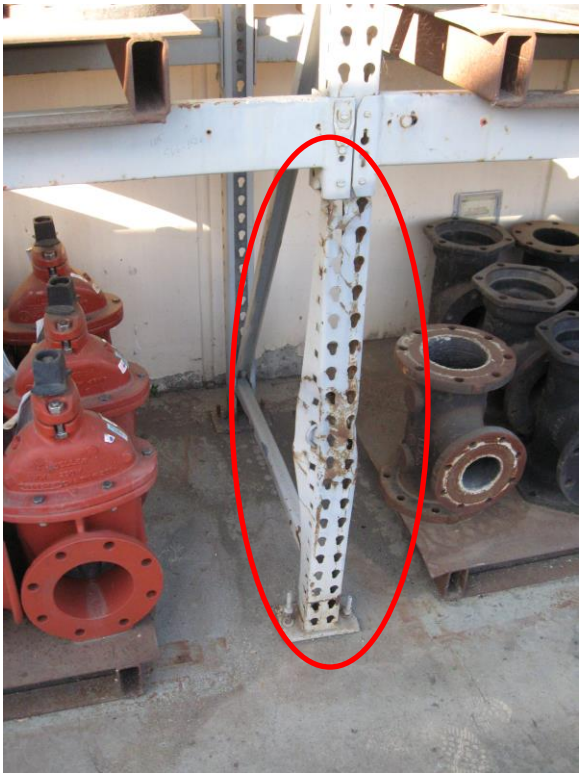


**Photo 11: Minor Damage to Storage Rack Post & Loose Anchor Bolt Nuts**

**Photo 12: Cracking and Lateral Shifting of Paving at Back Property Line**

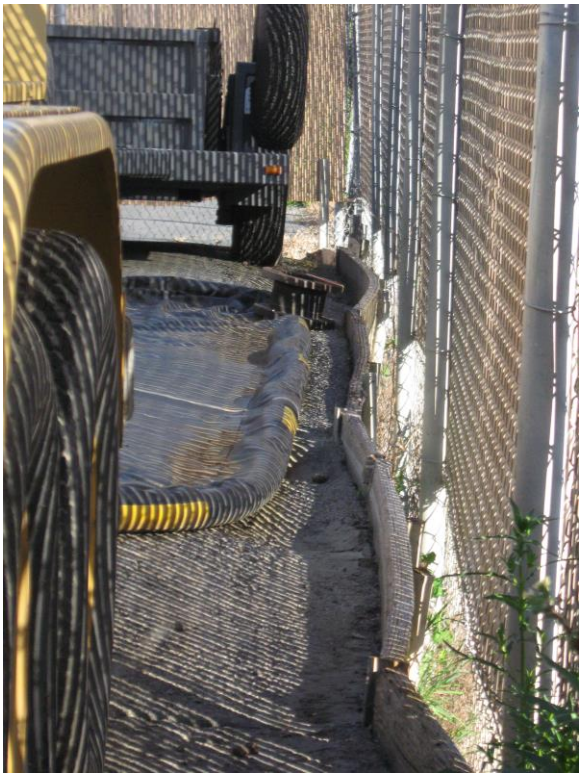


**Photo 13: Inadequate Soldier Pile Retaining Wall with Significant Deflection in Lagging**

**Photo 14: Excessive Amounts of Garbage Storage against Building**

**Photo 15: Minor Damage to Interior Wood Post**

**Photo 16: Typical Inadequate (Cross-Grain Bending) Mezzanine Floor to Wall Attachment**

**Photo 17a: Typical Wood Frame Mezzanine**


**Photo 17b: Steel Framed Mezzanine**

**Photo 18: Cracked Concrete Pilaster at Seismic Joint**

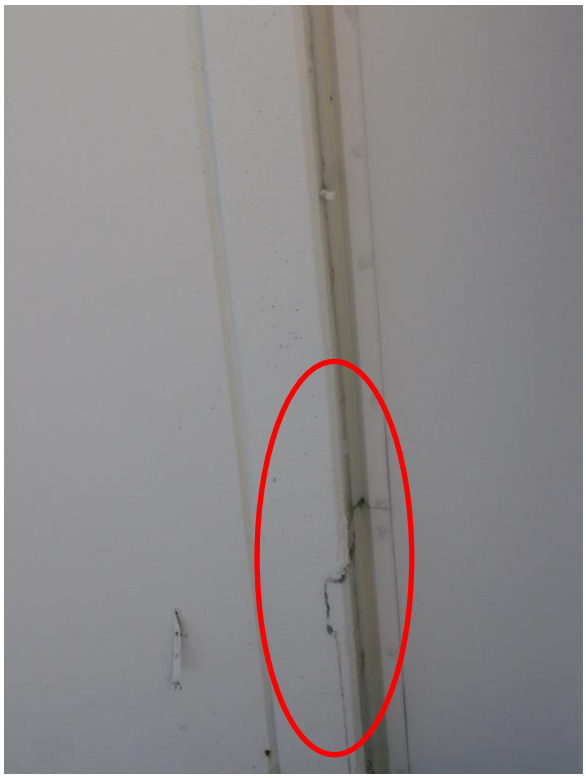


**Photo 19: Cracked Concrete Pilaster at Seismic Joint**

**Photo 20: Exterior Steel Canopy**

**Photo 21: Insufficient Connection to Building**


**Photo 22: Typical Interior Mezzanine with Inadequate Lateral System**

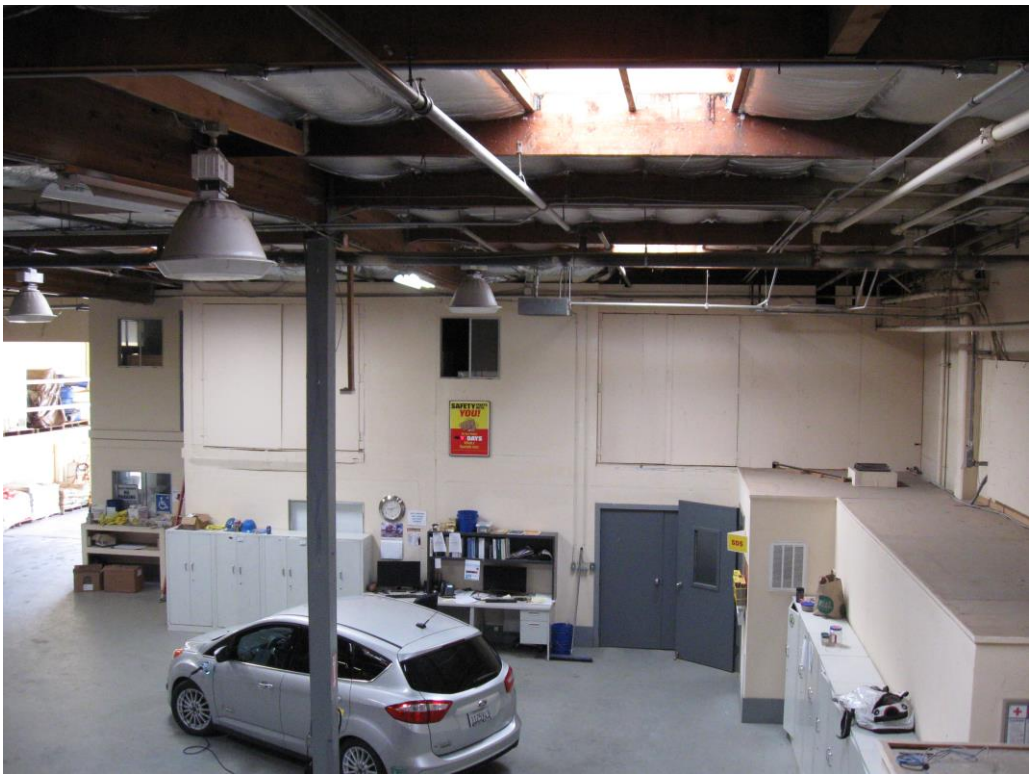
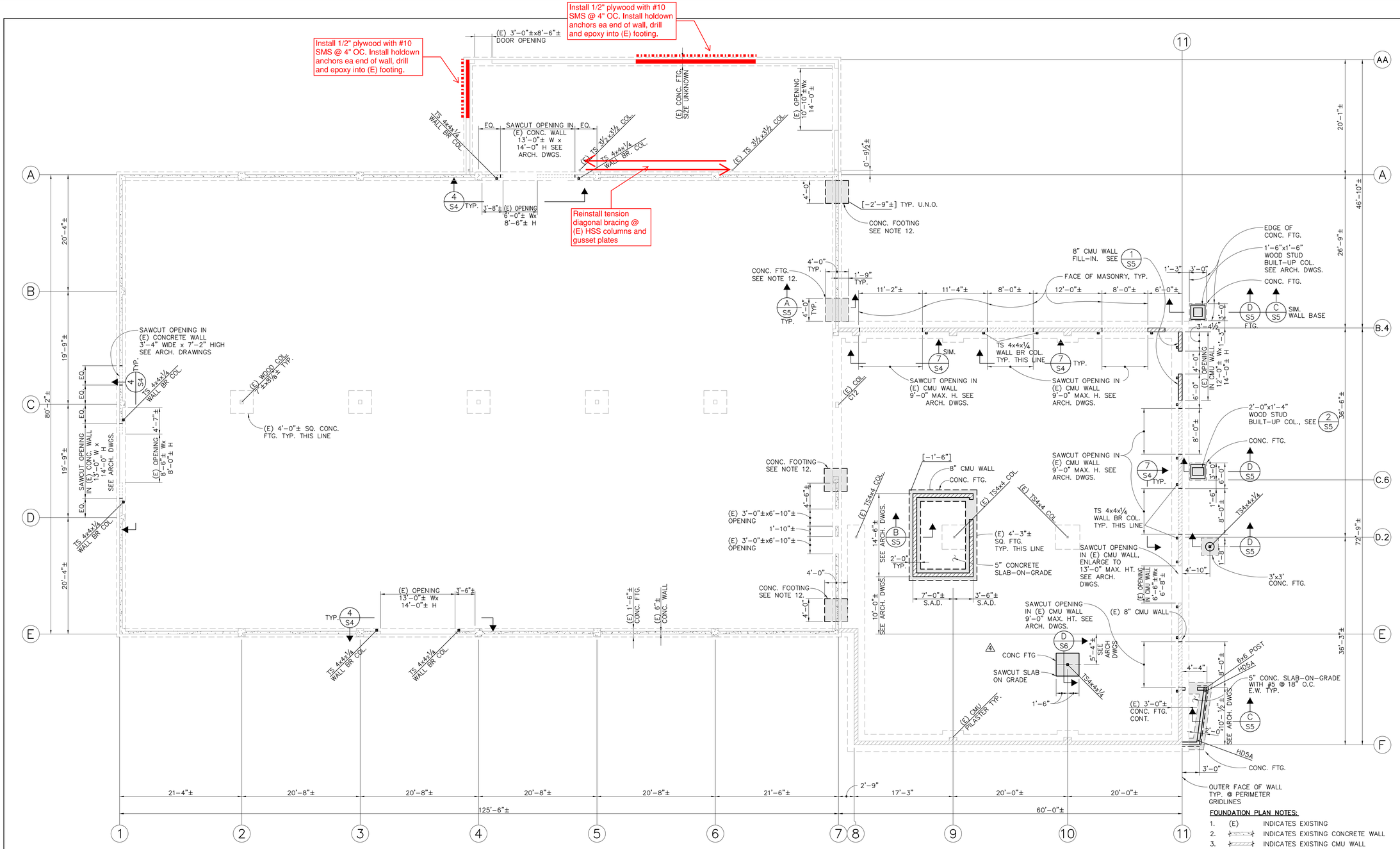


**Photo 23: Typical Interior Mezzanine with Inadequate Lateral System**

**Photo 24: Typical Roof to Wall Tie**




## FOUNDATION PLAN
1/8" = 1'-0"

**WOOD STUD SHEARWALL CONSTRUCTION NOTES:**

1. ALL WALLS ARE TO BE CONSTRUCTED WITH 2x6 STUDS @ 16" O.C. U.N.O.
2. PLYWOOD AND FASTENERS SHALL BE USED AS FOLLOWS U.N.O.:
   - ½" CDX PLYWOOD, ONE SIDE
   - EDGE NAILING: 10d @ 6"O.C.
   - FIELD NAILING: 10d @ 12" O.C.
3. INSTALL 2x OR WIDER FRAMING AND BLOCKING AT ALL ADJOINING SHEET EDGES.
4. NAILS SHALL BE COMMON.

**FOUNDATION PLAN NOTES:**

1. (E) INDICATES EXISTING
2. INDICATES EXISTING CONCRETE WALL
3. INDICATES EXISTING CMU WALL
4. INDICATES EXISTING METAL STUD WALL
5. INDICATES ASSUMED CONCRETE FOOTING BELOW
6. INDICATES EXISTING WALL TO BE REMOVED
7. INDICATES CONCRETE FOOTING
8. INDICATES CMU WALL
9. [-1'-6"] INDICATES B.O.F. ELEVATION
10. INDICATES WOOD STUD SHEAR/BEARING WALL
11. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SIZES, SITE LAYOUT CONDITIONS, ELEVATIONS, AND DIMENSIONS BEFORE BEGINNING CONSTRUCTION AND/OR ORDERING MATERIALS AND CONDITIONS ENCOUNTERED IN THE FIELD THAT CONFLICT WITH THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
12. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS BEFORE BEGINNING CONSTRUCTION. CONFLICTS BETWEEN DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
13. CONTRACTOR TO PROVIDE TEMPORARY SHORING TO SUPPORT ROOF AND WALL PANEL LOADS DURING CONSTRUCTION.
14. HD5A INDICATES SIMPSON HD5A HOLD DOWN INSTALLED PER MANUFACTURER'S RECOMENDATION. ¾"ø ANCHOR BOLT SHALL BE EMBEDDED 1'-3" INTO CONCRETE AND HAVE STUD END NUT & WASHER.

| REV. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 0 | 10/7/97 | RELEASED FOR PLAN CHECK | TLS |
| 1 | 1/22/98 | REVISION #1 RELEASED FOR PLAN CHECK | TLS |
| A | 1/14/98 | SPRINKLER SYSTEM CHECK | TLS |
| B | 1/16/98 | SPRINKLER SYSTEM CHECK | TLS |

DESIGNED BY: DGK
DRAWN BY: REM
CHECKED BY: TLS
SCALE: AS SHOWN

BIGGS CARDOSA ASSOCIATES INC
STRUCTURAL ENGINEERS
501 Second Street, Suite 412
San Francisco, California 94107
415-538-8611

3 DAIRY LANE SEISMIC UPGRADE
BELMONT COUNTY WATER DISTRICT
THREE DAIRY LANE
BELMONT CALIFORNIA

FOUNDATION PLAN

SHEET NUMBER
S-2
OF 6 SHEETS
DRAWING NO.
97086-2



(97086S2) 97086

COMPRESSOR
107 SQ FT

STORAGE
74 SQ FT

STORAGE
67 SQ FT

STORAGE
67 SQ FT

8-6

STORAGE
67 SQ FT

PAINT SUPP
107 SQ FT

STORAGE

12' W x 14' H
ROLL UP GA

Install 1/2" plywood up to mezzanine floor level w/ 10d@4" OC.

~4x14 JOISTS

Simpson HDU5 holdown with 5/8" dia anchor rod installed into 3'-6"x3'-6"x2'-0" deep footing, typ ea end of wall

Drill and epoxy tension tie rods and holdowns @ 8'-0" OC into (E) walls at mezzanine floor levels.

6" C

TOOLS STORAGE

9'-8 1/2"

19-4 1/2

10-6

OFFICE
97 SQ FT

PARTS RM
349 SQ FT

SAFETY & CLEAN SUPPLIES
257 SQ FT

18'-2"

10

8-1

20

Install 1/2" plywood up to mezzanine floor level w/ 10d@4" OC.

STORAGE ABOVE

UP

42" WD STAIRS TO STORAGE ABOVE

STORAGE ABOVE

STORAGE
282 SQ FT

CLNG ~17.5 FT
SMALL SLOPE TO SIDES
CONC. SLAB ON GRADE
RAISED 6"

STORAGE FLOOR
& DECK ABOVE

TRUCK PKG &
SERVICE AREA

~8x26 WD BEAMS
~20-FT O.C.

WAREHOUSE
3978 SQ FT
CLNG ~18.5 FT
SMALL SLOPE TO SIDES
CONC. SLAB ON GRADE

7-4 7/8

VENDING MACHINES
55 SQ FT

???
20 SQ FT

3-2

8" SQ. STEEL COLUMNS &
RAILS FOR SHOP CRANE

VEHICLE PKG &
CHARGE STATION

8X8 WD POSTS
~20 FT O.C.

11'-9 1/2

PRINT & COPY
65 SQ FT

18-2

82-7 1/2

20 20 20 20 20

1-1

51-3

5-3

12' W x 14' H
ROLL UP GATE

CLNG ~17.5 FT
SMALL SLOPE TO SIDES
CONC. SLAB ON GRADE
RAISED 6"

6" PLATFORM

41-0 1/2

METAL/MECHANICAL SHOP

31-2

6

6-11 1/2

STORAGE
40 SQ FT

WAREHOUSE
1793 SQ FT

WOOD SHOP

WOOD SHOP AND STORAGE
1641 SQ FT

TABLES
WORK AREA

Simpson HDU5 holdown with 5/8" dia anchor rod installed into 3'-6"x3'-6"x2'-0" deep footing, typ ea end of wall

Install 1/2" plywood up to mezzanine floor level w/ 10d@4" OC.

BATH
37 SQ FT

6-6

OFFICES ABOVE

42" WD STAIRS TO OFFICES ABOVE

Install 1/2" plywood up to mezzanine floor level w/ 10d@4" OC.

LNDRY
56 SQ FT

8-1 1/2

12-5

8-3 1/2

STORAGE
272 SQ FT

34-5

SHWR
15 SQ FT

~14x14 CONC. COLUMNS
~20 FT O.C.

12' W x 14' H
ROLL UP GATE

TRANSFORMR
49 SQ FT

Drill and epoxy tension tie rods and holdowns @ 8'-0" OC into (E) walls at mezzanine floor levels.

| NO. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| | | | |

**EX. WRHSE GROUND LEVEL**

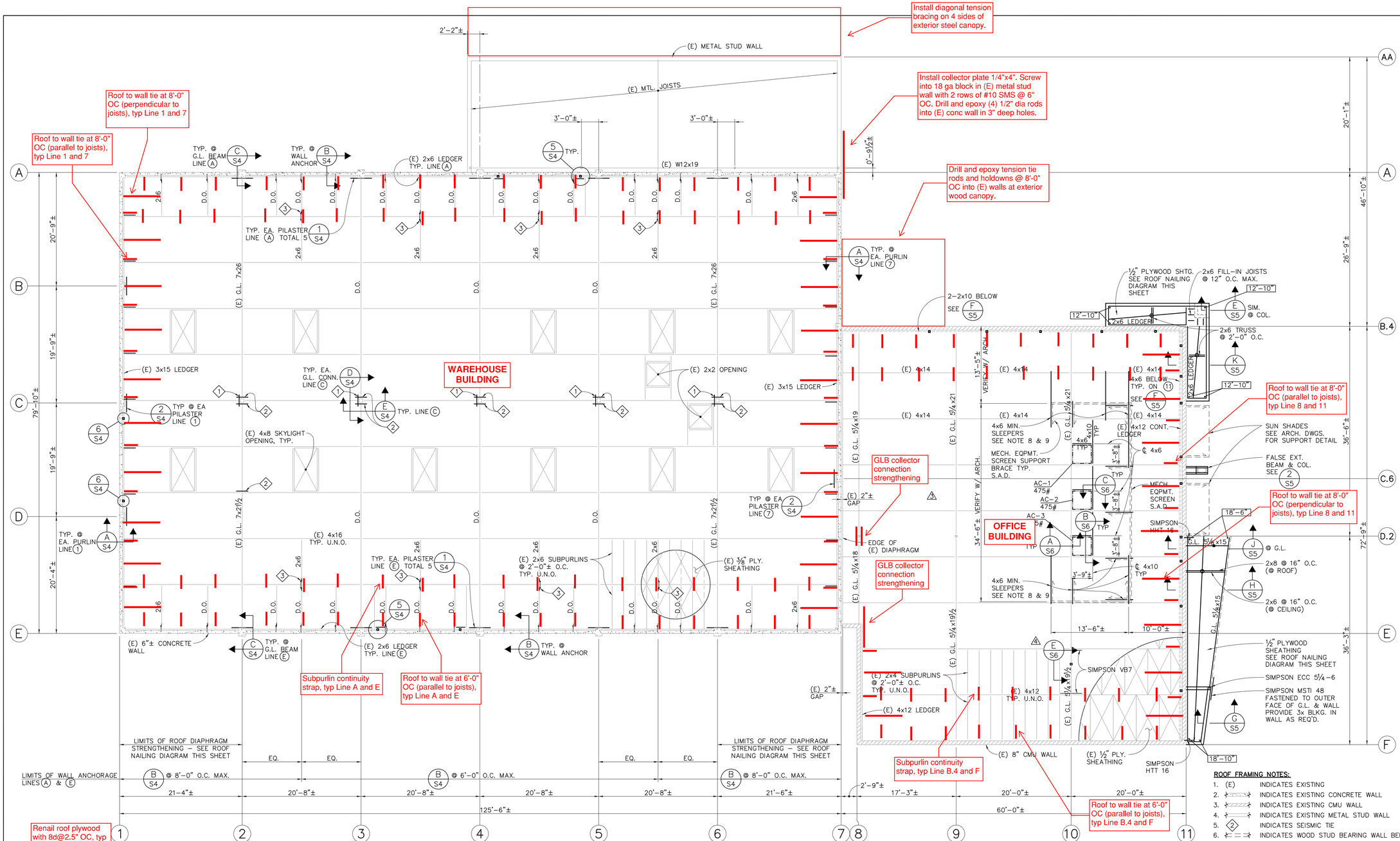
MPWD FACILITIES IMPROVEMENT
3 DAIRY LANE
BELMONT CA 94002


DRAWINGS PROVIDED BY:
**VectorVision PC**
PO BOX 357
SAN MATEO CA 94401
650-307-0370
bmozayeny@comcast.net


DATE:
04-20-16

SCALE:
1/4" = 1'

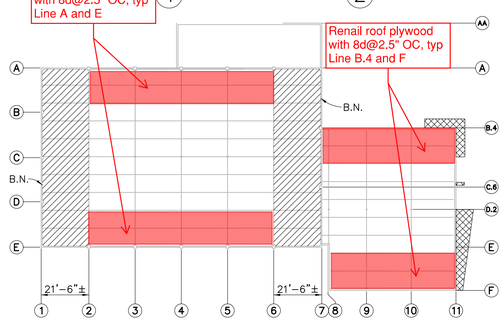
SHEET:
**A-2.3**




## ROOF FRAMING PLAN

1/8" = 1'-0"

## ROOF NAILING DIAGRAM




**NOTES:**

1. INDICATES ROOF AREAS WHERE (E) PLYWOOD SHALL BE NAILED AS FOLLOWS:
   8d @ 2½" O.C. AT BOUNDARIES (STAGGERED)
   8d @ 4" O.C. AT PANEL EDGES
   8d @ 12" O.C. FIELD
   (E) NAILS SHALL NOT BE INCLUDED IN SPACING, EXCEPT FIELD NAILING.
2. INDICATES ROOF AREAS W/ ½" CDX PLYWOOD W/ 10d @ 6" O.C. AT BOUNDARIES AND EDGES, 10d @ 12" O.C. FIELD. ALL PLYWOOD EDGES BLOCKED.
3. ALL ADDED NAILS SHALL BE COMMON.
4. BN – DENOTES BOUNDARY NAILING.
5. SPECIAL INSPECTION OF DIAPHRAGM NAILING IS REQ'D. SEE TESTING AND SPECIAL INSPECTION REQUIREMENTS, SHEET S-1.

## SEISMIC TIE SCHEDULE

| TYPE | TIE | DETAIL | NOTES |
|---|---|---|---|
| 1 | SIMPSON HD8A | D S4 | 7/8" ROD |
| 2 | SIMPSON HD8A (BACK TO BACK) | E S4 | 7/8" ROD |
| 3 | SIMPSON HD5A | E S4 SIM | 3/4" ROD |

**ROOF FRAMING NOTES:**

1. (E) INDICATES EXISTING
2. INDICATES EXISTING CONCRETE WALL
3. INDICATES EXISTING CMU WALL
4. INDICATES EXISTING METAL STUD WALL
5. 2 INDICATES SEISMIC TIE
6. INDICATES WOOD STUD BEARING WALL BELOW
7. INDICATES MECH. SCREEN SUPPORT BRACE
   INDICATES SLEEPER
8. INDICATES NEW MECHANICAL UNITS ABOVE ROOF, SEE MECHANICAL DRAWINGS.
   1500# INDICATES MAXIMUM UNIT WEIGHT INCLUDING CURB.
3. ATTACH UNIT TO 4x CURB W/ 4–½"ø LAG SCREWS WITH 3" PENETRATION PLACE ONE AT EACH CORNER. PREDRILL HOLES.
9. SLEEPER SHALL BE LOCATED DIRECTLY OVER (E) PURLINS OR G.L. BEAMS OR SHALL SPAN BETWEEN (E) PURLINS. LOCATIONS OF (E) ROOF FRAMING SHALL BE FIELD VERIFIED.
10. ALL ROOF PENETRATIONS SHALL BE TRIMMED WITH 2x4 PURLINS WITH SIMPSON U24 HANGERS AT EACH END.
11. CURBS & SLEEPERS SHALL BE FASTENED TO 4x PURLINS AND G.L.s AT EACH BEARING POINT WITH A 5/8ø LAG SCREW W/ 6" PENETRATION INTO (E) MEMBER. CENTER LAG SCREW, BOTH MEM. PREDRILL HOLE FOR LAG SCREW. RIP AS REQUIRED TO LEVEL UNITS TO 3½ MIN. DEPTH. PROVIDE 4x SOLID BLOCKING BETWEEN (E) PLY AND SLEEPER.
12. THE SIZE, LOCATIONS AND ORIENTATIONS OF ALL MECHANICAL UNITS, CURBS, SLEEPERS AND OPENINGS SHALL BE VERIFIED WITH THE UNIT SUPPLIERS AND MECHANICAL ENGINEER. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
13. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SIZES, CONDITIONS, MEMBER ELEVATIONS AND DIMENSIONS BEFORE BEGINNING CONSTRUCTION AND/OR ORDERING MATERIALS. ANY CONDITIONS ENCOUNTERED IN THE FIELD THAT CONFLICT WITH THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
14. 18'-10" INDICATES TOP OF PLYWOOD ELEVATION

| REV. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 12/7/98 | MECHANICAL UNIT | TLS |
| A | 12/7/98 | SPRINKLER SYSTEM | TLS |
| A | 10/19/98 | ROOF MECH. UNITS | TLS |
| 2 | 3/18/98 | RESPONSE TO PLAN CHECK | TLS |
| 1 | 1/27/98 | REVISION #1 RELEASED FOR PLAN CHECK | TLS |
| 0 | 12/9/97 | RELEASED FOR PLAN CHECK | TLS |

DESIGNED BY: DCK
DRAWN BY: REM
CHECKED BY: TLS
SCALE: AS SHOWN


BIGGS CARDOSA ASSOCIATES INC
STRUCTURAL ENGINEERS
501 Second Street, Suite 412
San Francisco, California 94107
415–538–8611

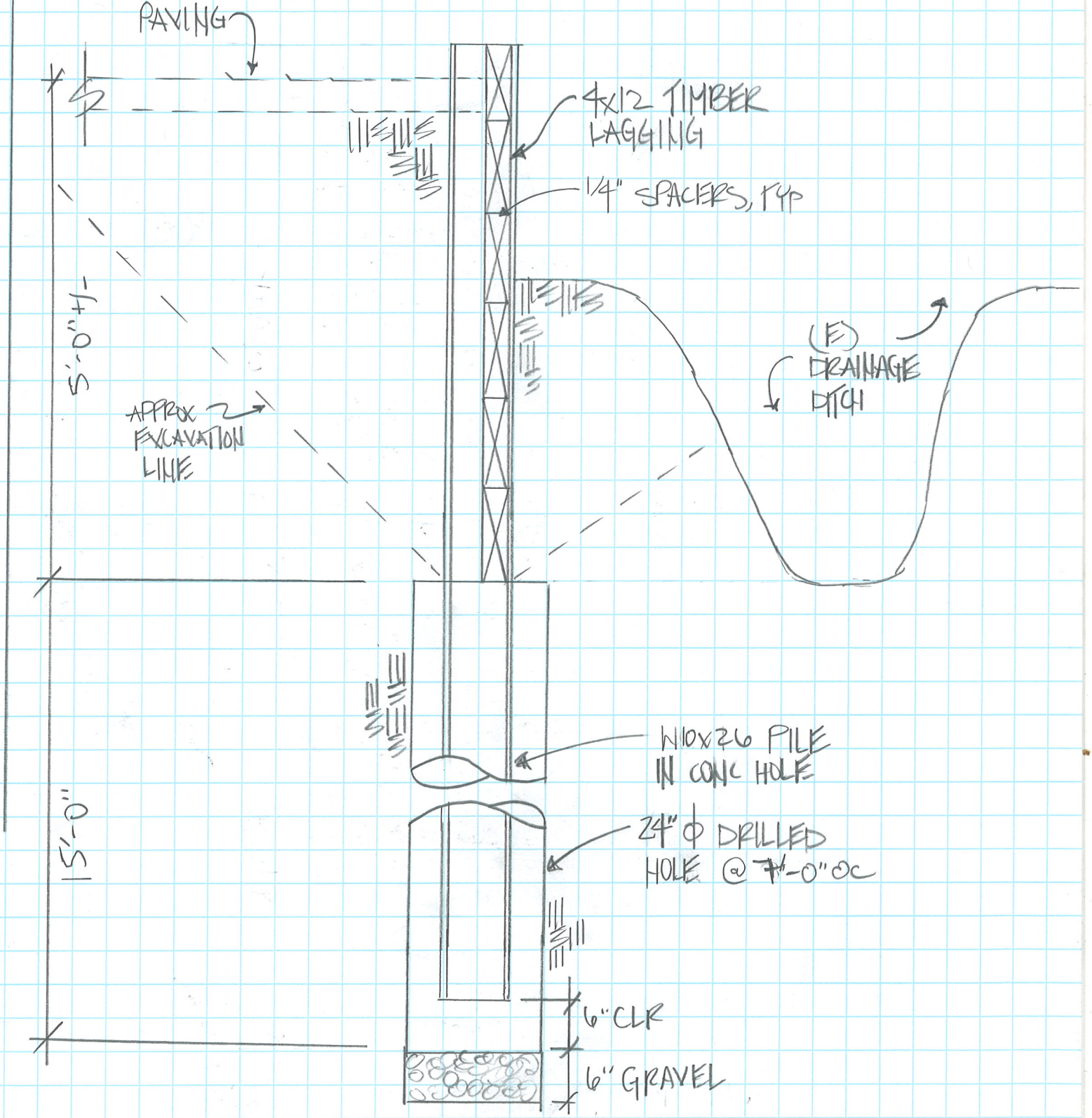

3CK

ROOF FRAMING PLAN

3 DAIRY LANE SEISMIC UPGRADE
BELMONT COUNTY WATER DISTRICT
THREE DAIRY LANE
BELMONT CALIFORNIA

SHEET NUMBER
S-3
OF 6 SHEETS
DRAWING NO.
97086-3

# MPWD HQ BUILDING: SKETCH #1

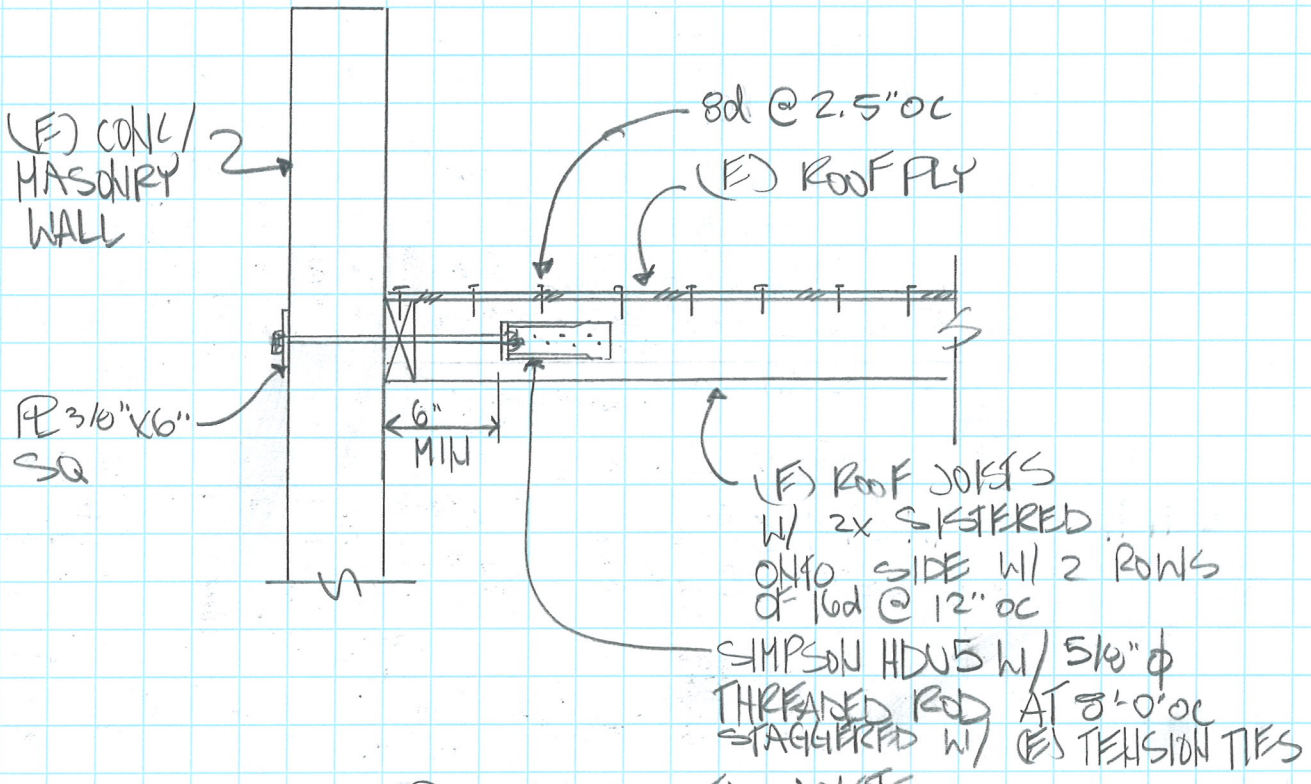



## TYPICAL SOLDIER PILE WALL

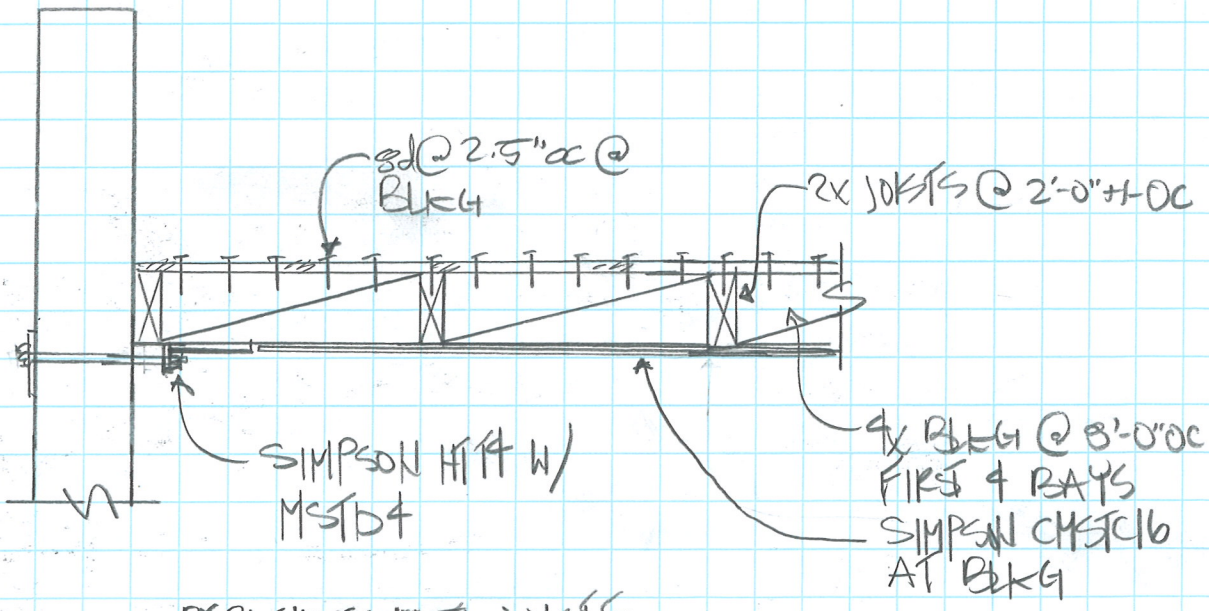
3/4"=1'-0"

# MPWD HQ BUILDING: SKETCH #2

## TYPICAL ROOF TO WALL TIES

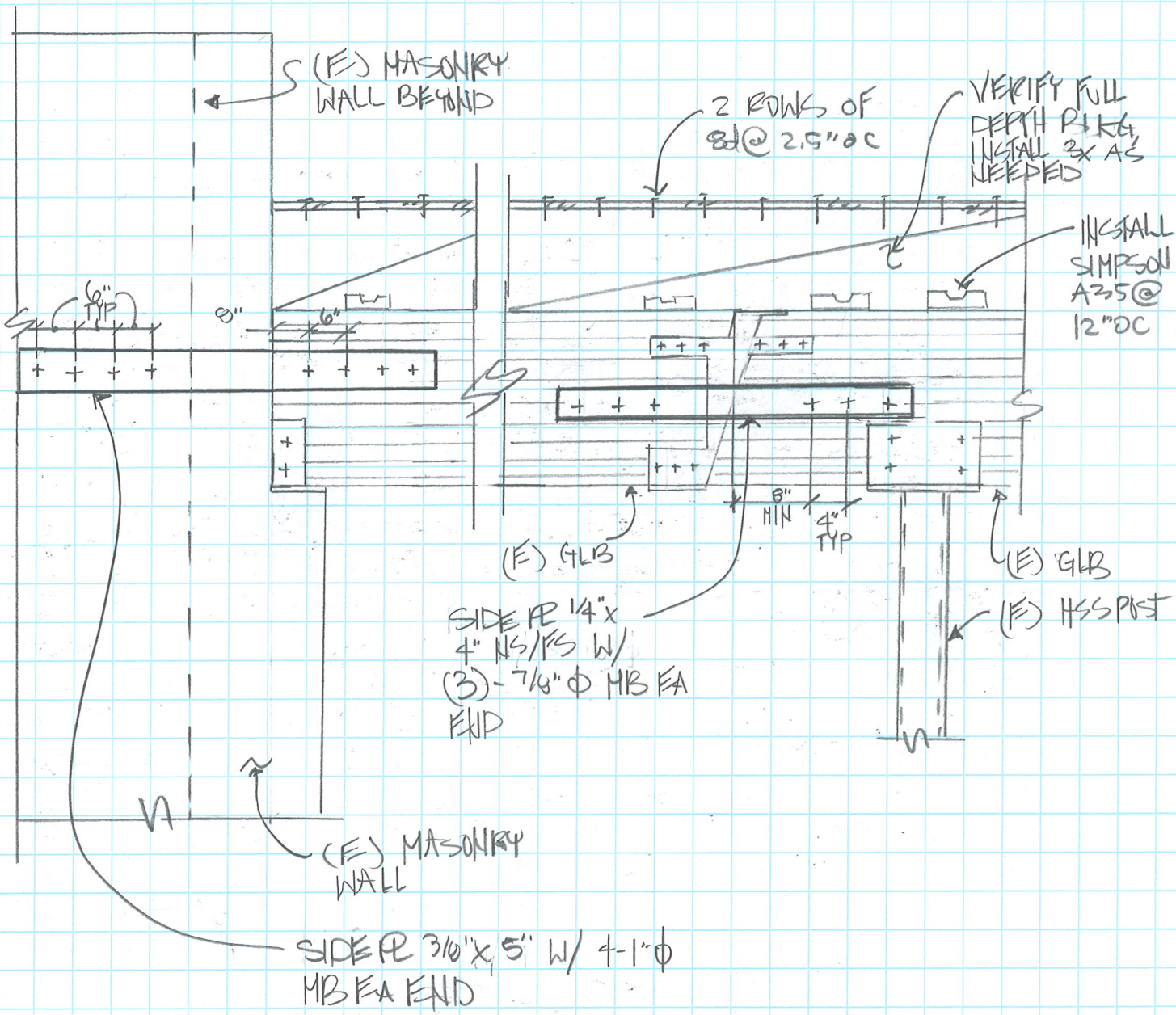



PARALLEL TO JOISTS




PERPENDICULAR TO JOISTS

# MPWD HQ BUILDING: SKETCH #3




## GLB COLLECTOR CONNECTION STRENGTHENING

3/4" = 1'-0"

CORNERSTONE structural engineering group

DATE: **2/16/2018**
CONTRACT NO:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| STRUCTURE: | MID-PENINSULA HEADQUARTERS | | BR. NO: | | RCVD. BY: | IN | |
| TYPE: | SOLDIER PILE RETAINING WALL | | DIST: 4 | CO: San Mateo | RTE: P.M: | OUT | |
| LENGTH | 98 x 5 varies | = AREA | 490 | SQ FT. | | | |

DESIGN SECTION CORNERSTONE
PROJECT INCLUDES 1 STRUCTURE(S)

QUANTITIES BY CDI DATE 2/16/2018
QUANTITIES CHECKED BY DGL DATE 2/16/2018
CHARGE UNIT AND EA

ESTIMATE NO 1
PRICED BY CDI
COST INDEX

| | CONTRACT ITEMS | UNIT | QUANTITY | PRICE | AMOUNT |
|---|---|---|---|---|---|
| | | | | | |
| | STEEL SOLDIER PILE (W10x26) | LF | 300 | $75.00 | $22,500 |
| | CONCRETE BACKFILL (SOLDIER PILE WALL) | CY | 26 | $450.00 | $11,700 |
| | 24" DRILLED HOLE | LF | 225 | $150.00 | $33,750 |
| | TIMBER LAGGING | SF | 490 | $20.00 | $9,800 |
| | CLEAN AND PAINT STEEL SOLDIER PILING | LS | 1 | $15,000.00 | $15,000 |
| | STRUCTURE EXCAVATION (SOLDIER PILE WALL) | CY | 80 | $225.00 | $18,000 |
| | STRUCTURE BACKFILL (SOLDIER PILE WALL) | CY | 70 | $250.00 | $17,500 |
| | DEMO (E) WALL | LF | 300 | $20.00 | $6,000 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | |
|---|---|---|
| **SUBTOTAL** | | **$134,250** |
| MOBILIZATION (10%) | | $14,917 |
| SUBTOTAL STRUCTURE ITEMS | | $149,167 |
| CONTINGENCIES | 20% | $29,833 |
| TOTAL ( $ / sq ft) | $274 | $179,000 |
| GRAND TOTAL | | $179,000 |
| FOR BUDGET PURPOSES - SAY | | **$180,000** |

COMMENTS

| | | |
|---|---|---|
| STRUCTURE COSTS | = | $180,000 |
| **TOTAL COSTS** | = | **$180,000** |

CORNERSTONE structural engineering group

DATE: **2/16/2018**
CONTRACT NO:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| STRUCTURE: | MID-PENINSULA HEADQUARTERS | BR. NO: | | | RCVD. BY: | IN | |
| TYPE: | Warehouse and Office Building Retrofit | DIST: 4 | CO: San Mateo | RTE: | P.M: | OUT | |

DESIGN SECTION CORNERSTONE
PROJECT INCLUDES ____ STRUCTURE(S)

QUANTITIES BY DGL DATE 2/16/2018
QUANTITIES CHECKED BY CDI DATE 2/16/2018
CHARGE UNIT AND EA

ESTIMATE NO 1
PRICED BY DGL
COST INDEX

| CONTRACT ITEMS | UNIT | QUANTITY | PRICE | AMOUNT |
|---|---|---|---|---|
| **ROOF RENAILING** | | | | |
| DEMO (E) ROOFING AND RE-ROOF | SQFT | 5,800 | $18.00 | $104,400 |
| RE-NAIL (E) PLYWOOD | SQFT | 5,800 | $3.25 | $18,850 |
| | | | SUBTOTAL | $123,250 |
| **ROOF TO WALL TIES** | | | | |
| REMOVE & REPLACE (E) CEILING FOR ROOF TO WALL TIES IN WAREHOUSE | SQFT | 3,985 | $2.50 | $9,963 |
| REMOVE & REPLACE (E) CEILING FOR ROOF TO WALL TIES IN OFFICE | SQFT | 1,815 | $15.00 | $27,225 |
| 2X6 SISTERED JOISTS & BLKG | SQFT | 1,000.00 | $12.00 | $12,000 |
| ROOF TO WALL TIES | EA | 114 | $1,000.00 | $114,000 |
| CONTINUITY STRAP | EA | 55 | $800.00 | $44,000 |
| | | | SUBTOTAL | $207,188 |
| **FLOOR TO WALL TIES** | | | | |
| FLOOR TO WALL TIES | EA | 14 | $1,000.00 | $14,000 |
| 2X6 SISTERED JOISTS & BLKG | SQFT | 500.00 | $12.00 | $6,000 |
| | | | SUBTOTAL | $20,000 |
| **COLLECTOR PLATE STRAPS AT GLULAM BEAM AND METAL STUD WALL** | | | | |
| METAL STUD WALL COLLECTOR PLATE CONNECTION | EA | 1 | $3,000.00 | $3,000 |
| GLULAM BEAM CONNECTION STRENGTHENING | EA | 1 | $2,000.00 | $2,000 |
| GLULAM BEAM WALL CONNECTION STRENGTHENING | EA | 1 | $3,000.00 | $3,000 |
| | | | SUBTOTAL | $8,000 |
| **DIAGONAL BRACING** | | | | |
| CANOPY DIAGONAL TENSION BRACING | EA | 4 | $3,500.00 | $14,000 |
| 1" DIAMETER DIAGINAL BRACING | LB | 180 | $20.00 | $3,600 |
| | | | SUBTOTAL | $17,600 |
| | | | | |
| **SHEAR WALLS** | | | | |
| SHEAR WALL HOLDOWN ASSEMBLY | EA | 18 | $800.00 | $14,400 |
| WALL SHEATHING | SQFT | 1,225 | $10.00 | $12,250 |
| | | | SUBTOTAL | $26,650 |
| **FOOTINGS** | | | | |
| CONCRETE FOR NEW FOOTINGS | CY | 11 | $1,500.00 | $16,500 |
| REBAR FOR NEW FOOTINGS | LB | 1,650 | $4.00 | $6,600 |
| EXCAVATION FOR NEW FOOTINGS | CY | 27 | $325.00 | $8,775 |
| TEMPORARY SHORING FOR NEW FOOTINGS | LS | 1 | $15,000.00 | $15,000 |
| DEMOLISH AND RECONSTRUCT EXISTING SLAB | SQFT | 360 | $40.00 | $14,400 |
| | | | SUBTOTAL | $61,275 |
| | | | | |
| | ROOF RENAILING SUBTOTAL (includes Mobilization) | | | $136,944.44 |
| | ROOF/FLOOR TO WALL TIES SUBTOTAL (includes Mobilization) | | | $252,431 |
| | PLATE STRAPPING/GLULAM CONNECTION/DIAGONAL BRACING SUBTOTAL (includes Mobilization) | | | $28,444 |
| | SHEAR WALLS AND FOOTINGS SUBTOTAL (includes Mobilization) | | | $97,694 |

| | | |
|---|---|---|
| **SUBTOTAL** | | **$463,963** |
| MOBILIZATION (10%) | | $51,551.39 |
| SUBTOTAL STRUCTURE ITEMS | | $515,514 |
| CONTINGENCIES | 20% | $103,102.78 |
| | | $618,617 |
| GRAND TOTAL | | $618,617 |
| FOR BUDGET PURPOSES - SAY | | **$619,000** |

COMMENTS

| | | |
|---|---|---|
| STRUCTURE COSTS | = | $619,000 |
| **TOTAL COSTS** | = | **$619,000** |

# GEOTECHNICAL INVESTIGATION

SEISMIC EVALUATION OF THE
MPWD HEADQUARTERS BUILDING
3 DAIRY LANE
BELMONT, CALIFORNIA 94002

Prepared for
Mid-Peninsula Water District
3 Dairy Lane
Belmont, California 94002

March 2018

Project No. 4164-1

March 8, 2018
4164-1

**Mid-Peninsula Water District**
3 Dairy Lane
Belmont, California 94002

**RE: GEOTECHNICAL INVESTIGATION**
**SESIMIC EVALUATION OF THE**
**MPWD HEADQUARTERS BUILDING**
**3 DAIRY LANE**
**BELMONT, CALIFORNIA**

Attention: Mr. Rene Ramirez:
Operations Manager

Gentlemen:

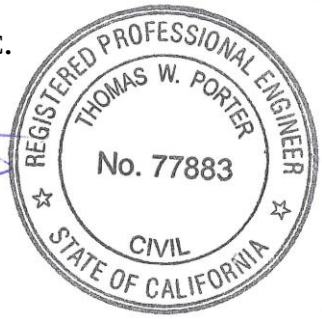
In accordance with your request, we have performed a geotechnical investigation for the seismic evaluation of the Mid-Peninsula District's (MPWD) headquarters building located at 3 Dairy Lane in Belmont, California. The accompanying report summarizes the results of our field exploration, laboratory testing, and engineering analysis, and presents our geotechnical recommendations for the proposed project.

We refer you to the text of our report for specific geotechnical recommendations for the project.

Thank you for the opportunity to work with you on this project. Please call if you have any questions or comments concerning the findings, conclusions, or recommendations from our investigation.

Very truly yours,

**ROMIG ENGINEERS, INC.**





Tom W. Porter, P.E. Glenn A Romig, P.E., G.E.

Copies: Addressee (1)
Pakpour Consulting Group, Inc. (3)
Attn: Mr. Joubin Pakpour
Cornerstone Structural Engineering Group (via email)
Attn: Mr. Tom Swayze

GAR:TWP:LO:dr

# GEOTECHNICAL INVESTIGATION
# SEISMIC EVALUATION OF THE
# MPWD HEADQUARTERS BUILDING
# 3 DAIRY LANE
# BELMONT, CALIFORNIA 94002

**PREPARED FOR:**
**MID-PENINSULA WATER DISTRICT**
**3 DAIRY LANE**
**BELMONT, CALIFORNIA 94002**

**PREPARED BY:**
**ROMIG ENGINEERS, INC.**
**1390 EL CAMINO REAL, SECOND FLOOR**
**SAN CARLOS, CALIFORNIA 94070**

**MARCH 2018**

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Page No.

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(Continued)

# GEOTECHNICAL INVESTIGATION
# FOR
# SEISMIC EVALUATION OF THE
# MPWD HEADQUARTERS BUILDING
# 3 DAIRY LANE
# BELMONT, CALIFORNIA

## INTRODUCTION

We are pleased to present this geotechnical investigation report for seismic evaluation of the Mid-Peninsula District's (MPWD) headquarters building located at 3 Dairy Lane in Belmont, California. The location of the site is shown on the Vicinity Map, Figure 1. The purpose of this investigation was to evaluate subsurface conditions at the site and to provide geotechnical recommendations for the proposed project.

### Project Description

The project consists of constructing several seismic improvements to the MPWD's headquarters building in Belmont. The existing masonry and tilt-up concrete building consists of two-separate single story structures with interior work platforms and storage mezzanines. At this time the seismic improvements are generally expected to consist of a combination of tension ties, structural holdown anchors, and lateral bracing at the roof diaphragm, shear walls, mezzanine, and exterior canopy. New interior foundation elements are planned along shear walls and for holddown anchors, CMU wall infill, and new interior slab-on-grade areas. . We understand the building was constructed in the 1970's and is assumed to be supported on conventional shallow spread footing foundations. The preliminary structural assessment by Cornerstone indicated little to no signs of obvious foundation settlement.

In addition, an existing soldier pile retaining wall located along the rear of the property, adjacent to the Highway 101, is deflecting and showing signs of failure. The retaining wall is approximately 5 feet in height and supports an equipment parking area. We understand that this wall may be replaced in the future.

### Scope of Work

The scope of our work for this investigation was presented in the Professional Services Agreement with Mid-Peninsula Water District dated September 25, 2017. In order to accomplish this investigation, we performed the following work.

- Review of geologic, geotechnical, and seismic conditions in the vicinity of the site.
- Subsurface exploration consisting of advancing three cone penetration tests (CPT) in the area of the existing building.
- Laboratory testing of one near surface sample to aid in soil classification and to help evaluate their engineering properties.
- Engineering analysis and evaluation of the subsurface data and laboratory testing to develop geotechnical design criteria for the project.
- Preparation of this report presenting our findings and geotechnical recommendations for the proposed project.

**Limitations**

This report was prepared for the exclusive use of the Mid-Peninsula Water District for specific application to developing geotechnical design criteria for the seismic evaluation of their headquarters building located at 3 Dairy Lane in Belmont, California. We make no warranty, expressed or implied, except that our services were performed in accordance with geotechnical engineering principles generally accepted at this time and location. This report was prepared to provide engineering opinions and recommendations only. In the event there are any changes in the nature, design, or location of the project, or if any future improvements are planned, the conclusions and recommendations presented in this report should not be considered valid unless 1) the project changes are reviewed by us, and 2) the conclusions and recommendations presented in this report are modified or verified in writing.

The analysis, conclusions, and recommendations presented in this report are based on site conditions as they existed at the time of our investigation; our understanding of the currently proposed construction; review of readily available reports relevant to the site conditions; and laboratory test results. In addition, it should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during an investigation of this type. Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes occur, we should be advised so that we can review our report in light of those changes.

## SITE EXPLORATION AND RECONNAISSANCE

Site reconnaissance and subsurface exploration were performed on August 7, 2017. Our subsurface exploration consisted of using a truck-mounted, electronic cone penetration test (CPT) system to advance three CPT probes to depths ranging between 42.5 to 60 feet below ground surface. In addition, near surface soil sampling was performed using hand-auger equipment at the location of CPT-2. The approximate location of the CPT probe is shown on the Site Plan, Figure 2. The CPT log is attached in Appendix A and the results of our laboratory tests are attached in Appendix B.

### Surface Conditions

The site is located in a commercial area along the northeast side of Dairy Lane. Highway 101 extended along the rear of the property. At the time of our investigation, the site was occupied by the existing masonry and tilt-up concrete headquarters building, which consisted of the front office building and rear warehouse building. An asphaltic concrete paved parking lot extended along the southwest (front) side of the building along Dairy Lane and a concrete paved equipment yard extended across the southeast and northeast sides of the building. Concrete walkways extended along portions of the building perimeter. A large roof canopy extended into the equipment yard from the southeast side of the warehouse building and a smaller roof canopy was located at the southeast side of the offices. Industrial storage racks were located across the rear of the building and a covered construction material storage bay structure was located at the east corner of the equipment yard. A soldier pile retaining wall extended along the northeast portion of the rear of the site and a concrete block sound wall extended along the southeast portion. The soldier pile wall separated grades between the equipment yard and the lower unpaved shoulder along Highway 101. Some fill may have been placed along the rear of the site to backfill the wall and create current site grades. The site was landscaped with lawn grass and a few small shrubs and small to medium trees along the front of the site.

According to the preliminary structural assessment performed by Cornerstone, the building consists of two seismically separated single-story concrete tilt-up structures with panelized wood roofs and internal work platforms and storage mezzanines. The building was likely constructed in the 1970's and seismically retrofitted in 1998. Based on document research, the building appears to be supported on shallow continuous concrete spread footings at the building perimeter and isolated spread footings supporting the interior columns and the mezzanine structures (although the building could also have been supported on drilled piers). The building has concrete slab-on-grade floors throughout. Cornerstone concluded that the building showed little to no signs of settlement.

The exact depth and width of the existing building foundations are unknown. Where visible, the exterior stem wall of the building appeared to be in adequate condition. The asphalt pavement and concrete flatwork had hairline to ½-inch wide cracks. The soldier beam retaining wall appeared to be deflecting outward. The roof downspouts discharged adjacent to the perimeter foundation

**Subsurface Conditions**

At the locations of our CPTs, we generally encountered approximately 4 to 8.5 feet of relatively soft to stiff silty clay to clay and clayey silt to silty clay with interbeds of loose to medium dense sand to sandy silt and clean sand to silty sand. The upper 2 to 3 feet of soil encountered in our CPT's were interpreted to be artificial fill. Portions of these softer soils are expected to be moderately to highly compressible under new foundation loads. We then encountered generally firm to hard silty clay to clay silty, clayey silt to silty clay, and fine grained soils with interbeds of medium dense to very dense sand to clayey sand, clean sand to silty sand, and silty sand to sandy silt which extended to the maximum depth of our CPT exploration. We note that we encountered a layer of soft organic soil between depths of about 5.5 to 6.8 feet in CPT-2.

A Liquid Limit of 33 and a Plasticity Index of 15 were measured on a sample of near-surface soil obtained from CPT-2 at a depth of about 2 feet. These test results indicate that the near-surface soils at the site generally have low plasticity and a low potential for expansion.

**Ground Water**

At the time of our exploration, ground water was estimated to be present at a depth of about 5 feet below grade in CPT-1 and at about 4 feet below grade in CPT-2 and CPT-3 based on the dynamic pore pressure response observed during testing. Because of the low permeability of the clayey soil in the bay margin environment, pore pressure dissipation tests are not always conclusive, therefore these ground water levels do not represent stabilized ground water levels. Please be cautioned that fluctuations in the level of ground water can occur due to variations in rainfall, tidal fluctuations, local surface and subsurface drainage patterns, landscaping, and other factors.

**GEOLOGIC SETTING**

As part of our investigation, we reviewed our local experience and geologic literature in our files pertinent to the general area of the site. The information reviewed indicates the site is located in an area mapped as historic artificial fill, af (Brabb, Graymer, Jones,

1998). These deposits are generally found to consist of loose to very well consolidated gravel, sand, silt, clay, rock fragments, organic matter, and man-made debris in various combinations. Thickness is variable and may exceed 30 meters in some places. Some of the fill is compacted and quite firm, but fill placed before 1965 is nearly everywhere not compacted and consists of dumped materials. The geology of the site vicinity is shown on the Vicinity Geologic Map, Figure 3.

Based on information presented in a report titled "Geologic and Engineering Aspects of San Francisco Bay Fill" (CDMG, 1969), the site is mapped near the southeast edge of the area which is considered to be underlain by compressible younger Bay Mud (CDMG, 1969). The estimated extent and thickness of the young Bay Mud in the immediate site area is shown on the Contour Map of Bay Mud Thickness, Figure 4.

A State of California seismic hazard map has not yet been published for this area of the peninsula, however, the site is located in an area where historical occurrence of liquefaction, or local geological, geotechnical, and ground water conditions indicate a potential for permanent ground displacement from liquefaction may occur. A site specific liquefaction discussion is presented later in this report.

The lot and immediate site vicinity are located in an area that slopes very gently to the north towards the San Francisco Bay. The site is located at an elevation of approximately 10 feet above sea level.

**Faulting and Seismicity**

There are no mapped through-going faults across or immediately adjacent to the site and the site is not located within a State of California Earthquake Fault Zone (formerly known as a Special Studies Zone), an area where the potential for fault rupture is considered probable. The closest active fault is the San Andreas fault, located approximately 3.9 miles southwest of the property. Thus, the likelihood of surface rupture occurring from active faulting at the site is low.

The San Francisco Bay Area is, however, an active seismic region. Earthquakes in the region result from strain energy constantly accumulating due to the northwestward movement of the Pacific Plate relative to the North American Plate. On average about 1.6-inches of movement occur per year. Historically, the Bay Area has experienced large, destructive earthquakes in 1838, 1868, 1906, and 1989. The faults considered most likely to produce large earthquakes in the area include the San Andreas, San Gregorio, Hayward, and Calaveras faults. The San Gregorio fault is located approximately 12 miles southwest of the site. The Hayward and Calaveras faults are located approximately 15

and 22 miles northeast of the site, respectively. These faults and significant earthquakes that have been documented in the Bay Area are listed in Table 1 on the following page and are shown on the Regional Fault and Seismicity Map, Figure 5.

**Table 1. Earthquake Magnitudes and Historical Earthquakes**
**Seismic Evaluation of the**
**MPWD Headquarters Building**
**Belmont, California**

| Fault | Maximum Magnitude (Mw) | Historical Earthquakes | | Estimated Magnitude |
|---|---|---|---|---|
| San Andreas | 7.9 | 1989 | Loma Prieta | 6.9 |
| | | 1906 | San Francisco | 7.9 |
| | | 1865 | N. of 1989 Loma Prieta Earthquake | 6.5 |
| | | 1838 | San Francisco-Peninsula Segment | 6.8 |
| | | 1836 | East of Monterey | 6.5 |
| Hayward | 7.1 | 1868 | Hayward | 6.8 |
| | | 1858 | Hayward | 6.8 |
| Calaveras | 6.8 | 1984 | Morgan Hill | 6.2 |
| | | 1911 | Morgan Hill | 6.2 |
| | | 1897 | Gilroy | 6.3 |
| San Gregorio | 7.3 | 1926 | Monterey Bay | 6.1 |

In the future, the subject property will undoubtedly experience severe ground shaking during moderate and large magnitude earthquakes produced along the San Andreas fault or other active Bay Area fault zones. The Working Group On California Earthquake Probabilities, a panel of experts that are periodically convened to estimate the likelihood of future earthquakes based on the latest science and ground motion prediction modeling, concluded there is a 72 percent chance for at least one earthquake of Magnitude 6.7 or larger in the Bay Area before 2045. The Hayward fault has the highest likelihood of an earthquake greater than or equal to magnitude 6.7 in the Bay Area, estimated at 14 percent, while the likelihood on the San Andreas and Calaveras faults is estimated at approximately 6 and 7 percent, respectively (Working Group, 2015).

**Earthquake Design Parameters**

The State of California currently requires that buildings and structures be designed in accordance with the seismic design provisions presented in the 2016 California Building Code and in ASCE 7-10, "Minimum Design Loads for Buildings and Other Structures." Based on site geologic conditions and on information from our subsurface exploration at the site, the site may be classified as Site Class D, stiff soil, in accordance with Chapter 20 of ASCE 7-10. Spectral Response Acceleration parameters and site coefficients may

be taken directly from the U.S.G.S. website based on the longitude and latitude of the site. For site latitude (37.5238), longitude (-122.2686) and Site Class D, design parameters are presented on Table 2.

**Table 2. 2016 CBC Seismic Design Criteria**
**Seismic Evaluation of the**
**MPWD Headquarters Building**
**Belmont, California**

| Spectral Response Acceleration Parameters | | | Design Value |
|---|---|---|---|
| Mapped Value for Short Period | - | $S_S$ | 1.772 |
| Mapped Value for 1-sec Period | - | $S_1$ | 0.821 |
| Site Coefficient | - | $F_a$ | 1.0 |
| Site Coefficient | - | $F_v$ | 1.5 |
| Adjusted for Site Class | - | $S_{MS}$ | 1.772 |
| Adjusted for Site Class | - | $S_{M1}$ | 1.231 |
| Value for Design Earthquake | - | $S_{DS}$ | 1.181 |
| Value for Design Earthquake | - | $S_{D1}$ | 0.821 |

**Liquefaction Evaluation**

Severe ground shaking during an earthquake can cause loose to medium dense granular soils to densify. If the granular soils are below ground water, their densification can cause increases in pore water pressure, which can lead to soil softening, liquefaction, and ground deformation. Soils most prone to liquefaction are saturated, loose to medium dense, silty sands and sandy silts with limited drainage, and in some cases, sands and gravels that are interbedded with or that contain seams or layers of impermeable soil.

To evaluate the potential for earthquake-induced liquefaction of the soils at the site, we performed a liquefaction analysis of the CPT data using the program CLiq, developed by GeoLogismiki. The program applied several published methodologies, including Roberston (NCEER, 2008 and 2009), Idriss and Boulanger 2014, and Moss et. al 2006.

The clean sand, silty sand, sandy silt, and clayey silt to silty clay strata that we encountered at the site, below the highest historical ground water level of approximately 4 feet below the ground surface, were considered in our liquefaction analysis.

The results of our analysis indicate that some of the interbedded strata of sand, silty sand, sandy silt, and clayey silt to silty clay encountered in our CPTs could liquefy when subjected to a peak ground acceleration (PGA) of 0.702g, the $PGA_M$ for the maximum considered earthquake based on ASCE 7-10. The results of our liquefaction evaluation of the CPT data are presented in Table 3, and are presented in Figures C-1 through C-3 in Appendix C.

**Table 3: Results of Liquefaction Evaluation**
**Seismic Evaluation of the**
**MPWD Headquarters Building**
**Belmont, California**

| CPT No. | Robertson NCEER Settlement (Inches) | Idriss and Boulanger 2014 Settlement (Inches) | Moss et. al 2006 Settlement (Inches) | Mean Average (Inches) |
|---|---|---|---|---|
| CPT-1 | 0.9 | 2.1 | 2.1 | 1.7 |
| CPT-2 | 0.3 | 0.8 | 0.8 | 0.6 |
| CPT-3 | 0.3 | 1.3 | 1.4 | 1.0 |

Based on our analyses of the CPT data, the total settlement that could occur as a result of liquefaction from the design-level earthquake is expected to range between approximately ¾- to $2^1/_8$-inches across the site. In our opinion, based on the estimated settlement at each of the CPT locations, differential settlement on the order of about 1 to 1½-inches over a horizontal distance of 50 feet may be possible from liquefaction during seismic shaking. The estimated dynamic settlement should be considered in the structural upgrade of the building, as needed.

**Geologic Hazards**

As part of our investigation, we reviewed the potential for geologic hazards to impact the site, considering the geologic setting and the soils encountered during our investigation. The results of our review are presented below and in the following sections of our report.

- Fault Rupture - The site is not located in a State of California Earthquake Fault Zone or area where fault rupture is considered likely. Therefore, active faults are not believed to exist beneath the site and the potential for fault rupture at the site is low.

- Ground Shaking - The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30 to 50 year design life. Strong ground shaking should therefore be expected several times during the design life of the service center facility, as is typical for sites throughout the Bay Area. The building improvements should be designed in accordance with current earthquake resistance standards.

- Differential Compaction - Differential compaction can occur during moderate and large earthquakes when unsaturated soft or loose, natural or fill soils are densified and settle, often unevenly across a site. The potential for dynamic settlement of the subsurface soils below the assumed highest ground water level was evaluated in our liquefaction analysis and was discussed above. The soils encountered above the assumed ground water level in our CPTs were generally firm to very stiff clay and medium dense to very dense sand with some relatively thin interbeds of loosely compacted historic fill encountered in the upper 3 feet in CPT-3. In our opinion, the likelihood of significant structural damage affecting the existing building from differential compaction is low.

**CONCLUSIONS**

From a geotechnical viewpoint, the site is suitable for the seismic upgrade, retaining wall replacement, and other site improvements provided the recommendations presented in this report are followed during design and construction. Specific geotechnical recommendations for the project are presented in the following sections of this report.

The primary geotechnical concerns for the project are the presence of the sand and silt strata below the shallow ground water table that are prone to liquefaction during a moderate to strong earthquake, the potentially compressible soft clayey soil encountered at varying depth within the upper 10 feet in CPT-1 and CPT-2 (potentially Bay Mud), and the potential for severe ground shaking at the site during a major earthquake. In our opinion, based on the estimated seismic settlement, differential settlement on the order of about 1½-inches over a horizontal distance of 50 feet is possible from liquefaction during seismic shaking. We note that based on the condition of the existing building that the foundation appears to be performing adequately.

Based on the initial structural assessment by Cornerstone, several new foundation improvements are currently planned to support existing shear walls, CMU wall infills, and seismic hold down anchors. As discussed above, potentially compressible soft clayey soil was encountered in CPT-1 and CPT-2 and these soft soils are expected to underlie the building. Because the building was constructed over 40 years ago, additional ongoing consolidation settlement of these softer layers is not expected to be significant. Based on

our discussion with Cornerstone, the static loads on these foundation elements are not significant and building loads are not expected to be increased. However, if significant new foundation loads are planned, these loads could potentially cause settlement. In our opinion, the proposed interior foundation improvements may be supported on relatively deep conventional spread footing foundations with added reinforcing to provide a stiffer foundation more capable of tolerating differential movement. In addition, a relatively low allowable bearing pressure has been recommended to decrease the magnitude of potential building foundation settlement..

We expect that portions of the spread footing foundations for the improvements will be bearing in the weak surface fill material. During construction, it is possible that poor soil support conditions may be encountered in the footing excavations which may require some mitigation prior to steel and concrete placement, such as constructing compacted fill pads below the new foundation areas. Where very soft/loose or overly saturated soil conditions are encountered, some overexcavation and recompaction of the fill below the foundation areas may be required locally, under the direction of our staff during construction. If the soft and saturated subgrade soils cannot be properly recompacted, the soft soil may need to be removed and imported aggregate base rock or ¾-inch crushed rock used in order to provide improved bearing support of the foundations.

It is thought that the existing building is supported on a conventional spread footing foundation, although not confirmed. In our opinion, it may be valuable for several test pits to be excavated adjacent to the perimeter of the building to reveal the foundation type, embedment depth, and width. This information would be helpful to the project team for determining the potential interactions between new foundations and the existing structure and if alterations to the foundation recommendations are appropraite.

We understand that the portion of the retaining wall that has failed and deflected along the rear of the property will be replaced with a new retaining wall. In our opinion, the soldier beam and wood lagging wall should be supported on a drilled pier foundation.

Because subsurface conditions may vary from those encountered at the location of our CPTs, and to observe that our recommendations are properly implemented, we recommend that we be retained to 1) review the project plans for conformance with our recommendations and 2) observe and test during the earthwork and foundation installation phases of construction.

## FOUNDATIONS

### Shallow Foundations

In our opinion, the proposed interior building foundation improvements may be supported on conventional continuous and isolated spread footing foundations bearing in the existing fill, undisturbed native soil, or compacted fill pads. Footings should have a width of at least 24 inches and should extend at least 30 inches below exterior grade, and at least 26 inches below the bottom of slab elevation, whichever is deeper. Footings may be designed for allowable bearing pressures of 1,000 pounds per square foot for dead loads, 1,250 pounds per square foot for dead plus live loads, with a one-third increase allowed for total loads including wind or seismic forces.

All footings located adjacent to utility lines should be embedded below a 1:1 plane extending up from the bottom edge of the utility trench. All continuous footings should be reinforced with the equivalent of at least two, No. 5 bars, top and bottom steel to provide structural continuity and to permit spanning of local irregularities.

The bottom of all footing excavations should be cleaned of all loose or soft soil and debris. Our representative should observe the excavations to confirm that they are founded in suitable material and have been properly cleaned prior to placing concrete forms and reinforcing steel. If soft or loose soils are encountered at the foundation bearing depth, our field representative will require these soils be removed and may recommend overexcavation and/or compaction of the bottom of the excavation before reinforcing steel is placed, as discussed previously.

Where encountered, the soft soil may need to be locally excavated and compacted fill pads constructed below at least portions of the new foundations; recompacted fill material, imported aggregate base rock or ¾-inch crushed rock may be used for the compacted fill pads. If needed, the extent of the overexcavation and fill pads will need to be established by our representative in the field during excavation for the footings.

Since the existing foundations were constructed many years ago, and the depth and width of the foundations are unknown, there is more uncertainty concerning their performance than for the new footings for the project. If the structural load on the existing foundations will be increased significantly, it may be prudent to selectively underpin the foundations as needed to reduce post-construction differential settlement due to the new loads from the proposed improvements.

When the existing foundations are exposed during construction, the design and construction team should observe their condition and determine if any remedial measures or supplemental recommendations would be appropriate.

**Lateral Loads**

Lateral loads may be resisted by friction between the bottom of the footings and the supporting subgrade. A coefficient of friction of 0.25 may be assumed for design. In addition to the above, lateral resistance may be provided by passive pressures acting against foundations poured neat in the footing excavations. We recommend assuming an equivalent fluid pressure of 250 pounds per cubic foot for passive soil resistance, where appropriate. The above values are based on a factor of safety of 1.5. The upper foot of passive soil resistance should be neglected where soil adjacent to the footing is not covered and protected by a concrete slab or pavement.

**Drilled Piers**

In our opinion, the retaining wall replacement should be supported on a drilled pier foundation embedded in stiff undisturbed soil. The piers should be at least 16-inches in diameter, and extend at least 14 feet below grade at the base of the wall. The piers may be designed for an allowable skin friction in soil of 400 pounds per square foot for dead plus live loads, with a one-third increase allowed when considering additional short-term wind or seismic loading. The uplift capacity of the piers may be based on a skin friction value of 300 pounds per square foot. The vertical resistance of the upper 3 feet of the pier should be neglected in design. Piers should have a center-to-center spacing of at least three pier diameters.

We recommend that grade beams be provided between piers supporting the improvements as required by the structural engineer. To reduce the potential for seepage and erosion below the retaining wall, the wood lagging or grade beam should be embedded at least 8-inches below exterior finished grade.

Pier drilling should be observed by our representative to confirm that the piers are bearing in competent material, extend the required minimum depth, and have been properly cleaned and dewatered. The minimum pier depths recommended above may require adjustment if differing conditions are encountered during drilling.

Concrete should be placed in the pier holes the same day the holes are drilled. Ground water may seep into the pier holes during drilling, and ground water or the sandy portions of the soils that were encountered in some of the borings could cause sloughing or caving conditions. If ground water cannot be effectively pumped from the pier holes, concrete will need to be placed by the tremie method. The potential for caving soils, need for casing the holes or for ground water seepage can be further evaluated during the drilling of the initial piers.

**Lateral Loads**

Lateral loads on the piers may be resisted by passive earth pressure based upon an equivalent fluid pressure of 300 pounds per cubic foot, acting on 1.5 times the projected area of the pier. The passive resistance of the upper 3 feet of the piers should be neglected.

**Settlement**

Based on our experience and judgment, thirty year post construction, differential movement due to static loads is not expected to exceed about 3/4- to 1-inch across the proposed foundation improvements, and between existing and new foundations, provided the foundations improvements are designed and constructed as recommended. Relatively small total settlement is expected at the new shear wall and hold down foundations where there is only a small increase in static loads expected due to some increase in weight of the foundations.

Thirty year post construction, differential settlement due to static loads is not expected to exceed about 1-inch across the proposed across a 50 foot length of the proposed retaining wall.

Additional differential settlement may occur as a result of liquefaction caused by severe ground shaking during a major earthquake, as discussed earlier.

**SLABS-ON-GRADE**

**General Slab Considerations**

The surface and near surface soils at this site have a low potential for expansion. To reduce the potential for movement of the slab subgrade, at least the upper 8-inches of expansive soil should be scarified and compacted at a moisture content at least 2 percent

above the laboratory optimum. The native or fill soil subgrade should be kept moist up until the time the non-expansive fill and/or aggregate base is placed. Slab subgrades and non expansive fill should be prepared and compacted as recommended in the section of this report titled "Earthwork." Exterior flatwork should be underlain by a layer of non expansive fill as discussed below. The non expansive fill should consist of aggregate base rock or a clayey soil with a plasticity index of 15 or less.

Considering the potential for expansive soil movements of the surface soils, we expect that a reinforced slab will perform better than an unreinforced slab. Consideration should also be given to using a control joint spacing on the order of 2 feet in each direction for each inch of slab thickness.

In addition, our staff should observe the condition of the existing historic fill located below the new pavement and flatwork areas. For better slab performance, the existing fill could be excavated and recompacted under the direction of our staff at the time of construction as discussed in the "Conclusions" section. If the entire fill thickness will not be removed and properly compacted, at a minimum, the exposed subgrades will need to be scarified and compacted prior to placement aggregate base and any overly soft or weak fills encountered reworked and compacted and determine if a deeper soil removal is advisable in specific locations. The fill removal and compaction should follow the recommendations in the "Earthwork" section of this report.

**Exterior Flatwork**

Near surface concrete walkways and exterior flatwork should be at least 4 inches thick and should be constructed on at least 8 inches of Class 2 aggregate base. We recommend that exterior slabs-on-grade be constructed with a thickened edge to improve edge stiffness and to reduce the potential for water seepage under the edge of the slabs.

**Interior Slabs**

The concrete slab-on-grade floors should be constructed on a layer of non-expansive fill at least 8-inches thick and constructed on a properly prepared and compacted soil subgrade. Where the warehouse floor for the building will support vehicle loads, we recommend that the floor slab be designed more heavily reinforced and at least 5 to 6 inches in thickness, in our opinion.

**Moisture Considerations**

In areas where dampness of concrete floor slab would be undesirable, such as within building interior, concrete slabs s hould be underlain by at least 4 inches of clean, free-draining gravel, such as ½-inch to ¾-inch clean crushed rock with no more than 5 percent passing the ASTM No. 200 sieve. Pea gravel should not be used. The crushed rock should be compacted with vibratory equipment. To reduce vapor transmission up through at-grade concrete floor slabs, the crushed rock section should be covered with a high-quality, UV-resistant membrane vapor retarder meeting the minimum ASTM E 1745, Class C requirements or better. If moisture-sensitive floor coverings are proposed and/or additional protection is desired by the owner, a higher quality vapor barrier conforming to the requirements of ASTM E 1745 Class A, with a water vapor transmission rate less than or equal to 0.01 perms (such as 15-mil thick "Stego Wrap Class A") may be used rather than a Class C vapor retarder. The vapor retarder or barrier should be placed directly below the concrete slab. Sand above the vapor retarder/barrier is not recommended. The vapor retarder/barrier should be installed in accordance with ASTM E 1643. All seams and penetrations of the vapor barrier should be sealed in accordance with manufacturer's recommendations.

The permeability of concrete is affected significantly by the water:cement ratio of the mix, with lower water:cement ratios producing more damp-resistant slabs and higher strength. Where moisture protection is important and/or where the concrete will be placed directly on the vapor barrier, the water:cement ratio should be 0.45 or less. To increase the workability of the concrete, mid-range plasticizers may be added to the mix. Water should not be added to the mix unless the slump is less than specified and the water:cement ratio will not exceed 0.45. Other steps that may be taken to reduce moisture transmission through concrete slabs-on-grade include moist curing for 5 to 7 days and allowing the slab to dry for a period of two months or longer prior to placing floor coverings. Prior to installation of floor coverings, it may be appropriate to test the slab moisture content for adherence to the manufacturer's requirements to determine whether a longer drying time is necessary.

**RETAINING WALLS**

Retaining walls should be designed to resist lateral pressures from the adjacent native and fill soils and backfill. We recommend retaining walls with level backfill that are not free to deflect or rotate, be designed to resist an equivalent fluid pressure of 45 pounds per cubic foot, plus an additional uniform lateral pressure of 8H pounds per square foot, where H is the height of the wall in feet. Retaining walls with level backfill that are free

to rotate may be designed to resist an equivalent fluid pressure of 45 pounds per cubic foot. Wherever walls will be subjected to surcharge loads, the walls should be designed for an additional uniform lateral pressure equal to one-half of the surcharge load for restrained walls and one-third of the surcharge load for unrestrained walls.

Based on the site peak ground acceleration (PGA), on Seed and Whitman (1970); Al Atik and Sitar (2010); and Lew et al. (2010); seismic loads on retaining walls that can yield may be simulated by a line load of $5H^2$ (in pounds per foot, where H is the wall height in feet). Seismic loads on walls that cannot yield may be subjected to a seismic load as high as about $11H^2$. This seismic surcharge line load should be assumed to act at 1/3H above the base of the wall (in addition to the active wall design pressure of 45 pounds per cubic foot).

The retaining wall along the downslope side of the rear parking area should be designed for surcharge loads from vehicles and trucks which may park near the wall. To account for surcharge loading from the wheels of trucks (H10 loading with a 16 kip axle load) with the edge of the wheels located as close as about 2 feet from the back of the retaining wall, the retaining wall should be designed for an additional uniform lateral pressure equal to at least 245 pounds per square foot. If the edge of the wheels will be located as close as about 3 feet from the back of the retaining wall, the lateral pressure reduces to 130 pounds per square foot and at a wheel distance of about 4 feet, the lateral pressure reduces to 70 pounds per square foot.

To prevent buildup of water pressure from surface water infiltration, a subsurface drainage system should be installed behind the retaining wall. The drainage system should consist of adequate spacing between the lower wood lagging boards or a 4-inch diameter perforated pipe (perforations placed down) embedded in a section of 1/2- to 3/4-inch, clean, crushed rock at least 12 inches wide. Backfill above and behind the spacing in the wood lagging and/or perforated pipe should also consist of 1/2- to 3/4-inch, clean, crushed rock up to within about 1½ feet below finished grade. Filter fabric should be wrapped around the crushed rock to protect it from infiltration of native soil. The upper 1½ feet of the backfill should consist of compacted on-site soil. The perforated pipe (if used) should discharge to a free-draining outlet at a suitable location.

Miradrain, Enkadrain or other drainage fabrics approved by our office may be used for wall drainage as an alternative to the gravel drainage system described above. If used, the drainage fabric should extend from a depth of about 1 foot below the top of the wall backfill down to the drain pipe at the base of the wall. A minimum 12-inch wide section of ½-inch to ¾-inch clean crushed rock and filter fabric should be placed around the drainpipe, as recommended previously.

Backfill placed behind the walls should be compacted to at least 90 percent relative compaction using light compaction equipment. If heavy equipment is used for compaction of wall backfill, the walls should be temporarily braced. Preferably, the backfill behind the walls should be placed on level benches, rather than on sloping grades.

Backfill placed behind the walls should be compacted to at least 90 percent relative compaction using light compaction equipment. If heavy equipment is used for compaction of wall backfill, the walls should be temporarily braced. The backfill behind the walls should be placed on level benches, rather than directly on the sloping grade.

The retaining wall may be supported on a drilled pier foundation designed in accordance with the recommendations presented previously.

## VEHICLE PAVEMENTS

### Asphalt Concrete Pavements

Based on the anticipated composition of the surface soils, and an estimated traffic index for the proposed pavement loading conditions, we developed the minimum pavement sections presented in Table 4 on the next page based on Procedure 630 of the Caltrans Highway Design Manual.

The Traffic Indices used in our pavement thickness calculations are considered reasonable values for this development and are based on engineering judgment rather than on detailed traffic projections. Asphalt concrete and aggregate base should conform to and be placed in accordance with the requirements of the Caltrans Standard Specifications, latest edition, except that compaction should be based on ASTM Test D1557. These minimum pavement section thicknesses could be reduced if the soil subgrade is treated with lime.

We recommend that measures be taken to limit the amount of surface water that seeps into the aggregate base and subgrade below vehicle pavements, particularly where the pavements are adjacent to landscape areas. Seepage of water into the pavement base material tends to soften the subgrade, increasing the amount of pavement maintenance that is required and shortening the pavement service life. Deepened curbs extending 4-inches below the bottom of the aggregate base layer are generally effective in limiting excessive water seepage. Other types of water cutoff devices or edge drains may also be considered to maintain pavement service life.

**Table 4. Pavement Sections**
**Seismic Evaluation of the**
**MPWD Headquarters Building**
**Belmont, California**

| General Traffic Condition | Traffic Index | AC Thickness (inches) | Aggregate Base* (inches) | Total Section (inches) |
|---|---|---|---|---|
| Automobile Parking | 4.0 | 3.0 | 7.0 | 9.0 |
| Automobile Access | 4.5 | 3.0 | 8.0 | 11.0 |
| Light Truck Access | 5.0 | 3.0 | 10.0 | 13.0 |
| Moderate Truck Access | 6.0 | 4.0 | 12.0 | 16.0 |
| Heavy Truck Access | 7.0 | 4.0 | 15.0 | 19.0 |

*Caltrans Class 2 Aggregate Base (minimum R-value = 78).

**Portland Cement Concrete Pavements**

If Portland Cement Concrete (PCC) pavements are to be used on portions of the site, the minimum required thickness of the PCC pavements should be based on the anticipated traffic loading, the modulus of rupture of the concrete that will be used for pavement construction, and the composition and supporting characteristics of the soil subgrade below the pavement section.

To provide a general guideline for the minimum required thickness of PCC pavements, we used information in the Portland Cement Association publication titled "Thickness Design for Concrete Highway and Street Pavements." We assumed "low" subgrade support from the on-site soils, considering typical residential street traffic (up to 25 daily trucks with maximum single axle loads of 22 kips and maximum tandem axle loads of 36 kips), aggregate-interlock joints (i.e. no dowels), no concrete shoulder or curb, a modulus of rupture of concrete of 550 psi (which correlates to a concrete compressive strength of approximately 3,700 psi), at least 10 inches of Class 2 aggregate base below the PCC pavement, and 20-year pavement service life. Sufficient control joints should be incorporated in the design and construction to limit and control cracking.

Based on the design assumptions described above, a PCC pavement with a thickness of at least 6 inches would be adequate for average daily truck traffic (ADTT) of one; a thickness of at least 6.5 inches would be adequate for ADTT of 13; and a thickness of at least 7 inches would be adequate for ADTT of 110.

## EARTHWORK

### Clearing and Subgrade Preparation

All deleterious materials, such as existing pavements, utilities to be abandoned, vegetation, root systems, surface fills, topsoil, etc. should be cleared from areas of the site to be built on or paved. The actual stripping depth should be determined by a member of our staff in the field at the time of construction. Excavations that extend below finished grade should be backfilled with structural fill that is water-conditioned, placed, and compacted as recommended in the section of this report titled “Compaction.”

After the site has been properly cleared, stripped, and excavated to the required grades, exposed soil surfaces in areas to receive structural fill or slabs-on-grade should be scarified to a depth of 6 inches, moisture conditioned, and compacted as recommended for structural fill in the section of this report titled "Compaction." On-site soils, foundation and utility trench excavations, and slab and pavement subgrades should be kept in a moist condition throughout the construction period.

### Existing Fill Recommendations

In general, it would be beneficial to excavate and compact the existing fill below pavements, exterior flatwork, and other site improvements, although depending on the location of the improvements, recompaction of all the fill may not be feasible. As discussed earlier, where overly soft or weak fills are encountered, we recommend that these fill areas be removed and compacted and our field staff should provide guidance if reworking deeper portions of the fill is advisable at certain locations, where feasible. Care should be taken to not undermine the existing building foundation.

In general, the existing fill should be excavated down to stiff native soil and compacted under our direction. The resulting excavation bottom and sidewalls should be cut (benched) into as the structural backfill is being placed and compacted as discussed below. Imported backfill materials should be approved by a member of our staff prior to delivery to the site. The backfill should be moisture conditioned, and compacted as recommended in the section of the report titled "Compaction." A member of our staff should observe and test during re-working of the fill and placement of new fill, as required.

### Subgrade Stabilization

Wet and potentially unstable surface soils may be encountered in some areas of the site. Depending upon the extent of the future site work, stabilization of wet and/or unstable

soils exposed during earthwork construction may be required in at least some areas by means of lime-treatment, installation of fabrics or geogrids, or other suitable methods.

For a lime-treatment option, where the subgrade is overly wet and/or too soft to compact as a structural fill, the soil moisture may be sufficiently reduced and strength increased to continue earthwork operations by mixing the soil with an additive, such as quicklime (CaO), kiln-dust, or cement. We recommend that site preparation and lime-treatment of the subgrade soils be performed as described below and with the applicable portions of Caltrans Standard Specifications, Section 24. On a preliminary basis, we recommend that 4 to 5 percent (based on dry unit weight of soil) "quicklime-plus" be mixed into the subgrade to at least 15-inch thick depth. All vegetation and organically-contaminated fill should be removed from the soil to be lime-treated. The lime should be well mixed with the soil and allowed to set for 24 hours prior to compaction. The lime-treated soil subgrade should be compacted to at least 90 percent relative compaction based on ASTM Test D1557.

We recommend that lime treatment be performed by a lime treatment specialty contractor. Details for the lime-treatment operation may be modified if recommended in advance by the specialty contractor and approved by one of our geotechnical engineers. A member of our staff should observe and test during site preparation, lime treatment, and compaction of the treated subgrade.

**Material For Fill**

All on-site soil containing less than 3 percent organic material by weight (ASTM D2974) may be suitable for use as structural fill (but not for non-expansive fill). Structural fill should not contain rocks or pieces larger than 6 inches in greatest dimension and no more than 15 percent larger than 2.5 inches. Imported, non-expansive fill should have a Plasticity Index no greater than 15, should be predominately granular, and should have sufficient binder so as not to slough or cave into foundation excavations or utility trenches. A member of our staff should approve proposed import materials prior to their delivery to the site.

**Compaction**

Scarified soil surfaces and all structural fill should be compacted in uniform lifts no thicker than 8-inches in uncompacted thickness, conditioned to the appropriate moisture content, and compacted as recommended for structural fill in Table 5 on the following page. The relative compaction and moisture content recommended in Table 5 is relative to ASTM Test D1557, latest edition.

**Table 5. Compaction Recommendations**
**Seismic Evaluation of the**
**MPWD Headquarters Building**
**Belmont, California**

| | Relative Compaction* | Moisture Content* |
|---|---|---|
| **General** | | |
| • Scarified subgrade in areas to receive structural fill. | 90 percent | Above optimum |
| • Structural fill composed of native soil. | 90 percent | Above optimum |
| • Structural fill composed of non-expansive fill. | 90 percent | Above optimum |
| • Structural fill below a depth of 4 feet. | 92 percent | Above optimum |
| **Pavement Areas** | | |
| • Upper 6-inches of soil below baserock. | 95 percent | Near optimum |
| • Aggregate baserock. | 95 percent | Near optimum |
| **Utility Trench Backfill** | | |
| • On-site soil. | 90 percent | Near optimum |
| • Imported sand | 95 percent | Near optimum |

* Relative to ASTM Test D1557, latest edition.

**Temporary Slopes, Excavations and Dewatering**

The contractor should be responsible for the design and construction of all temporary slopes, any required shoring, and protection of the residence during the repair. Shoring and bracing should be provided in accordance with all applicable local, state, and federal safety regulations, including current OSHA excavation and trench safety standards.

Temporary slopes less than 4 feet deep excavated in the native soils should be capable of standing near-vertical for short construction periods with minimal bracing. Field modification of temporary cut slopes may be required. Unstable materials encountered on slopes during excavation should be trimmed off even if this requires cutting the slopes back to a flatter inclination.

As discussed earlier, shallow ground water could be encountered during pavement construction or trenching. Therefore, construction dewatering may be required depending on the depth of excavations and the ground water level at the time of excavation.

Temporary dewatering during grading should be the responsibility of the contractor. Preferably, dewatering should be carried out in such a manner as to maintain the ground water a minimum of 2 feet below the bottom of excavations to allow for proper compaction of the excavated subgrade and structural fill. The contractor should design a system to achieve this. Depending upon the depth and dimensions of the excavations, we anticipate that dewatering may be able to be accomplished from pumping from sumps.

Protection of the existing building and other site improvements during grading should be the responsibility of the contractor. The contractor should exercise care when cutting and benching adjacent to the residence to reduce the potential for damage to occur. In our experience, a preconstruction survey is generally performed to document existing conditions prior to construction, with intermittent monitoring of the structures during construction.

**Finished Slopes**

We recommend that finished slopes be cut or filled to an inclination no steeper than 3:1 (horizontal:vertical). Exposed slopes may be subject to minor sloughing and erosion, which could require periodic maintenance. We recommend that all slopes and soil surfaces disturbed during construction be planted with erosion-resistant vegetation.

**Surface Drainage**

Finished grades should be designed to prevent ponding and to drain surface water away from foundations and edges slabs and pavements, and toward suitable collection and discharge facilities. Slopes of at least 2 percent are recommended for flatwork and pavement areas with 5 percent preferred in landscape areas within 8 feet of the structures, where possible. At a minimum, splash blocks should be provided at the ends of downspouts to carry surface water away from perimeter foundations. Preferably, downspout drainage should be collected in a closed pipe system that is routed to a storm drain system or other suitable discharge outlet.

Drainage facilities should be observed to verify that they are adequate and that no adjustments need to be made, especially during first two years following construction. We recommend that an as-built plan be prepared to show the locations of all surface and subsurface drain lines and clean-outs. Drainage facilities should be periodically checked to verify that they are continuing to function properly. The drainage facilities will probably need to be periodically cleaned of silt and debris that may build up in the lines.

## FUTURE SERVICES

### Plan Review

Romig Engineers should review the completed grading and foundation plans for conformance with the recommendations presented in this report. We should be provided with these plans as soon as possible upon their completion in order to limit the potential for delays in the permitting process that might otherwise be attributed to our review process. In addition, it should be noted that many of the local building and planning departments now require "clean" geotechnical plan review letters prior to acceptance of plans for their final review. Since our plan reviews often do result in recommendations for additional changes to the plans, our generation of a "clean" review letter often requires two iterations. At a minimum, we recommend that the following note be added to the general note sections of the architectural, structural, and civil plans:

"Earthwork, utility trench backfilling, slab subgrade preparation, foundation and slab construction, pier drilling, pavement construction, and site drainage should be performed in accordance with the geotechnical report prepared by Romig Engineers, Inc., dated March 8, 2018. Romig Engineers should be notified at least 48 hours in advance of any earthwork or foundation construction and should observe and test during earthwork and foundation construction as recommended in the geotechnical report."

### Construction Observation and Testing

Earthwork and foundation construction should be observed and tested by us to 1) confirm that subsurface conditions are compatible with those used in the analysis and design; 2) observe compliance with the design concepts, specifications and recommendations; and 3) allow design changes in the event that subsurface conditions differ from those anticipated. The recommendations in this report are based on a limited number of borings. The nature and extent of variation across the site may not become evident until construction. If variations are exposed during construction, it will be necessary to reevaluate our recommendations.

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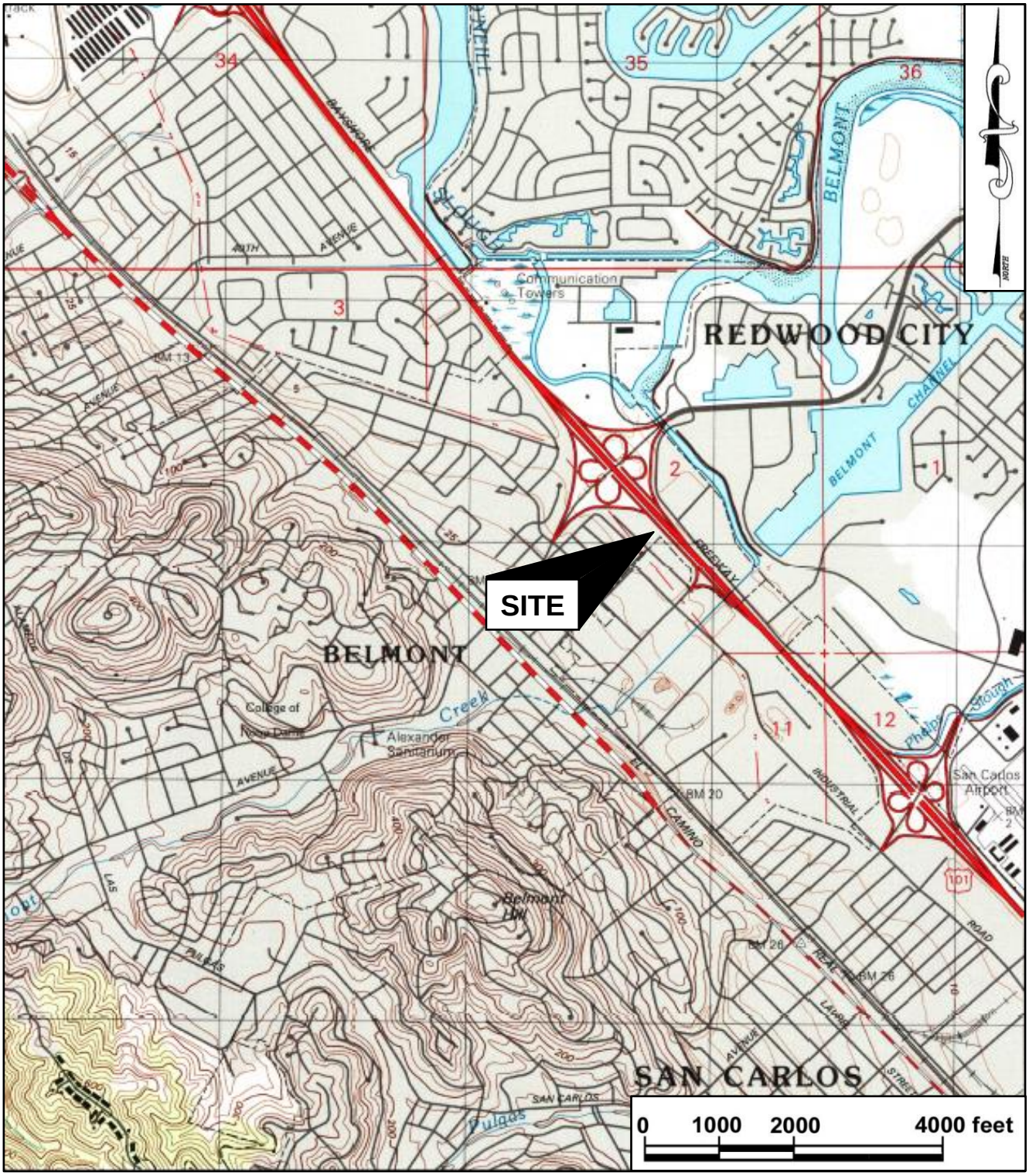
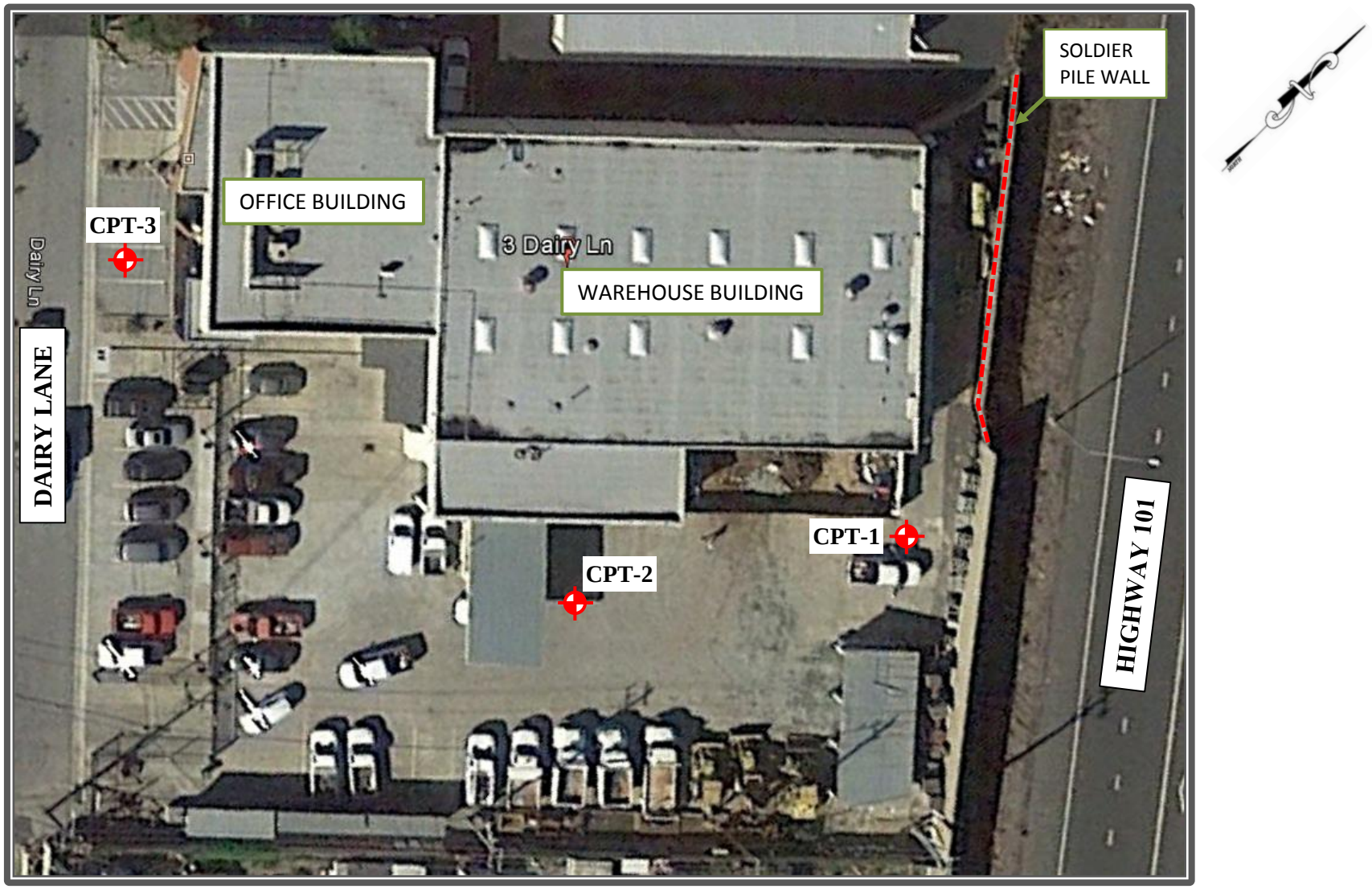



Scale: 1 inch = 2000 feet
Base is United States Geological Survey San Mateo 7.5 Minute Quadrangle, dated 1997.

**VICINITY MAP** **FIGURE 1**
SEISMIC EVALUATION OF THE MDWD HEADQUARTERS BUILDING MARCH 2018
BELMONT, CALIFORNIA PROJECT NO. 4164-1




**LEGEND**

**CPT-3** Approximate Location of Cone Penetrometer Test.
Approximate Scale: 1 inch = 40 feet.
Base is aerial photo obtained from Google Earth, 2017.

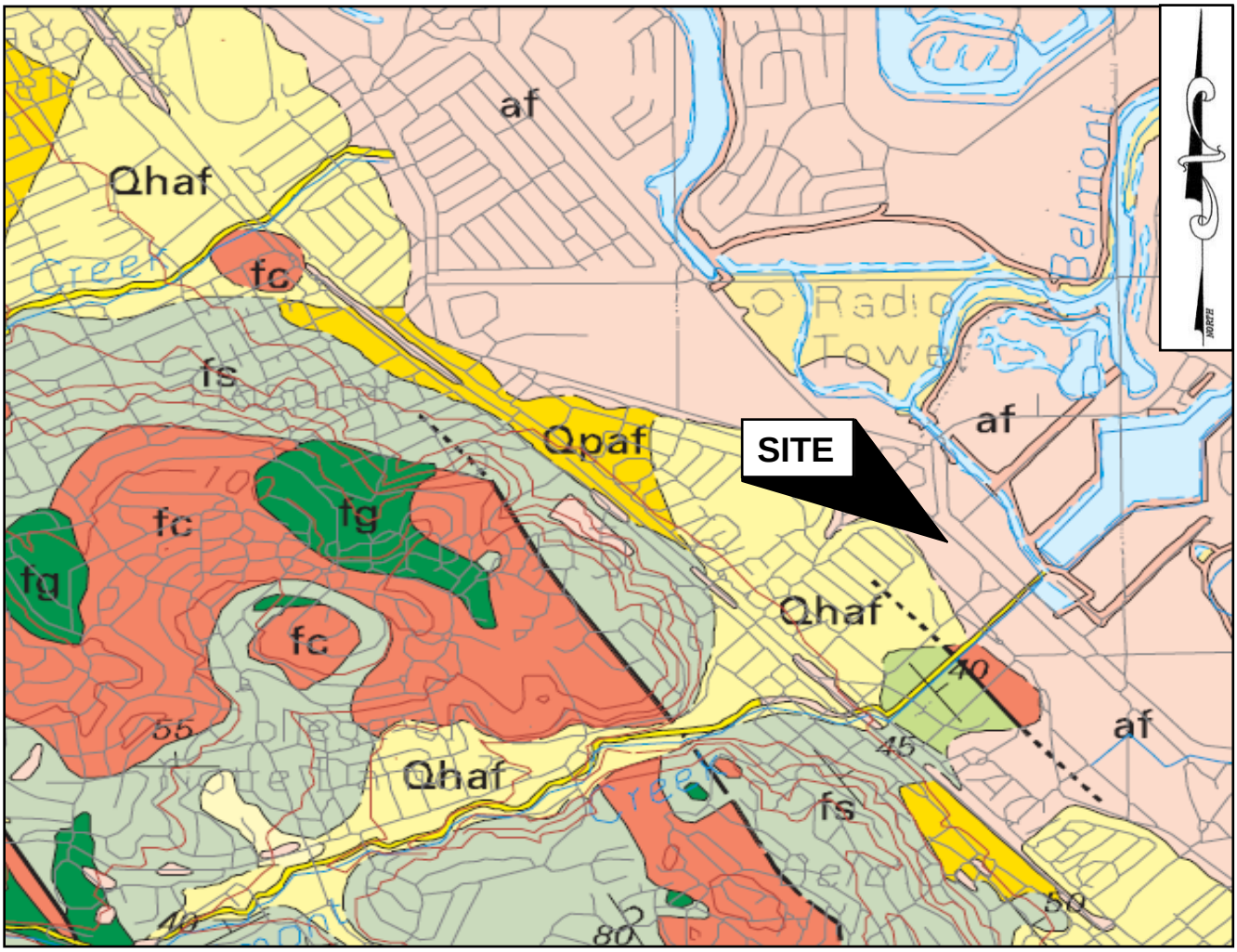
0 20 40 80 feet

**SITE PLAN** **FIGURE 2**

SEISMIC EVALUATION OF THE MDWD HEADQUARTERS BUILDING
BELMONT, CALIFORNIA

MARCH 2018
PROJECT NO. 4164-1

ROMIG ENGINEERS




**LEGEND**

| | |
|---|---|
| af | Artifical fill |
| Qhaf | Alluvial fan and fluvial deposits |
| Qpaf | Alluvial fan and fluvial deposits |
| fs | Franciscan Complex Sandstone |
| fg | Franicscan Complex Greenstone |
| fc | Franciscan Complex Chert |

Geologic Contact - dashed where approximate, dotted where inferred.

Fault - dashed where approximate, dotted where inferred.

35 Strike and dip of bedding

0 1000 2000 4000 feet

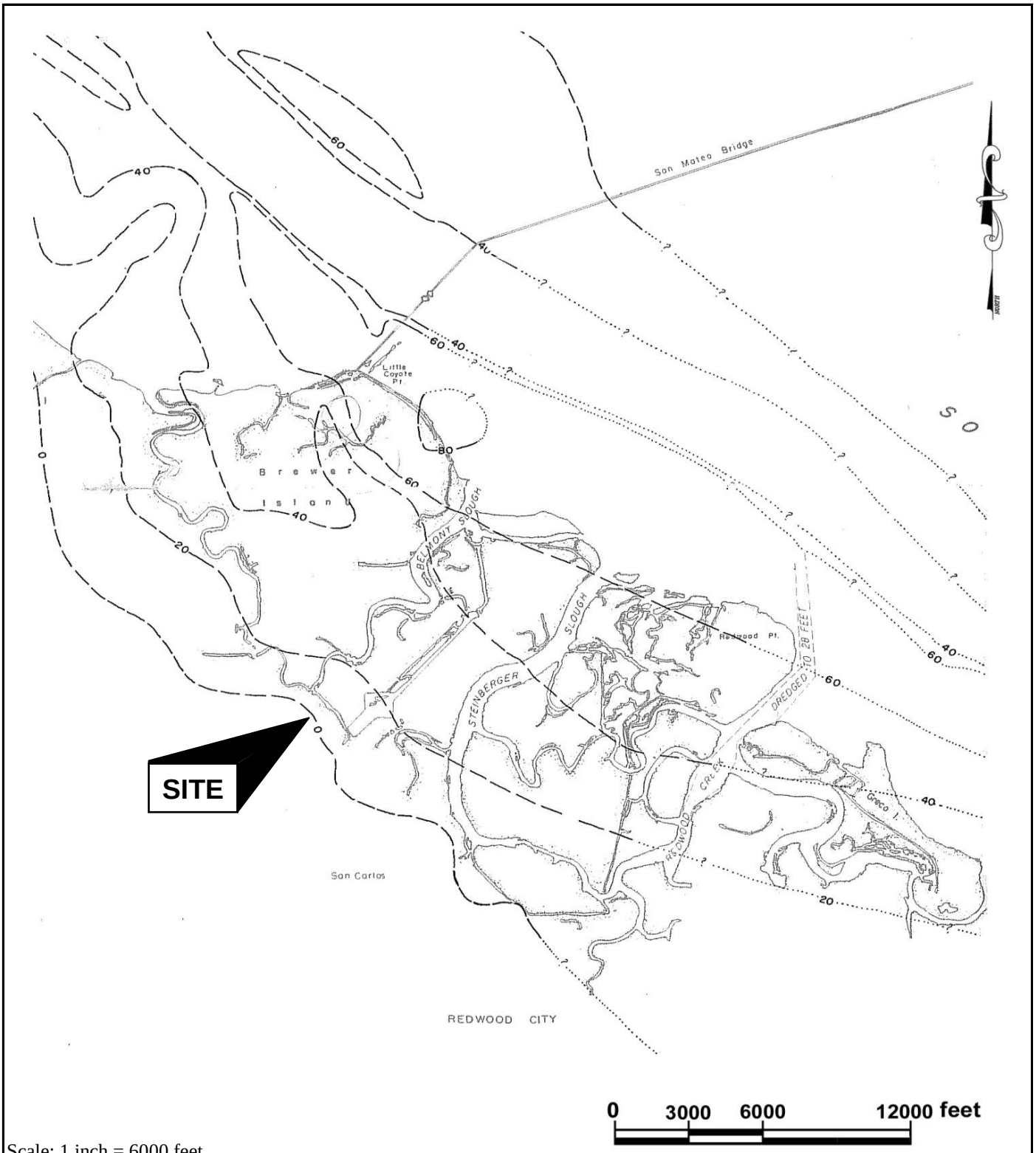
Scale: 1 inch = 2000 feet

Base is USGS Geologic Map of the Onshore Part of San Mateo County (Brabb, Graymer, and Jones, dated 1998).

**VICINITY GEOLOGIC MAP** **FIGURE 3**

SEISMIC EVALUATION OF THE MDWD HEADQUARTERS BUILDING MARCH 2018

BELMONT, CALIFORNIA PROJECT NO. 4164-1



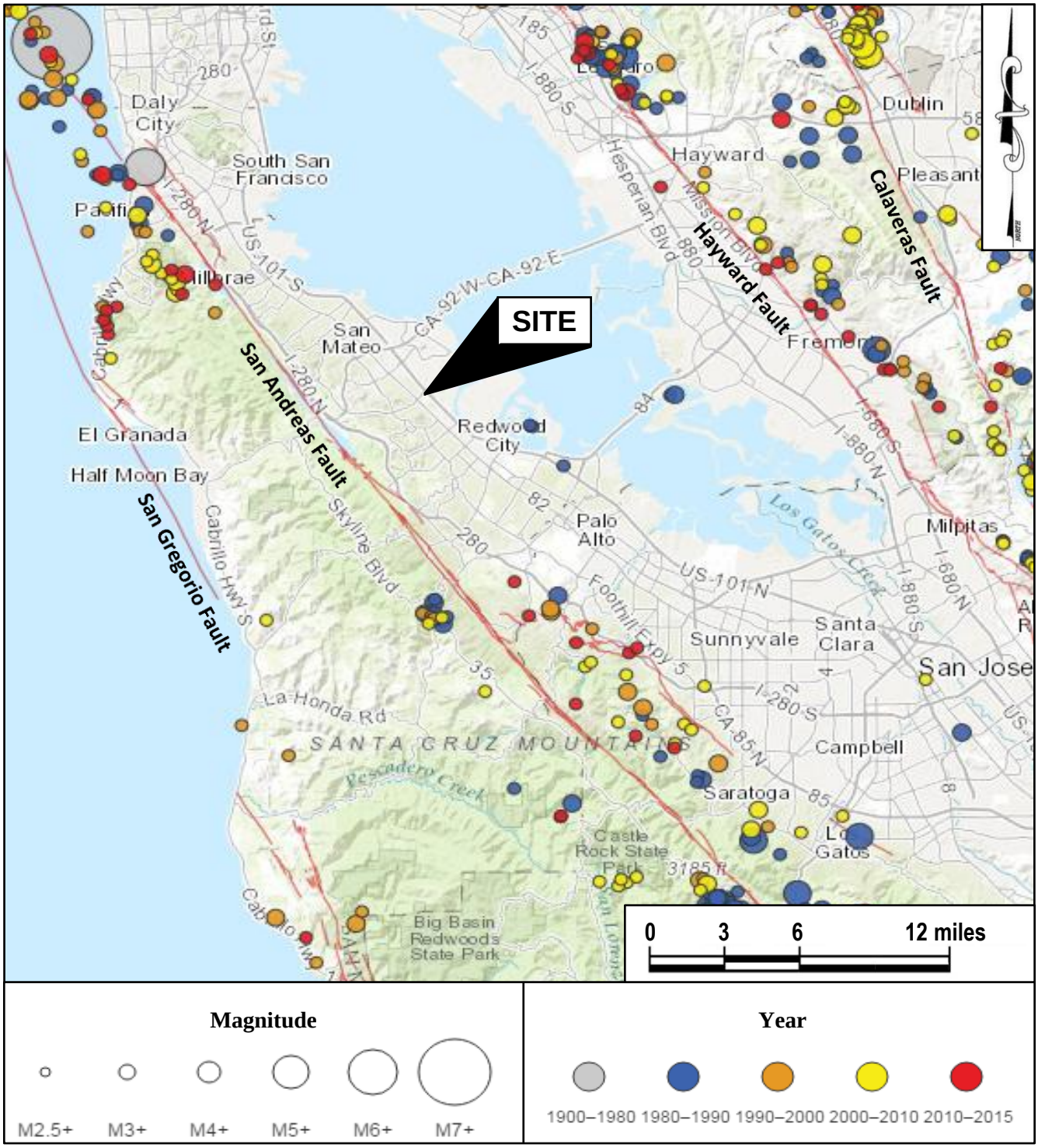

Scale: 1 inch = 6000 feet

Base is CDMG Geologic and Engineering Aspects of San Francisco Bay Fill, Special Report 97, Map of "Thickness of Younger Bay Mud," dated 1969

**CONTOUR MAP OF YOUNG BAY MUD THICKNESS** **FIGURE 4**

SEISMIC EVALUATION OF THE MDWD HEADQUARTERS BUILDING SEPTEMBER 2017

MARCH 2018 PROJECT NO. 4164-1




Earthquakes with M5+ from 1900 to 1980, M2.5+ from 1980 to January 2015. Faults with activity in last 15,000 years. Based on data sources from Northern California Earthquake Data Center and USGS Quaternary Fault and Fold Database, accessed May 2015.

**REGIONAL FAULT AND SEISMICITY MAP** **FIGURE 5**
SEISMIC EVALUATION OF THE MDWD HEADQUARTERS BUILDING MARCH 2018
BELMONT, CALIFORNIA PROJECT NO. 4164-1

## APPENDIX A

## SUMMARY OF CONE PENETRATION TEST DATA

The Cone Penetration Test (CPT) was performed by Middle Earth Geo Testing, Inc. using an integrated electronic cone system. The CPT sounding was performed in accordance with ASTM standards (D 5778-95). A 20 ton capacity cone was used for the sounding. The cone had a tip area of 10 $cm^2$ and friction sleeve area of 150 $cm^2$. The log of our CPT is attached in this Appendix.

Since the location of the CPT was established by pacing using the site plan provided to us, the location of the CPT should be considered accurate only to the degree implied by the method used.

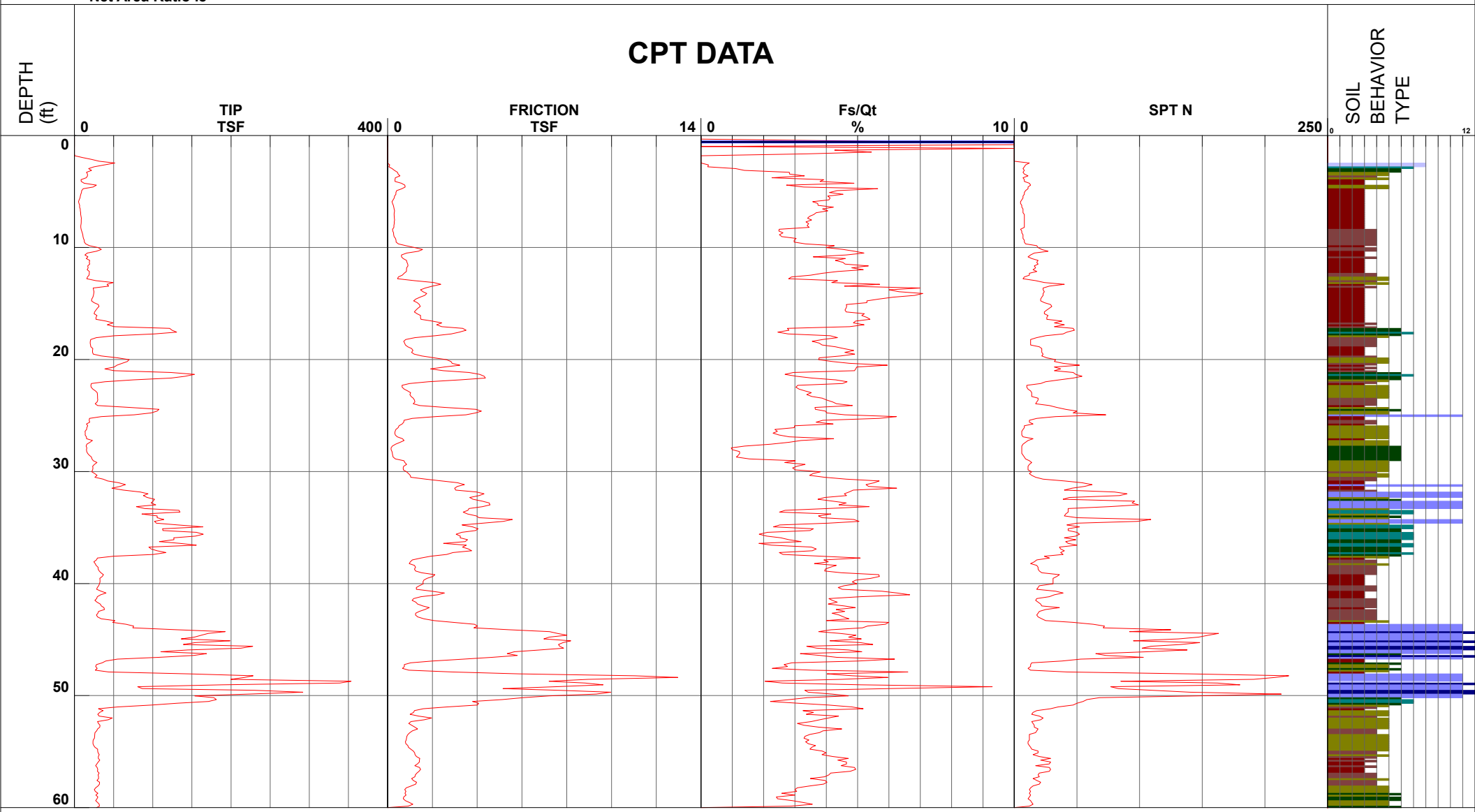
The CPT log and related information depict our interpretation of subsurface conditions only at the specific location and time indicated. Subsurface conditions and ground water levels at other locations may differ from conditions at the locations where sampling was conducted. The passage of time may also result in changes in the subsurface conditions.

# Romig Engineers

| | | | | | |
|---|---|---|---|---|---|
| Project | MPWD Seismic Assessment | Operator | RB KK | Filename | SDF(201).cpt |
| Job Number | 4164-1 | Cone Number | DDG1333 | GPS | |
| Hole Number | CPT-01 | Date and Time | 8/7/2017 1:09:46 PM | Maximum Depth | 60.20 ft |
| EST GW Depth During Test | | 5.00 ft | | | |

Net Area Ratio .8

## CPT DATA




1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)



Cone Size 10cm squared

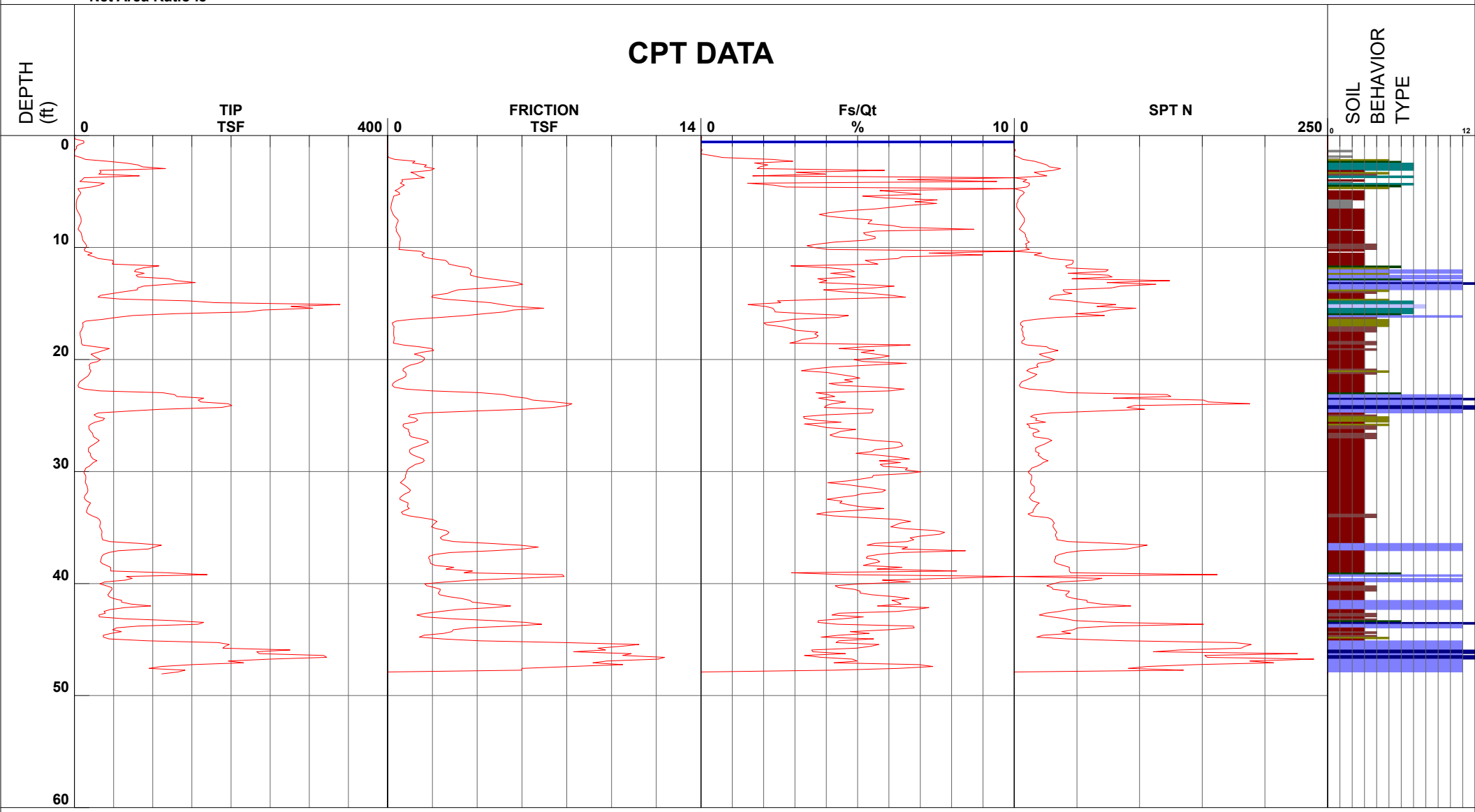
S*Soil behavior type and SPT based on data from UBC-1983

# Romig Engineers

| | | | | | |
|---|---|---|---|---|---|
| Project | MPWD Seismic Assessment | Operator | RB KK | Filename | SDF(202).cpt |
| Job Number | 4164-1 | Cone Number | DDG1333 | GPS | |
| Hole Number | CPT-02 | Date and Time | 8/7/2017 2:21:02 PM | Maximum Depth | 48.06 ft |
| EST GW Depth During Test | | 4.00 ft | | | |

Net Area Ratio .8

## CPT DATA




1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)



Cone Size 10cm squared

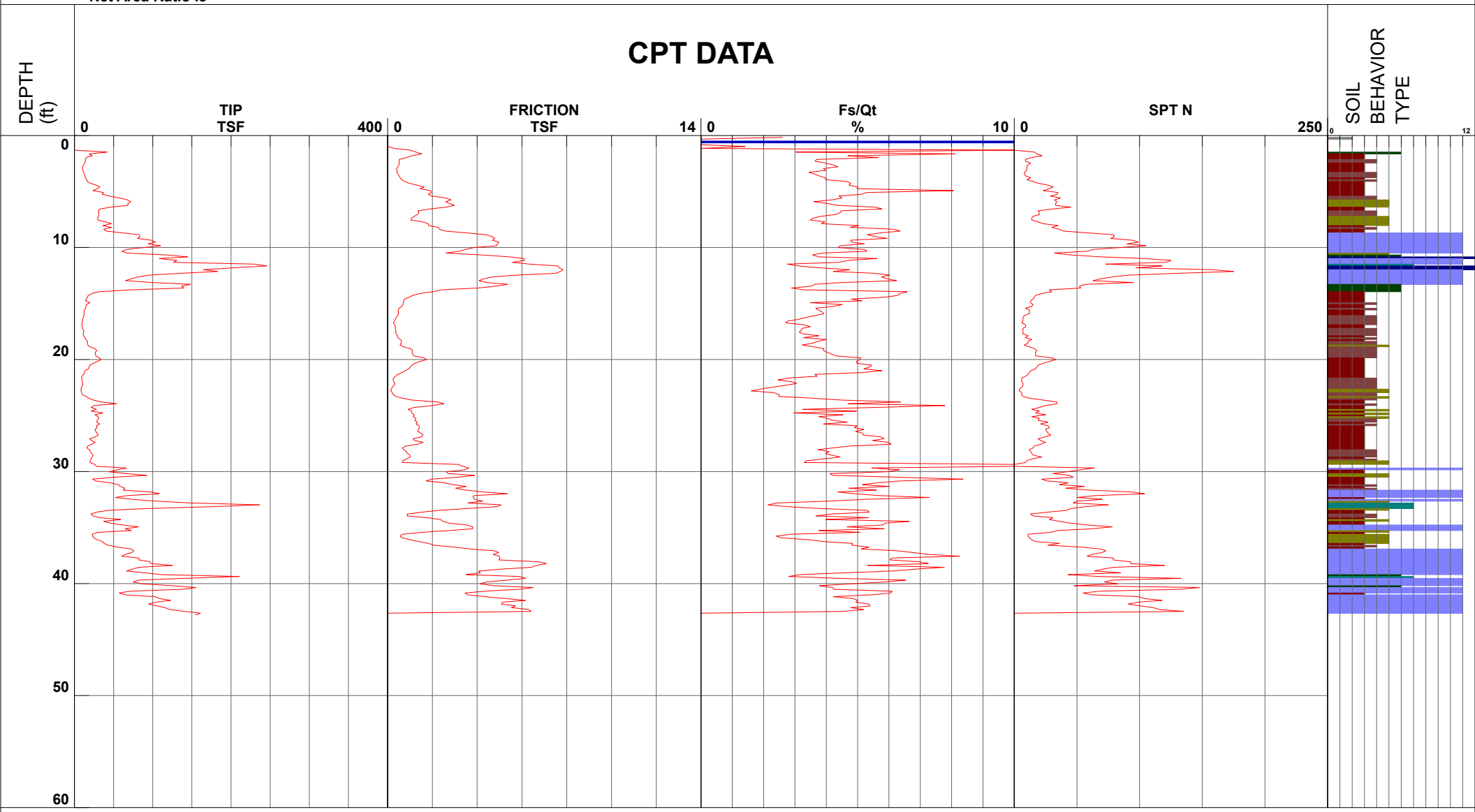
S*Soil behavior type and SPT based on data from UBC-1983

# Romig Engineers

| | | | | | |
|---|---|---|---|---|---|
| Project | MPWD Seismic Assessment | Operator | RB KK | Filename | SDF(203).cpt |
| Job Number | 4164-1 | Cone Number | DDG1333 | GPS | |
| Hole Number | CPT-03 | Date and Time | 8/7/2017 3:24:03 PM | Maximum Depth | 42.81 ft |
| EST GW Depth During Test | | 4.00 ft | | | |

Net Area Ratio .8

## CPT DATA




1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)



Cone Size 10cm squared

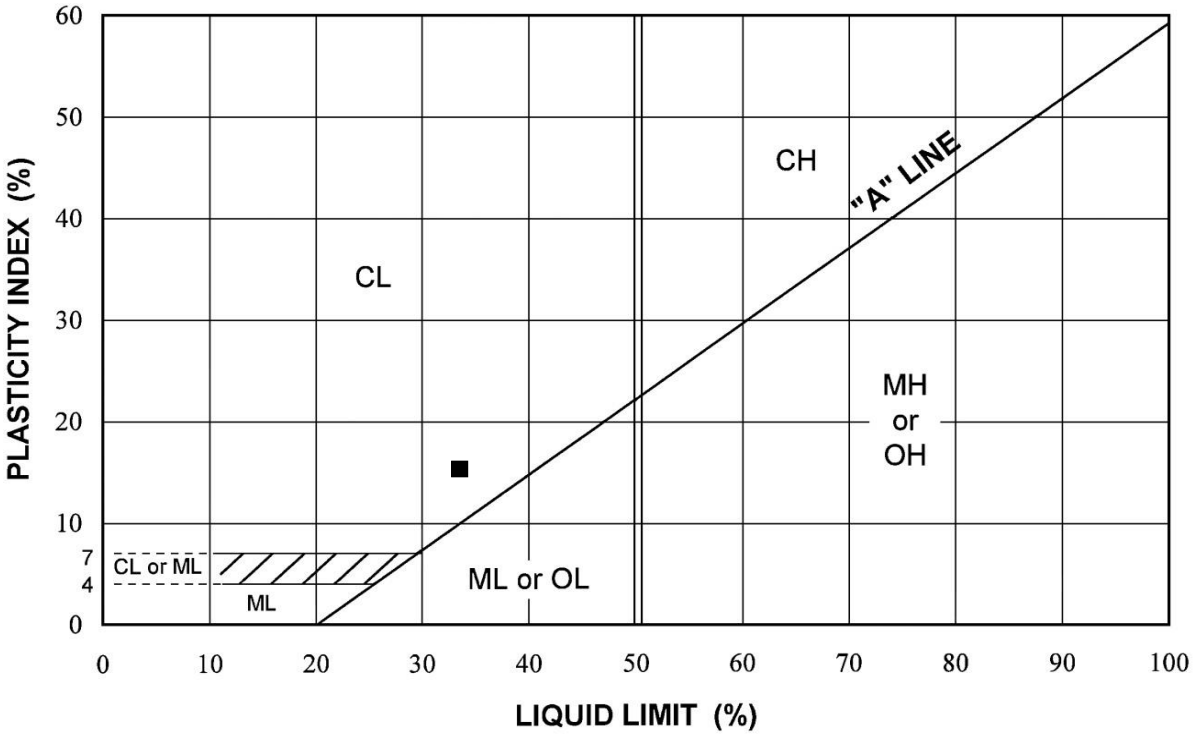
S*Soil behavior type and SPT based on data from UBC-1983

# APPENDIX B

## LABORATORY TESTS

Samples from subsurface exploration were selected for tests to help evaluate the physical and engineering properties of the soils that were encountered. The tests that were performed are briefly described below.

The Atterberg Limits were determined on one sample of near surface soil in accordance with ASTM D4318. The Atterberg limits are the moisture content within which the soil is workable or plastic. The results of this test are presented in Figure B-1.




| Chart Symbol | Boring Number | Sample Depth (feet) | Water Content (percent) | Liquid Limit (percent) | Plasticity Index (percent) | Liquidity Index (percent) | Passing No. 200 Sieve (percent) | USCS Soil Classification |
|---|---|---|---|---|---|---|---|---|
| ■ | CPT-2 | 0-2 | 15 | 33 | 15 | -20 | | CL |

**PLASTICITY CHART** **FIGURE B-1**

SEISMIC EVALUATION OF THE MDWD HEADQUARTERS BUILDING MARCH 2018

BELMONT, CALIFORNIA PROJECT NO. 4164-1

## APPENDIX C

## LIQUEFACTION EVALUATION

To evaluate the potential for earthquake-induced liquefaction of the soils at the site, we performed a liquefaction analysis of the CPT data using the program CLiq, developed by GeoLogismiki. The program applied several published methodologies, including Roberston (NCEER, 2009), Idriss and Boulanger 2014, and Moss et. al 2006. The results of our liquefaction evaluation and the details regarding the potentially liquefiable layers are presented on the attached Figures C-1 through C-3.

**Project: Seismic Evaluation of the MDWD Headquarters Building**

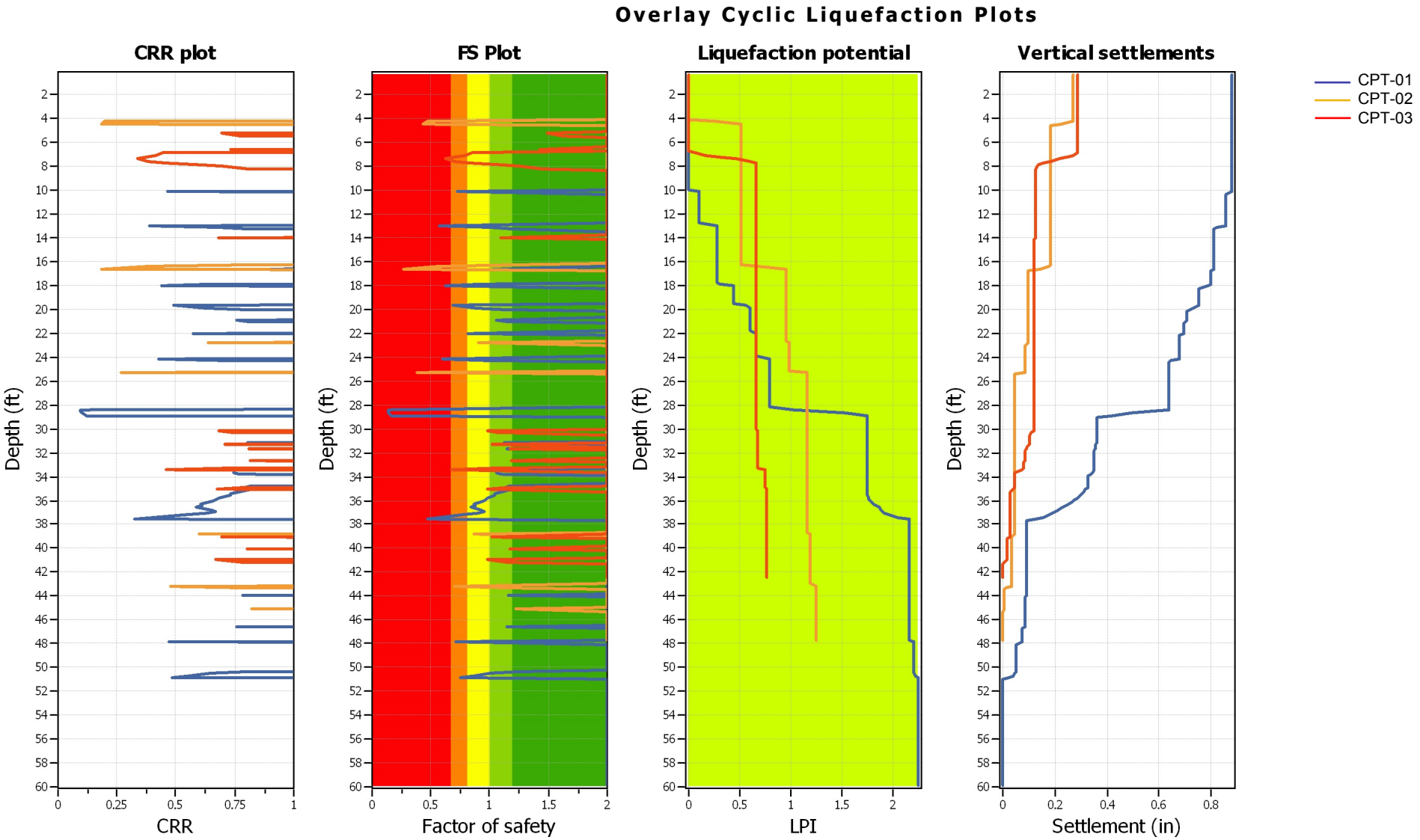



FIGURE C-1 LIQUEFACTION ANALYSIS USING ROBERTSON NCEER

**Project: Seismic Evaluation of the MDWD Headquarters Building**

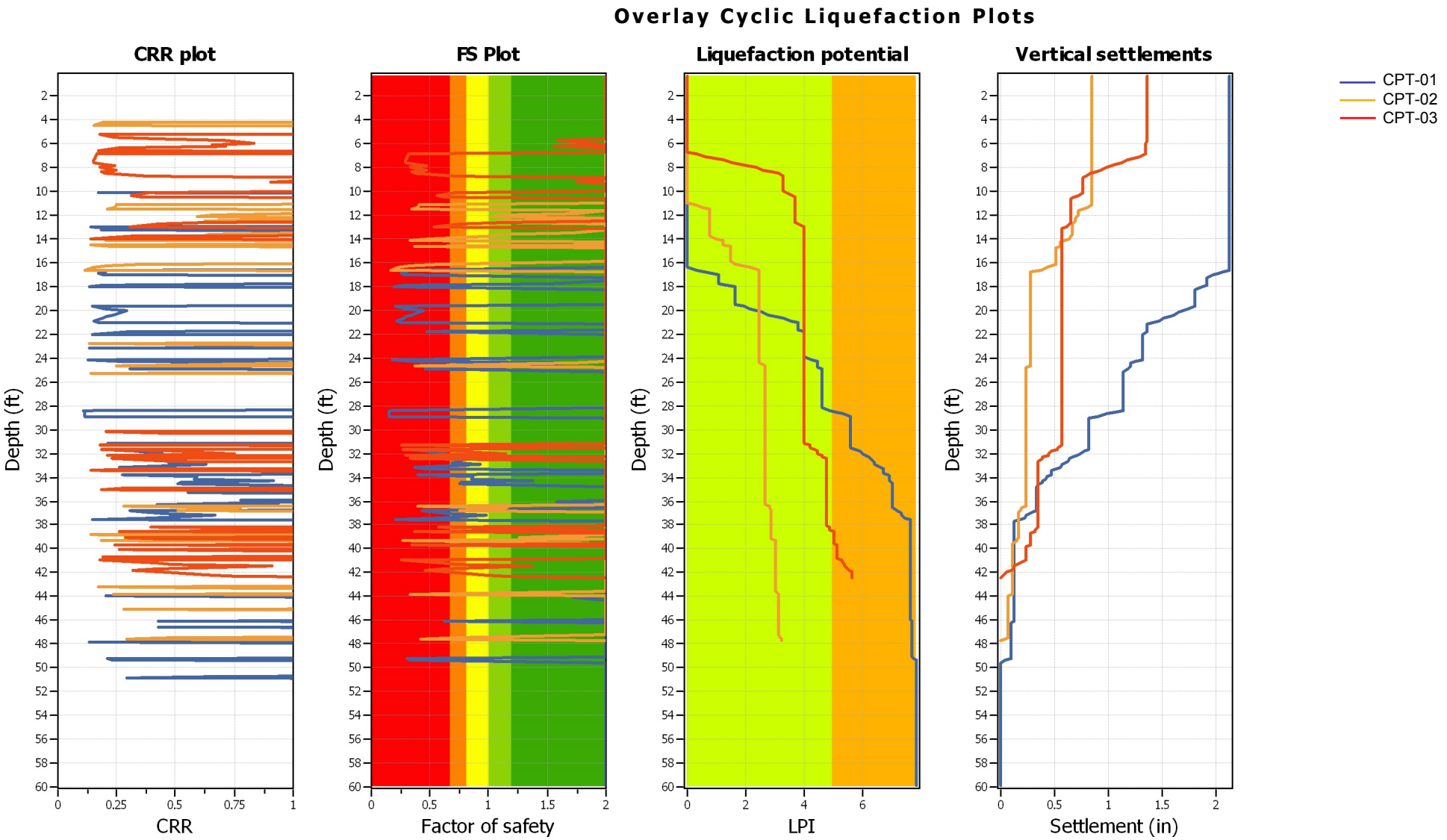



FIGURE C-2 LIQUEFACTION ANALYSIS USING IDRISS AND BOULANGER 2014

**Project: Seismic Evaluation of the MDWD Headquarters Building**

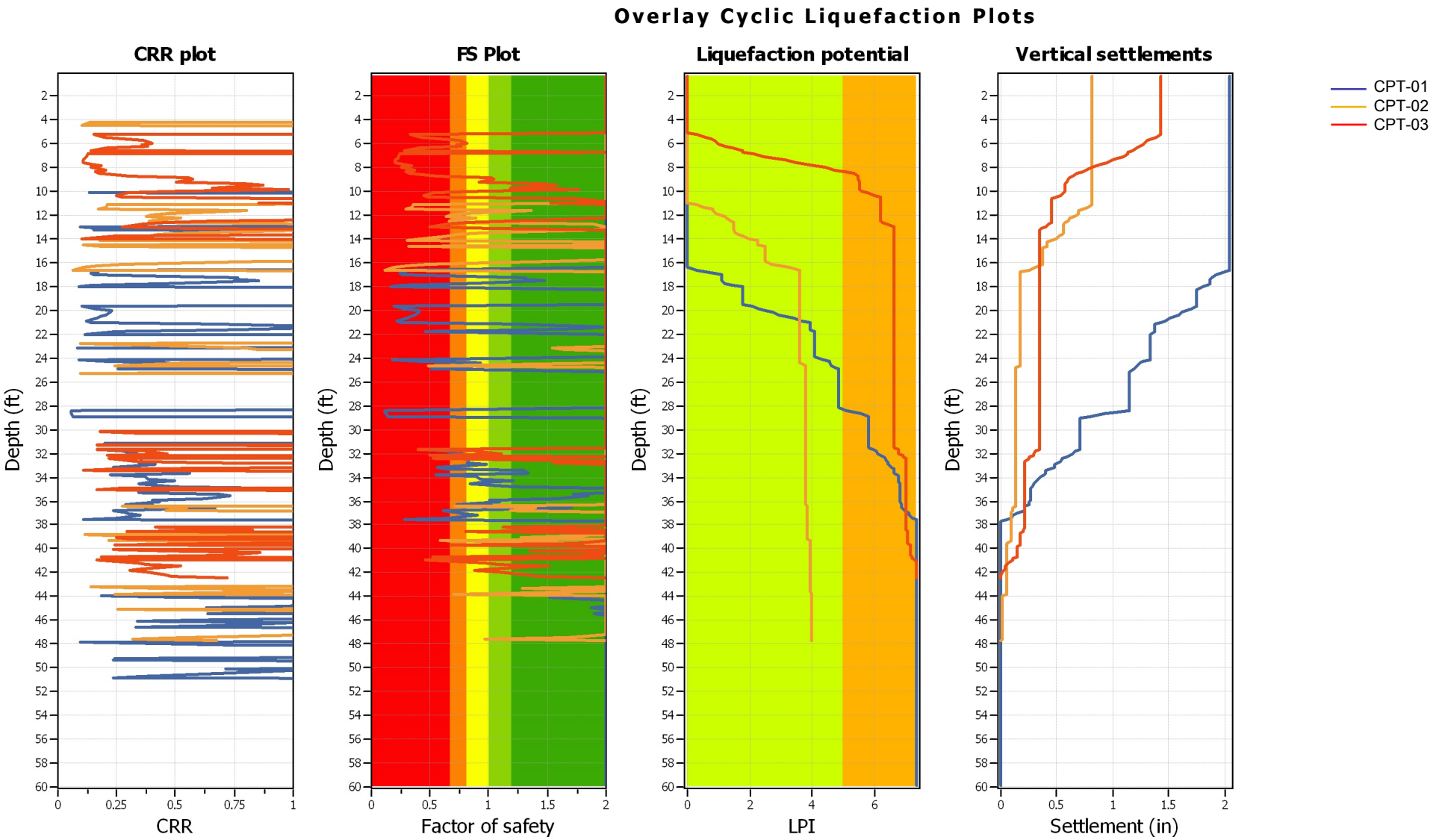
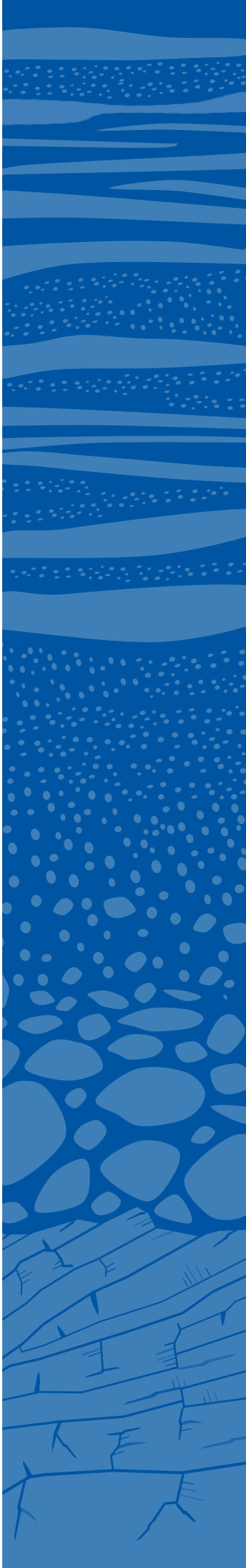



FIGURE C-3 LIQUEFACTION ANALYSIS USING MOSS ET. AL 2006




**ROMIG ENGINEERS, INC.**

1390 El Camino Real, 2nd Floor

San Carlos, California 94070

Phone: (650) 591-5224

www.romigengineers.com

MID-PENINSULA WATER DISTRICT

# *AGENDA ITEM NO. 8.D.*

DATE: March 22, 2018

TO: Board of Directors

FROM: Rene A. Ramirez, Operations Manager

---

**SUBJECT: CONSIDER RESOLUTION 2018-08 ESTABLISHING SURPLUS ITEMS LIST 18-01 AND DECLARING ITEMS IN DISTRICT INVENTORY AS SURPLUS, AND AUTHORIZING STAFF TO SELL THE ITEMS VIA GOVDEALS.COM**

---

## RECOMMENDATION

Adopt Resolution No. 2018-08 establishing a list known as "Surplus Items List 18-01" and declaring 27 items, or lots of items, in District inventory surplus (see attached Exhibit A for description), and authorizing staff to place the items for sale on a public auction bid site known as GovDeals.com.

## FISCAL IMPACT

It is estimated that the auction of these 27 items could generate approximately $80,000 in revenue. GovDeals.com fee/commission is 10% of the item's sales price and will be paid by the successful bidder. The proceeds from the sale of this equipment would be miscellaneous revenue, but staff plans to use the proceeds to replace the backhoe with a new mini-excavator and the service truck with a smaller one (new or used), including a crane for heavy lifting. Those items will be in the FY 2018/2019 capital outlay budget.

## DISCUSSION

The equipment/items identified on Exhibit A are obsolete and/or no longer being used by the District. Staff, with Board approval, used GovDeals.com to auction nine surplus items late last year, and the results were quite successful. All surplused items were sold. GovDeals.com is a public auction site used by many public agencies to dispose of public property at no cost to the agency. This auction website is open to anyone with internet access and auctions everything from used desks to fire trucks. GovDeals.com derives their fee/commission from a 10% fee added to the successful bid, which is very similar to car auction sites. For a staff our size, GovDeals.com appears to be a very efficient way to deal with surplus items. The first step is to have materials declared surplus and authorize the sale.

Attachments: Resolution 2018-08
Exhibit A – Surplus Items List 18-01

---

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ WARDEN_____ VELLA_____ STEUBING_____ LINVILL_____ ZUCCA____

MID-PENINSULA WATER DISTRICT

# EXHIBIT A

**SURPLUS ITEMS LIST 18-01**

1. 2005 Peterbilt PB335 Service Truck w/Scelzi Service Body, Auto-Crane model 5005H, Compressor and Lift-Gate; 10,616 miles; 1,767 engine hours; VIN: 2NPLHD6X66M650845
2. 2001 Cat 420D 4WD Loader/Backhoe w/clam shell bucket and extenda-stick bucket; 4,369 hours; VIN: CAT0420DLFDP03187.
3. Wacker RT560 18 HP, Diesel Powered Vibratory Roller. 464 Hours; Serial#: 5112122
4. Utility Trailer w/5-ft wide and 8-ft long bed.
5. Ingersoll Rand Tilt Deck utility trailer ID#: 258706UHF327
6. GE Double-Door Built-in Refrigerator, Monogram Series.
7. GE Combination Microwave/Range Hood, Model JVM1750SM1SS.
8. GE 30-inch Electric Range, Model JB850SP2SS.
9. GE Dishwasher, Model GLD4560N00SS.
10. Lot of two counter-top microwaves, Magic Chef and Whirlpool.
11. Lot of 14 orange safety flags.
12. Electric Coffeemaker, 100-cup capacity with supply of cups.
13. Large lot of light fixtures, fixture parts, speaker and light bulbs.
14. Stainless steel sink with faucet and air gap.
15. Vitreous China Bathroom sink 19” x 13”.

16. Plastic Parts Cabinet, 12” by 12”

17. Lot of 2 Work lights with extra stand.

18. Pop-up canopy with extra cover & two pipe-frame covers.

19. Lot of 2 Igloo 5-gallon water coolers.

20. Lot of concrete products – waterproofing, sealant and other similar materials.

21. Lot of adhesive products.

22. Lot of 2 used Peterbilt truck seats (need refurbishing).

23. Metal Desk with wood grain top.

24. Oak veneer desk.

25. Lot of 15 miscellaneous used pickup truck and car tires ranging in wheel size of 15” to 17”.

26. Lot of 5 original Bobcat S185 wheels and tires.

27. Lot of miscellaneous valves, elbows, reducers, etc. ranging in size from 4” to 12”.

**RESOLUTION NO. 2018-08**

**DECLARING DISTRICT PROPERTY SURPLUS IDENTIFIED IN SURPLUS ITEMS LIST 18-01**

*** * ***

**MID-PENINSULA WATER DISTRICT**

**WHEREAS**, the Mid-Peninsula Water District no longer has a need or use for the vehicles and equipment listed on Exhibit A due to age, obsolescence and/or cost of maintenance; and

**WHEREAS,** it is highly desirable to sell or dispose of the surplus equipment for the highest return possible.

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of the Mid-Peninsula Water District hereby declares the equipment listed on Exhibit A, which is incorporated herein by reference, is declared surplus and is to be sold by public auction, bid or sale at the least cost or greatest benefit to the District; and that staff is authorized to undertake any and all actions to transfer title to the successful bidder/purchaser or done.

**REGULARLY PASSED AND ADOPTED** this 22nd day of March, 2018.

AYES:

NOES:

ABSTAINS:

ABSENT:

_____
PRESIDENT

ATTEST:

_____
SECRETARY OF THE BOARD

MID-PENINSULA WATER DISTRICT

# *AGENDA ITEM NO. 8.E.*

DATE: March 22, 2018

TO: Board of Directors

FROM: Joan Cassman, District Counsel
Julie Sherman, District Counsel

---

**SUBJECT: ENACT RESOLUTION 2018-09 APPROVING A SALARY ADJUSTMENT FOR THE GENERAL MANAGER, EFFECTIVE JANUARY 1, 2018, AND CORRESPONDING FOURTH AMENDMENT TO THE GENERAL MANAGER'S EMPLOYMENT AGREEMENT**

---

## RECOMMENDATION

Enact Resolution 2018-09 approving a salary adjustment for the General Manager effective as of January 1, 2018, and the Fourth Amendment to the General Manager's Employment Agreement.

## FISCAL IMPACT

The General Manager's base salary is $178,279. Sufficient funds are available in the District's Operating Budget to cover a salary increase.

## DISCUSSION

The District Board of Directors hired Tammy Rudock as the District's General Manager and entered into an Employment Agreement with her dated December 21, 2012. That Agreement calls for an annual review of her performance and salary at or near the anniversary of her employment.

In accordance with the Agreement, the MPWD Board commenced the performance evaluation of the General Manager at the regular Board meeting of January 25, 2017. The Board completed this evaluation at its regular Board meeting of February 22, 2018, determining that her excellent performance warranted a salary adjustment. The Board then directed the District Counsel to prepare this report and the attached resolution with a recommendation to approve a 4.0% increase in the General Manager's salary as of January 1, 2018, and a Fourth Amendment to her Agreement, reflecting the recommended salary adjustment. The salary increase will be discussed at the March 22rd Regular Board meeting, after which an oral summary will be reported prior to the Board taking action on the recommendation.

Attachment: Resolution 2018-09
Fourth Amendment to Employment Agreement

---

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS____ WARDEN____ VELLA_____ LINVILL_____ ZUCCA_____ STUEBING_____

**RESOLUTION NO. 2018-09**

**APPROVING AN ADJUSTMENT TO THE SALARY OF THE GENERAL MANAGER OF THE MID-PENINSULA WATER DISTRICT AND THE FOURTH AMENDMENT TO THE GENERAL MANAGER'S EMPLOYMENT AGREEMENT**

*** * ***

**MID-PENINSULA WATER DISTRICT**

**WHEREAS**, by Resolution No. 2012-13, the Mid-Peninsula Water District Board of Directors appointed Tammy Rudock as the new General Manager and approved the execution of an Employment Agreement with her that was dated December 21, 2012; and

**WHEREAS,** the Employment Agreement calls for an annual performance evaluation and salary review around the anniversary date of the General Manager's employment; and

**WHEREAS,** the District Board commenced this annual review at its regular Board meeting on January 25, 2018; and

**WHEREAS,** at the regular Board meeting on February 22, 2018, the Board completed the evaluation and proposed a 4.0% increase to the base salary of the General Manager commencing as of January 1, 2018, and directed the District Counsel to place this matter on the Board meeting agenda of March 22, 2018, for final action.

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of the Mid-Peninsula Water District hereby approves an increase in the salary of the General Manager effective January 1, 2018, bringing her total base salary to $185,410; and

**BE IT FURTHER RESOLVED** that the Board approves the Fourth Amendment to the General Manager's Employment Agreement that reflects the aforementioned increase and her current salary level.

REGULARLY passed and adopted this 22nd day of March 2018.

AYES:

NOES:

ABSENCES:

_____

PRESIDENT, BOARD OF DIRECTORS

ATTEST:

_____

DISTRICT SECRETARY

**FOURTH AMENDMENT TO**

**EMPLOYMENT AGREEMENT**

THIS FOURTH AMENDMENT TO EMPLOYMENT AGREEMENT is made as of the 1st day of January 2018, by and between the Mid-Peninsula Water District (hereinafter referred to as “DISTRICT”) and Tammy A. Rudock (hereinafter referred to as “EMPLOYEE”).

A. The Parties entered into an EMPLOYMENT AGREEMENT ("Agreement") under which EMPLOYEE is employed in the position of General Manager of the DISTRICT;

B. The Board of Directors conducted an annual performance evaluation of EMPLOYEE commencing in October of 2014 and took action to increase EMPLOYEE's salary to $162,500 pursuant to Resolution No. 2015-01; and

C. The Board of Directors conducted an annual performance evaluation of EMPLOYEE commencing in December of 2015 and took action to increase EMPLOYEE's salary to $172,250 pursuant to Resolution No. 2016-01; and

D. The Board of Directors conducted an annual performance evaluation of EMPLOYEE commencing in December of 2016 and took action to increase EMPLOYEE's salary to $178,279 pursuant to Resolution No. 2017-06; and

E. Following an annual performance evaluation, which commenced in January of 2018, the Board of Directors took action to increase EMPLOYEE's salary to $185,410 pursuant to Resolution No. 2018-09; and

F. The Board of Directors desires to amend the Employment Agreement with the General Manager to reflect the adjustment in EMPLOYEE's salary level.

NOW THEREFORE, the Parties agree to amend the Agreement as follows:

1. Section 3.1, Salary, is hereby amended by deleting the first sentence in its entirety and replacing it with the following:

> Effective as of January 1, 2018, the District agrees to pay Employee a salary at the annualized rate of $185,410 for Employee's faithful and diligent performance of the duties and obligations of General Manager, payable in installments in accordance with the District's customary payroll practices.

2. Except for those changes expressly specified in this Fourth Amendment, all other provisions, requirements, conditions, and sections of the Agreement, as previously amended, remain in full force and effect.

IN WITNESS WHEREOF, this Fourth Amendment to the Agreement is entered into as of the date first written above by the duly authorized representatives of the parties.

| MID-PENINSULA WATER DISTRICT | TAMMY A. RUDOCK |
| --- | --- |
| By: _____ | _____ |
| Dave Warden, President<br>Board of Directors | |

MID-PENINSULA WATER DISTRICT

TO: Board of Directors

FROM: Tammy A. Rudock
General Manager

DATE: March 22, 2018

# MANAGER'S REPORT

## FOLLOW-UP FROM 02/22/18 REGULAR BOARD MEETING

- Posted the Cash Reserve Policy and Debt Management Policy to the MPWD website.
- Received the documents from PARS for review with District Counsel for the establishment of the Pension Rate Stabilization Program (PRSP).
- Posted the Mid-Year MPWD FY 2017/2018 Operating and Capital Budgets to the MPWD website.
- Initiated the Employee Wellness Incentive Program.

## MAI APPRAISAL UPDATE

We received the MAI appraisals for MPWD properties:

- 1510 Folger in Belmont;
- 1513-1513 Folger in Belmont; and
- "F" Street property in San Carlos.

These will be discussed next month with the Board and District Counsel in a Closed Session regarding the potential surplus and sale of these properties.

## 2018 TOTAL COMPENSATION STUDY

After last month's Board meeting, the Board's Finance Committee and I reviewed the comparator agencies for the 2018 Total Compensation Study and determined that the following list should be recommended to the MPWD Employees Association:

- Alameda County Water District
- City of Burlingame
- City of Foster City
- City of Menlo Park
- City of Millbrae
- City of Redwood City
- City of San Bruno
- Coastside County Water District
- North Coast County Water District
- Westborough Water District

## MEETING WITH OFFICERS FOR THE MPWD EMPLOYEES ASSOCIATION

I met with the officers of the MPWD Employees Association on March 7, 2018, and shared the list of recommended comparator agencies for the 2018 MPWD Total Compensation Study. I will wait to hear back from them before giving KOFF & Associates a notice to proceed with the study.

## UPDATE ON OPEB ACTUARIAL REPORT AS OF JULY 1, 2017

Staff is working with actuarial consultant, Demsey, Filliger & Associates (DFA) and currently sharing data to enable them to prepare the 2017 OPEB Actuarial report. We anticipate a review with the Board during its regular meeting scheduled on May 24, 2018.

**WATER CONSERVATION SUMMARY**

Water consumption for February 2018, was down 10.0% when compared to 2013.

The R-GPCD (Residential-Gallons Per Capita Per Day) was 69.6 (compared to 75.4 in 2013).

Cumulative water savings from July 1, 2017 through February 28, 2018 (compared to 2013) was -13.3%.

## 3-MONTH "LOOK AHEAD" FOR BOARD MEETINGS

*APRIL 26, 2018*

- Consider/approve water rate adjustments effective July 1, 2018. (30-day notice to ratepayers.)
- Discuss reorganization for "staffing up" and proposed succession plan.
- Review working DRAFT Operating and Capital Budgets for FY 2018/2019.
- Review DRAFT MPWD Board Bylaws.
- Closed session conference regarding labor negotiations with MPWD Employees Association.
- Closed session conference regarding real property negotiations for 1510 and 1513-1515 Folger and "F" Street properties.

*MAY 24, 2018*

- Consider final DRAFT Operating and Capital Budgets for FY 2018/2019.
- Review proposed updated MPWD Miscellaneous Fees.
- Receive MPWD OPEB Actuarial Report (as of July 1, 2017).
- Receive BAWSCA report.

*JUNE 28, 2018*

- Adopt FY 2018/2019 Operating and Capital Budgets.

UPCOMING MEETINGS/EVENTS

HIA Meeting (Belmont): March 1, 2018
BAWSCA Water Management Meeting (Foster City): March 1, 2018
ACWA JPIA 2018 Spring Conference & Exhibition (Sacramento): May 7-11, 2018
CSDA Special Districts Legislative Days (Sacramento): May 22-23, 2018
CSDA Annual Conference and Exhibition Showcase (Indian Wells): September 24-27, 2018
ACWA JPIA 2018 Fall Conference & Exhibition (San Diego): November 26-30, 2018
ACWA JPIA 2019 Fall Conference & Exhibition (Monterey): May 6-10, 2019

MID-PENINSULA WATER DISTRICT

TO: Board of Directors

FROM: Candy Pina

DATE: March 22, 2018

## ADMINISTRATIVE SERVICES MANAGER'S REPORT

## FINANCIAL REPORTING:

1) **Schedule of Cash and Investments:**

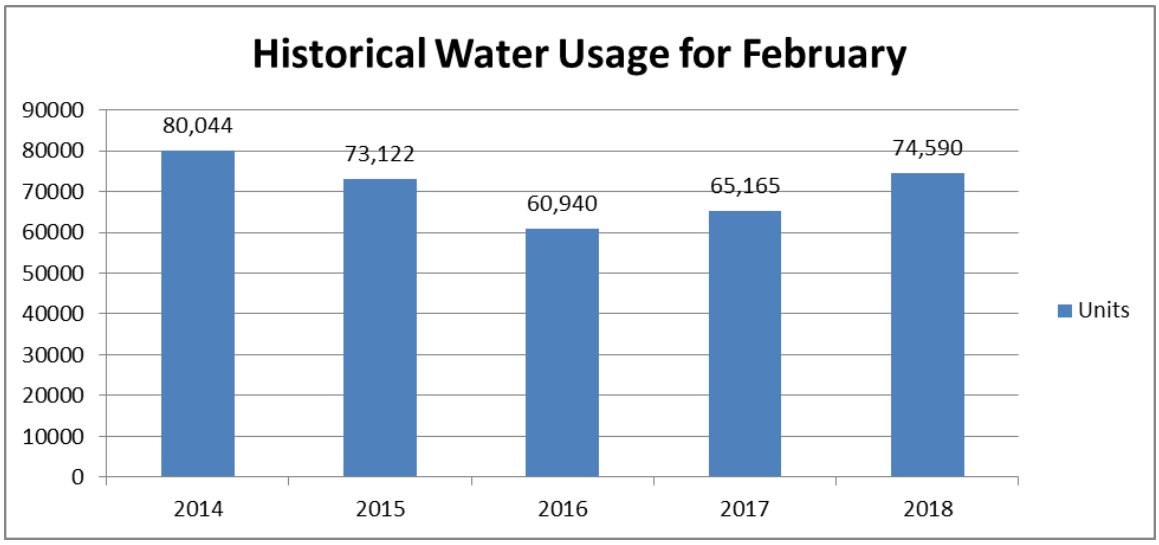
| SCHEDULE OF CASH AND INVESTMENTS | | |
|---|---|---|
| **CASH ACCOUNT** | **BALANCE @ 02/28/18** | **BALANCE @ 03/14/18** |
| PETTY CASH | $400 | $400 |
| CASH DRAWER | $200 | $200 |
| WELLS FARGO CHECKING | $296,548 | $66,901 |
| LAIF | $6,672,532 | $6,672,532 |
| BNY INSTALLMENT ACCOUNT | $365,099 | $365,099 |
| | | |
| **TOTAL** | **$7,334,779** | **$7,105,132** |
| | | |

Month End Balance of PARS/OPEB for January 2018 (February 2018 report not available): $993,608.12. Total Net Earnings of $20,832.54 were reported.

| MPWD RESERVE FUNDS | | | | |
|---|---|---|---|---|
| **Reserve Account** | **Balance @ 02/28/2016** | **Balance @ 02/28/2017** | **Balance @ 02/28/2018** | **Budget for Reserve Policy** |
| Capital Reserves | $ 1,295,326 | $ 3,068,454 | $ 4,172,532 | $ 2,500,000 |
| Emergency Reserves | $ 2,000,000 | $ 2,000,000 | $ 2,000,000 | $ 2,000,000 |
| Working Capital Reserves | $ 500,000 | $ 500,000 | $ 500,000 | $ 500,000 |
| **TOTAL RESERVE FUNDS** | **$ 3,795,326** | **$ 5,568,454** | **$ 6,672,532** | **$ 5,000,000** |

**Water Revenue Report:**

| WATER REVENUES for FISCAL YEAR 2017/2018 | | | | | |
|---|---|---|---|---|---|
| Month | Total Units | Water Commodity Charges | Fixed System Charges | Total Water Revenues | Misc Rev |
| JUL | 117,761 | 991,424.67 | 221,479.51 | 1,212,904.18 | 1,263.43 |
| AUG | 124,029 | 1,058,492.93 | 221,538.81 | 1,280,031.74 | 1,262.50 |
| SEP | 127,050 | 1,086,959.69 | 221,731.22 | 1,308,690.91 | 1,262.50 |
| OCT | 117,970 | 969,366.58 | 220,229.28 | 1,189,595.86 | 1,270.47 |
| NOV | 100,278 | 842,727.91 | 221,252.40 | 1,063,980.31 | 1,257.50 |
| DEC | 76,510 | 597,628.22 | 221,492.48 | 819,120.70 | 1,276.32 |
| JAN | 85,964 | 649,485.61 | 221,521.30 | 871,006.91 | 1,271.28 |
| FEB | 74,590 | 563,551.39 | 220,748.00 | 784,299.39 | 1,277.00 |
| **TOTAL** | **824,152** | **6,759,637.00** | **1,769,993.00** | **8,529,630.00** | **10,141.00** |




**CONFERENCES, TRAINING, & MEETINGS:**

1) Jeanette Kalabolas: 02/28/18 – BAWSCA Conservation Strategic Plan #2 meeting
2) All staff: 03/07/18 – Lunch & Learn Meeting—Employee Benefits
3) Candy Pina: 03/09/18 – Leadership Essentials Meeting
4) Candy Pina: 03/15/18 – Meeting with Jen Dermon on Financial Reporting
5) Jeanette Kalabolas/Misty Malczon/Laura Ravella/Candy Pina: 03/19/18 – MPWD Admin Office Staff Meeting
6) All staff: Jeanette Kalabolas' 10-year Anniversary luncheon

**TEAM BUILDING ACTIVITIES:**
We continue to celebrate birthdays.

**LEGEND FOR MONTHLY EXPENDITURES REPORT:**
3-digit checks: EFT checks
4-digit checks: Trustee BNY disbursements from COP Project Fund
5-digit checks: Vendor checks

MID-PENINSULA WATER DISTRICT

TO: Board of Directors

FROM: Rene A. Ramirez, Operations Manager

DATE: March 22, 2018

## OPERATIONS REPORT – February

**Projects:**

- We are still waiting for the dust to settle on the lawsuit so that staff can replace the last meter in Zone 1. As noted before, their water continues to be metered;
- Held a construction progress meeting with Stoloski & Gonzalez attended by District Engineer and District staff;
- Conducted a follow-up warranty inspection on the Buckland Tanks, which required District staff to clean up before warranty work. Some minor paint touch up was required;
- Addressed and corrected some pressure switch issues with a pump at the Tunnels Pump Station;
- Met with City staff and Tanner Pacific, construction manager, for the joint City/District project to go over roles and responsibilities;
- Completed construction for a new 4-inch fire service at 940 Old County Road; and
- During January we were unable to install any meters. The total since June 2, 2017 remains at 455 AMI meters, or about 25% of Zone 2.

**Maintenance:**

- Responded to and completed 276 USA (underground service alerts) requests and identified infrastructure before digging in the streets or easements. Last month we marked 297 locations, a 7% decrease;
- Read meters in zones without AMI;
- Tanks at Exbourne and Dekoven were cleaned and are ready to be put back in service when demand increases;
- Paved a portion Naughton Avenue where a service curb stop had been replaced;
- Saw cut, prep the trench and pipe in order to remove a tee on Monserrat (where the large leak took place last summer);
- Prep and pour concrete to repair a large meter box at 555 Harbor Blvd.;
- Performed routine maintenance to system regulators;
- Met with District Engineer to discuss the work to date on District Standard Drawings;
- Met with District Engineer to go over progress on the Hillcrest Pressure Reducing Station capital project;
- Raised the fire hydrant and valve near 1524 Desvio Way;

- Carried out some general meter maintenance, i.e. removed dirt inside meter box and removed weeds around meter box;
- Collected a requisite 44 water samples for bacteriological testing – all samples were normal and showed no signs of coliform bacteria;
- Continued to routinely monitor water system dead-ends continued for disinfectant residual; and
- Monitored for signs of nitrification within our tanks, sample stations and dead ends continues as a part of regular water quality monitoring. One of two tanks at the following tank sites was removed from service for maintenance work and to maintain water quality: Buckland, Exbourne and Dekoven.

**System Repairs:**

| Date | Location | Event | Material | Installation Date | Estimated Water Loss (Gals.) |
|---|---|---|---|---|---|
| **2/14/18** | **1904 El Verano Way** | **Main Break** | **CIP** | **1954** | **Unknown** |
| | | | | | |

**Development:**

Staff is currently working with developers on 36 development projects:

Mixed Use Commercial/Residential:

- 576-600 El Camino Real – Fees paid, awaiting scheduling request from contractor;
- 400-490 El Camino Real –Awaiting request for meter installations;
- 1325 Old County Rd – Currently reviewing plans;
- 800 Belmont Ave – Contacted by developer tentative plans; and
- 815 Old County Rd – Contacted by developer tentative plans.

Commercial:

- 539 Harbor Blvd. – Updated installation quote;
- 700 Island Parkway – Installation Complete;
- 1201 Shoreway Road – Awaiting scheduling from contractor;
- 1477 El Camino Real – Currently reviewing their plans;
- 699 Ralston Ave – Installation complete, awaiting service abandonment;
- 940 Old County - Awaiting backflow installation inspection;
- Belmont Ave Parcel APN's – (2) awaiting plans;
- 1500 Ralston – Currently reviewing plans;
- 2200 Carlmont Drive – Currently reviewing their plans
- 1400 Alameda – Plans approved, requirements provided ;
- 400 Industrial – Plans approved fee schedule provided to developer; and
- 2710 Ralston Ave – Awaiting plans.

Residential/Multi-Family:

- 1829 Oak Knoll - Currently reviewing their plans;

- 10 Notre Dame Place – Preconstuction meeting scheduled;
- 1919 Oak Knoll Dr. – Currently reviewing their plans;
- 1922 Bayview – Plans approved, fee schedule provided;
- 2515 Carlmont Dr - Currently reviewing their plans;
- 1105 Tahoe – Developer requesting fire flow;
- 2009 Mezes – Currently reviewing their plans;
- 2723 Monserat – Currently reviewing their plans;
- 796 Miramar Terrace - Currently reviewing their plans;
- 2114 Cipriani – Currently reviewing their plans;
- Bishop Road development - Currently reviewing their plans;
- Talbryn Drive parcel - Developer requesting system information;
- Ralston Parcel - Developer requesting system information;
- 2620 Ponce – Currently reviewing their plans;
- 1320 Talbryn Lane Development- Developer reviewing agreement;
- 2712 Comstock – Currently reviewing their plans;
- 2689 Comstock – Installed, awaiting backflow installation;
- 3918 Christian Dr – Plans approved; and
- 3900 Marsten – Currently reviewing their plans.

**Administration:**

- Involved in the sanitary survey of the system with the State Water Resources Control Board Engineer who oversees our system. He inspected all tank sites and pump stations. Following inspection, we were asked to replace the rubber gasket on the access hatch to the Hersom Tank;
- Conducted a training session on fall protection that included both classroom and a field exercise;
- Participated in training on the use of the MPWD News Alert – how to announce and withdraw news flashes on website and smartphones;
- Some were able to attend the 1st Quarter Water Quality Meeting held by the SFPUC in Redwood City;
- Listened to a proposal from a start-up company on their software that uses “big data and machine learning” to plan water main replacement;
- Received some training from Tanner Pacific on the use of Pro-Core for project management of the joint project with the City;
- Held a discussion with staff on uniform service and next steps;
- One of the Operators attended a review class for the Water Distribution exam;
- Participated in a webinar from XiO on the use of data;
- Continue to actively managing five (5) engineering design contracts related to the CIP; and
- Continued to actively manage power use during pumping operations.

Pakpour Consulting Group, Inc.

# MEMO

| | | | |
|---|---|---|---|
| **Agency:** | Mid-Peninsula Water District | **Date** | March 14, 2018 |
| **Attn:** | Board of Directors | | |
| **Project Name:** | Karen, Mezes, Arthur, South & Folger Water Main Improvements | **Project No.** | 10012.16 |
| **Reference:** | Project Update | | |
| **From:** | Joubin Pakpour, P.E. – District Engineer JP | | |

## Construction Status

During February, water main installation and all the tie-ins along Mezes Avenue were completed. The new water main is in full service with all service connections transferred. During the last week of February, S&G began construction on Arthur Avenue while a smaller crew wrapped up remaining work on Mezes Avenue.

## Project Schedule

During the last week of February, S&G began construction on Arthur Avenue which is anticipated to last three to four weeks subject to weather conditions. As of March 1, 2018, the project has 30 of 132 working days remaining on the contract (110 contract days with an additional 22 days for Change Orders No.1 and No.2), with 50% of the work still remaining. Delays were caused by unforeseen site conditions, water main alignment modifications to avoid existing unknown utilities, and traffic control. Although S&G is using additional crews and staff to make up lost time, they are still behind schedule. S&G is currently working to update the construction schedule however may approach the District in the coming weeks to request additional working days. Meanwhile, they are using larger crews on Arthur Avenue and when they move to Karen Road near the end of March.

Remaining work on South Road, Folger Road, Folger Court and Mezes Avenue, includes slurry seal and striping.

## Change Orders

Enclosed please find Change Order No.2 for $10,802.11 for additional work during January and February. Work included unforeseen site conditions such as unknown/unmarked underground utilities and additional work requested by the District. The total change order as of February 28, 2018 is $34,518.94. This represents an approximate 1.7% increase over the original contract amount which is well below the industry average of 10% for underground construction.

**Request for Progress Payment No. 5**

As of February 28, 2018, S&G completed 50% of the contractual work ***($1,042,129.94).*** Enclosed please find Progress Payment No.5 due S&G for this period for ***$231,222.11*** (value of work, less 5% retention). The work performed to date has been satisfactory, and payment is recommended.

| | Current Month | Total | |
|---|---|---|---|
| Original Contract Amount | | $ 2,055,271.00 | |
| Approved Change Orders | $ 10,802.11 | $ 34,518.94 | 1.7% |
| **Final Contract Amount** | | **$ 2,089,789.94** | |
| Previous Value of Work Completed | | $ 798,737.83 | |
| Previously Paid | | $ 758,801.83 | |
| **Current Request (*Less Retention)*** | **$ 231,222.11** | **$ 990,023.94** | |
| Retention | $ 12,170.00 | $ 52,106.00 | |
| Total Value of Work Completed | $ 243,392.11 | $ 1,042,129.94 | 50% |
| Total Remaining on Contract | | $ 1,047,660.00 | 50% |

| Bid | Description | | Original Contract Amount | | | Change Order | | | Revised Contract Amount | | | Earned This Period | | | Prior Billing | | | Total to Date | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Item | Original Contract | Unit | Unit Price | Qty. | Total Price | Qty. | Unit Price | Total Price | Qty. | Unit Price | Total Price | Qty. | Amount Earned | % | Qty. | Amount Earned | % | Qty. | Amount Earned | % |
| 1 | 8" Fusible C900 PVC | LF | $ 203 | 972 | $ 197,316.00 | 0 | $ 203 | $ - | 972 | $ 203.00 | $ 197,316.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 2 | 8-inch Class 350 DIP | LF | $ 309 | 1,563 | $ 482,967.00 | 0 | $ 309 | $ - | 1,563 | $ 309.00 | $ 482,967.00 | 390 | $ 120,510.00 | 25% | 143 | $ 44,187.00 | 9% | 533 | $ 164,697.00 | 34% |
| 3 | 10-inch Class 350 DIP | LF | $ 336 | 785 | $ 263,760.00 | 0 | $ 336 | $ - | 785 | $ 336.00 | $ 263,760.00 | 0 | $ - | 0% | 794 | $ 266,784.00 | 101% | 794 | $ 266,784.00 | 101% |
| 4 | Dairy Lane - Fire Service Tie-in at Sta. 10+00 (Detail A) | LS | $ 6,500 | 1 | $ 6,500.00 | 0 | $ 6,500 | $ - | 1 | $ 6,500.00 | $ 6,500.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 5 | Karen Road/O'Neill Avenue - Tie-in to 8" PVC at Sta. 11+79 (Detail B) | LS | $ 8,500 | 1 | $ 8,500.00 | 0 | $ 8,500 | $ - | 1 | $ 8,500.00 | $ 8,500.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 6 | Karen Road/O'Neill Avenue - Tie-in to 12" ACP at Sta. 12+12 (Detail C) | LS | $ 6,500 | 1 | $ 6,500.00 | 0 | $ 6,500 | $ - | 1 | $ 6,500.00 | $ 6,500.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 7 | Karen Road - Fire Service Tie-in at Sta. 13+97 | LS | $ 7,000 | 1 | $ 7,000.00 | 0 | $ 7,000 | $ - | 1 | $ 7,000.00 | $ 7,000.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 8 | Karen Road/Harbor Blvd - Tie-in to 12" ACP at Sta. 19+72 (Detail D) | LS | $ 19,000 | 1 | $ 19,000.00 | 0 | $ 19,000 | $ - | 1 | $ 19,000.00 | $ 19,000.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 9 | Mezes Avenue - Tie-in to 6" CIP, Sta. 10+00 to 10+15 (Detail E) | LS | $ 12,000 | 1 | $ 12,000.00 | 0 | $ 12,000 | $ - | 1 | $ 12,000.00 | $ 12,000.00 | 1 | $ 12,000.00 | 100% | 0 | $ - | 0% | 1 | $ 12,000.00 | 100% |
| 10 | Mezes Avenue - Tie-in to 6" CIP, Sta. 13+45 to 13+55 (Detail F) | LS | $ 10,500 | 1 | $ 10,500.00 | 0 | $ 10,500 | $ - | 1 | $ 10,500.00 | $ 10,500.00 | 1 | $ 10,500.00 | 100% | 0 | $ - | 0% | 1 | $ 10,500.00 | 100% |
| 11 | Mezes Avenue/Lyon Avenue - Tie-in to 4" PVC, Sta. 20+59 to 20+88 (Detail G) | LS | $ 23,000 | 1 | $ 23,000.00 | 0 | $ 23,000 | $ - | 1 | $ 23,000.00 | $ 23,000.00 | 1 | $ 23,000.00 | 100% | 0 | $ - | 0% | 1 | $ 23,000.00 | 100% |
| 12 | Arthur Avenue - Tie-in to 8" CIP, Sta. 10+00 to 10+10 (Detail H) | LS | $ 10,900 | 1 | $ 10,900.00 | 0 | $ 10,900 | $ - | 1 | $ 10,900.00 | $ 10,900.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 13 | Arthur Avenue/Coronet Blvd - Tie-in to 8" CIP at Sta. 10+54 (Detail I) | LS | $ 15,600 | 1 | $ 15,600.00 | 0 | $ 15,600 | $ - | 1 | $ 15,600.00 | $ 15,600.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 14 | Arthur Avenue/Covington Road - 6" DIP Modification (Detail J) | LS | $ 12,700 | 1 | $ 12,700.00 | 0 | $ 12,700 | $ - | 1 | $ 12,700.00 | $ 12,700.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 15 | Arthur Avenue/Alameda de las Pulgas - Tie-in to 8" CIP at Sta. 20+93 (Detail K) | LS | $ 16,000 | 1 | $ 16,000.00 | 0 | $ 16,000 | $ - | 1 | $ 16,000.00 | $ 16,000.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 16 | Middle Road/Notre Dame Avenue - 6"/8" CIP Tie-ins (Detail L) | LS | $ 29,000 | 1 | $ 29,000.00 | 0 | $ 29,000 | $ - | 1 | $ 29,000.00 | $ 29,000.00 | 0 | $ - | 0% | 1 | $ 29,000.00 | 100% | 1 | $ 29,000.00 | 100% |
| 17 | South Road/Middle Road - 6" CIP Tie-in (Detail M) | LS | $ 32,000 | 1 | $ 32,000.00 | 0 | $ 32,000 | $ - | 1 | $ 32,000.00 | $ 32,000.00 | 0 | $ - | 0% | 1 | $ 32,000.00 | 100% | 1 | $ 32,000.00 | 100% |
| 18 | South Road/Debbie Lane - 6" CIP Tie-in (Detail N) | LS | $ 35,400 | 1 | $ 35,400.00 | 0 | $ 35,400 | $ - | 1 | $ 35,400.00 | $ 35,400.00 | 0 | $ - | 0% | 1 | $ 35,400.00 | 100% | 1 | $ 35,400.00 | 100% |
| 19 | South Road/Hainline Drive - 4" CIP Tie-in (Detail O) | LS | $ 21,000 | 1 | $ 21,000.00 | 0 | $ 21,000 | $ - | 1 | $ 21,000.00 | $ 21,000.00 | 0 | $ - | 0% | 1 | $ 21,000.00 | 100% | 1 | $ 21,000.00 | 100% |
| 20 | South Road/Korbel Way - 4" CIP Tie-in (Detail P) | LS | $ 18,000 | 1 | $ 18,000.00 | 0 | $ 18,000 | $ - | 1 | $ 18,000.00 | $ 18,000.00 | 0 | $ - | 0% | 1 | $ 18,000.00 | 100% | 1 | $ 18,000.00 | 100% |
| 21 | South Road Vannier Drive - 4" CIP Tie-in (Detail Q) | LS | $ 18,500 | 1 | $ 18,500.00 | 0 | $ 18,500 | $ - | 1 | $ 18,500.00 | $ 18,500.00 | 0 | $ - | 0% | 1 | $ 18,500.00 | 100% | 1 | $ 18,500.00 | 100% |
| 22 | South Road/College View Way - 8" ACP Tie-in (Detail R) | LS | $ 22,000 | 1 | $ 22,000.00 | 0 | $ 22,000 | $ - | 1 | $ 22,000.00 | $ 22,000.00 | 0 | $ - | 0% | 1 | $ 22,000.00 | 100% | 1 | $ 22,000.00 | 100% |
| 23 | Folger Drive - Tie-in to 10" DIP, Sta: 10+00 to 10+10 (Detail S) | LS | $ 6,000 | 1 | $ 6,000.00 | 0 | $ 6,000 | $ - | 1 | $ 6,000.00 | $ 6,000.00 | 0 | $ - | 0% | 1 | $ 6,000.00 | 100% | 1 | $ 6,000.00 | 100% |
| 24 | Folger Drive/Notre Dame Avenue - Tie-in to 6" CIP, Sta. 17+95 to 18+00 (Detail T) | LS | $ 7,000 | 1 | $ 7,000.00 | 0 | $ 7,000 | $ - | 1 | $ 7,000.00 | $ 7,000.00 | 0 | $ - | 0% | 1 | $ 7,000.00 | 100% | 1 | $ 7,000.00 | 100% |
| 25 | 10" Gate Valve | EA | $ 3,600 | 5 | $ 18,000.00 | 0 | $ 3,600 | $ - | 5 | $ 3,600.00 | $ 18,000.00 | 0 | $ - | 0% | 5 | $ 18,000.00 | 100% | 5 | $ 18,000.00 | 100% |
| 26 | 8" Gate Valve | EA | $ 2,500 | 42 | $ 105,000.00 | 0 | $ 2,500 | $ - | 42 | $ 2,500.00 | $ 105,000.00 | 4 | $ 10,000.00 | 10% | 21 | $ 52,500.00 | 50% | 25 | $ 62,500.00 | 60% |
| 27 | 8" Fire Service Connection (Assembly) | EA | $ 17,500 | 1 | $ 17,500.00 | 0 | $ 17,500 | $ - | 1 | $ 17,500.00 | $ 17,500.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 28 | 6" Fire Hydrant Assembly | EA | $ 12,500 | 12 | $ 150,000.00 | 0 | $ 12,500 | $ - | 12 | $ 12,500.00 | $ 150,000.00 | 1 | $ 12,500.00 | 8% | 5 | $ 62,500.00 | 42% | 6 | $ 75,000.00 | 50% |
| 29 | Fire Hydrant Bollard | EA | $ 400 | 20 | $ 8,000.00 | 0 | $ 400 | $ - | 20 | $ 400.00 | $ 8,000.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 30 | Fire Hydrant Retaining Wall | EA | $ 3,900 | 1 | $ 3,900.00 | 0 | $ 3,900 | $ - | 1 | $ 3,900.00 | $ 3,900.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |

| Bid Item | Description | Original Contract Amount | | | | Change Order | | | Revised Contract Amount | | | Earned This Period | | | Prior Billing | | | Total to Date | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Original Contract | Unit | Unit Price | Qty. | Total Price | Qty. | Unit Price | Total Price | Qty. | Unit Price | Total Price | Qty. | Amount Earned | % | Qty. | Amount Earned | % | Qty. | Amount Earned | % |
| 31 | 2" Blow-Off Assembly | EA | $ 4,200 | 1 | $ 4,200.00 | 0 | $ 4,200 | $ - | 1 | $ 4,200.00 | $ 4,200.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 32 | 1" Combination Air Valve | EA | $ 3,100 | 1 | $ 3,100.00 | 0 | $ 3,100 | $ - | 1 | $ 3,100.00 | $ 3,100.00 | 0 | $ - | 0% | 3 | $ 9,300.00 | 300% | 3 | $ 9,300.00 | 300% |
| 33 | 8" PRV Station | LS | $ 31,000 | 1 | $ 31,000.00 | 0 | $ 31,000 | $ - | 1 | $ 31,000.00 | $ 31,000.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 34 | Anode Test Station | EA | $ 1,400 | 11 | $ 15,400.00 | 0 | $ 1,400 | $ - | 11 | $ 1,400.00 | $ 15,400.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 35 | 2" Service Connection to Existing Meter | EA | $ 3,700 | 1 | $ 3,700.00 | 0 | $ 3,700 | $ - | 1 | $ 3,700.00 | $ 3,700.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 36 | 1.5" Service Connection | EA | $ 3,500 | 1 | $ 3,500.00 | 0 | $ 3,500 | $ - | 1 | $ 3,500.00 | $ 3,500.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 37 | 1" Service Connection with 2" Service line | EA | $ 3,200 | 1 | $ 3,200.00 | 0 | $ 3,200 | $ - | 1 | $ 3,200.00 | $ 3,200.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 38 | 1" or 5/8" Service Connection | EA | $ 3,100 | 68 | $ 210,800.00 | 0 | $ 3,100 | $ - | 68 | $ 3,100.00 | $ 210,800.00 | 11 | $ 34,100.00 | 16% | 32 | $ 99,200.00 | 47% | 43 | $ 133,300.00 | 63% |
| 39 | Residential PRV | EA | $ 400 | 3 | $ 1,200.00 | 0 | $ 400 | $ - | 3 | $ 400.00 | $ 1,200.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 40 | Service Meter Retaining Wall | EA | $ 1,100 | 5 | $ 5,500.00 | 0 | $ 1,100 | $ - | 5 | $ 1,100.00 | $ 5,500.00 | 0 | $ - | 0% | 5 | $ 5,500.00 | 100% | 5 | $ 5,500.00 | 100% |
| 41 | Abandon Existing Fire Hydrant Assembly | EA | $ 800 | 7 | $ 5,600.00 | 0 | $ 800 | $ - | 7 | $ 800.00 | $ 5,600.00 | 1 | $ 800.00 | 14% | 2 | $ 1,600.00 | 29% | 3 | $ 2,400.00 | 43% |
| 42 | Abandon Existing Gate Valve/Blow-Off | EA | $ 450 | 25 | $ 11,250.00 | 0 | $ 450 | $ - | 25 | $ 450.00 | $ 11,250.00 | 2 | $ 900.00 | 8% | 19 | $ 8,550.00 | 76% | 21 | $ 9,450.00 | 84% |
| 43 | Traffic Striping and Markings | LS | $ 25,000 | 1 | $ 25,000.00 | 0 | $ 25,000 | $ - | 1 | $ 25,000.00 | $ 25,000.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 44 | Type II Slurry Seal | SF | $ 0.39 | 120,200 | $ 46,878.00 | 0 | $ 0.39 | $ - | 120,200 | $ 0.39 | $ 46,878.00 | 0 | $ - | 0% | 0 | $ - | 0% | 0 | $ - | 0% |
| 45 | 4" Deeplift Pavement Repair at Karen Road | SF | $ 12 | 2,900 | $ 34,800.00 | 0 | $ 12 | $ - | 2,900 | $ 12.00 | $ 34,800.00 | 590 | $ 7,080.00 | 20% | 0 | $ - | 0% | 590 | $ 7,080.00 | 20% |
| 46 | Traffic Control | LS | $ 45,000 | 1 | $ 45,000.00 | 0 | $ 45,000 | $ - | 1.00 | $ 45,000.00 | $ 45,000.00 | 0.00 | $ - | 0% | 0.40 | $ 18,000.00 | 40% | 0.4 | $ 18,000.00 | 40% |
| 47 | Street Sweeping | EA | $ 600 | 36 | $ 21,600.00 | 0 | $ 600 | $ - | 36 | $ 600.00 | $ 21,600.00 | 2 | $ 1,200.00 | 6% | 0 | $ - | 0% | 2 | $ 1,200.00 | 6% |
| | Change Order No.1 (November 1, 2017 thru December 31, 2017) | | | | | 1 | $ 23,716.83 | $ 23,716.83 | 1 | $ 23,716.83 | $ 23,716.83 | 0 | $ - | 0% | 1 | $ 23,716.83 | 100% | 1 | $ 23,716.83 | 100% |
| | Change Order No.2 (January 1, 2018 thru February 28, 2018) | | | | | 1 | $ 10,802.11 | $ 10,802.11 | 1 | $ 10,802.11 | $ 10,802.11 | 1 | $ 10,802.11 | 100% | 1 | $ - | 0% | 2 | $ 10,802.11 | 100% |
| | | | | | | | | | | | | | | | | | | | | |
| | Contract Amount | | | | ***$2,055,271.00*** | | | ***$34,518.94*** | | | ***$2,089,789.94*** | | | | | | | | | |
| | Amount Earned | | | | | | | | | | | | **$243,392.11** | **12%** | | **$798,737.83** | **38%** | | **$1,042,129.94** | **50%** |
| | Retention (5%) | | | | | | | | | | | | **($12,170.00)** | | | **($39,937.00)** | | | **($52,106.00)** | |
| | | | | | | | | | | | | | | | | | | | | |
| | Progress Payment No.1 | | | | | | | | | | | | | | | | | | **($135,090.00)** | |
| | Progress Payment No.2 | | | | | | | | | | | | | | | | | | **($220,599.00)** | |
| | Progress Payment No.3 | | | | | | | | | | | | | | | | | | **($260,757.00)** | |
| | Progress Payment No.4 | | | | | | | | | | | | | | | | | | **($142,355.83)** | |
| | | | | | | | | | | | | | | | | | | | | |
| | Amount Due | | | | | | | | | | | | **$231,222.11** | | | | | | **$231,222.11** | |
| | Amount Remaining on Contract | | | | | | | | | | | | | | | | | | **$1,047,660.00** | **50%** |

**Prepared By**

GP

**Joubin Pakpour, P.E.**

**District Engineer**

| | | |
|---|---|---|
| Amount Remaining on Contract | $1,047,660.00 | 50% |
| Total Retention Being Held | $52,106.00 | |

# Karen, Mezes, Arthur, South Folger Water Main Improvements
## Progress Payment No. 05
## Breakdown Summary

| Karen Road | Current | Total | |
|---|---|---|---|
| Original Contract Amount | | $438,196.00 | |
| Approved Change Orders | $0.00 | $0.00 | 0% |
| **Final Contract Amount** | | **$438,196.00** | |
| Previous Value of Work Completed | | $0.00 | |
| Previously Paid | | $0.00 | |
| **Current Request (Less Retention)** | **$0.00** | **$0.00** | |
| Retention | $0.00 | $0.00 | |
| Total Value of Work Completed | $0.00 | $0.00 | 0% |
| Total Remaining on Contract | | $438,196.00 | 100% |

| Mezes Avenue | Current | Total | |
|---|---|---|---|
| Original Contract Amount | | $235,278.00 | |
| Approved Change Orders | $4,505.24 | $4,505.24 | 2% |
| **Final Contract Amount** | | **$239,783.24** | |
| Previous Value of Work Completed | | $0.00 | |
| Previously Paid | | $0.00 | |
| **Current Request (Less Retention)** | **$220,429.24** | **$220,429.24** | |
| Retention | $11,602.00 | $11,602.00 | |
| Total Value of Work Completed | $232,031.24 | $232,031.24 | 97% |
| Total Remaining on Contract | | $7,752.00 | 3% |

| Arthur Avenue | Current | Total | |
|---|---|---|---|
| Original Contract Amount | | $553,771.00 | |
| Approved Change Orders | $0.00 | $0.00 | 0% |
| **Final Contract Amount** | | **$553,771.00** | |
| Previous Value of Work Completed | | $0.00 | |
| Previously Paid | | **$0.00** | |
| **Current Request (Less Retention)** | **$0.00** | **$0.00** | |
| Retention | $0.00 | $0.00 | |
| Total Value of Work Completed | $0.00 | $0.00 | 0% |
| Total Remaining on Contract | | $553,771.00 | 100% |

| South Road | Current | Total | |
|---|---|---|---|
| Original Contract Amount | | $366,929.00 | |
| Approved Change Orders | $0.00 | $1,342.68 | 0.4% |
| **Final Contract Amount** | | **$368,271.68** | |
| Previous Value of Work Completed | | $346,218.68 | |
| Previously Paid | | $328,907.68 | |
| **Current Request (Less Retention)** | **$0.00** | **$328,907.68** | |
| Retention | $0.00 | $17,311.00 | |
| Total Value of Work Completed | $0.00 | $346,218.68 | 94% |
| Total Remaining on Contract | | $22,053.00 | 6% |

| Folger Drive | Current | Total | |
|---|---|---|---|
| Original Contract Amount | | $461,097.00 | |
| Approved Change Orders | $6,296.87 | $28,671.02 | 6.2% |
| **Final Contract Amount** | | **$489,768.02** | |
| Previous Value of Work Completed | | $452,519.15 | |
| Previously Paid | | $429,893.15 | |
| **Current Request (Less Retention)** | **$10,792.87** | **$440,686.02** | |
| Retention | $568.00 | $23,194.00 | |
| Total Value of Work Completed | $11,360.87 | $463,880.02 | 95% |
| **Total Remaining on Contract** | | **$25,888.00** | 5% |

| Total (All Projects) | Current | Total | |
|---|---|---|---|
| Original Contract Amount | | $2,055,271.00 | |
| Approved Change Orders | $10,802.11 | $34,518.94 | 1.7% |
| **Final Contract Amount** | | **$2,089,789.94** | |
| Previous Value of Work Completed | | $798,737.83 | |
| Previously Paid | | $758,801.83 | |
| **Current Request (Less Retention)** | **$231,222.11** | **$990,023.94** | |
| Retention | $12,170.00 | $52,106.00 | |
| Total Value of Work Completed | $243,392.11 | $1,042,129.94 | 50% |
| Total Remaining on Contract | | $1,047,660.00 | 50% |

**Mid-Peninsula Water District Water District**
**Karen, Mezes, Arthur, South and Folger Water Main Improvements**
**Project No. 10012.16**

**Change Order No. 2**
**Stoloski & Gonzalez, Inc.**
**March 14, 2018**

**Item No. 1 – Additional Potholing on Mezes Avenue**

On January 25, 2018, the District requested additional potholing along Mezes Avenue to verify existing water main and sewer main alignments. Extra work included associated downtime to hand dig and backfill four locations along Mezes Avenue. This work was performed on a Time and Material (Force Account) basis with the District inspector on site. The District reviewed Stoloski & Gonzalez's (S&G) total cost for the additional work and determined conformance with the project specifications. This extra work is per S&G's Daily Extra Work Report dated March 13, 2018.

**Total Cost of Item No. 1 - $ 2,058.29**
**Total Increase of Working Days for Item No. 1 - 1 Day**

**Item No. 2 – 4" Fire Service Line for 1510 Folger Drive (Folger Yard)**

On January 29, 2018, the District requested S&G install a 4" fire service line for 1510 Folger Drive (District property) for future improvements. Extra work included installation of a 10"x4" tapping sleeve, 4" gate valve and approximately 10 LF of 4" DIP with MJ cap. This work was performed on a Time and Material (Force Account) basis with the District inspector on site. The District reviewed S&G's total cost for the additional work and determined conformance with the project specifications. This extra work is per S&G's Daily Extra Work Report dated March 13, 2018.

**Total Cost of Item No. 2 - $ 6,296.87**
**Total Increase of Working Days for Item No. 2 - 1 Day**

**Item No. 3 – Unmarked Water Main on Mezes Avenue, STA 11+99**

On February 2, 2018, S&G found an unmarked abandoned steel pipe along Mezes Avenue. Extra work included associated downtime to dig around, cut and remove approximately 10 LF of pipe. This work was performed on a Time and Material (Force Account) basis with the District inspector on site. The District reviewed S&G's total cost for the additional work and determined conformance with the project specifications. This extra work is per S&G's Daily Extra Work Report dated March 13, 2018.

**Total Cost of Item No. 3 - $ 1,484.09**
**Total Increase of Working Days for Item No. 3 - 0 Day**

**Item No. 4 –Unmarked Storm Drain Line at the Intersection of Mezes and Lyon Avenues, STA 20+50**

On February 05, 2018, S&G found an unmarked storm drain line crossing Lyon Avenue at the intersection with Mezes Avenue. Extra work included associated downtime to dig around and under the storm drain and modifying the new water main alignment to avoid conflict with the storm drain. This work was performed on a Time and Material (Force Account) basis with the District inspector on site. The District reviewed S&G's total cost for the additional work and determined conformance with the project specifications. This extra work is per S&G's Daily Extra Work Report dated March 13, 2018.

**Total Cost of Item No. 4 - $ 962.86**
**Total Increase of Working Days for Item No. 4 - 0 Day**

**Item No. 5 – Six (6) working day non-compensable time extension due to inclement weather.**

During January and February 2018, S&G requested additional working days to account for project shutdowns due to inclement weather. The District agreed to a non-compensable time extension of six (6) working days for the dates listed below.

| | | |
|---|---|---|
| January 5, 2018 | January 8, 2018 | January 9, 2018 |
| January 24, 2018 | January 25, 2018 | February 26, 2018 |

**Total Cost of Item No. 5 - $ 0.00**
**Total Increase of Working Days for Item No. 5 - 6 Days**

**Total Cost of Change Order No. 2 $ 10,802.11**
**Overall Increase of Working Days for Change Order No. 2 - 8 Days**

**Other Terms Remain in Effect**

This Change Order fully resolves all cost and time issues related to the work described above, including any indirect effects or the effect of this Change Order on any other work performed by Stoloski & Gonzalez, Inc. This Change Order does not modify or supersede any provision of the Contract, unless, and only to the extent, explicitly stated in this Change Order.

**Signature Block**

Prepared by: _____

Feraydoon Jahanian-Farsi
District Project Manager
Pakpour Consulting Group

Reviewed and Approved by: _____

Michael Anderson
District Inspector
Mid-Peninsula Water District

Reviewed and Approved by: _____

Joubin Pakpour, P.E.
District Engineer
Pakpour Consulting Group

Reviewed and Approved by: _____

Tammy Rudock
General Manager
Mid-Peninsula Water District

Reviewed and Approved by: _____

Mark Stoloski
Project Manager
Stoloski & Gonzalez, Inc.

**Karen, Mezes, Arthur, South & Folger Water Main Improvements**
**Mid-Peninsula Water District, Belmont, CA**
**February 1, 2018 thru February 28, 2018**


February 1, 2018 - Water main installation (Mezes Ave)

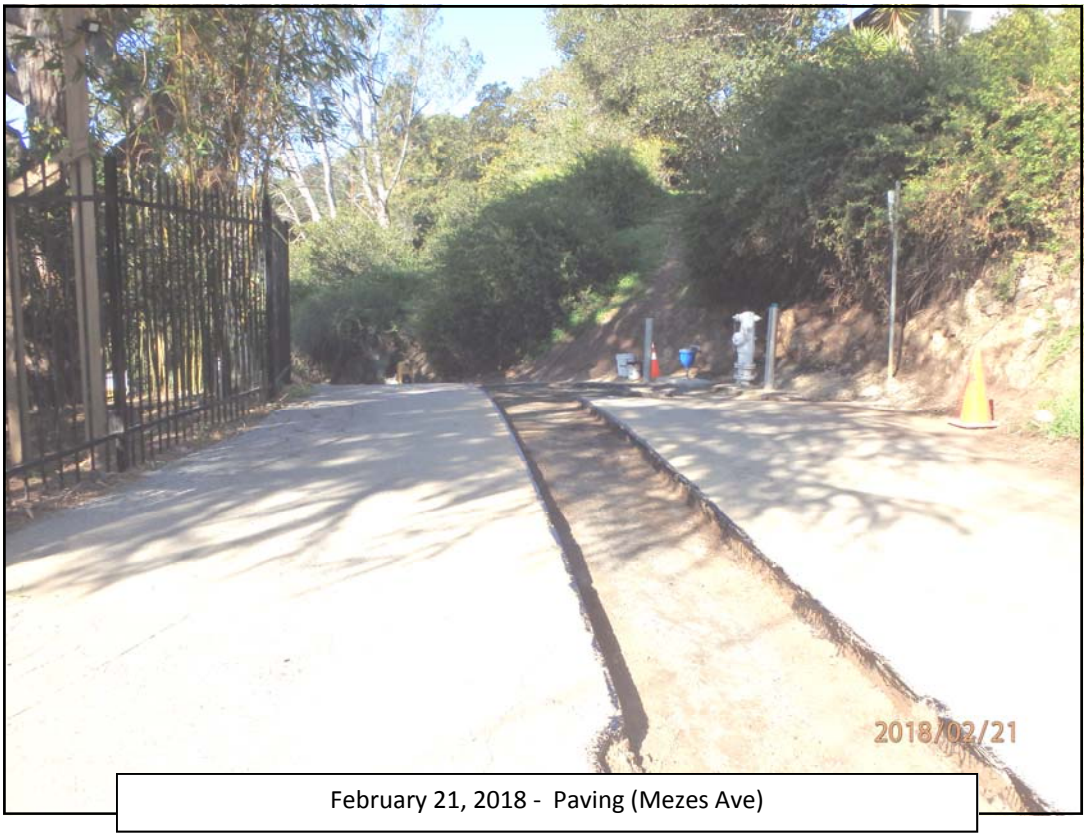

February 2, 2018 - Water main installation (Mezes Ave)


February 7, 2018—Hand digging for service connections (Mezes Ave)

February 7, 2018—Service lines (Mezes Ave)


February 14, 2018 - Tie-in connection (Mezes Ave/Lyon Ave)


February 14, 2018 - Tie-in connection (Mezes Ave/Lyon Ave)




February 21, 2018 - Paving (Mezes Ave)


February 23, 2018 - Paving (Mezes Ave)

**MID-PENINSULA WATER DISTRICT**
**BUDGET FOR YEAR 2017-2018**
**SUMMARY**

| DESCRIPTION | APPROVED MID-YEAR FY 2017-2018 BUDGET $ | ACTUALS 7/1/2017 2/28/18 | REMAINING BALANCE/ (OVER BUDGET) | Target YTD % 66.6% Y-T-D % OF BUDGET |
|---|---|---|---|---|
| **OPERATING REVENUE** | | | | |
| WATER COMMODITY CHARGES | 8,700,000 | 6,759,637 | 1,940,363 | 77.7% |
| FIXED SYSTEM CHARGES | 2,663,720 | 1,769,993 | 893,727 | 66.4% |
| FIRE SERVICE CHARGES | 14,000 | 10,141 | 3,859 | 72.4% |
| SERVICE LINE & INSTALLATION CHARGES | 10,000 | 76,762 | (66,762) | 767.6% |
| MISCELLANEOUS OPERATING | 10,000 | 44,563 | (34,563) | 445.6% |
| PROPERTY TAX REVENUE | 260,000 | 232,505 | 27,495 | 89.4% |
| **TOTAL OPERATING REVENUE** | **11,657,720** | **8,893,601** | **2,764,119** | 76.3% |
| WATER SYSTEM CAPACITY CHARGES | 200,000 | 252,492 | (52,492) | 126.2% |
| WATER DEMAND OFFSET CHARGES | 10,000 | 31,156 | (21,156) | 311.6% |
| MISCELLANEOUS NON-OPERATING | 10,000 | 3,785 | 6,215 | 37.9% |
| INTEREST REVENUE - LAIF | 40,000 | 46,144 | (6,144) | 115.4% |
| INTEREST REVENUE - COP | 150,000 | 116,628 | 33,372 | 77.8% |
| LEASE OF PHYSICAL PROPERTY | 150,000 | 107,829 | 42,171 | 71.9% |
| LANDSCAPE PERMIT REVENUE | 11,200 | 11,200 | - | 100.0% |
| **TOTAL NON-OPERATING REVENUE** | **571,200** | **569,234** | **1,966** | 99.7% |
| **TOTAL REVENUE** | **12,228,920** | **9,462,835** | **2,766,085** | 77.4% |
| **OPERATING EXPENDITURES (OP EXP)** | | | | |
| SALARIES & WAGES | 1,893,566 | 1,064,761 | 828,805 | 56.2% |
| PAYROLL TAXES & BENEFITS | 1,084,880 | 631,462 | 453,418 | 58.2% |
| PURCHASED WATER | 5,554,624 | 3,846,426 | 1,708,199 | 69.2% |
| OUTREACH & EDUCATION | 92,400 | 31,148 | 61,252 | 33.7% |
| M&R - OPS SYSTEM | 486,598 | 239,944 | 246,654 | 49.3% |
| M&R - FACILITIES & EQUIPMENT | 166,860 | 81,739 | 85,121 | 49.0% |
| MAJOR MAINTENANCE | 30,000 | 12,376 | 17,624 | 41.3% |
| OFFICE SUPPLIES & EQUIPMENT | 317,278 | 175,760 | 141,518 | 55.4% |
| MEMBERSHIP & GOV FEES | 208,613 | 143,181 | 65,432 | 68.6% |
| BAD DEBT & CLAIMS | 17,000 | (2,662) | 19,662 | -15.7% |
| UTILITIES | 306,200 | 166,786 | 139,414 | 54.5% |
| PROFESSIONAL SERVICES | 406,450 | 240,202 | 166,248 | 59.1% |
| TRAINING/TRAVEL & RECRUITMENT | 45,000 | 20,751 | 24,249 | 46.1% |
| RESTRICTED EARNINGS | 216,000 | 162,772 | 53,228 | 75.4% |
| DEBT SERVICE TRUSTEE FEES & EXPENSES | - | 1,700 | (1,700) | N/A |
| DEBT SERVICE 2016 COPs | 984,950 | 786,580 | 198,370 | 79.9% |
| **TOTAL OP EXP LESS DEPRECIATION (DEPREC)** | **11,810,419** | **7,602,926** | **4,207,493** | 64.4% |
| **TOTAL OP REVENUE LESS OP EXP & DEPREC** | **418,501** | **1,859,910** | **(1,441,409)** | 444.4% |
| DEPRECIATION | 900,000 | 581,286 | 318,714 | 64.6% |
| **TOTAL OP REVENUE LESS OP EXP** | **(481,499)** | **1,278,624** | **(1,760,123)** | -265.6% |
| **NET TRANSFERS TO CAPITAL** | **481,499** | **(1,278,624)** | **1,760,123** | -265.6% |
| **NET RESULTS OF OPERATIONS** | - | - | - | |

# MID-PENINSULA WATER DISTRICT
## OPERATIONS BUDGET FOR YEAR 2017-2018
## DETAILED

| ACCOUNT NUMBER | ACCOUNT DESCRIPTION | APPROVED MID-YEAR FY 2017-2018 BUDGET $ | ACTUAL 7/1/2017 2/28/2018 | REMAINING BALANCE/ (OVER BUDGET) | Target YTD % 66.6% **Y-T-D % OF BUDGET** |
|---|---|---|---|---|---|
| 4010 | Water Commodity Charges (A) | 8,700,000 | 6,759,637 | 1,940,363 | 77.7% |
| 4020 | Fixed System Charges | 2,663,720 | 1,769,993 | 893,727 | 66.4% |
| 4030 | Fire Service Charges | 14,000 | 10,141 | 3,859 | 72.4% |
| 4050 | Service Line & Installation Charges (B) | 10,000 | 76,762 | (66,762) | 767.6% |
| 4080 | Miscellaneous Operating (C) | 10,000 | 44,563 | (34,563) | 445.6% |
| 4000 | TOTAL WATER CHARGES | 11,397,720 | 8,661,096 | 2,736,624 | 76.0% |
| 4202 | Property Tax Revenue (D) | 260,000 | 232,505 | 27,495 | 89.4% |
| 4200 | OTHER OPERATING REVENUE | 260,000 | 232,505 | 27,495 | 89.4% |
| | TOTAL OPERATING REVENUE | 11,657,720 | 8,893,601 | 2,764,119 | 76.3% |
| 4060 | Water System Capacity Charges (E) | 200,000 | 252,492 | (52,492) | 126.2% |
| 4070 | Water Demand Offset Charges (E) | 10,000 | 31,156 | (21,156) | 311.6% |
| 4090 | Miscellaneous - Non Operating | 10,000 | 3,785 | 6,215 | 37.9% |
| 4102 | Interest Revenue- LAIF(F) | 40,000 | 46,144 | (6,144) | 115.4% |
| 4103 | Interest Revenue-COP Funds (F) | 150,000 | 116,628 | 33,372 | 77.8% |
| 4100 | INTEREST REVENUE | 190,000 | 162,772 | 27,228 | 85.7% |
| 4201 | Lease of Physical Property | 150,000 | 107,829 | 42,171 | 71.9% |
| 4208 | Landscape Plan Permit Review | 11,200 | 11,200 | - | 100.0% |
| 4200 | OTHER NON-OPERATING REVENUE | 161,200 | 119,029 | 42,171 | 73.8% |
| 4000 | TOTAL NON-OPERATING REVENUE | 571,200 | 569,234 | 1,966 | 99.7% |
| | TOTAL OPERATING & NON-OP REVENUE | 12,228,920 | 9,462,835 | 2,766,085 | 77.4% |
| 6011 | Salaries & Wages | 1,822,566 | 1,027,967 | 794,599 | 56.4% |
| 6012 | Director Compensation | 11,000 | 5,000 | 6,000 | 45.5% |
| 6010 | GROSS REGULAR WAGES | 1,833,566 | 1,032,967 | 800,599 | 56.3% |
| 6017 | CAPITAL SALARY & WAGES reversed | - | | - | |
| 6021 | Overtime Labor | 30,000 | 10,877 | 19,123 | 36.3% |
| 6022 | Standby Labor | 30,000 | 20,917 | 9,083 | 69.7% |
| 6020 | SUB-TOTAL SALARY & WAGES | 1,893,566 | 1,064,761 | 828,805 | 56.2% |
| 6031 | FICA/Medicare PR Tax | 125,000 | 81,261 | 43,739 | 65.0% |
| 6038 | ACWA Health Care | 329,600 | 250,646 | 78,954 | 76.0% |
| 6039 | ACWA Dental | 25,000 | 20,029 | 4,971 | 80.1% |
| 6040 | ACWA Vision | 4,481 | 3,489 | 992 | 77.9% |
| 6041 | ACWA Life/AD&D | 4,326 | 3,228 | 1,098 | 74.6% |
| 6042 | Standard LDL/SDL Disabiility | 10,000 | 7,634 | 2,366 | 76.3% |
| 6043 | Workers' Comp Insurance | 40,000 | 25,704 | 14,296 | 64.3% |
| 6044 | Unemployment | 1,030 | - | 1,030 | NA |
| 6045 | CALPERS Retirement - ER 2%@55 | 275,000 | 159,971 | 115,029 | 58.2% |

# MID-PENINSULA WATER DISTRICT
## OPERATIONS BUDGET FOR YEAR 2017-2018
## DETAILED

| ACCOUNT NUMBER | ACCOUNT DESCRIPTION | APPROVED MID-YEAR FY 2017-2018 BUDGET $ | ACTUAL 7/1/2017 2/28/2018 | REMAINING BALANCE/ (OVER BUDGET) | Target YTD % 66.6% Y-T-D % OF BUDGET |
|---|---|---|---|---|---|
| 6046 | Retirees' ACWA Health Care | 57,680 | 42,525 | 15,155 | 73.7% |
| 6047 | Directors' ACWA Health Care | 111,240 | 78,241 | 32,999 | 70.3% |
| 6049 | Medical Reimbursement | 1,030 | 319 | 711 | 30.9% |
| 6050 | Employee Service Recognition | 10,000 | 7,023 | 2,977 | 70.2% |
| 6051 | Safety Incentive Program | 15,000 | 3,937 | 11,063 | 26.2% |
| 6052 | Uniforms | 25,493 | 18,858 | 6,635 | 74.0% |
| 6053 | PARS OPEB Expense (G) | 50,000 | 72,576 | (22,576) | 145.2% |
| 6030 | TOTAL PAYROLL TAXES & BENEFITS | 1,084,880 | 775,440 | 309,440 | 71.5% |
| 6054 | CAPITAL PAYROLL, TAXES & BENEFITS | | (143,978) | 143,978 | N/A |
| 6000 | PERSONNEL COSTS | 2,978,446 | 1,696,223 | 1,282,223 | 56.9% |
| 6101 | SFPUC Treated Water (A) | 5,000,000 | 3,468,170 | 1,531,831 | 69.4% |
| 6102 | BAWSCA (Debt Service Surcharges) | 476,000 | 326,080 | 149,920 | 68.5% |
| 6103 | Rates Stabilization | - | - | - | NA |
| 6104 | SFPUC Water Service Charge | 78,624 | 52,176 | 26,448 | N/A |
| 6100 | PURCHASED WATER | 5,554,624 | 3,846,426 | 1,708,199 | 69.2% |
| 6301 | Water Conservation Program | 7,200 | 3,303 | 3,897 | 45.9% |
| 6302 | School Conservation Program (H) | 7,200 | 19,704 | (12,504) | 273.7% |
| 6303 | Public Outreach & Education | 15,000 | 4,555 | 10,445 | 30.4% |
| 6305 | HET Rebates | 19,750 | 1,932 | 17,818 | 9.8% |
| 6306 | Washing Machine Rebates | - | - | - | NA |
| 6307 | Lawn-Be-Gone Rebates | 38,100 | 1,439 | 36,661 | 3.8% |
| 6308 | Rain Barrel Rebates | 5,150 | 215 | 4,935 | 4.2% |
| 6304 | TOTAL WATER CONSERVATION REBATES | 63,000 | 3,586 | 59,414 | 5.7% |
| 6300 | OUTREACH/EDUCATION | 92,400 | 31,148 | 61,252 | 33.7% |
| 6401 | Water Quality | 69,010 | 14,065 | 54,945 | 20.4% |
| 6402 | Pumping | 65,148 | 3,737 | 61,411 | 5.7% |
| 6403 | Storage Tanks | 10,300 | 244 | 10,056 | 2.4% |
| 6404 | Mains/Distribution | 200,000 | 159,582 | 40,418 | 79.8% |
| 6405 | Meters & Service | 30,900 | 13,302 | 17,598 | 43.0% |
| 6406 | Fire Hydrants (I) | 31,930 | 28,398 | 3,532 | 88.9% |
| 6407 | Regulator Stations | 6,180 | 2,696 | 3,484 | 43.6% |
| 6408 | Safety | 32,960 | 6,755 | 26,205 | 20.5% |
| 6409 | SCADA Maintenance | 15,450 | 9,781 | 5,669 | 63.3% |
| 6410 | Generator Maintenance | 24,720 | 1,385 | 23,335 | 5.6% |
| 6400 | M&R - OPS SYSTEMS | 486,598 | 239,944 | 246,654 | 49.3% |
| 6501 | M&R-Buildings&Grounds | 95,790 | 49,682 | 46,108 | 51.9% |
| 6502 | M&R- Equipment&Tools | 21,630 | 6,402 | 15,228 | 29.6% |
| 6503 | M&R- Vehicles & Large Equipment | 19,570 | 11,272 | 8,298 | 57.6% |
| 6504 | M&R - Fuel | 29,870 | 14,383 | 15,487 | 48.2% |
| 6500 | M&R - FACILITIES & EQUIPMENT | 166,860 | 81,739 | 85,121 | 49.0% |
| 6601 | Cathodic Protection Survey | | (1,424) | 1,424 | NA |

# MID-PENINSULA WATER DISTRICT
## OPERATIONS BUDGET FOR YEAR 2017-2018
## DETAILED

| ACCOUNT NUMBER | ACCOUNT DESCRIPTION | APPROVED MID-YEAR FY 2017-2018 BUDGET $ | ACTUAL 7/1/2017 2/28/2018 | REMAINING BALANCE/ (OVER BUDGET) | Target YTD % 66.6% Y-T-D % OF BUDGET |
|---|---|---|---|---|---|
| 6602 | Leak Detection Survey | 30,000 | 13,800 | 16,200 | NA |
| 6600 | MAJOR MAINTENANCE | 30,000 | 12,376 | 17,624 | 41.3% |
| 6701 | Office Supplies | 15,450 | 4,425 | 11,025 | 28.6% |
| 6702 | Insurance- Liability/Vehicles | 80,000 | 48,332 | 31,668 | 60.4% |
| 6703 | Postage | 8,240 | 1,387 | 6,853 | 16.8% |
| 6704 | Printing/Printing Supplies | 10,000 | 5,864 | 4,136 | 58.6% |
| 6705 | Equipment Services/Maintenance | 20,000 | 8,362 | 11,638 | 41.8% |
| 6706 | Computer Supplies & Upgrades | 32,000 | 12,136 | 19,864 | 37.9% |
| 6707 | Security & Safety | 11,073 | 3,411 | 7,662 | 30.8% |
| 6708 | Other Fees | 515 | - | 515 | NA |
| 6709 | Customer Credit Card Svs Fees | 140,000 | 91,843 | 48,157 | 65.6% |
| 6700 | OFFICE SUPPLIES & EQUIP | 317,278 | 175,760 | 141,518 | 55.4% |
| 6801 | Dues & Publications | 30,685 | 21,382 | 9,303 | 69.7% |
| 6802 | Gov't Fees & Licenses | 29,848 | 17,074 | 12,774 | 57.2% |
| 6803 | BAWSCA Membership Assessments | 76,000 | 36,302 | 39,698 | 47.8% |
| 6804 | Env Health - Cross Connection Inspection | 31,930 | 21,800 | 10,130 | 68.3% |
| 6805 | Software License (J) | 40,150 | 46,623 | (6,473) | 116.1% |
| 6800 | MEMBERSHIP & GOV FEES | 208,613 | 143,181 | 65,432 | 68.6% |
| 6901 | Bad Debt **(K)** | 7,000 | (2,089) | 9,089 | -29.8% |
| 6902 | Claims (K) | 10,000 | (573) | 10,573 | -5.7% |
| 6900 | BAD DEBT & CLAIMS | 17,000 | (2,662) | 19,662 | -15.7% |
| 7001 | Utilities-Internet/Cable | 10,000 | 4,897 | 5,103 | 49.0% |
| 7002 | Utilities-Cellular Telephones | 12,206 | 7,438 | 4,768 | 60.9% |
| 7003 | Utilities-Electric-Pumping | 226,600 | 119,060 | 107,541 | 52.5% |
| 7004 | Utilities-Electric-Bldgs&Grounds | 24,720 | 15,609 | 9,111 | 63.1% |
| 7005 | Utilities-Telephones | 25,000 | 15,604 | 9,396 | 62.4% |
| 7006 | Utilities-Sewer - NPDES | 7,674 | 4,179 | 3,495 | 54.5% |
| 7000 | UTILITIES | 306,200 | 166,786 | 139,414 | 54.5% |
| 7101 | Prof Serv - District Counsel | 75,000 | 38,043 | 36,957 | 50.7% |
| 7102 | Prof Serv - District Engineer (C) | 65,000 | 40,160 | 24,840 | 61.8% |
| 7103 | Prof Serv - IT | 19,750 | 13,640 | 6,110 | 69.1% |
| 7104 | Prof Serv- Annual Finance Audit (L) | 19,000 | 19,050 | (50) | 100.3% |
| 7105 | Prof Serv - Mngmt Consult | - | - | - | NA |
| 7106 | Prof Serv- Accounting & Payroll | 21,750 | 12,623 | 9,127 | 58.0% |
| 7107 | Prof Serv- Customer Billing | 72,250 | 39,425 | 32,825 | 54.6% |
| 7109 | Prof Serv - Answering Svs | 5,000 | 2,248 | 2,752 | 45.0% |
| 7110 | Prof Serv - Miscellaneous | 125,000 | 73,212 | 51,788 | 58.6% |
| 7111 | Prof Serv - District Treasurer | 3,700 | 1,800 | 1,900 | 48.6% |
| 7100 | PROFESSIONAL SERVICES | 406,450 | 240,202 | 166,248 | 59.1% |
| 7201 | Director Travel | 5,000 | 2,733 | 2,267 | 54.7% |
| 7202 | Director Expense | 1,000 | - | 1,000 | NA |

# MID-PENINSULA WATER DISTRICT
# OPERATIONS BUDGET FOR YEAR 2017-2018
# DETAILED

| ACCOUNT NUMBER | ACCOUNT DESCRIPTION | APPROVED MID-YEAR FY 2017-2018 BUDGET $ | ACTUAL 7/1/2017 2/28/2018 | REMAINING BALANCE/ (OVER BUDGET) | Target YTD % 66.6% Y-T-D % OF BUDGET |
|---|---|---|---|---|---|
| 7203 | Elections | - | - | - | NA |
| 7204 | Employee Travel/Training | 32,000 | 16,382 | 15,618 | 51.2% |
| 7205 | Meetings Expense | 7,000 | 1,636 | 5,364 | 23.4% |
| 7200 | TRAINING & TRAVEL | 45,000 | 20,751 | 24,249 | 46.1% |
| 7302 | Restricted Earnings Expense - Interest LAIF & COP (F) | 216,000 | 162,772 | 53,228 | 75.4% |
| 7300 | RESTRICTED EARNINGS EXPENSE | 216,000 | 162,772 | 53,228 | 75.4% |
| 8001 | Working Reserves: Capital | - | - | - | NA |
| 8002 | Working Reserves: Operating | | - | - | NA |
| 8000 | RESERVES | - | - | - | NA |
| 9010 | DEPRECIATION | 900,000 | 581,286 | 318,714 | 64.6% |
| 9011 | DEBT SERVICE TRUSTEE FEES & EXPENSES | - | 1,700 | (1,700) | NA |
| 9012 | DEBT SERVICE 2017-2018 COPs (M) | 984,950 | 786,580 | 198,370 | 79.9% |
| SUB-TOTAL - OPERATING EXPENSES | | 9,731,973 | 6,487,988 | 3,243,985 | 66.7% |
| TOTAL OPERATING EXPENSES | | 12,710,419 | 8,184,212 | 4,526,207 | 64.4% |
| | NET OPERATING SURPLUS/(LOSS) TRANSFER TO CAPITAL | (481,499) | 1,278,624 | (1,760,123) | -265.6% |
| | | | - | | |

(A) Water revenues are at 77.7% and water purchases are at 69.4%. Water revenues is a preliminary number. Revenue does not include the second half of the month.
(B) Nine (9) meter upgrades & new services closed & revenue recognized accordingly.
(C) BAWSCA Reimbursements and Fire Inspection Fees balanced by District Engineering expense.
(D) Receive property tax revenue in Dec 2017 & April 2018
(E) New Service Installations fees recognized for eight (8) projects.
(F) LAIF and COP funds generating more interest revenue than expected.
(G) PARS expense accrued for month until funding is put in place.
(H) Water education kit purchased from BAWSCA totaling $2,611.
(I) Purchase of hydrants totaling $31,694.
(J) Accela (Springbrook) software license from prior year recognized this year $15,713.92. This year's license is $2619/month.
(K) Reversing Bad Debt sent to collections 4 years ago.
(L) Financial Audit payment for field work completed.
(M) This includes both interest and principal paid on debt.

**MID-PENINSULA WATER DISTRICT**
**STATEMENT OF REVENUES & EXPENSES**
**PREVIOUS YEAR COMPARISON**

| | Jul 17 - Feb 18 | Jul 16 - Feb 17 | $ Change | % Change |
|---|---|---|---|---|
| Ordinary Income/Expense | | | | |
| Income | | | | |
| OPERATING REVENUE | 8,948,529.41 | 7,627,506.38 | 1,321,023.03 | 17.32% |
| INTEREST INCOME | 162,771.67 | 7,670.84 | 155,100.83 | 2,021.95% |
| OTHER INCOME | 351,534.13 | 310,301.69 | 41,232.44 | 13.29% |
| Total Income | 9,462,835.21 | 7,945,478.91 | 1,517,356.30 | 19.1% |
| Expense | | | | |
| PERSONNEL COSTS | 1,696,223.10 | 1,768,177.84 | -71,954.74 | -4.07% |
| PURCHASED WATER | 3,846,425.50 | 3,500,813.53 | 345,611.97 | 9.87% |
| OUTREACH/EDUCATION | 31,148.08 | -7,378.34 | 38,526.42 | 522.16% |
| M&4 - OPS SYSTEMS | 239,944.00 | 200,028.34 | 39,915.66 | 19.96% |
| FACILITIES & EQUIPMENT | 81,739.00 | 71,126.66 | 10,612.34 | 14.92% |
| MAJOR MAINTENANCE | 12,376.00 | 590.74 | 11,785.26 | 1,995.0% |
| OFFICE SUPPLIES & EQUIPMENT | 175,759.63 | 184,449.67 | -8,690.04 | -4.71% |
| MEMBERSHIP & GOV FEES | 143,181.28 | 107,884.53 | 35,296.75 | 32.72% |
| BAD DEBT & CLAIMS | -2,661.95 | 16,921.12 | -19,583.07 | -115.73% |
| UTILITIES | 166,786.08 | 169,452.75 | -2,666.67 | -1.57% |
| PROFESSIONAL SERVICES | 240,201.74 | 264,610.19 | -24,408.45 | -9.22% |
| TRAINING & TRAVEL | 20,751.45 | 24,724.39 | -3,972.94 | -16.07% |
| Total Expense | 6,651,873.91 | 6,301,401.42 | 350,472.49 | 5.56% |
| Net Ordinary Income | 2,810,961.30 | 1,644,077.49 | 1,166,883.81 | 70.98% |
| Other Income/Expense | | | | |
| Other Expense | | | | |
| DEPRECIATION | 581,285.87 | 620,423.31 | -39,137.44 | -6.31% |
| DEBT SERVICE TRUSTEE FEES & EXPENSES | 1,700.00 | 0.00 | 1,700.00 | 100.0% |
| COP Financing Costs | 471,580.07 | 0.00 | 471,580.07 | 100.0% |
| Total Other Expense | 1,054,565.94 | 620,423.31 | 434,142.63 | 70.0% |
| Net Revenue/(Expenses) | 1,756,395.36 | 1,023,654.18 | 732,741.18 | 71.6% |

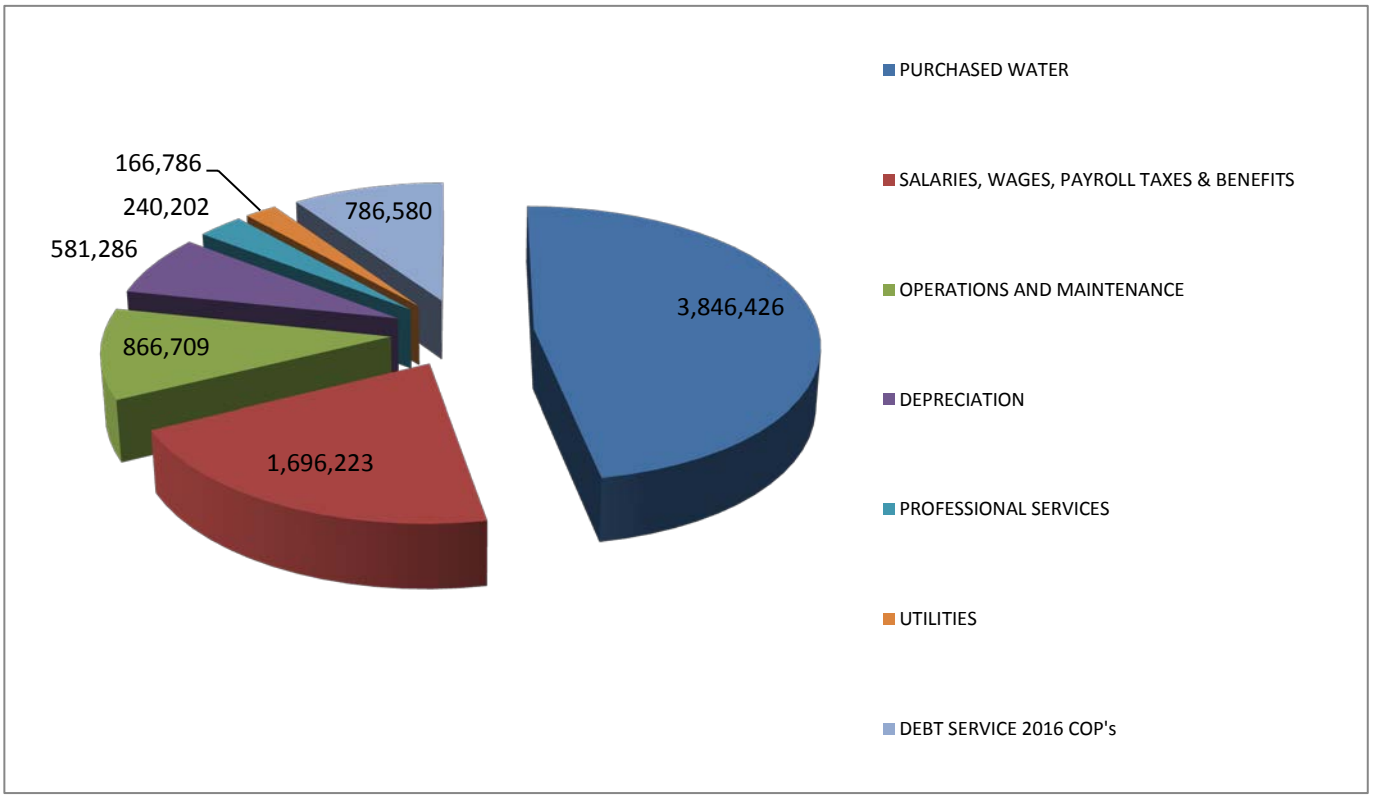
**RECONCILIATION TO OPERATING BUDGET**

| | |
|---|---|
| **Adjustments to Increase Net Operating Surplus** | |
| Interest Income - LAIF & COP Interest | -162,771.67 |
| Debt Service Principal Payment | -315,000.00 |
| **Total Adjustments to Increase Net Operating Surplus** | -477,771.67 |
| **Net Revenue/(Expenses)** | 1,756,395.36 |
| **Net Operating Surplus/(Loss) Transfer to Capital** | 1,278,623.69 |

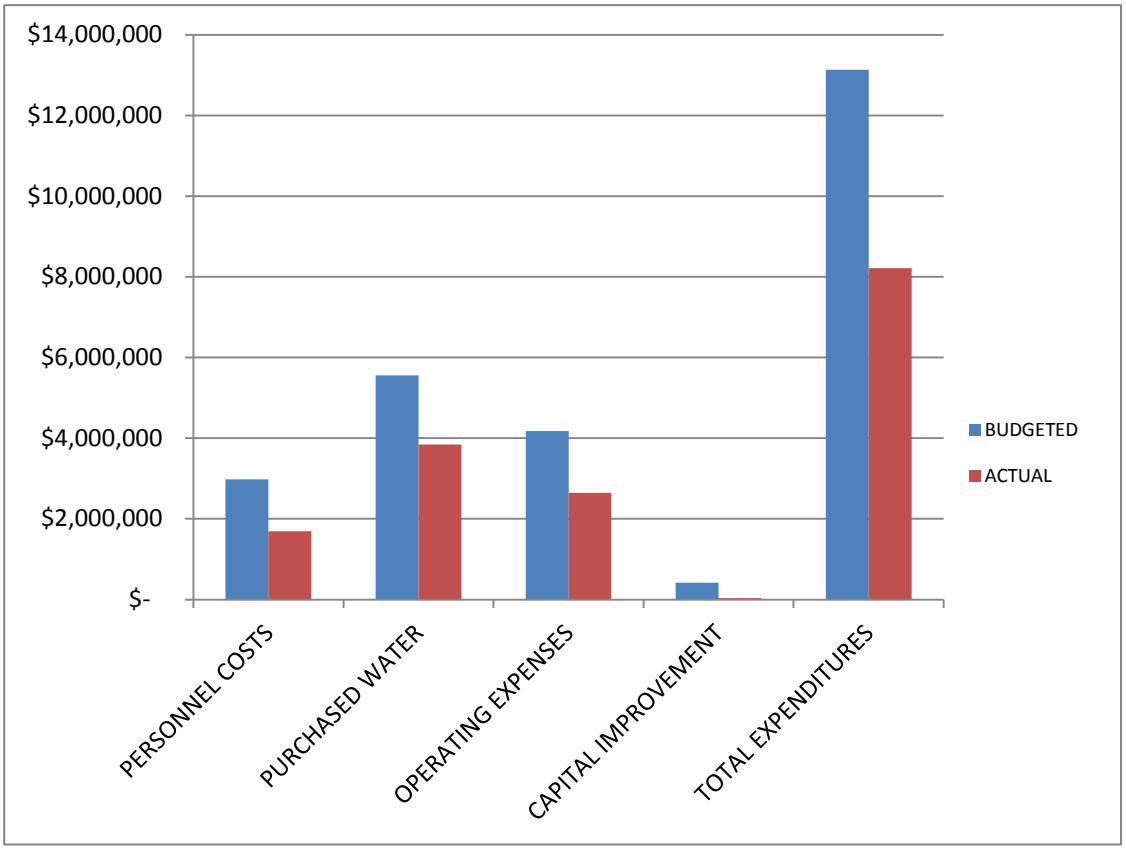
**MID-PENINSULA WATER DISTRICT**
**ACTUAL OPERATING EXPENDITURES SUMMARY**
**Feb-18**

| OPERATING EXPENDITURES | ACTUAL $ | % OF TOTAL |
|---|---|---|
| PURCHASED WATER | 3,846,426 | 47.0% |
| SALARIES, WAGES, PAYROLL TAXES & BENEFITS | 1,696,223 | 20.7% |
| OPERATIONS AND MAINTENANCE | 866,709 | 10.6% |
| DEPRECIATION | 581,286 | 7.1% |
| PROFESSIONAL SERVICES | 240,202 | 2.9% |
| UTILITIES | 166,786 | 2.0% |
| DEBT SERVICE 2016 COP's | 786,580 | 9.6% |
| **TOTAL OPERATING EXPENDITURES** | **8,184,212** | **100%** |

-



# 2016/2017 BUDGET vs ACTUAL TOTAL EXPENDITURES
# Feb-18




| TOTAL EXPENDITURES | BUDGETED | ACTUAL | BUDGETED % OF TOTAL | ACTUAL % OF TOTAL |
|---|---|---|---|---|
| PERSONNEL COSTS | $ 2,978,446 | $ 1,696,223 | 23% | 21% |
| PURCHASED WATER | $ 5,554,624 | $ 3,846,426 | 42% | 47% |
| OPERATING EXPENSES | $ 4,177,349 | $ 2,641,563 | 32% | 32% |
| CAPITAL IMPROVEMENT | $ 418,504 | $ 32,176 | 3% | 0% |
| **TOTAL EXPENDITURES** | **$ 13,128,923** | **$ 8,216,387** | **100%** | **100%** |

**MID-PENINSULA WATER DISTRICT**
**BUDGET FOR FY 2017-2018**
**Capital Projects**

| DESCRIPTION | APPROVED MID-YEAR FY 2017-2018 BUDGET $ | ACTUAL 7/1/2017 2/28/2018 | REMAINING BALANCE/ (OVER BUDGET) | Target YTD % 66.6% **Y-T-D % OF BUDGET** |
|---|---|---|---|---|
| CAPITAL IMPROVEMENTS - WORK IN PROCESS (WIP) | | | | |
| 2017 Joint WMR and Belmont Sewer Rehab Project (Pay-Go Portion) | 375,000 | 13,672 | 361,328 | 3.6% |
| AMI Meter Change Out Program | - | - | 0 | N/A |
| **CAPITAL IMPROVEMENTS - WIP TOTAL** | **375,000** | **13,672** | **361,328** | 3.6% |
| **CAPITAL OUTLAY** | | | | |
| Replacement Printer/Scanner/Copier | 18,504 | 18,504 | 0 | 100.0% |
| Miscellaneous Capital Outlay/Projects | 25,000 | - | 25,000 | 0.0% |
| **CAPITAL OUTLAY TOTAL** | **43,504** | **18,504** | **25,000** | 42.5% |
| **CAPITAL IMPROVEMENTS & CAPITAL OUTLAY TOTAL** | **418,504** | **32,176** | **386,328** | 7.7% |
| DEPRECIATION | 900,000 | 581,286 | 318,714 | 64.6% |
| TRANSFER FROM OPS | (481,496) | 1,278,624 | (1,760,120) | -265.6% |
| TRANSFER (TO)/FROM CAPITAL RESERVES | - | (1,827,734) | 1,827,734 | N/A |
| CAPITAL OUTLAY/CAPITAL PROJECTS | (418,504) | (32,176) | (386,328) | 7.7% |
| **NET RESULTS OF CAPITAL** | **-** | **(0)** | **0** | N/A |

(A) Purchased Canon Copier to replace leased Ricoh Copier.

**MID-PENINSULA WATER DISTRICT**
**STATEMENT OF NET POSITION**
**PREVIOUS YEAR COMPARISON**

| | 28-Feb-18 | 28-Feb-17 | $ Change | % Change |
|---|---|---|---|---|
| **ASSETS** | | | | |
| **CURRENT ASSETS** | | | | |
| Total Checking/Savings | 7,346,564.42 | 25,139,652.18 | -17,793,087.76 | -70.78% |
| Total COP Funds | 17,718,968.57 | 0.00 | 0.00 | 100.0% |
| Total Accounts Receivable | 1,086,277.65 | 764,659.36 | 321,618.29 | 42.06% |
| Total Other Current Assets | 282,498.16 | 235,075.18 | 47,422.98 | 20.17% |
| **TOTAL CURRENT ASSETS** | 26,434,308.80 | 26,139,386.72 | 294,922.08 | 1.13% |
| **FIXED ASSETS** | | | | |
| Fixed Assets | 43,872,409.91 | 41,945,088.75 | 1,927,321.16 | 4.6% |
| Accumulated Depreciation | -27,199,138.65 | -26,384,515.28 | -814,623.37 | -3.09% |
| Construction in Progress | 2,475,995.04 | 900,518.57 | 1,575,476.47 | 174.95% |
| **TOTAL FIXED ASSETS** | 19,149,266.30 | 16,461,092.04 | 2,688,174.26 | 16.33% |
| **TOTAL OTHER ASSETS** | 803,133.00 | 442,276.00 | 360,857.00 | 81.59% |
| **TOTAL ASSETS** | 46,386,708.10 | 43,042,754.76 | 3,343,953.34 | 7.77% |
| **LIABILITIES & EQUITY** | | | | |
| **LIABILITIES** | | | | |
| **CURRENT LIABILITIES** | | | | |
| Total Accounts Payable | 455,816.73 | 116,969.20 | 338,847.53 | 289.69% |
| Total Other Current Liabilities | 2,202,567.00 | 764,964.86 | 1,437,602.14 | 187.93% |
| **TOTAL CURRENT LIABILITIES** | 2,658,383.73 | 881,934.06 | 1,776,449.67 | 201.43% |
| **LONG TERM LIABILITIES** | | | | |
| Total COP Financing Debt **(B)** | 17,910,000.00 | 0.00 | 17,910,000.00 | 100.0% |
| Total COP Premium **(B)** | 899,345.30 | 0.00 | 899,345.30 | 100.0% |
| Total Other Long Term Liabilities **(B)** | 1,765,634.45 | 20,537,084.35 | -18,771,449.90 | -91.4% |
| **TOTAL LONG TERM LIABILITIES** | 20,574,979.75 | 20,537,084.35 | 37,895.40 | 0.19% |
| **TOTAL LIABILITIES** | 23,233,363.48 | 21,419,018.41 | 1,814,345.07 | 8.47% |
| **EQUITY** | | | | |
| 3000 · Opening Bal Equity | 0.00 | 0.00 | 0.00 | 0.0% |
| **3800 · RESERVES *** | 6,672,532.22 | 5,568,453.80 | 1,104,078.42 | 19.83% |
| 3940 · Fund Bal Invest in Util Plant | 19,149,266.30 | 16,605,168.90 | 2,544,097.40 | 15.32% |
| Net Assets **(A)** | -2,668,453.90 | -549,886.35 | -2,118,567.55 | -385.27% |
| **TOTAL EQUITY** | 23,153,344.62 | 21,623,736.35 | 1,529,608.27 | 7.07% |
| **TOTAL LIABILITIES & EQUITY** | 46,386,708.10 | 43,042,754.76 | 3,343,953.34 | 7.77% |

| | **Balance @ Feb-16** | **Balance @ Feb-17** | **Balance @ Feb-18** | **Budget for Reserve Policy** |
|---|---|---|---|---|
| *** RESERVES** | | | | |
| Capital Reserves | 1,295,326 | 3,068,454 | 4,172,532 | 2,500,000 |
| Emergency Reserves | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 |
| Working Capital Reserves | 500,000 | 500,000 | 500,000 | 500,000 |
| **TOTAL RESERVE FUNDS** | 3,795,326 | 5,568,454 | 6,672,532 | 5,000,000 |

**(A)** CalPERS Net Pension Liability - GASB 68 requirement.
**(B)** COP Financing Debt and Debt Premium total $19,185,626.90.