



**CITY OF HUGHSON**  
**CITY COUNCIL MEETING**  
**CITY HALL COUNCIL CHAMBERS**  
**(VIA VIDEOCONFERENCE)**  
**7018 Pine Street, Hughson, CA**

**AGENDA**  
**MONDAY, JUNE 8, 2020 – 7:00 P.M.**

**SPECIAL NOTICE**  
**Coronavirus COVID-19**

**MEMBERS OF THE PUBLIC MAY REMOTELY OBSERVE THE MEETING VIA WEBEX VIDEOCONFERENCE. THIS MEETING WILL NOT INCLUDE IN PERSON PUBLIC ATTENDANCE.**

This meeting will be held in accordance with the Governor's Stay at Home Executive Order N-33-20 and will not include in person public attendance. Members of the public may observe the meeting and provide comments to the Council as described below.

**INFORMATION REGARDING ATTENDANCE AT THE CITY COUNCIL MEETING  
IN RESPONSE TO THE LOCAL PUBLIC HEALTH EMERGENCY:**

**How to observe the Meeting:**

- You can observe the meeting via WebEx, by calling Deputy City Clerk, Ashton Gose at 209-883-4054, or e-mailing [AGOSE@HUGHSON.ORG](mailto:AGOSE@HUGHSON.ORG) by 4:00 p.m. on Monday, June 8, 2020.
- In addition, recorded City Council meetings are posted on the City's website the first business day following the meeting. Recorded videos can be accessed with the following link: <http://hughson.org/our-government/city-council/#council-agenda>

**How to submit Public Comment:**

- If you wish to provide comment during the Public Comment Period, or on a specific agenda item, please submit your comments via email by 4:00 p.m. on Monday, June 8, 2020 prior to the Council meeting. Please email your comment to the Deputy City Clerk at [AGOSE@HUGHSON.ORG](mailto:AGOSE@HUGHSON.ORG) and include either "Public Comment 6/08" or the Agenda Item Number in the subject line of the email. Your written comment will be distributed to the City Council, read aloud during the WebEx videoconference meeting, and kept on file as part of official record of the Council meeting.

**CALL TO ORDER:** Mayor Jeramy Young

**ROLL CALL:** Mayor Jeramy Young  
Mayor Pro Tem George Carr  
Councilmember Ramon Bawanan  
Councilmember Harold Hill  
Councilmember Michael Buck

**FLAG SALUTE:** Mayor Jeramy Young

**INVOCATION:** Hughson Ministerial Association

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**1. PUBLIC BUSINESS FROM THE FLOOR (No Action Can Be Taken):**

Members of the audience may address the City Council on any item of interest to the public pertaining to the City and may step to the podium, state their name and city of residence for the record (requirement of name and city of residence is optional) and make their presentation. Please limit presentations to five minutes. Since the City Council cannot take action on matters not on the agenda, unless the action is authorized by Section 54954.2 of the Government Code, items of concern, which are not urgent in nature can be resolved more expeditiously by completing and submitting to the City Clerk a "Citizen Request Form" which may be obtained from the City Clerk.

**2. PRESENTATIONS:** NONE.

**3. CONSENT CALENDAR:**

All items listed on the Consent Calendar are to be acted upon by a single action of the City Council unless otherwise requested by an individual Councilmember for special consideration. Otherwise, the recommendation of staff will be accepted and acted upon by roll call vote.

3.1: Approve the Minutes of the Regular Meeting of May 11, 2020.

3.2: Approve the Warrants Register.

3.3: Adopt Resolution No. 2020-22, Updating the Citywide Records Management Program, Adopting an Updated Records Retention Schedule, and Rescinding Resolution No. 88-34 (Establishing a Records Management Program and a Records Retention Schedule).

3.4: Adopt Resolution No. 2020-23, Approving the Professional Service Agreement with Moss, Levy & Hartzheim, LLP, for Independent Auditing Services.

- 3.5:** Adopt Resolution No. 2020-24, Approving the Second Amendment to the Agreement with Gilton Solid Waste Management, Inc. for Street Sweeping Services.
- 3.6:** Adopt Resolution No. 2020-25, Accepting the Public Improvements for the Euclid South Subdivision.
- 3.7:** Adopt Resolution No. 2020-26, Accepting the Santa Fe Overlay Project (Phase 2) and Authorizing the City Clerk to File a Notice of Completion.
- 3.8:** Adopt Resolution No. 2020-27, Authorizing the City Manager to Execute an Annual Funding Agreement with the City of Turlock/Stanislaus County HOME Consortium Designating the City of Hughson as a Subrecipient of HOME Investment Partnership Program Funds for Fiscal Year 2020-2021.
- 3.9:** Approve the Treasurer's Report for January 2020.

**4. UNFINISHED BUSINESS: NONE.**

**5. PUBLIC HEARING TO CONSIDER THE FOLLOWING: NONE.**

**6. NEW BUSINESS:**

- 6.1:** Authorize City Staff to Release Bid Documents for the Well No. 7 Replacement Project, Phase IV.

**7. CORRESPONDENCE: NONE.**

**8. COMMENTS:**

- 8.1:** Staff Reports and Comments: (Information Only – No Action)

**City Manager:**

**Deputy City Clerk:**

**Community Development Director:**

**Police Services:**

**City Attorney:**

- 8.2:** Council Comments: (Information Only – No Action)

- 8.3:** Mayor's Comments: (Information Only – No Action)

**9. CLOSED SESSION TO DISCUSS THE FOLLOWING:****9.1: CONFERENCE WITH LABOR NEGOTIATORS**

Agency designated representatives: Merry Mayhew, City Manager  
Employee Organization: Operating Engineers Local Union 3

**9.2: CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION**

(Paragraph (1) of subdivision (d) of Section 54956.9)

Name of case: CITY OF HUGHSON vs. THE DOW CHEMICAL COMPANY; DOW AGROSCIENCES, LLC; SHELL OIL COMPANY, individually and doing business as SHELL CHEMICAL COMPANY; OCCIDENTAL CHEMICAL CORPORATION; WILBUR ELLIS COMPANY; J.R. SIMPLOT COMPANY; FMC CORPORATION, Superior Court of California, County of San Francisco, Case No. CGC-14-542221.

**ADJOURNMENT:****WAIVER WARNING**

If you challenge a decision/direction of the City Council in court, you may be limited to raising only those issues you or someone else raised at a public hearing(s) described in this Agenda, or in written correspondence delivered to the City of Hughson at or prior to, the public hearing(s).

**UPCOMING EVENTS:**

|                |  |
|----------------|--|
| <b>June 9</b>  | ▪ Parks, Recreation and Entertainment Commission Meeting, City Hall Chambers, 6:00 P.M. <b>Cancelled</b> |
| <b>June 16</b> | ▪ Planning Commission Meeting, City Hall Chambers, 6:00 P.M. <b>Tentative</b>                            |
| <b>June 22</b> | ▪ Economic Development Committee Meeting, City Hall Chambers, 5:30 P.M. <b>Tentative</b>                 |
| <b>June 22</b> | ▪ City Council Meeting, City Hall Chambers, 7:00 P.M.  |
| <b>July 3</b>  | ▪ City Hall Closed (Observe Independence Day)  |

**AFFIDAVIT OF POSTING**

**DATE:** June 4, 2020 **TIME:** 5:00 p.m.  
**NAME:** Ashton Gose **TITLE:** Deputy City Clerk



**AMERICANS WITH DISABILITIES ACT/CALIFORNIA BROWN ACT**  
**NOTIFICATION FOR THE CITY OF HUGHSON**

This Agenda shall be made available upon request in alternative formats to persons with a disability as required by the Americans with Disabilities Act of 1990 (42 U.S.C. Section 12132) and the Ralph M. Brown Act (California Government Code Section 54954.2).

**Disabled or Special needs Accommodation:** In compliance with the Americans with Disabilities Act, persons requesting a disability related modification or accommodation in order to participate in the meeting and/or if you need assistance to attend or participate in a City Council meeting, please contact the City Clerk's office at (209) 883-4054. Notification at least 48-hours prior to the meeting will assist the City Clerk in assuring that reasonable accommodations are made to provide accessibility to the meeting.

**Notice Regarding Non-English Speakers:**

Pursuant to California Constitution Article III, Section IV, establishing English as the official language for the State of California, and in accordance with California Code of Civil Procedures Section 185, which requires proceedings before any State Court to be in English, notice is hereby given that all proceedings before the City of Hughson City Council shall be in English and anyone wishing to address the Council is required to have a translator present who will take an oath to make an accurate translation from any language not English into the English language.

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**General Information:** The Hughson City Council meets in the Council Chambers on the second and fourth Mondays of each month at 7:00 p.m., unless otherwise noticed.

**Council Agendas:** The City Council agenda is now available for public review at the City's website at [www.hughson.org](http://www.hughson.org) and City Clerk's Office, 7018 Pine Street, Hughson, California on the Friday, prior to the scheduled meeting. Copies and/or subscriptions can be purchased for a nominal fee through the City Clerk's Office.

**Questions:** Contact the City Clerk at (209) 883-4054



## **CITY COUNCIL AGENDA ITEM NO. 3.1 SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Approval of the City Council Minutes  
**Presented By:** Ashton Gose, Deputy City Clerk  
**Approved By:** Merry Mayhew, City Manager

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### **Staff Recommendation:**

Approve the Minutes of the Regular Meeting of May 11, 2020.

### **Background and Overview:**

The draft minutes of the May 11, 2020 meeting are prepared for the Council's review.



**CITY OF HUGHSON  
CITY COUNCIL MEETING  
CITY HALL COUNCIL CHAMBERS  
7018 Pine Street, Hughson, CA**

**MINUTES  
MONDAY, MAY 11, 2020 – 7:00 P.M.**

**SPECIAL NOTICE  
Coronavirus COVID-19**

THIS MEETING WAS HELD REMOTELY WITHOUT IN PERSON PUBLIC ATTENDANCE IN ACCORDANCE WITH THE GOVERNOR'S STAY AT HOME EXECUTIVE ORDER N-33-20.

**CALL TO ORDER:** Mayor Jeramy Young

**ROLL CALL:**

Present: Mayor Jeramy Young (via videoconference)  
Mayor Pro Tem George Carr (via videoconference)  
Councilmember Harold Hill (via videoconference)  
Councilmember Ramon Bawanan (via videoconference)  
Councilmember Michael Buck (via videoconference)

Staff Present: Raul Mendez, City Manager (via videoconference)  
Daniel Schroeder, City Attorney (via videoconference)  
Larry Seymour, Chief of Police (via videoconference)  
Ashton Gose, Deputy City Clerk (via videoconference)  
Lea Simvoulakis, Community Development Director (via teleconference)  
Merry Mayhew, Director of Finance and Admin Services (via teleconference)

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**1. PUBLIC BUSINESS FROM THE FLOOR (No Action Can Be Taken):**

**NONE.**

**2. PRESENTATIONS: NONE.****3. CONSENT CALENDAR:**

All items listed on the Consent Calendar are to be acted upon by a single action of the City Council unless otherwise requested by an individual Councilmember for special consideration. Otherwise, the recommendation of staff will be accepted and acted upon by roll call vote.

- 3.1:** Approve the Minutes of the Regular Meeting of April 27, 2020.
- 3.2:** Approve the Warrants Register.
- 3.3:** Approve the City of Hughson Treasurer's Quarterly Investment Portfolio Report for December 2019.
- 3.4:** Proclaim May 17-23, 2020, as National Public Works Week.
- 3.5:** Accept the City of Hughson Goals Annual Report Card.
- 3.6:** Adopt Resolution 2020-21, Approving the Measure L Master Funding Agreement with the Stanislaus Council of Governments.

**Deputy City Clerk Gose made an amendment to Consent Calendar item 3.1.**

**YOUNG/HILL 5-0-0-0 motion passes to approve the Consent Calendar as amended.**

**4. UNFINISHED BUSINESS: NONE.****5. PUBLIC HEARING TO CONSIDER THE FOLLOWING: NONE.****6. NEW BUSINESS:**

- 6.1:** Approve the Employment Contract with Merry Mayhew for the Position of City Manager, Effective June 1, 2020.

**CARR/BAWANAN 5-0-0-0 motion passes to approve the employment contract with Merry Mayhew for the position of City Manager, effective June 1, 2020.**

**7. CORRESPONDENCE: NONE.****8. COMMENTS:**

- 8.1:** Staff Reports and Comments: (Information Only – No Action)

**City Manager:**

City Manager Mendez recognized each of the City's public works staff in conjunction with National Public Works Week (May 17-23, 2020). He congratulated Merry Mayhew for being selected as the incoming City Manager. He provided an update to the City Council regarding COVID-19 community compliance within the City of Hughson. He informed the Council that regularly scheduled City Council meetings would need to resume for the month of June.

**Community Development Director:**

Director Simvoulakis provided the Council an update regarding the Santa Fe Overlay Project Phase II, and Euclid South housing development.

**Director of Finance and Administrative Services:**

Director Mayhew informed the Council that a Budget and Finance Subcommittee meeting was scheduled for May 28, 2020.

**Police Services:**

Chief Seymour provided the City Council with the latest Crime Statistic Report.

**8.2: Council Comments: (Information Only – No Action)**

**Councilmember Bawanan congratulated Merry Mayhew on being selected as the incoming City Manager. He participated in several Zoom Videoconference calls for the Hughson Chamber of Commerce, and the Hughson Ministerial Association. He provided an update regarding College Scholarships given to Hughson High School seniors by the Hughson Chamber of Commerce. He expressed his appreciated for all the hard work put in by Raul Mendez as the Hughson City Manager for the last seven years.**

**Councilmember Hill congratulated Merry Mayhew on being selected as the incoming City Manager. He expressed his appreciated for all the hard work put in by Raul Mendez as the Hughson City Manager for the last seven years. He attended a Stanislaus County Economic Development Action Committee meeting via Skype.**

**Councilmember Buck congratulated Merry Mayhew on being selected as the incoming City Manager. He expressed his appreciated for all the hard work put in by Raul Mendez as the Hughson City Manager. He thanked City public works staff for all that they do. He also thanked City staff for continuing to keep the City running during the COVID-19 pandemic.**

**Mayor Pro Tem Carr congratulated Merry Mayhew on being selected as the incoming City Manager. He expressed his appreciated for all the hard work put in by Raul Mendez as the Hughson City Manager for the last seven years. He acknowledged that he believed the City of Hughson has the best staff in Stanislaus County.**

Mayor Young expressed his appreciation for City public works staff and Hughson Police Services. He identified that the City parks look great and thanked the Public Works staff for the condition of the parks. He informed the Council that he attends 5 conference calls per week, with the City Managers and Mayors of Stanislaus County, as well as the Stanislaus County Office of Emergency Services, regarding COVID-19.

**9. CLOSED SESSION TO DISCUSS THE FOLLOWING:**

**9.1: CONFERENCE WITH LABOR NEGOTIATORS**

Agency designated representatives: Raul Mendez, City Manager

Employee Organization: Operating Engineers Local Union 3

**No reportable action.**

**ADJOURNMENT:**

**YOUNG/BUCK 5-0-0-0 motion passes to adjourn the regular meeting of May 11, 2020, at 8:25 P.M.**



## **CITY COUNCIL AGENDA ITEM NO. 3.2**

### **SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Approval of Warrants Register  
**Enclosure:** Warrants Register  
**Presented By:** Lisa Whiteside, Finance Manager  
**Approved By:** Merry Mayhew, City Manager

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#### **Staff Recommendation:**

Approve the Warrants Register as presented.

#### **Background and Overview:**

The warrants register presented to the City Council is a listing of all expenditures paid from May 8, 2020 to June 4, 2020.

#### **Fiscal Impact:**

There are reductions in various funds for payment of expenses.



Hughson

*LW*

# Check Report

By Check Number

Date Range: 05/08/2020 - 06/04/2020

| Vendor Number                        | Vendor Name               | Payment Date | Payment Type                             | Discount Amount | Payment Amount | Number |
|--------------------------------------|---------------------------|--------------|--|-----------------|----------------|--------|
| Payable #                            | Payable Type              | Post Date    | Payable Description                      | Discount Amount | Payable Amount |        |
| Bank Code: Payable Bank-Payable Bank |                           |              |  |                 |                |        |
| 00019                                | ACCOUNTEMPS               | 05/15/2020   | Regular                                  | 0.00            | 2,523.36       | 52882  |
| <a href="#">55727786</a>             | Invoice                   | 04/22/2020   | Finance Extra Help                       | 0.00            | 872.00         |        |
| <a href="#">55746378</a>             | Invoice                   | 04/28/2020   | Finance Extra Help                       | 0.00            | 799.52         |        |
| <a href="#">55776055</a>             | Invoice                   | 05/05/2020   | Finance Extra Help                       | 0.00            | 851.84         |        |
| 00032                                | AFLAC                     | 05/15/2020   | Regular                                  | 0.00            | 734.82         | 52883  |
| <a href="#">287417</a>               | Invoice                   | 04/11/2020   | AFLAC                                    | 0.00            | 734.82         |        |
| 01555                                | Berdion, Richard          | 05/15/2020   | Regular                                  | 0.00            | 83.07          | 52884  |
| <a href="#">INV0003648</a>           | Invoice                   | 05/05/2020   | UB Refund Re-issue, previously issued in | 0.00            | 83.07          |        |
| 00245                                | CCAC                      | 05/15/2020   | Regular                                  | 0.00            | 25.00          | 52885  |
| <a href="#">6144</a>                 | Invoice                   | 04/30/2020   | Webinar Registration                     | 0.00            | 25.00          |        |
| 00258                                | CENTRAL SANITARY SUPPLY   | 05/15/2020   | Regular                                  | 0.00            | 81.88          | 52886  |
| <a href="#">1049245</a>              | Invoice                   | 02/27/2020   | BLANKET P.O. Central Sanitary Supply     | 0.00            | 81.88          |        |
| 00310                                | CLARK'S PEST CONTROL      | 05/15/2020   | Regular                                  | 0.00            | 130.00         | 52887  |
| <a href="#">25704430</a>             | Invoice                   | 04/14/2020   | PEST CONTROL                             | 0.00            | 130.00         |        |
| 00324                                | CODE PUBLISHING COMPANY   | 05/15/2020   | Regular                                  | 0.00            | 627.50         | 52888  |
| <a href="#">66613</a>                | Invoice                   | 04/22/2020   | Municipal Code - Web Update              | 0.00            | 627.50         |        |
| 01538                                | Colonial Life             | 05/15/2020   | Regular                                  | 0.00            | 446.48         | 52889  |
| <a href="#">5405907-040195</a>       | Invoice                   | 04/18/2020   | Colonial Life                            | 0.00            | 446.48         |        |
| 00463                                | EXPRESS PERSONNEL SERVICE | 05/15/2020   | Regular                                  | 0.00            | 790.40         | 52890  |
| <a href="#">23852011</a>             | Invoice                   | 04/15/2020   | Extra Help- PW                           | 0.00            | 790.40         |        |
| 00464                                | EZ NETWORK SOLUTIONS      | 05/15/2020   | Regular                                  | 0.00            | 4,116.30       | 52891  |
| <a href="#">38228</a>                | Invoice                   | 04/30/2020   | IT SERVICES                              | 0.00            | 497.90         |        |
| <a href="#">TS38202</a>              | Invoice                   | 05/01/2020   | IT SERVICES                              | 0.00            | 3,618.40       |        |
| 00527                                | GIBBS MAINTENANCE CO      | 05/15/2020   | Regular                                  | 0.00            | 693.00         | 52892  |
| <a href="#">6880</a>                 | Invoice                   | 04/30/2020   | JANITOR SERVICES                         | 0.00            | 693.00         |        |
| 00528                                | GILTON SOLID WASTE MANAGE | 05/15/2020   | Regular                                  | 0.00            | 1,848.84       | 52893  |
| <a href="#">HUGHSS-045</a>           | Invoice                   | 05/04/2020   | STREET SWEEPING-April                    | 0.00            | 1,848.84       |        |
| 01322                                | GOSE, ASHTON              | 05/15/2020   | Regular                                  | 0.00            | 30.00          | 52894  |
| <a href="#">INV0003619</a>           | Invoice                   | 04/27/2020   | Notary Signing Full Reconveyance Szuggar | 0.00            | 15.00          |        |
| <a href="#">INV0003621</a>           | Invoice                   | 04/27/2020   | Notary Signing Full Reconveyance William | 0.00            | 15.00          |        |
| 00546                                | GRANITE TELECOMMUNICATION | 05/15/2020   | Regular                                  | 0.00            | 1,365.50       | 52895  |
| <a href="#">486002084</a>            | Invoice                   | 05/01/2020   | PHONES                                   | 0.00            | 1,365.50       |        |
| 00627                                | HUGHSON NAPA AUTO & TRUCK | 05/15/2020   | Regular                                  | 0.00            | 78.34          | 52896  |
| <a href="#">279204</a>               | Invoice                   | 04/09/2020   | Small auto parts                         | 0.00            | 12.34          |        |
| <a href="#">279482</a>               | Invoice                   | 04/13/2020   | Small auto parts                         | 0.00            | 66.00          |        |
| 00775                                | MISSION UNIFORM SERVICE   | 05/15/2020   | Regular                                  | 0.00            | 207.62         | 52897  |
| <a href="#">512192067</a>            | Invoice                   | 03/31/2020   | Uniform service                          | 0.00            | 26.00          |        |
| <a href="#">512286468</a>            | Invoice                   | 04/20/2020   | Uniform service                          | 0.00            | 33.92          |        |
| <a href="#">512286469</a>            | Invoice                   | 04/20/2020   | Uniform service                          | 0.00            | 56.89          |        |
| <a href="#">512333600</a>            | Invoice                   | 04/27/2020   | Uniform service                          | 0.00            | 33.92          |        |
| <a href="#">512333602</a>            | Invoice                   | 04/27/2020   | Uniform service                          | 0.00            | 56.89          |        |
| 00879                                | PG & E                    | 05/15/2020   | Regular                                  | 0.00            | 395.07         | 52898  |



## Check Report

Date Range: 05/08/2020 - 06/04/2020

| Vendor Number<br>Payable #     | Vendor Name<br>Payable Type | Post Date  | Payment Date<br>Payable Description | Payment Type | Discount Amount<br>Discount Amount | Payment Amount<br>Payable Amount | Number |
|--------------------------------|-----------------------------|------------|-------------------------------------|--------------|------------------------------------|----------------------------------|--------|
| <a href="#">INV0003650</a>     | Invoice                     | 04/26/2020 | UTILITIES                           |              | 0.00                               | 395.07                           |        |
| 00914                          | QUICK N SAVE                |            | 05/15/2020                          | Regular      | 0.00                               | 351.42                           | 52899  |
| <a href="#">1015714</a>        | Invoice                     | 04/01/2020 | Fuel                                |              | 0.00                               | 125.64                           |        |
| <a href="#">1018939</a>        | Invoice                     | 04/30/2020 | Fuel                                |              | 0.00                               | 86.45                            |        |
| <a href="#">1018945</a>        | Invoice                     | 04/30/2020 | Fuel                                |              | 0.00                               | 61.61                            |        |
| <a href="#">1018963</a>        | Invoice                     | 04/30/2020 | Fuel                                |              | 0.00                               | 49.91                            |        |
| <a href="#">1019496</a>        | Invoice                     | 05/01/2020 | Fuel                                |              | 0.00                               | 27.81                            |        |
| 01554                          | Rangel, Briseida            |            | 05/15/2020                          | Regular      | 0.00                               | 1,000.00                         | 52900  |
| <a href="#">INV0003652</a>     | Invoice                     | 04/27/2020 | Cancelled June Rental - COVID-19    |              | 0.00                               | 1,000.00                         |        |
| 00931                          | RAY A. MORGAN COMPANY       |            | 05/15/2020                          | Regular      | 0.00                               | 611.55                           | 52901  |
| <a href="#">26940312</a>       | Invoice                     | 04/27/2020 | LEASE                               |              | 0.00                               | 611.55                           |        |
| 01115                          | THE HOME DEPOT CRC          |            | 05/15/2020                          | Regular      | 0.00                               | 453.92                           | 52902  |
| <a href="#">8023831</a>        | Invoice                     | 04/09/2020 | Misc Material- Blanket PO           |              | 0.00                               | 453.92                           |        |
| 01152                          | TYLER TECHNOLOGIES          |            | 05/15/2020                          | Regular      | 0.00                               | 400.00                           | 52903  |
| <a href="#">025-293854</a>     | Invoice                     | 05/01/2020 | Annual Fee                          |              | 0.00                               | 400.00                           |        |
| 01264                          | VERIZON WIRELESS            |            | 05/15/2020                          | Regular      | 0.00                               | 456.12                           | 52904  |
| <a href="#">9853278532</a>     | Invoice                     | 04/24/2020 | MIFI DEVICES/ CAMERAS               |              | 0.00                               | 152.04                           |        |
| <a href="#">9853278533</a>     | Invoice                     | 04/24/2020 | MIFI DEVICES/ CAMERAS               |              | 0.00                               | 228.06                           |        |
| <a href="#">9853278534</a>     | Invoice                     | 04/24/2020 | TABLETS FOR SCADA                   |              | 0.00                               | 76.02                            |        |
| 01192                          | VISION SERVICE PLAN         |            | 05/15/2020                          | Regular      | 0.00                               | 502.10                           | 52905  |
| <a href="#">809209753</a>      | Invoice                     | 04/19/2020 | MEDICAL INSURANCE WITHHELD- MAY     |              | 0.00                               | 502.10                           |        |
| 00168                          | W.H. BRESHEARS              |            | 05/15/2020                          | Regular      | 0.00                               | 830.58                           | 52906  |
| <a href="#">377349</a>         | Invoice                     | 04/15/2020 | FUEL                                |              | 0.00                               | 830.58                           |        |
| 01206                          | WARDEN'S OFFICE             |            | 05/15/2020                          | Regular      | 0.00                               | 57.79                            | 52907  |
| <a href="#">2027295-0</a>      | Invoice                     | 04/28/2020 | MISC OFFICE SUPPLIES                |              | 0.00                               | 57.79                            |        |
| 00016                          | ABS PRESORT                 |            | 05/15/2020                          | Regular      | 0.00                               | 908.95                           | 52908  |
| <a href="#">85806</a>          | Invoice                     | 05/08/2020 | BILL PRINTING- MAY                  |              | 0.00                               | 908.95                           |        |
| 00019                          | ACCOMTEMS                   |            | 05/15/2020                          | Regular      | 0.00                               | 855.38                           | 52909  |
| <a href="#">55794695</a>       | Invoice                     | 05/11/2020 | Finance Extra Help                  |              | 0.00                               | 419.38                           |        |
| <a href="#">55795886</a>       | Invoice                     | 05/11/2020 | Finance Extra Help                  |              | 0.00                               | 436.00                           |        |
| 00032                          | AFLAC                       |            | 05/15/2020                          | Regular      | 0.00                               | 734.82                           | 52910  |
| <a href="#">706950</a>         | Invoice                     | 05/12/2020 | AFLAC                               |              | 0.00                               | 734.82                           |        |
| 00049                          | ALLIED ADMINISTRATORS       |            | 05/15/2020                          | Regular      | 0.00                               | 1,739.76                         | 52911  |
| <a href="#">INV0003696</a>     | Invoice                     | 05/13/2020 | DELTA DENTAL                        |              | 0.00                               | 1,739.76                         |        |
| 00094                          | AT&T MOBILITY               |            | 05/15/2020                          | Regular      | 0.00                               | 209.06                           | 52912  |
| <a href="#">287249079959X0</a> | Invoice                     | 04/19/2020 | PHONES                              |              | 0.00                               | 209.06                           |        |
| 00104                          | AYERA TECHNOLOGIES INC.     |            | 05/15/2020                          | Regular      | 0.00                               | 84.00                            | 52913  |
| <a href="#">206529</a>         | Invoice                     | 05/01/2020 | Blanket P.O. Ayera Tech. Internet   |              | 0.00                               | 84.00                            |        |
| 00109                          | BADGER METER, INC           |            | 05/15/2020                          | Regular      | 0.00                               | 19,795.84                        | 52914  |
| <a href="#">1358433</a>        | Invoice                     | 04/21/2020 | Water meter replacement             |              | 0.00                               | 8,855.30                         |        |
| <a href="#">1358434</a>        | Invoice                     | 04/21/2020 | Water meter replacement             |              | 0.00                               | 6,249.48                         |        |
| <a href="#">1359773</a>        | Invoice                     | 04/21/2020 | Water Radio Replacement             |              | 0.00                               | 3,911.06                         |        |
| <a href="#">80051905</a>       | Invoice                     | 05/06/2020 | Water Radios                        |              | 0.00                               | 780.00                           |        |
| 00123                          | BAY ALARM CO                |            | 05/15/2020                          | Regular      | 0.00                               | 190.02                           | 52915  |
| <a href="#">2256342200415</a>  | Invoice                     | 04/21/2020 | alarm service                       |              | 0.00                               | 190.02                           |        |
| 00284                          | CHARTER COMMUNICATION       |            | 05/15/2020                          | Regular      | 0.00                               | 238.35                           | 52916  |
| <a href="#">0013555050120</a>  | Invoice                     | 05/01/2020 | IP ADDRESS- PINE ST                 |              | 0.00                               | 238.35                           |        |

## Check Report

Date Range: 05/08/2020 - 06/04/2020

| Vendor Number<br>Payable #  | Vendor Name<br>Payable Type   | Post Date  | Payment Date<br>Payable Description  | Payment Type | Discount Amount<br>Discount Amount           | Payment Amount<br>Payable Amount                            | Number |
|---|---|--|--|--------------|--|---|--------|
| 00305<br><a href="#">INV0003667</a>   | CITY OF HUGHSON<br>Invoice  | 05/01/2020   | 05/15/2020<br>LLDS & STARN PARK  | Regular      | 0.00<br>0.00                                 | 2,215.02<br>2,215.02  | 52917  |
| 00310<br><a href="#">25848480</a><br><a href="#">25863654</a>   | CLARK'S PEST CONTROL<br>Invoice<br>invoice  | 05/04/2020<br>05/04/2020   | 05/15/2020<br>PEST CONTROL<br>PEST CONTROL   | Regular      | 0.00<br>0.00<br>0.00                         | 175.00<br>110.00<br>65.00                                   | 52918  |
| 00332<br><a href="#">81931</a>  | CONDOR EARTH TECHNOLOGIES<br>Invoice  | 04/28/2020   | 05/15/2020<br>Small MS4 permit   | Regular      | 0.00<br>0.00                                 | 1,197.50<br>1,197.50  | 52919  |
| 00463<br><a href="#">23870688</a>   | EXPRESS PERSONNEL SERVICE<br>Invoice  | 04/21/2020   | 05/15/2020<br>Extra Help- PW   | Regular      | 0.00<br>0.00                                 | 790.40<br>790.40  | 52920  |
| 00474<br><a href="#">1543829</a><br><a href="#">1543829-1</a><br><a href="#">1543874</a>  | FERGUSON ENTERPRISES, INC<br>Invoice<br>Invoice<br>Invoice                            | 05/04/2020<br>05/04/2020<br>05/04/2020   | 05/15/2020<br>Blanket P.O. Ferguson<br>LF 1-1/2 CTS X CTS COMP COUP Blanket P<br>Blanket P.O. Ferguson   | Regular      | 0.00<br>0.00<br>0.00<br>0.00                 | 1,182.15<br>1,027.87<br>140.60<br>13.68                     | 52921  |
| 00498<br><a href="#">580524</a>   | FRANTZ WHOLESALE NURSERY<br>Invoice   | 04/22/2020   | 05/15/2020<br>insect treatment   | Regular      | 0.00<br>0.00                                 | 194.18<br>194.18  | 52922  |
| 00513<br><a href="#">MS45721</a>  | GARTON TRACTOR<br>Invoice   | 05/06/2020   | 05/15/2020<br>Repairs Vandilized ATV   | Regular      | 0.00<br>0.00                                 | 316.67<br>316.67  | 52923  |
| 00528<br><a href="#">INV0003700</a>   | GILTON SOLID WASTE MANAGE<br>Invoice  | 05/13/2020   | 05/15/2020<br>GARBAGE SERVICE- APRIL   | Regular      | 0.00<br>0.00                                 | 40,642.55<br>40,642.55                                      | 52924  |
| 01322<br><a href="#">INV0003668</a>   | GOSE, ASHTON<br>Invoice   | 05/04/2020   | 05/15/2020<br>Food - City Manager Recruitment Intervie   | Regular      | 0.00<br>0.00                                 | 11.99<br>11.99  | 52925  |
| 00614<br><a href="#">H330311</a><br><a href="#">H330753</a><br><a href="#">H331501</a><br><a href="#">H331734</a><br><a href="#">H331850</a><br><a href="#">H332329</a> | HUGHSON FARM SUPPLY<br>Invoice<br>Invoice<br>Invoice<br>Invoice<br>Invoice<br>Invoice | 04/03/2020<br>04/08/2020<br>04/15/2020<br>04/16/2020<br>04/17/2020<br>04/21/2020 | 05/15/2020<br>Small equipment<br>Blanket P.O. Hughson Farm<br>Small equipment<br>Blanket P.O. Hughson Farm<br>Small equipment<br>Blanket P.O. Hughson Farm | Regular      | 0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00 | 177.23<br>15.09<br>25.35<br>26.95<br>57.78<br>46.27<br>5.79 | 52926  |
| 00631<br><a href="#">321825</a>   | ICMA<br>Invoice   | 05/13/2020   | 05/15/2020<br>Job Ad: Chief Administrative Officer   | Regular      | 0.00<br>0.00                                 | 487.50<br>487.50  | 52927  |
| 00824<br><a href="#">307338</a><br><a href="#">307626</a>   | NEUMILLER & BEARDSLEE<br>Invoice<br>Invoice   | 04/22/2020<br>04/22/2020   | 05/15/2020<br>LEGAL SERVICES<br>LEGAL SERVICES   | Regular      | 0.00<br>0.00<br>0.00                         | 15,575.29<br>1,600.00<br>13,975.29                          | 52928  |
| 01435<br><a href="#">004589</a>   | North Valley Labor Compliance Services<br>Invoice                                     | 05/01/2020   | 05/15/2020<br>Phase II- Tank Construction  | Regular      | 0.00<br>0.00                                 | 637.50<br>637.50  | 52929  |
| 00837<br><a href="#">168880</a><br><a href="#">168882</a>   | NORTHSTAR CHEMICAL<br>Invoice<br>Invoice  | 05/08/2020<br>05/08/2020   | 05/15/2020<br>Blanket P.O. Northstar chemical<br>Blanket P.O. Northstar chemical   | Regular      | 0.00<br>0.00<br>0.00                         | 550.26<br>275.13<br>275.13                                  | 52930  |
| 00855<br><a href="#">INV0003699</a>   | OPERATING ENGINEERS LOCAL<br>Invoice  | 05/03/2020   | 05/15/2020<br>LOCAL UNION DUES #3  | Regular      | 0.00<br>0.00                                 | 312.00<br>312.00  | 52931  |
| 00901<br><a href="#">0157189-IN</a>   | PREFERRED ALLIANCE, INC.<br>Invoice   | 04/30/2020   | 05/15/2020<br>OFF-SITE PARTICIPANT   | Regular      | 0.00<br>0.00                                 | 228.54<br>228.54  | 52932  |
| 01271<br><a href="#">INV0003697</a><br><a href="#">INV0003698</a>   | RAUL MENDEZ<br>Invoice<br>Invoice   | 03/14/2020<br>03/13/2020   | 05/15/2020<br>Reimbursement Western City Magazine P<br>Reimbursement California City News Posti  | Regular      | 0.00<br>0.00<br>0.00                         | 525.00<br>300.00<br>225.00                                  | 52933  |
| 01049<br><a href="#">INV0003684</a>   | STANISLAUS COUNTY<br>Invoice  | 05/12/2020   | 05/15/2020<br>Overpayment  | Regular      | 0.00<br>0.00                                 | 12,877.87<br>12,877.87                                      | 52934  |
| 01069   | STEELEY, JARED WATER & WA   |  | 05/15/2020   | Regular      | 0.00   | 3,378.50  | 52935  |

## Check Report

Date Range: 05/08/2020 - 06/04/2020

| Vendor Number             | Vendor Name        | Payment Date | Payment Type                      | Discount Amount | Payment Amount | Number |
|---------------------------|--------------------|--------------|-----------------------------------|-----------------|----------------|--------|
| Payable #                 | Payable Type       | Post Date    | Payable Description               | Discount Amount | Payable Amount |        |
| <a href="#">8184</a>      | Invoice            | 05/01/2020   | BLANKET PO                        | 0.00            | 2,511.50       |        |
| <a href="#">8184-1</a>    | Invoice            | 05/01/2020   | Service for April 2020 Wastewater | 0.00            | 867.00         |        |
| 01090                     | SUTTER HEALTH PLUS | 05/15/2020   | Regular                           | 0.00            | 12,282.70      | 52936  |
| <a href="#">1229685</a>   | Invoice            | 05/01/2020   | MEDICAL INSURANCE- JUNE           | 0.00            | 12,282.70      |        |
| 01176                     | USA BLUE BOOK      | 05/15/2020   | Regular                           | 0.00            | 394.99         | 52937  |
| <a href="#">217199</a>    | Invoice            | 05/06/2020   | Sanitizer                         | 0.00            | 337.58         |        |
| <a href="#">218029</a>    | Invoice            | 05/06/2020   | Sanitizer                         | 0.00            | 57.41          |        |
| 01206                     | WARDEN'S OFFICE    | 05/15/2020   | Regular                           | 0.00            | 266.44         | 52938  |
| <a href="#">2026407-0</a> | Invoice            | 04/21/2020   | Ink                               | 0.00            | 266.44         |        |

## Bank Code Payable Bank Summary

| Payment Type   | Payable Count | Payment Count | Discount    | Payment           |
|----------------|---------------|---------------|-------------|-------------------|
| Regular Checks | 89            | 57            | 0.00        | 138,016.12        |
| Manual Checks  | 0             | 0             | 0.00        | 0.00              |
| Voided Checks  | 0             | 0             | 0.00        | 0.00              |
| Bank Drafts    | 0             | 0             | 0.00        | 0.00              |
| EFT's          | 0             | 0             | 0.00        | 0.00              |
|                | <b>89</b>     | <b>57</b>     | <b>0.00</b> | <b>138,016.12</b> |

**All Bank Codes Check Summary**

| Payment Type   | Payable<br>Count | Payment<br>Count | Discount    | Payment           |
|----------------|------------------|------------------|-------------|-------------------|
| Regular Checks | 89               | 57               | 0.00        | 138,016.12        |
| Manual Checks  | 0                | 0                | 0.00        | 0.00              |
| Voided Checks  | 0                | 0                | 0.00        | 0.00              |
| Bank Drafts    | 0                | 0                | 0.00        | 0.00              |
| EFT's          | 0                | 0                | 0.00        | 0.00              |
|                | <b>89</b>        | <b>57</b>        | <b>0.00</b> | <b>138,016.12</b> |

**Fund Summary**

| Fund | Name                          | Period | Amount            |
|------|-------------------------------|--------|-------------------|
| 999  | POOLED CASH/CONSOLIDATED CASH | 5/2020 | 138,016.12        |
|      |                               |        | <b>138,016.12</b> |



## **CITY COUNCIL AGENDA ITEM NO. 3.3**

### **SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Approval to Adopt Resolution No. 2020-22, Updating the Citywide Records Management Program, Adopting an Updated Records Retention Schedule, and Rescinding Resolution No. 88-34 (Establishing a Records Management Program and a Records Retention Schedule)  
**Enclosures:** Current City of Hughson Records Management Program Manual  
**Presented By:** Ashton Gose, Deputy City Clerk  
**Approved By:** Merry Mayhew, City Manager

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#### **Staff Recommendation:**

Adopt Resolution No. 2020-22, Updating the Citywide Records Management Program, Adopting an Updated Records Retention Schedule, and Rescinding Resolution No. 88-34 (Establishing a Records Management Program and a Records Retention Schedule).

#### **Background:**

The City of Hughson's Citywide Records Management Program Manual was adopted by Resolution No. 88-34 to provide for the proper and efficient management of the City's business records. The City of Hughson's Records Retention Schedule was also adopted by Resolution No. 88-34 to identify each Department's records, how long records are to be retained, and statutes applicable to class of records.

The Records Management Supervisor, or City Clerk was directed to conduct periodic audits of the retention schedule to determine the need for revision, which would be presented to the City Council for schedule modification as necessary in order to keep retention information current and records efficiently maintained. No revisions have been made to the Records Retention Schedule since the initial adoption in 1988.

#### **Discussion:**

The attached Resolution No. 2020-22, updating the Citywide Records Management Program will provide streamlined and efficient means for the City Clerk to administer the City Council adopted Citywide Records Management Program, and for each Department Head, the City Clerk, and the City Attorney to review and approve department record

destruction without sending each individual destruction list to the City Council for approval.

Exhibit A, which is attached to Resolution No. 2020-22, reflects an updated Records Retention/Disposition Schedule. This update includes identifying the Office of Record for each Department's records, changing the format of each record to include "electronic format", updating retention periods for certain records, and adding the California Law Citation Codes for reference. The City Clerk and City Attorney will periodically review and update the Records Management Program Resolution (including the Records Retention/Disposition Schedule) for City Council approval.

**Fiscal Impact:**

Staff time and costs will be incurred to implement the update of the Records Management Program including training/manuals and destruction list review and will be absorbed in the existing General Fund budget.

**CITY OF HUGHSON**  
**CITY COUNCIL**  
**RESOLUTION NO. 2020-22**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUGHSON  
UPDATING THE CITYWIDE RECORDS MANAGEMENT PROGRAM, ADOPTING AN  
UPDATED RECORDS RETENTION SCHEDULE, AND RESCINDING RESOLUTION  
NO. 88-34 (ESTABLISHING A RECORDS MANAGEMENT PROGRAM AND A  
RECORDS RETENTION SCHEDULE)**

**WHEREAS**, the purpose of this Resolution is to provide direction to City Officials, employees, contractors, and volunteers for the proper and efficient management of City of Hughson business records consistent with the requirements of State Law including the California Government Code Sections 6250 et seq. "Public Records Act"; and

**WHEREAS**, the California Government Code Section 34090 et seq. sets forth certain legal requirements relating to the retention of certain municipal records and provides a procedure whereby City records that have served its purpose and are no longer required may be destroyed; and

**WHEREAS**, the City Attorney finds that the attached Records Retention/Disposition Schedule complies with Federal and State statutes; and

**WHEREAS**, the update of the City's established Records Management Program and Records Retention/Disposition Schedule will facilitate the orderly and efficient transfer, retention, and disposition of the records of the City of Hughson in responsible and timely manner.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of Hughson does hereby declare, determine, and order as follows:

Section 1. Resolution No. 88-34 (Establishing a Records Management Program and Records Retention Schedule) is hereby rescinded.

Section 2. The City Council finds that the Records Retention/Disposition Schedule set forth in Exhibit "A", attached hereto and incorporated by reference, is hereby adopted.

Section 3. The specific department identified as the Department of Record on said Records Retention/Disposition Schedule is hereby designated as the Custodian of those records, and as such, shall be responsible for the safekeeping and production of those records.

Section 4. The City Clerk and City Attorney are directed to review these schedules periodically and present revisions to the City Council as may be necessary to keep retention information current and records efficiently maintained.

Section 5. Ownership of City Records: All writings containing information relating to the conduct of the City's business prepared, owned, used, or retained by the City regardless of physical form or characteristics are the property of the City and shall be delivered by outgoing officials, employees, contractors, or volunteers to their successors.

Section 6. Responsibilities:

- A. City Council. The ultimate approval of policies for the keeping, producing, permitting copies, and management of all records of the City shall rest with the City Council.
- B. Officers and Employees. Each officer, employee, contractor, or volunteer of the City has the duty to protect, preserve, store, transfer, destroy or otherwise dispose of, use, and manage City records in accordance with applicable Federal or State laws or such rules as may be approved by the City Council.
- C. City Attorney. The duty of the City Attorney shall be to review and approve department retention and destruction schedules and approve the destruction of original City records in accordance with Federal and State laws and City regulations.
- D. City Clerk. The duty of the City clerk shall be to manage the Citywide Records Management Program for the City pursuant to applicable statutes and the approved City Council program. The City Clerk may, for proper and efficient management of City records:
  - a. Establish procedures, policies and effective controls for using, maintaining, protecting, storing, and destroying records on a Citywide bases;
  - b. Advise, direct, and assist City departments in the preparation of records inventories and retention periods and make recommendations to the City Attorney;
  - c. Maintain a designated, official records center or contract for offsite storage to house records no longer required in active office areas, but which require further retention for legal or operating reasons; and maintain an index of all records stored in the records center;
  - d. Maintain an archive to protect records of historic nature which should not be destroyed;



- e. Advise and assist City departments reviewing and selecting records to be transferred to the records center or archives;
  - f. Advise and assist City departments in conducting surveys, studies, and investigations to promote a proper and efficient Records Management Program for the City;
  - g. Develop and maintain procedures for the protection of City records against natural or other disasters;
  - h. Develop and provide individual and Citywide employee training on the City's Records Management Program; and
  - i. Approve the destruction of original City records in accordance with the approved Citywide Records Retention/Disposition Schedule.
- E. City Departments. Each City department shall establish and maintain an active, continuing program for the economical and efficient management of records of the department within the structure of the Council adopted Citywide Records Management Program. Such program shall, among other things, provide for:
- a. Effective controls over the creation, maintenance, and use of records utilized in the conduct of business;
  - b. Maintenance, security, and protection of records deemed appropriate for preservation;
  - c. Segregation and proper disposal of records in accordance with the established Records Retention/Disposition Schedule.

Those records which are not required in the current operation of the office where the records are made or kept shall be transferred to 1) the records center until they have met specific retention requirements and then may be destroyed; or 2) the official archives, so records may be insured permanent preservation.

Section 7. Destruction of City Records. The records of the City of Hughson as set forth in the approved Records Retention/Disposition Schedule are hereby authorized to be destroyed as provided by Government Code Section 34090 and in accordance with the provisions of said schedule without further action by the City Council, provided that

no records may be destroyed pursuant to said schedule without the prior written approval of the Department Head, City Attorney and City Clerk.

Section 8. Updates to Records Retention/Disposition Schedule:

The City Clerk is hereby authorized with the consent of the City Attorney to modify the Records Retention/Disposition Schedule on a biennial basis. The changes will be brought to the City Council for approval.

**PASSED AND ADOPTED** by the City Council of the City of Hughson at a regular meeting held on this 8<sup>th</sup> day of June 2020, by the following roll call vote:

**AYES:**

**NOES:**

**ABSTENTIONS:**

**ABSENT:**

\_\_\_\_\_  
**JERAMY YOUNG, Mayor**

**ATTEST:**

\_\_\_\_\_  
**ASHTON GOSE, Deputy City Clerk**

CITY OF HUGHSON - RECORDS RETENTION/DISPOSITION SCHEDULE

Adopted June 8, 2020 - Resolution No. 2020-22

EXHIBIT A

|     |                                 | RETENTION PERIODS                      |          |       | FORMAT                  | VITAL DoR |     | REMARKS   | CITATION   |
|-----|---------------------------------|--|----------|-------|-------------------------|-----------|-----|---|--|
|     |                                 | ACTIVE                                 | INACTIVE | TOTAL | See legend on last page |           |     |   | See legend on last page  |
|     |                                 |  |          |       |                         |           |     | COPIES or DUPLICATES of documents for which a department is not the office of record.   |  |
|     |                                 | C                                      | --       | C     | --                      | --        |     | It is the policy of the City of Hughson that copies distributed to various departments for informational purposes and drafts, notes, or interagency or intra-agency memoranda that are not retained by the public agency in the ordinary course of business may be destroyed by the departments when they are no longer useful for reference. | GOV 6254(a) (drafts);<br>GOV 34090.7 (copies)  |
| 100 | GENERAL ADMINISTRATION          |  |          |       |                         |           |     |   |  |
| 101 | OFFICE MANAGEMENT & REFERENCE   |  |          |       |                         |           |     |   |  |
| 101 | -01                             | General Information                    | C        | --    | C+2                     | E HC      | --  | Various   | GOV 34090  |
| 101 | -02                             | Correspondence - Chronological Files   | C        | 2     | C+2                     | E HC      | --  | Various   | Originating Department<br>GOV 34090  |
| 101 | -03                             | Citywide Policies/Procedures           | C        | 2     | C+2                     | E         | --  | Various   | Note: This does not include area specific policies and procedures. For those see the appropriate function (e.g. 200, 600, 800, etc). Includes reference materials: such as Help aids, Tutorials, and Software and Hardware Training Manuals<br>GOV 34090 |
| 101 | -04                             | Staff Meeting Notes                    | C        | --    | C                       | E HC      | --  | Various   | Inter-agency memoranda not retained in the ordinary course of business<br>GOV 6254(a)  |
| 101 | -05                             | In-House Committees                    | C        | 3     | C+3                     | E HC      | --  | Various   | May be kept for research/historic purposes<br>GOV 34090  |
| 101 | -06                             | Departmental Analysis & Reports        | C        | --    | C+5                     | E HC      | --  | Various   | e.g. reorganization and transformation info, department and division mission statements, visions, drivers, initiatives, etc.<br>GOV 34090  |
| 101 | -07                             | Press Releases and Social Media        | C        | 2     | C+2                     | E         | --  | Various   | Media releases, posts to official social media accounts (Facebook, Twitter, Instagram, YouTube, Pinterest, Flickr, NextDoor, etc.)<br>GOV 34090  |
| 101 | -08                             | General Subject Files                  | C        | 2     | C+2                     | E HC      | --  | Various   | Internal working files<br>GOV 34090(d)   |
| 101 | -09                             | Customer Response Management           | 2        | --    | 2                       | E HC      | --  | Various   | Correspondence, audio recordings, and staff memos regarding suggestions, complaints, and feedback from community<br>GOV 34090  |
| 101 | -10                             | Professional Associations              | 2        | --    | 2                       | E HC      | --  | Various   | (I.e. IIMC, CCAC, ICMA)<br>GOV 34090   |
| 101 | -11                             | Community Organizations                | 2        | 3     | 5                       | E HC      | --  | Various   | (I.e. Business Associations)<br>GOV 34090  |
| 101 | -12                             | Community Promotions                   | C        | 3     | C+5                     | E HC      | --  | Various   | (I.e. Communications & Outreach info, surveys, City Focus, Community Connections)<br>GOV 34090   |
| 101 | -13                             | Publications from Outside Agencies     | C        | --    | C                       | E HC      | --  | Various   | Not in City's control (not a public record)<br>GOV 34090   |
| 102 | FORMS & PUBLICATIONS MANAGEMENT |  |          |       |                         |           |     |   |  |
| 102 | -01                             | General Information                    | 2        | --    | C+2                     | E HC      | --  | Various   | GOV 34090  |
| 102 | -02                             | Blank Forms                            | C        | 2     | C+2                     | E HC      | --  | Various   | Templates/forms are considered preliminary drafts exempt from disclosure<br>GOV 6254(a)  |
| 102 | -03                             | Mailing Labels                         | C        | --    | C                       | E         | --  | Various   | GOV 34090  |
| 102 | -04                             | Document Templates                     | C        | --    | C+2                     | E         | --  | Various   | Templates are considered preliminary drafts exempt from disclosure<br>GOV 6254(a)  |
| 103 | RECORDS MANAGEMENT              |  |          |       |                         |           |     |   |  |
| 103 | -01                             | General Information                    | C        | --    | C+                      | E HC      | --  | Various   | Damaged records assessment reports, Records disaster recovery worksheets (for records that are recoverable)<br>GOV 34090   |
| 103 | -02                             | Certificates of Destruction            | 2        | P     | P                       | E HC      | yes | Various   | Authorization to destroy obsolete records, Authorization to destroy unrecoverable damaged records<br>GOV 34090.5   |
| 103 | -03                             | Retention Schedules                    | C        | 4     | C+4                     | E HC      | yes | Various   | GOV 34090; CCP 343   |
| 103 | -04                             | Records Management Policies/Procedures | C        | --    | C                       | E HC      | yes | Various   | Keep until superseded.<br>GOV 34090  |
| 103 | -05                             | Inventory, Records                     | C        | 2     | C+2                     | E         | yes | Various   | Inventory of inactive records holdings & location<br>GOV 34090   |
| 103 | -06                             | Public Records Request                 | C        | 2     | C+2                     | E HC      | --  | CA  | GOV 34090  |
| 104 | INFORMATION SYSTEMS             |  |          |       |                         |           |     |   |  |
| 104 | -01                             | General Information                    | C        | --    | C+2                     | E HC      | --  | IR  | GOV 34090  |
| 104 | -02                             | Internet, World Wide Web               | C        | 2     | C+2                     | E         | --  | CM  | Management/Policies & supporting documentation<br>GOV 34090  |

A/E – After Expiration; Au – Audit; C – While Current/Until Completed; D – Database; DoR – Dept. of Record; E – Electronic/Image; HC – Hard Copy; M – Microfilm; P – Permanent; S – Samples; T – Until Termination

CITY OF HUGHSON - RECORDS RETENTION/DISPOSITION SCHEDULE

Adopted June 8, 2020 - Resolution No. 2020-22

EXHIBIT A

|     |     |   | RETENTION PERIODS |          |       | FORMAT                  | VITAL | DoR     | REMARKS  | CITATION                        |
|-----|-----|---|-------------------|----------|-------|-------------------------|-------|---------|--|---------------------------------|
|     |     |   | ACTIVE            | INACTIVE | TOTAL | See legend on last page |       |         |  | See legend on last page         |
| 104 | -03 | Inventory, Information Systems                                      | C                 | 2        | C+2   | E D HC                  | yes   | IR      | Hardware/Software Inventory logs; systems manuals  | GOV 34090                       |
| 104 | -04 | Program Files and Directories                                       | C                 | -        | C     | E                       | yes   | Various | Backup tapes - not a record  | GOV 34090.7                     |
| 104 | -05 | Network Information Systems (LAN/WAN)                               | C                 | 4        | C+4   | E HC                    | yes   | IR      | Configuration maps & plans   | GOV 34090; CCP 337.2; CCP 343   |
| 104 | -06 | Intraweb  | C                 | 2        | C+2   | E                       | --    | CM      | Internal communications, management/policies & supporting documentation  | GOV 34090                       |
| 104 | -07 | Software Program Management   | C                 | 2        | C+2   | E HC                    | --    | IR      |  | GOV 34090                       |
| 104 | -08 | Application Integrations  | C                 | 2        | C+2   | E HC                    | --    | IR      |  | GOV 34090                       |
| 104 | -09 | Technology  | C                 | 2        | C+2   | E HC                    | --    | IR      |  | GOV 34090                       |
| 104 | -10 | Business Process Workflows  | C                 | 2        | C+2   | E HC                    | --    | IR      |  | GOV 34090                       |
| 104 | -11 | City Software Design Documents                                      | C                 | 2        | C+2   | E HC                    | --    | IR      | Includes functional specifications, technical specifications, and user acceptance docs - kept until software is no longer in use   | GOV 34090                       |
| 105 |     | PRINTING & POSTAGE  |                   |          |       |                         |       |         |  |                                 |
| 105 | -01 | General Information   | C                 | -        | C+2   | E HC                    | --    | Various |  | GOV 34090                       |
| 105 | -02 | Printing/Reproduction   | C                 | 2        | C+2   | E HC                    | --    | Various |  | GOV 34090                       |
| 105 | -03 | Postal/Mailing  | C                 | 2        | C+2   | E HC                    | --    | IR      |  | GOV 34090                       |
| 106 |     | TELECOMMUNICATIONS  |                   |          |       |                         |       |         |  |                                 |
| 106 | -01 | General Information   | C                 | 2        | C+2   | E HC                    | --    | Various | These are not broadcasted files; these are City documents relative to these subjects   | GOV 34090                       |
| 106 | -02 | Cable Television  | C                 | 2        | C+2   | E HC                    | --    | Various | These are not broadcasted files; these are City documents relative to these subjects   | GOV 34090                       |
| 106 | -03 | Telephone Carriers, Antennae and Telephone Services                 | C                 | 2        | C+2   | E HC                    | --    | Various | These are not broadcasted files; these are City documents relative to these subjects   | GOV 34090                       |
| 106 | -04 | Public Education and Government Cable Television                    | C                 | 2        | C+2   | E HC                    | --    | Various | These are not broadcasted files; these are City documents relative to these subjects   | GOV 34090                       |
| 106 | -05 | Institutional Network Services                                      | C                 | 2        | C+2   | E HC                    | --    | Various | These are not broadcasted files; these are City documents relative to these subjects   | GOV 34090                       |
| 106 | -06 | Media Information   | C                 | 2        | C+2   | E HC                    | --    | Various | Media contact information  | GOV 34090                       |
| 106 | -07 | Emergency Communications Systems                                    | C                 | 2        | C+2   | E HC                    | --    | Various | (e.g. Narrowbanding equipment)   | GOV 34090                       |
| 200 |     | COMMUNITY DEVELOPMENT   |                   |          |       |                         |       |         |  |                                 |
| 201 |     | DEVELOPMENT ADMINISTRATION  |                   |          |       |                         |       |         |  |                                 |
| 201 | -01 | General Information   | C                 | -        | C+2   | E HC                    | --    | CD      |  | GOV 34090                       |
| 201 | -02 | Development Bonds   | C                 | 10       | C+10  | E HC                    | yes   | FF      | Housing; industrial development GC43901 requires that you list publications requirements before destroying. All destruction must be approved by City Attorney. A development bond is what a developer posts to insure that required public improvements (roads, curbs, gutters, sidewalks, schools, etc) are built. BONDS INSURING REAL PROPERTY MUST BE RETAINED PERMANENTLY. See Insurance Bonds | GOV 34090; GOV 43900; CCP 337.5 |
| 201 | -03 | Security Bonds  | C                 | 2        | C+2   | E HC                    | yes   | FF      | Documentation created/received in connection with performance of work/services for parcel maps & subdivision work.   | GOV 34090; GOV 43900; CCP 337.5 |
| 201 | -04 | Development Conditions & Development Agreement Supporting Materials | C                 | P        | P     | E                       | yes   | CD      | Mitigation measures; filed with case files. Supporting documents for development agreement filed here; Executed development agreements are also kept permanently.  | GOV 65868.5; CCP 337.15         |

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CITY OF HUGHSON - RECORDS RETENTION/DISPOSITION SCHEDULE

Adopted June 8, 2020 - Resolution No. 2020-22

EXHIBIT A

|     |     | RETENTION PERIODS   |          |       | FORMAT                  | VITAL DoR |     | REMARKS | CITATION   |   |
|-----|-----|---|----------|-------|-------------------------|-----------|-----|---------|--|---|
|     |     | ACTIVE  | INACTIVE | TOTAL | See legend on last page |           |     |         |  | See legend on last page   |
| 201 | -05 | Development Standards   | C        | P     | P                       | E HC      | --  | CD      | Landscape medians, parkway landscape development<br>Applications, reports, supporting documents  | GOV 34090(a)  |
| 201 | -06 | Community Development Block Grants (CDBG)   | Au       | 5     | Au+5                    | E         | yes | CD      |  | 24 CFR 570.502(a)(7),<br>2 CFR 200.333; OMB cir<br>A-102, A-110, A-28 |
| 201 | -07 | Land Uses, Nonconforming  | 2        | P     | P                       | E HC      | yes | CD      | Building or site usage which does not conform to current standards<br>Engineering & field notes & profiles; cross-section of roads, streets,<br>right of way maps, bridges; annexations, deannexation parks, tracts,<br>block, storm drains maps, water easement maps, etc.  | GOV 34090(a)  |
| 201 | -08 | Maps & Plats  | C        | P     | P                       | E         | yes | Various |  | HSC 19850;<br>GOV 34090(a)  |
| 201 | -09 | Plans - Regulatory  | C        | P     | P                       | E         | yes | CD      | Master Plans, General Plans & Elements to General Plan, Area<br>Plans, Local Coastal Plans, Land Use Plans, Zoning Ordinance,<br>Zoning Maps, Zoning Text Amendments, Plans, Drawings,<br>Exhibits, and Photos   | GOV 34090(a);<br>GOV 65106; GOV<br>50110; HSC 19850                   |
| 201 | -10 | General Plan Amendments   | C        | 3     | C+3                     | D E HC    | yes | CD      | Includes approved and denied   | GOV 34090(a); GOV<br>65106; GOV 50110                                 |
| 201 | -11 | Development Impact Fees   | C        | P     | P                       | D         | yes | CD      |  | GOV 34090(a);<br>CCP 337.15   |
| 201 | -12 | Studies, Special Projects & Areas   | C        | 2     | C+2                     | E HC      | --  | Various | Engineering joint powers, noise, traffic impact studies,<br>circulation, archeological artifacts   | GOV 34090(a)  |
| 201 | -13 | Americans with Disabilities Act (ADA)<br>Action   | C        | 2     | C+2                     | E HC D    | --  | Various |  | GOV 34090   |
| 202 |     | BUILDING  |          |       |                         |           |     |         |  |   |
| 202 | -01 | General Information   | C        | --    | C+2                     | E HC      | --  | CD      |  |   |
| 202 | -02 | Building Permits and Plans (Includes<br>construction permits. Does not include other<br>permits such as encroachment or excavation,<br>temporary usage) | C        | P     | P                       | E D HC    | yes | CD      | Issued and final permits, plans and associated documents. Official<br>copy of the plans of every building, during the life of the building for<br>which the City issued a building permit (New commercial and<br>residential construction, tenant improvements, room additions, spa,<br>signs, block wall, remodels) | GOV 34090(a); 4003;<br>4004; H&S 19850; 19853                         |
| 202 | -03 | Projects in Plan Check  | C        | 2     | C+2                     | D HC      | --  | CD      | Retain for 2 years after plan check expires  | GOV 34090   |
| 202 | -04 | Projects in Plan Check SC   | 1        | 1     | C+2                     | D HC      | --  | CD      | Contracted work for Sand City - Destroy two years after permit is<br>issued  | GOV 34090   |
| 202 | -05 | Code Books  | C        | P     | P                       | E HC      | yes | CD      | National Electrical Code, Uniform Building, Fire, Mechanical,<br>Plumbing & Supplements - Keep until superseded  | GOV 34090(e)  |
| 202 | -06 | Contractors   | C        | --    | C                       | D         | yes | CD      | Current list-contractor database is contained within Infor software  | GOV 34090   |
| 202 | -07 | Structural Calculations   | C        | --    | C+2                     | E HC      | --  | CD      | Destroy two years after building permit is finalized   | HSC 19850   |
| 202 | -08 | Residential Property Inspections  | C        | P     | P                       | E HC D    | yes | CD      | Residential property inspections. Destroy paper after scanning.  | GOV 34090.5;<br>HSC 19850   |
| 202 | -09 | Inspection Logs   | C        | 5     | C+5                     | E HC      | yes | CD      | Daily inspections, building activity, daily, plan check, utility   | GOV 34090   |
| 202 | -10 | Complaint File  | C        | 7     | C+7                     | D E       | --  | CD      | Confidential complaints  | 42 USC 1983   |
| 202 | -11 | Building Inspection Services/Case Files   | C        | 2     | C+2                     | D E HC    | --  | CD      | Building, housing, mobile home code violation records including<br>inspections; public nuisance, citations.  | GOV 34090   |
| 202 | -12 | Seismic Retrofit  | P        | P     | P                       | D E HC    |     |         | Includes certificates of compliance  | GOV 34090(a)  |

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Adopted June 8, 2020 - Resolution No. 2020-22

EXHIBIT A

|         |  | RETENTION PERIODS |          |       | FORMAT                  | VITAL DoR | REMARKS |  | CITATION                                    |
|---------|--|-------------------|----------|-------|-------------------------|-----------|---------|--|---|
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| 203     | PUBLIC WORKS   |                   |          |       |                         |           |         |  |   |
| 203 -01 | ENGINEERING  |                   |          |       |                         |           |         |  |   |
| 203 -02 | General Information  | C                 | 2        | C+2   | D E HC                  |           |         |  | GOV 34090                                   |
| 203 -03 | Construction Tracking  | C                 | 10       | C+10  | D E HC                  |           |         | Construction management held for 10 years after notice of completion filed   | CCP 337.15                                  |
| 203 -04 | Engineering Design, Drawings, Traffic Control and Plans            | C                 | P        | P     | D E HC                  |           |         | Includes street design   | GOV 34090(a)                                |
| 203 -05 | Flood Control/Storm Drains   | C                 | 2        | C+2   | D E HC                  |           |         | Storm Drains   | GOV 34090(a)                                |
| 203 -06 | Special Districts (includes Community Services Districts)          | C                 | P        | P     | D E HC                  |           |         | Supporting documents re improvement, lighting, underground utility, bonds, taxes and construction (e.g., CSD, LLD)   | GOV 34090(a)                                |
| 204     | PLANNING   |                   |          |       |                         |           |         |  |   |
| 204 -01 | General Information  | C                 | --       | C+2   | E HC                    | --        | CD      |  | GOV 34090                                   |
| 204 -02 | Case / Project Files   | C                 | P        | P     | D E HC                  | yes       | CD      | Planning & Zoning. Pertains to real property. May include blueprints, drawings, maps, plans, reports, correspondence, uses, variances, studies, appeals, compliance certificates. Includes rezoning of properties, historic preservation address files, mobile food vending for specific locations and permits only, and planning alcohol permits / uses and redevelopment / urban renewal projects, parking adjustments, lot line adjustments, preliminary, tentative and final maps; subdivision agreements filed under 704. | GOV 34090(a); GOV 4003; GOV 4004; HSC 19850 |
| 204 -03 | Sample materials submitted with projects for approval              | C                 | 2        | C+2   | S                       | --        | CD      | Roof, glass, paint, etc. samples - keep as long as project is in approval process plus 2 years. Original is then scanned or photographed, original destroyed, and photo or scan filed in project file.   | GOV 34090                                   |
| 204 -04 | Broad policies or topics not tied to specific address              | C                 | P        | P     | D E HC                  | yes       | CD      | May include blueprints, drawings, correspondence, reports or studies, and staff reports. (I.e. awnings, mansionization, lighting), water allocation charts   | GOV 34090; HSC 19850                        |
| 205     | STREETS - TRAFFIC  |                   |          |       |                         |           |         |  |   |
| 205 -01 | General Information  | 2                 | --       | 2     | E HC                    | --        | PW      | Traffic ordinances relative to streets (e.g. weight maximum)   | GOV 34090                                   |
| 205 -02 | Abandonment/Vacations  | 2                 | P        | P     | E HC                    | --        | PW      | Supporting documentation and includes temporary construction easements   | GOV 34090(a)                                |
| 205 -03 | Street Openings and Closures                                       | 2                 | P        | P     | E HC                    | --        | PW      |  | GOV 34090                                   |
| 205 -04 | Easements, Dedications, Rights of Way, and Other Access Agreements | 2                 | P        | P     | E HC                    | --        | PW      | Supporting documentation, includes emergency access and alternate access routes  | GOV 34090                                   |
| 205 -05 | Field Books  | 2                 | P        | P     | E HC                    | --        | PW      |  | GOV 34090                                   |
| 205 -06 | Intersection Records   | C                 | 2        | C+2   | E HC                    | --        | PW      | Includes correspondence, volume counts, accidents  | GOV 34090                                   |
| 205 -07 | Inventory, Traffic Control Device                                  | C                 | 2        | C+2   | D E HC                  | --        | PW      | Signs, lights, add or remove stop signs  | GOV 34090                                   |
| 205 -08 | Landscaping  | C                 | 2        | C+2   | D E HC                  | --        | PW      | Plants, tree maintenance, work orders  | GOV 34090                                   |
| 205 -09 | Lighting   | C                 | 2        | C+2   | D E                     | --        | PW      | Maintenance, work orders   | GOV 34090                                   |
| 205 -10 | Maintenance/Operations   | C                 | 2        | C+2   | D E                     | --        | PW      | Work orders, inspection, repairs, cleaning, reports, striping, etc   | GOV 34090                                   |
| 205 -11 | Traffic Operations   | C                 | P        | P     | E HC                    | --        | PW      | Fire hydrants, lighting districts, wheel chair ramps, storm drains, streets, sidewalks   | GOV 34090                                   |

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| 205 | -12 | Traffic Studies                   | C        | 10    | C+10                    | E HC      | --  | PW            | Includes analyses and surveys that are studies  | GOV 34090                                   |
| 205 | -13 | Encroachment Permits              | C        | P     | P                       | D E       | yes | IR<br>Various | Encroachment permits, street opening permits, driveway permits  | GOV 34090(a);<br>HSC 19850                  |
| 205 | -14 | Excavation Permits                | C        | 2     | C+2                     | E HC      |     |               | Excavations, road, street, sidewalks and curb alterations   | GOV 34090(d)                                |
| 205 | -15 | Other Permits                     | C        | 2     | C+2                     | D HC      | --  | PW            | Improvement, oversize load, parking, paving, temporary street banners   | GOV 34090                                   |
| 205 | -16 | Street Naming and Numbering       | 2        | P     | P                       | D         | yes | PW            |   | GOV 34090;<br>GOV 34090(a)                  |
| 205 | -17 | Speed Limits                      | C        | 2     | C+2                     | E HC      | --  | PW            | Engineering & Traffic Surveys   | GOV 34090                                   |
| 205 | -18 | Traffic Safety                    | C        | 2     | C+2                     | E HC      | --  | PW            | Drivers Education, pedestrian safety, crosswalks, bicycle lanes, traffic calming, safe routes to school, school circulation   | GOV 34090                                   |
| 205 | -19 | Bridges & Overpasses              | C        | 2     | C+2                     | E HC      | --  | PW            | Life of structure   | GOV 34090                                   |
| 205 | -20 | Inspection                        | C        | 2     | C+2                     | D E HC    | --  | PW            | Includes intersection, sidewalks, bridges and overpasses - keep for the life of structure   | GOV 34090                                   |
| 205 | -21 | Traffic Count - Traffic Data      | C        | 7     | 7                       | E HC      | --  | PW            | Evaluation of traffic volume, Counts for ADT/Segments, turning movements, bike and pedestrian, LOS Calcs, queuing, speed data, collision data, historical trends, origin destination  | GOV 34090                                   |
| 205 | -22 | Collision Data                    | C        | 2     | C+2                     | D         | --  | PW            | Collision database and related information  | GOV 34090                                   |
| 205 | -23 | Truck Routes & Oversized Vehicles | C        | 2     | C+2                     | HC        | --  | PW            |   | GOV 34090                                   |
| 205 | -24 | Traffic Signs                     | C        | 2     | C+2                     | D E HC    | --  | PW            | Log books, index register cards, inventory  | GOV 34090                                   |
| 205 | -25 | Traffic Signals                   | C        | 2     | C+2                     | D E HC    | yes | PW            | Logs, drawings, wiring diagrams, codes, circuits, installation records, testing & maintenance, traffic signal system, fiber optic comms, timing plans, special event timing, signals, lighted crosswalk warning, flashing beacons, dynamic message signs, signals for other jurisdictions | GOV 34090                                   |
| 205 | -26 | Traffic Stripes and Markings      | C        | 2     | C+2                     | D E HC    | yes | PW            |   | GOV 34090                                   |
| 205 | -27 | Temporary Traffic Control         | C        | 2     | C+2                     | D E HC    | yes | PW            |   | GOV 34090                                   |
| 205 | -28 | Traffic Calming                   | C        | 2     | C+2                     | D E HC    | yes | PW            |   | GOV 34090                                   |
| 206 |     | UTILITIES                         |          |       |                         |           |     |               |   |   |
| 206 | -01 | General Information               | 2        | --    | 2                       | HC        | --  | PW            |   | GOV 34090                                   |
| 206 | -02 | Facilities                        | C        | 2     | C+2                     | HC E      | --  | PW            | If City owned   | GOV 34090                                   |
| 206 | -03 | Gas & Electric Rates              | C        | 2     | C+2                     | HC        | --  | FF            |   | GOV 34090                                   |
| 206 | -04 | Underground                       | 2        | P     | P                       | HC        | yes | PW            |   | GOV 34090; GOV 4003;<br>GOV 4004; HSC 19850 |
| 206 | -05 | Water Utilities                   | 2        | P     | P                       | HC        | yes | PW            |   | GOV 34090                                   |
| 207 |     | MAPPING                           |          |       |                         |           |     |               |   |   |
| 207 | -01 | General Information               | 2        | --    | 2                       | HC        | --  | PW            |   | GOV 34090                                   |
| 207 | -02 | GIS System                        | C        |       | C                       | D         | --  | PW            |   | GOV 34090                                   |
| 207 | -03 | Aerial Photos                     | C        | 10    | C+10                    | D E HC    | --  | PW            |   | GOV 34090                                   |
| 207 | -04 | Street Names and House Numbers    | P        | P     | P                       | D E HC    |     |               | Street dedications, closings, address assignment/changes  | GOV 34090(a)                                |
| 208 |     | ENVIRONMENTAL QUALITY             |          |       |                         |           |     |               |   |   |
| 208 | -01 | General Information               | C        | --    | C+2                     | E HC      | --  | Various       |   | GOV 34090                                   |
| 208 | -02 | Air Quality (AQMD)                | C        | 7     | C+7                     | E HC      | --  | CD            | Participants, voucher logs, total daily mileage survey (TDM), commute alternative   | CCP 338(k);<br>GOV 34090                    |

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| 208 | -03 | Asbestos                                    | C                 | P        | P     | E HC                    | --        | PW      | Abatement projects, public buildings   | GOV 34090(a)   |
| 208 | -04 | California Environmental Quality Act (CEQA) | C                 | P        | P     | D E HC                  | yes       | CD      | Exemptions, Draft & Final EIRs, mitigation monitoring, negative declaration, notices of completion and determination, comments, statements of overriding consideration   | GOV 34090(a);<br>CEQA Guidelines                                 |
| 208 | -05 | Congestion Management                       | C                 | 2        | C+2   | E HC                    | --        | PW      | Ride sharing, trip reduction   | GOV 34090(d)   |
| 208 | -06 | National Environmental Policy Act (NEPA)    | C                 | 2        | C+2   | D E HC                  | --        | CD      | Correspondence, consultants, issues, conservation (e.g. oil leases on outer continental shelf)   | GOV 34090(d)   |
| 208 | -07 | Soil  | C                 | 2        | C+2   | E HC                    | --        | CD      | Analysis, construction recommendations   | GOV 34090(d)   |
| 208 | -08 | Soil Reports (Final)                        | C                 | P        | P     | E HC                    | yes       | CD      |  | GOV 34090(d);<br>CCP 338.1                                       |
| 208 | -09 | Review of EIRs not under City Jurisdiction  | C                 | 2        | C+2   | E HC                    | --        | CD      | City Review and comments on projects by other jurisdictions - exemptions, EIRs, mitigation monitoring, negative declaration, notices of completion and determination, comments, statements of overriding consideration | GOV 34090(d)   |
| 208 | -10 | Traffic Impacts                             | C                 | P        | P     | D E HC                  | --        | CD      |  | GOV 34090(d)   |
| 208 | -11 | Green House Gas Emissions                   | C                 | P        | P     | D E HC                  | --        | CD      | Climate Action Plan  | GOV 34090(d)   |
| 209 |     | REGIONAL PLANNING                           |                   |          |       |                         |           |         |  |  |
| 209 | -01 | General Information                         | C                 | --       | C+2   | E HC                    | --        | CD      |  | GOV 34090  |
| 209 | -02 | County General Plan                         | C                 | --       | C     | E HC                    | --        | CD      | Hughson is not the Agency of record  | GOV 34090  |
| 209 | -03 | General Plans Other Cities                  | C                 | --       | C     | E HC                    | --        | CD      | Hughson is not the Agency of record  | GOV 34090  |
| 209 | -04 | LAFCO                                       | C                 | --       | C+2   | E HC                    | --        | CD      | General Information, actions involving the City  | GOV 34090  |
| 210 |     | PROPERTY                                    |                   |          |       |                         |           |         |  |  |
| 210 | -01 | General Information                         | C                 | --       | C+2   | E HC                    | --        | CD      |  | GOV 34090  |
| 210 | -02 | Abandonment                                 | 2                 | P        | P     | D E HC                  | yes       | CD      | Buildings, Condemnation, Demolition  | GOV 34090(a)   |
| 210 | -03 | Acquisition / Disposition of Property       | C                 | P        | P     | E HC                    | yes       | CD      | Supporting documents of sale, purchase, or exchange, lease or rental of property by the City   | GOV 34090(a);<br>GOV 6254;                                       |
| 210 | -04 | Annexations / Deannexations                 | 2                 | P        | P     | E HC                    | yes       | CD      | Reports, agreements, public notices  | GOV 34090(a)   |
| 210 | -05 | Appraisals                                  | C                 | 2        | C+2   | E HC                    | yes       | CD      | Exempt from disclosure until final acquisition or contract agreement obtained  | GOV 34090;<br>GOV 6254(h)  |
| 210 | -06 | Deeds and Promissory Notes                  | C                 | P        | P     | E HC                    |           |         |  | GOV 34090(a)   |
| 210 | -07 | Property taxes                              | C                 | 2        | C+2   | E HC                    | --        | Various |  | GOV 34090  |
| 210 | -08 | Maps, City Boundary                         | C                 | P        | P     | E HC                    | yes       | CD      | Recorded maps, surveys, monuments, includes neighborhood association boundaries  | GOV 34090(d)   |
| 210 | -09 | Lot Splits and Lot Mergers                  | C                 | P        | P     | E HC                    | yes       | CD      |  | GOV 34090  |
| 210 | -10 | Relocation Files                            | C                 | 2        | C+2   | E HC                    | --        | CD      |  | GOV 34090  |
| 211 |     | HOUSING                                     |                   |          |       |                         |           |         |  |  |
| 211 | -01 | General Information                         | C                 | --       | C+2   | E HC                    | --        | CD      |  | GOV 34090  |
| 211 | -02 | Bonds                                       | C                 | 4        | C+4   | E HC                    |           |         | Revenue Bond Documentation   | CCP 337  |
| 211 | -03 | Programs                                    | C                 | 5        | C+5   | E HC                    | yes       | CD      | Includes housing authority strategy, housing bond advisory, HOME, In-lieu housing mitigation, low/moderate housing, housing assistance, etc.   | 24 CFR 570.502(a)(7),<br>2 CFR 200.333;<br>OMB cir. A-102, A-110 |
| 211 | -04 | Homelessness                                | C                 | 2        | C+2   | E HC                    | --        | Various |  | GOV 34090  |
| 212 |     | ECONOMIC DEVELOPMENT                        |                   |          |       |                         |           |         |  |  |
| 212 | -01 | General Information                         | C                 | --       | C+2   | E HC                    | --        | CD      | Includes correspondence  | GOV 34090  |
| 212 | -02 | Reserved                                    |                   |          |       |                         |           |         |  |  |

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CITY OF HUGHSON - RECORDS RETENTION/DISPOSITION SCHEDULE

Adopted June 8, 2020 - Resolution No. 2020-22

EXHIBIT A

|     |     |  | RETENTION PERIODS |          |        | FORMAT                  | VITAL DoR | REMARKS | CITATION  |
|-----|-----|--|-------------------|----------|--------|-------------------------|-----------|---------|---|
|     |     |  | ACTIVE            | INACTIVE | TOTAL  | See legend on last page |           |         | See legend on last page                               |
| 212 | -03 | Economic Development Strategies & Business Recruitment | C+2               | 5        | C+7    | E HC                    | --        | CD      | GOV 34090   |
| 213 |     | HISTORIC PRESERVATION PROGRAM                          |                   |          |        |                         |           |         |   |
| 213 | -01 | General Information                                    | 2                 | --       | 2      | E HC                    | --        | CD      | GOV 34090   |
| 213 | -02 | Historic Surveys                                       | C                 | 5        | C+5    | E HC                    | --        | CD      | Historic Preservation Grants                          |
| 213 | -03 | Archives   | 2                 | P        | P      | E HC                    | --        | CD      | GOV 34090   |
| 213 | -04 | Historic Master Plan                                   | C                 | P        | P      | E HC                    | yes       | CD      | GOV 34090   |
| 213 | -05 | Historic Property Tax Incentive Program - Mills Act    | C                 | 5        | C+5    | E HC                    | --        | CD      | GOV 34090   |
| 213 | -06 | Historic Adobes and Other Historic Buildings           | 2                 | P        | P      | E HC                    | --        | CD      | GOV 34090   |
| 213 | -07 | Historic Preservation Districts                        | C                 | P        | P      | E HC                    | --        | CD      | GOV 34090   |
| 213 | -08 | National Register                                      | C                 | P        | P      | E HC                    | --        | CD      | GOV 34090   |
| 213 | -09 | Historic Remains                                       | C                 | P        | P      | E HC                    | --        | CD      | GOV 34090   |
| 300 |     | COMMUNITY SERVICE PROGRAMS                             |                   |          |        |                         |           |         |   |
| 301 |     | RECREATION ADMINISTRATION                              |                   |          |        |                         |           |         |   |
| 301 | -01 | General Information                                    | 2                 | --       | 2      | E HC                    | --        | PR      | GOV 34090   |
| 301 | -02 | Facility Rental Information                            | C                 | 2        | C+2    | E HC                    | --        | PR      | GOV 34090   |
| 301 | -03 | Programs   | 2                 | 3        | 5      | E HC                    | --        | PR      | Programs that are youth, senior or child care program |
| 302 |     | EVENT/STREET CLOSURE                                   |                   |          |        |                         |           |         |   |
| 302 | -01 | General Information                                    | 2                 | --       | 2      | E HC                    | --        | Various | GOV 34090   |
| 302 | -02 | Farmers' Market  | 2                 | --       | 2      | E HC                    | --        | Various | GOV 34090   |
| 302 | -03 | Hughson Fruit & Nut Festival                           | 2                 | --       | 2      | E HC                    | --        | Various | GOV 34090   |
| 400 |     | FINANCIAL AND FISCAL                                   |                   |          |        |                         |           |         |   |
| 401 |     | ACCOUNTS PAYABLE                                       |                   |          |        |                         |           |         |   |
| 401 | -01 | A-P General Information                                | Au                | 4        | Au + 4 | E HC                    | --        | FF      | GOV 34090   |
| 401 | -02 | Invoice Packet   | Au                | 7        | Au+7   | E HC                    | yes       | FF      | GOV 34090   |
| 401 | -03 | Check Register   | Au                | 5        | Au+5   | D HC                    | yes       | FF      | Includes payroll, cancelled and voided checks         |
| 401 | -04 | 1099's   | Au                | 5        | Au+5   | D HC                    | yes       | FF      | 1099s and associated W-9s                             |
| 402 |     | PAYROLL  |                   |          |        |                         |           |         |   |
| 402 | -01 | Payroll General Information                            | 2                 | --       | 2      | E HC                    | --        | FF      | GOV 34090   |
| 402 | -02 | Payroll Register                                       |                   | P        | P      | D                       | yes       | FF      | Labor costs by employee and program                   |
| 402 | -03 | Employee Time Sheets                                   | Au                | 6        | Au+6   | D E                     | yes       | Various | Signed by employee                                    |
| 402 | -04 | PERS Employee Deduction Reports                        | T                 | 4        | T+4    | E HC                    |           |         | Record of deductions                                  |

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EXHIBIT A

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| 402 | -05          | Deferred Compensation                         | T                 | 5        | T+5   | E HC                    |           | Records of employee contributions and city payments  | GOV 34090; 26 CFR 16001-1                           |
| 402 | -06          | Other Payroll-Related Documents               | Au                | 6        | Au+6  | D HC                    | yes       | Includes W-2 Forms, W-4 Forms, Forms 1096, leave balance sheets, etc.  | GOV 34090; 29 CFR 516.2; 22 CCR 1085-2; 29 USC 436  |
| 402 | -07          | Salary Records                                | T                 | P        | P     | E HC                    | --        | Salary schedules; deduction authorization, beneficiary designation; unemployment claims, garnishments  | GOV 34090; 29 CFR 516.2; 22 CCR 1085-2              |
| 403 | ACCOUNTING   |   |                   |          |       |                         |           |  |   |
| 403 | -01          | General Information                           | 2                 | --       | 2     | E HC                    | --        |  | GOV 34090   |
| 403 | -02          | General Ledger                                | 2                 | P        | P     | D HC                    | yes       |  | GOV 34090; CCP 337                                  |
| 403 | -03          | Checks  | Au                | 5        | Au+5  | E HC                    |           | Includes payroll, cancelled and voided checks  | GOV 34090; CCP 337                                  |
| 403 | -04          | Deposits; receipts                            | Au                | 4        | Au+4  | E HC                    |           | Checks, coins, currency  | GOV 34090; CCP 337                                  |
| 403 | -05          | Report to EDD on Independent Contractors      | C                 | 4        | C+4   | E HC                    | --        | EDD Form 542   | GOV 34090; CCP 337                                  |
| 403 | -06          | Journal Entries and Backup                    | Au                | 7        | Au+7  | E HC                    | yes       | Account postings with supporting documents   | GOV 34090; CCP 337                                  |
| 403 | -07          | Audit Reports and Backup                      | C                 | P        | P     | E HC                    | --        | Various  | GOV 34090   |
| 403 | -08          | State Controller's and Other Required Reports | 2                 | P        | P     | E HC                    | yes       | Treasurer's Reports, Annual Financial reports<br>Controller may destroy after five years   | GOV 34090   |
| 404 | FIXED ASSETS |   |                   |          |       |                         |           |  |   |
| 404 | -01          | General Information                           | 2                 | --       | 2     | E HC                    | --        |  | GOV 34090   |
| 404 | -02          | Inventory                                     | Au                | 7        | Au+7  | D E                     | yes       | Reflects purchase date, cost, account number   | GOV 34090;<br>26 CFR 301 65-1(f)                    |
| 404 | -03          | Surplus Property Auction/Disposal             | Au                | 5        | Au+5  | D E                     | --        | Listing of property, sealed bids, sales of equipment, Deeds, etc.<br>Permanent records.  | GOV 34090; CCP 337                                  |
| 404 | -04          | Vehicle Ownership & Title                     | C                 | C        | C     | E HC                    | yes       | Title transfers when vehicle sold  | GOV 34090(a);<br>VEH 9900 et seq                    |
| 405 | PURCHASING   |   |                   |          |       |                         |           |  |   |
| 405 | -01          | Purchasing General Information                | 2                 | --       | --    | E HC                    | --        |  | GOV 34090   |
| 405 | -02          | Vendor Register                               | C                 | P        | P     | D E HC                  | yes       | Alpha list of vendors, including PO's, invoices, account number, check date and amount for year  | GOV 34090   |
| 405 | -03          | Purchase Orders and Requisitions              | Au                | 5        | Au+5  | D E HC                  | yes       | Original Documents   | GOV 34090; CCP 337                                  |
| 405 | -04          | Bids, RFP's, RFQ's                            | Au                | 5        | Au+5  | E HC                    | yes       | Requests for Proposals regarding goods & services, plus winning bid staff reports  | GOV 34090; GOV 25105-1; CCP 337                     |
| 405 | -05          | Not Awarded Vendor Packets                    | Au                | 2        | Au+2  | E HC                    | yes       | Bid quotes summaries are stored under this series number with the failed bid packets. Sole Source Justification Form, Piggyback Request Form | GOV 34090;<br>GOV 34090(d);<br>GOV 25105-1; CCP 337 |
| 406 | BUDGETING    |   |                   |          |       |                         |           |  |   |
| 406 | -01          | General Information                           | 2                 | --       | 2     | E HC                    | --        | Division Draft Budgets submitted to Budget Committee, Gann Initiatives   | GOV 34090   |
| 406 | -02          | Adopted Budget                                | C                 | P        | P     | D E HC                  | yes       | Adopted budget, council priorities, items included in adopted budget   | GOV 34090   |
| 406 | -03          | Budget as Presented to Council                | C                 | --       | C+10  | E HC                    | --        | Consolidated Draft budget, council priorities, CIP and any other items included in draft budget  | GOV 34090   |
| 406 | -04          | Budget Adjustments                            | Au                | 5        | Au+5  | E HC                    | yes       | Account transfers, appropriation and transfer of funds, and creation, modification, or accounting funds, Midyear review reports              | GOV 34090   |

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| 406 | -05 | Redevelopment Agency Budgets                                 | C                 | P        | P      | D E HC                  | yes   | FF      | (Redevelopment Agencies were dissolved per state law in 2012.) Includes annual audit & bond issues and draft RDA budget staff reports and items  | GOV 34090; GOV 40802; GOV 53901; GOV 43900 et seq. |
| 406 | -06 | Community Services District Budgets                          | C                 | P        | P      | D E HC                  | yes   | FF      | Account transfers, appropriation and transfer of funds, and creation, modification, or accounting funds, Midyear review reports  | GOV 34090; GOV 40802; GOV 53901; GOV 43900 et seq. |
| 407 |     | REVENUE  |                   |          |        |                         |       |         |  |  |
| 407 | -01 | Revenue General Information                                  | 2                 | --       | 2      | E HC                    | --    | FF      |  | GOV 34090  |
| 407 | -02 | Accounts Receivable  | Au                | 4        | Au + 4 | E HC                    |       |         |  | GOV 34090  |
| 407 | -03 | Bank Reconciliations   | Au                | 5        | Au+5   | E HC                    | yes   | FF      | Statements, summaries for receipts, disbursements & reconciliations  | GOV 34090; 26 CFR 16001-1                          |
| 407 | -04 | Billing Information  | Au                | 5        | Au+5   | D E HC                  | yes   | FF      | Invoices, Accounts Receivable, taxes (sales tax revenues, etc.). This series includes cash register receipt tapes, credit card receipt copies, and administrative citation collections packets.  | GOV 34090; CCP 338                                 |
| 407 | -05 | Business License and Other Customer Files                    | C                 | 5        | C+5    | D E HC                  | yes   | FF      | Paid and Reports   | GOV 34090; CCP 337                                 |
| 407 | -06 | Fee Schedules  | C                 | 5        | C+5    | E                       | --    | FF      |  | GOV 34090  |
| 407 | -07 | Investment Records   | C                 | P        | P      | D E HC                  | yes   | FF      | Summary of transactions, inventory & earnings report   | GOV 34090; GOV 53607; CCP 337                      |
| 407 | -08 | Assessment Districts   | C                 | P        | P      | D E HC                  | yes   | FF      | Transcript binder, collection information, account statements, administration, bond, coupons, certifying compliance with state law re: assessments, and CC staff reports on this topic.  | GOV 34090  |
| 407 | -09 | Bond Transcript Binder                                       | C                 | P        | P      | E HC                    | yes   | FF      |  | GOV 34090; CCP 337.5                               |
| 407 | -10 | Revenue Bonds and other Municipal Bond Information           | C                 | 10       | C+10   | E HC                    | yes   | FF      | Vital during life of debt. Revenue bond documentation - Account statements, Administration, Bond and coupons (paid and cancelled). A revenue bond is a bond issued by the City for a specific public works project and supported by revenues from that | GOV 34090; GOV 53921; CCP 337.5                    |
| 407 | -11 | Deposits, Receipts   | Au                | 5        | Au+ 5  | D HC                    | yes   | Various | Current documents are vital records  | GOV 34090; CCP 337                                 |
| 407 | -12 | Dog License Permits  | Au                | 5        | Au+ 5  | D HC                    | yes   | FF      | Dog tags   | GOV 34090; CCP 337                                 |
| 408 |     | RISK MANAGEMENT  |                   |          |        |                         |       |         |  |  |
| 408 | -01 | General Information  | 2                 | --       | 2      | E HC                    | --    | FF      |  | GOV 34090  |
| 408 | -02 | Damage to City Property - City Assets                        | C                 | 7        | C+7    | E HC                    | --    | FF      | Reports and related records  | GOV 25105.5  |
| 408 | -03 | Bonds, Insurance   | 2                 | P        | P      | E HC                    | yes   | FF      | Bonds & insurance policies insuring city property and other assets   | CCP 337.2; CCP 343; GOV 6499.03                    |
| 408 | -04 | Claims, Damage   | C                 | 10       | C+10   | E HC                    | yes   | FF      | Paid/Denied, CC claim staff reports  | GOV 34090; GOV 25105.5                             |
| 408 | -05 | Third Party Incident / Accident Reports                      | C                 | 5        | C+5    | E HC                    | --    | FF      | Theft, property damage or similar occurrence (not fire/law enforcement)  | 29 CFR 1904.2; 29 CFR 1904.6; GOV 25105.5          |
| 408 | -06 | Insurance Certificates for permanently held legal agreements | C                 | P        | P      | E HC                    | yes   | FF      |  | GOV 34090  |
| 408 | -07 | Insurance Policies   | C                 | P        | P      | E HC                    | yes   | FF      | May include liability, property Certificates of Participation  | GOV 34090  |
| 408 | -08 | Insurance, Workers Compensation                              | C                 | P        | P      | E HC                    | yes   | FF      | Indemnity; Originals with Administrator  | GOV 6410; 29 CFR 1910.20                           |

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| 408 | -09 | Photographs, Negatives, Film  | C                 | 2        | C+2   | E HC                    | --        | FF           |   | GOV 34090  |
| 408 | -10 | Risk Management Reports   | C                 | 5        | C+5   | E HC                    | yes       | FF           | Cal/OSHA Form 300 and annual summaries of occupational injuries and illnesses; Federal OSHA forms, loss analysis report, safety reports, actuarial studies  | 29 CFR 1904.4; 29 CFR 1904.7; GOV 34090; 8 CCR 342; 14300.33; 14300.48; LAB 6409; 6409.1                         |
| 408 | -11 | Warranties  | C                 | 2        | C+2   | E HC                    | --        | Various      | This includes any warranties issued to the City to cover services, purchases, and or work performed for the City (e.g. roof warranty, appliance warranties)   | GOV 34090; CCP 1790  |
| 408 | -12 | Work-Injury   | C                 | 5        | C+5   | E HC                    |           |              | (5 years from date of injury or when benefits were last provided, whichever is later. Closed claim files may be stored on microfilm, but original paper files must be kept for 2 years after claim was closed.<br>Claims file for each work-injury claim, including claims that were denied Includes claim log of all work-injury claims. | 8 CCR 10101.1; 10102; LAB 6401.7   |
| 408 | -13 | Insurance Certificates for legal agreements that do not have a permanent retention period | C                 | 5        | C+5   | E HC                    | --        | FF           |   | GOV 34090; GOV 4004; CCP 337.2; CCP 343  |
| 409 |     | GRANTS - DONATIONS  |                   |          |       |                         |           |              |   |  |
| 409 | -01 | General Information   | 2                 | --       | 2     | E HC                    | --        | FF           |   | GOV 34090  |
| 409 | -02 | Federal and State Grants and Assistance   | C                 | 5        | C+5   | E D HC                  | --        | FF           | Records for grants with Prop. 1B funding must be retained for 35 years.   | GOV 34090; OES Grant Mgmt. Memo 2011-09  |
| 409 | -03 | Donations   | 2                 | 3        | 5     | E D HC                  | --        | Various      |   | GOV 34090  |
| 409 | -04 | Request for Grant or Start Up Funds from City   | 2                 | 3        | 5     | E HC                    | --        | Various      |   | GOV 34090  |
| 409 | -05 | Grants from other sources   | 2                 | 3        | 5     | E HC                    | --        | Various      |   | GOV 34090  |
| 500 |     | PERSONNEL   |                   |          |       |                         |           |              |   |  |
| 501 |     | PERSONNEL DATA  |                   |          |       |                         |           |              |   |  |
| 501 | -01 | Personnel General Information   | 2                 | --       | 2     | E HC                    | --        | HR + Various | Reference checks from other agencies  | GOV 34090  |
| 501 | -02 | Active Employees (Non-Sworn)  | C                 | 10       | C+10  | E HC                    | yes       | HR + Various | May include application, release authorizations, certifications, reassignments, outside employment, disciplinary actions, terminations, evaluations   | 29 CFR 516.6; 29 CFR 1627.3; 29 CFR 1602 et seq.; 29 CFR 1607.4; GOV 6254(c); GOV 12946; GOV 34090               |
| 501 | -03 | Contractual Employees   | C                 | 10       | C+10  | E HC                    | yes       | HR           | Copy of contract and may include application, release authorizations, certifications, reassignments, outside employment, disciplinary actions, terminations, evaluations  | 29 CFR 516.6; 29 CFR 1627.3; 29 CFR 1602.30; 29 CFR 1602.31; GOV 6254(c); GOV 12946; GOV 34090; CCP 337; CCP 343 |

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| 501 | -04 | Temporary Services   | C        | 6          | C+6                     | E HC      | yes | Various | On-Call Staff, Outside Temporary Services   | GOV 12946; GOV 34090; 29 CFR 1627.3; LAB 1174  |
| 501 | -05 | Volunteers   | C        | 3          | C+3                     | E HC      | yes | Various |   | DSWVP Guidelines; 19 CCR 2570-   |
| 501 | -06 | Investigations, Discipline Background Information & Grievances | C        | P          | C+P                     | E HC      | --  | HR      |   | 29 CFR 1627.3; 29 CFR 1607.4; 29 CFR 516.6 et seq; LAB 1174; GOV 12946; GOV 3300; EEOC - Federal Regs.; PEN 832.5(b) |
| 501 | -07 | City Employee Oaths of Office                                  | C        | 2          | C+2                     | E HC      |     | Various |   | GOV 34090  |
| 502 |     | PERSONNEL MANAGEMENT   |          |            |                         |           |     |         |   |  |
| 502 | -01 | Personnel Management General Information                       | 2        | --         | 2                       | E HC      | --  | HR      |   |  |
| 502 | -02 | Job Descriptions   | C        | 2          | C+2                     | E HC      | yes | HR      | Current documents are vital records   | GOV 34090  |
| 502 | -03 | Position Classifications                                       | C        | 2          | C+2                     | E HC      | --  | HR      | Includes classification & wage rates, staff reports on control list, classification studies and surveys, and reclassification   | GOV 12946; GOV 34090; 29 CFR 516.6(2); 29 CFR 1602; 29 CFR 1607  |
| 502 | -04 | Unemployment Claims  | C        | 4          | C+4                     | E HC      | --  | HR      |   | GOV 34090  |
| 502 | -05 | Unemployment Insurance   | T        | 6          | T+6                     |           |     |         | Unemployment insurance, Social Security, and Medicare Tax records   | IRC 3301-3311  |
| 502 | -06 | Bond, Personnel Fidelity                                       | C        | 2          | T+2                     | E HC      | yes | FF      | Employee fidelity bonds   | GOV 34090  |
| 502 | -07 | Employee Handbooks and Policies                                | C        | 2          | C+2                     | E HC      | yes | HR      | General Employee information, including benefit plans   | GOV 34090; GOV 12946   |
| 502 | -08 | Employee Programs  | C        | 2          | C+2                     | E HC      | --  | HR      | Includes commendations, awards, and recognitions  | GOV 34090; GOV 12946   |
| 502 | -09 | Federal I-9 Forms  | C        | C + 3 or 1 | C+ 3 or 1               | E HC      | yes | HR      | Control of Unlawful Employment of Aliens, (b)(3)(B)(i) and (ii) I-9s are retained for three years after the date of such hiring, or (ii) one year after the individual's employment is terminated, whichever is later | Immigration Reform/ Control Act 1986 Pub. L 99-603   |
| 502 | -10 | Leaves of absence (FMLA, CFRA)                                 | C        | 3          | C+3                     | E HC      |     |         |   | 29 CFR 825.500<br><br>GOV 12946  |
| 502 | -11 | Motor Vehicle (DMV) Records                                    | C        | 7          | C+7                     | E HC      | --  | FF      |   | GOV 12946; GOV 9100; 8 USC 1324(a)   |
| 502 | -12 | Position Recruitment   | C        | 3          | C+3                     | E HC      | --  | Various | Applications and resumes, lists/logs, indices, ethnicity disclosures, examination materials & answer sheets, job bulletins, eligibility, release of Information forms for recruitments, electronic database           | GOV 12946; GOV 6250 et seq; 29 CFR 1602 et seq; 29 CFR 1607; 29 CFR 1627.3   |
| 502 | -13 | Vehicle Mileage Reimbursement Rates                            | C        | 2          | C+2                     | E HC      | --  | FF      | Annual mileage reimbursement rates as announced by Finance  | GOV 34090  |
| 502 | -14 | Equal Opportunity / Affirmative Action                         | C        | 3          | C+3                     | E HC      | --  | HR      | Affirmative Action or Equal Opportunity staff reports; outreach and recruitment efforts   | GOV 34090; 41 CFR 60-1.12, 60-741.44(f)  |
| 502 | -15 | Volunteer Programs, Guidelines, and Activities                 | C        | 2          | C+2                     | E HC      | --  | Various |   | GOV 34090  |

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| 503     | SAFETY  |                   |          |       |                         |           |    |  |   |
| 503 -01 | General Information                             | 2                 | --       | 2     | E HC                    | --        | HR |  | GOV 34090   |
| 503 -02 | Plan Document                                   | C                 | 6        | C+6   | E HC                    | yes       | HR |  | GOV 34090   |
| 503 -03 | OSHA  | C                 | 7        | C+7   | E HC                    | --        | HR |  | 29 CFR 1904.2;<br>29 CFR 1966.6                             |
| 503 -04 | Safety Policies and Procedures                  | C                 | 2        | C+2   | E HC                    | --        | HR |  | GOV 34090   |
| 503 -05 | Safety Audit                                    | C                 | 7        | C+7   | E HC                    | --        | HR |  | GOV 34090   |
| 503 -06 | Reserved  |                   |          |       |                         |           |    |  |   |
| 503 -07 | Publications and law updates                    | C                 | --       | C     | E HC                    | --        | HR |  | GOV 34090   |
| 504     | BENEFITS  |                   |          |       |                         |           |    |  |   |
| 504 -01 | General Information                             | 2                 | --       | 2     | E HC                    | --        | HR | Historical benefit information (includes Council benefits)   | GOV 34090   |
| 504 -02 | Plan Documents                                  | C                 | 6        | C+ 6  | E HC                    | yes       | HR | e.g. Dependent Care Program  | GOV 34090   |
| 504 -03 | Active Employee Benefit Files                   | C                 | 10       | C+10  | E HC                    | yes       | HR | May include enrollment forms, emergency notification forms, etc.   | 29 CFR 1627.3;<br>29 CFR 1602.30.32                         |
| 504 -04 | Separated Employees                             | 0                 | 10       | 10    | E HC                    | --        | HR | May include enrollment forms, emergency notification forms, etc.   | 29 CFR 1627.3;<br>29 CFR 1602.30.32                         |
| 504 -05 | COBRA files                                     | C                 | 10       | C+10  | E HC                    | yes       | HR | May include enrollment forms, COBRA letters, etc.  | 29 CFR 1627.3;<br>29 CFR 1602.30.32                         |
| 504 -06 | Retirement                                      | C                 | P        | P     | E HC                    | yes       | HR | PERS, Social Security, Medicare & Benefit documents  | 29 CFR 1627.3(2);<br>GOV 12946; GOV 34090; GOV 7501 et seq. |
| 504 -07 | Vendor/Administrator Reports and Correspondence | C                 | 2        | C+ 2  | E HC                    |           |    |  | GOV 34090   |
| 504 -08 | Orientation Packets                             | C                 | C        | C     | E HC                    |           |    |  | GOV 34090   |
| 504 -09 | Forms and Handouts                              | C                 | --       | C     | E HC                    | --        | HR |  | GOV 34090   |
| 504 -10 | Employee Medical Information                    | C                 | 10       | C+10  | E HC                    | yes       | HR | May include Family leave, certifications, tests, pre-employment physical, non-industrial disability            | FMLA 1993 US OSHA;<br>29 CFR 1602.20;<br>29 CFR 1602.32     |
| 504 -11 | Publications and law updates                    | C                 | --       | C     | E HC                    | --        |    |  | GOV 34090   |
| 504 -12 | Deferred Compensation Plan                      | C                 | P        | P     | E HC                    | yes       | HR | Includes plan information  | 29 CFR 1627.3(2);<br>GOV 12946; GOV 34090                   |
| 505     | WORKERS COMPENSATION                            |                   |          |       |                         |           |    |  |   |
| 505 -01 | General Information                             | 2                 | --       | 2     | E HC                    | --        | HR |  | GOV 34090   |
| 505 -02 | Employee Files                                  | C                 | P        | P     | E HC                    | yes       | HR | Claim files, reports, incidents (working files), originals filed with Administrator, Workers' Comp settlements | 8 CCR 15400.2;<br>LAB 110-139.6                             |
| 505 -03 | Forms and Handouts                              | C                 | 2        | C+2   | E HC                    | --        | HR |  | GOV 34090   |
| 505 -04 | Designation of Personal Physician Forms         | C                 | P        | P     | E HC                    | yes       | HR |  | 8 CCR 15400.2;<br>LAB 110-139.6                             |
| 505 -05 | Budget  | C                 | 2        | C+2   | E HC                    | --        | HR | Working Files  | GOV 34090   |
| 505 -06 | Reports   | 2                 | P        | P     | E HC                    | --        | HR | includes utilization and state reporting   | CCR 14311;<br>8 CCR 15400.2;<br>LAB 110-139.6               |
| 505 -07 | Administrator Correspondence                    | 2                 | 3        | 5     | E HC                    | --        | HR |  | GOV 34090   |
| 505 -08 | Ergonomic Evaluations and Job Analysis          | C                 | 7        | C+7   | E HC                    | --        | HR |  | GOV 34090   |
| 505 -09 | Publications and Law Updates                    | 2                 | --       | 2     | E HC                    | --        | HR |  | GOV 34090   |

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CITY OF HUGHSON - RECORDS RETENTION/DISPOSITION SCHEDULE

Adopted June 8, 2020 - Resolution No. 2020-22

EXHIBIT A

|         |  | RETENTION PERIODS |          |       | FORMAT                  | VITAL DoR | REMARKS    | CITATION   |
|---------|--|-------------------|----------|-------|-------------------------|-----------|------------|--|
|         |  | ACTIVE            | INACTIVE | TOTAL | See legend on last page |           |            | See legend on last page  |
| 506     | EDUCATION AND TRAINING                   |                   |          |       |                         |           |            |  |
| 506 -01 | General Information                      | 2                 | --       | 2     | E HC                    | --        | HR Various | GOV 34090  |
| 506 -02 | Training Records - Non Safety Employees  | C                 | 7        | C+7   | E HC                    | --        | Various    | Employee forms, volunteer program training, class training materials, internships  |
| 506 -03 | Tuition Reimbursement Program            | C                 | 7        | C+7   | E HC                    | --        | HR         | GOV 6250 et seq  |
| 507     | LABOR RELATIONS                          |                   |          |       |                         |           |            |  |
| 507 -01 | General Information                      | 2                 | --       | 2     | E HC                    | --        | HR         | Policies and procedures (e.g. memos on comp time, supplemental pay, allowances)  |
| 600     | PUBLIC SAFETY                            |                   |          |       |                         |           |            |  |
| 601     | FIRE SAFETY ADMINISTRATION               |                   |          |       |                         |           |            |  |
| 601 -01 | General Information                      | 2                 | --       | 2     | E HC                    | --        | FD         | GOV 34090  |
| 601 -02 | Contract for Fire Protection Services    | C                 | 5        | C+5   | D E HC                  | yes       | FD         | GOV 34090;   |
| 602     | HAZARDOUS MATERIALS                      |                   |          |       |                         |           |            |  |
| 602 -01 | General Information                      | 2                 | --       | 2     | E HC                    | --        | FD         | GOV 34090  |
| 602 -02 | Hazardous Waste Disposal                 | C                 | 10       | C+10  | E HC                    | --        | FD         | Documentation regarding handling and disposal of hazardous waste   |
| 602 -03 | Permits, Hazardous Materials Storage     | C                 | P        | P     | E HC                    | yes       | FD         | Two years retention required statutorily, permanent recommended  |
| 602 -04 | Programs, Household Hazardous Waste      | C                 | 2        | C+2   | E HC                    | --        | FD         | GOV 34090  |
| 602 -05 | Training Materials                       | C                 | 2        | C+2   | E HC                    | --        | FD         | Standards & Administration. However, if employees are exposed to hazardous materials during training, CCR 3204(d) et seq. applies and documents must be kept for thirty years                |
| 602 -06 | Underground Storage Tank Compliance      | C                 | P        | P     | E HC                    | yes       | FD         | Storage location, installation, removal, remediation, maintenance & operations   |
| 603     | LAW ENFORCEMENT ADMINISTRATION           |                   |          |       |                         |           |            |  |
| 603 -01 | General Information                      | C                 | --       | C     | E HC                    | --        | PD         | GOV 34090  |
| 603 -02 | Contract for Law Enforcement Services    | C                 | 5        | C+5   | E D HC                  |           | PD         | GOV 34090  |
| 603 -03 | Alcoholic Beverage Control               | C                 | 2        | C+2   | E HC                    | --        | PD         | Police actions -- this is not for Planning Dept. alcohol permit actions. Records are current for as long as establishment is in business.  |
| 604     | LOCAL & NATIONAL EMERGENCIES / DISASTERS |                   |          |       |                         |           |            |  |
| 604 -01 | General Information                      | C                 | 2        | C+2   | E HC                    | --        | Various    | GOV 34090  |
| 604 -02 | National Emergencies and Disasters       | C                 | 2        | C+2   | E HC                    | --        | Various    | GOV 34090  |
| 604 -03 | Local Emergencies and Disasters          | C                 | 2        | C+2   | E HC                    | --        | Various    | GOV 34090  |
| 604 -04 | Emergency / Disaster Planning            | C                 | 2        | C+2   | E HC                    | --        | Various    | Emergency Preparedness plan, emergency communication, earthquake awareness, emergency management exercises and training  |
| 604 -05 | Emergency Operations Center              | C                 | 2        | C+2   | E HC                    | --        | Various    | GOV 34090  |
| 700     | LEGISLATIVE AND LEGAL                    |                   |          |       |                         |           |            |  |
| 701     | LEGISLATIVE                              |                   |          |       |                         |           |            | Series for City Council and for all City boards, committees, and commissions as well   |
| 701 -01 | General Information                      | 2                 | --       | 2     | E HC                    | --        | Various    | Follow up letters on meeting items; history of CC staff, Council; work programs assigned and annual reports; Council Comments items, and proofs of publication for non-public hearing items. |
| 701 -02 | Agendas                                  | C                 | P        | P     | E HC                    | --        | Various    | Agendas and special meeting notices, including proof of posting and CC action summaries  |

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CITY OF HUGHSON - RECORDS RETENTION/DISPOSITION SCHEDULE

Adopted June 8, 2020 - Resolution No. 2020-22

EXHIBIT A

|     |          |   | RETENTION PERIODS |          |           | FORMAT                  | VITAL DoR | REMARKS | CITATION   |   |
|-----|----------|---|-------------------|----------|-----------|-------------------------|-----------|---------|--|---|
|     |          |   | ACTIVE            | INACTIVE | TOTAL     | See legend on last page |           |         | See legend on last page  |   |
| 701 | -03      | Agenda Reports                                    | C                 | 10       | C+10      | E                       | yes       | Various | Agenda reports created and submitted for Council/board/commission packets to include all exhibits and attachments therein.   | GOV 34090   |
| 701 | -04      | Appointments                                      | C                 | 5        | C+5       | E HC                    | --        | IR      | CC appointments to outside agencies and committees   | GOV 34090   |
| 701 | -05      | Applications to Boards, Commissions, & Committees | 2                 | --       | 2         | E HC                    | --        | IR      | Not Selected (includes letters to unsuccessful candidates and pending interview applications)  | GOV 34090   |
| 701 | -06      | Applications to Boards, Commissions, & Committees | C                 | 5        | C+5       | E HC                    | --        | IR      | Selected (includes appointment staff reports, appointment letters, oaths of office, awards, performance and attendance reports, any other info on selected members).   | GOV 34090;<br>GOV 40801                             |
| 701 | -07      | Formation of legislative bodies and procedures    | P                 | P        | P         | E HC                    | yes       | IR      | Articles of Incorporation, powers of RDA, JPA, creation or abolition of Council Subcommittees  | GOV 34090;<br>CCP 337.2                             |
| 701 | -08      | Legal Advertising                                 | C                 | 10       | C+10      | E HC                    | --        | IR      | Includes public notices and proofs of publication for public hearings  | CCP 343;<br>CCP 349 et seq;<br>GOV 911.2; GOV 34090 |
| 701 | -09      | Minutes   | 10                | P        | P         | E HC                    | yes       | Various | Official minutes and hearing proceedings of governing body or board, commission or committee. Includes annotated agendas for those boards that use annotated agendas as the official proceedings of meeting. | GOV 34090(d); GOV 36814; GOV 40801                  |
| 701 | -10      | Charter and Municipal Code                        | C                 | P        | P         | E HC                    | yes       | IR      | Supplements included   | GOV 34090   |
| 701 | -11      | Ordinances  | P                 | P        | P         | E HC                    | yes       | IR      | Signed ordinance, ord staff report, proof of publication, notice   | GOV 34090(d);<br>GOV 40806                          |
| 701 | -12      | Petitions   | 2                 | --       | 2         | E HC                    | --        | IR      | Submitted to legislative bodies  | GOV 50115; GOV 6253                                 |
| 701 | -13      | Resolutions                                       | P                 | P        | P         | E HC                    | yes       | Various | Legislative actions  | GOV 34090(d);<br>GOV 40806                          |
| 701 | -14      | Audio Recording of Public Meetings                | C                 | 90 days  | C+90 days | E                       | --        | Various | Used for minute preparation  | GOV 34090.7   |
| 701 | -15      | Policies  | C                 | P        | P         | E HC                    | --        | Various | Policies as approved at CC meeting, vision statements  | GOV 34090   |
| 701 | -16      | Public Comments from Meetings                     | C                 | 2        | C+2       | E HC                    | --        | Various |  | GOV 34090.7   |
| 701 | -17      | Awards and Proclamations                          | C                 | 2        | C+2       | E HC                    | --        | Various | Awards to non-city staff or given to City as a whole (not Personnel Service awards or Personnel recognition)   | GOV 34090   |
| 701 | -18      | Agenda Packets                                    | C                 | 10       | C+10      | E HC                    | --        | Various | Collection of collated staff reports received, created, and submitted for a specific Council / BCC meeting date  | GOV 34090   |
| 701 | -19      | Brown Act   | C                 | 2        | C+2       | E HC                    | yes       | CA      |  | GOV 34090   |
| 701 | -20      | Video recordings of public meetings               | C                 | 10       | C+10      | E HC                    | --        | IR      |  | GOV 34090   |
| 702 | ELECTION |   |                   |          |           |                         |           |         |  |   |
| 702 | -01      | General Information                               | 2                 | --       | 2         | E HC                    | --        | IR      | CC member biographies, photos, Candidate Binder of Information Requests, Correspondence  | GOV 34090   |
| 702 | -02      | Calendar  | C                 | 2        | C+2       | E                       | --        | IR      |  | GOV 34090   |

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|-----|-----|--|-------------------|----------|-------|-------------------------|-----------|---------|--|--|
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| 702 | -03 | Canvass and Ballot                           | 2                 | P        | P     | E HC                    | --        | IR      | Permanent for historic value (includes official voter guides, and combined list of candidates)   | ELEC 17302   |
| 702 | -04 | Reserved                                     |                   |          |       |                         |           |         |  |  |
| 702 | -05 | Charter Amendments/Measures                  | 2                 | P        | P     | HC                      | yes       | IR      | Permanent for historic value   | GOV 34458-60;<br>GOV 34090                               |
| 702 | -06 | Lobbyist Registration                        | C                 | P        | P     | HC                      | --        | IR      | Statements   | GOV 34090  |
| 702 | -07 | Maps, Precincts/Voter Information            | C                 | 4        | C+4   | E HC                    | --        | IR      |  | GOV 34090; ELEC 17501; ELEC 17301                        |
| 702 | -08 | Nomination Papers-Successful                 | C                 | 4        | C+4   | HC                      | --        | IR      | Must be held for four years after expiration of term. Sample ballot to be retained permanently.  | GOV 81009;<br>ELEC 17100                                 |
| 702 | -09 | Nomination papers - Unsuccessful             | C                 | 2        | C+2   | HC                      | --        | IR      | Candidate statements E+5, Nomination papers E+4  | GOV 81009(b);<br>ELEC 17100                              |
| 702 | -10 | Notifications and Publications               | C                 | 4        | C+4   | HC                      | --        | IR      | Voter information flyers, candidates guides with blank forms, and proof of publication or posting  | GOV 34090  |
| 702 | -11 | Oaths of Office                              | C                 | 6        | C+6   | HC                      | --        | IR      | Elected Officials  | GOV 34090;<br>29 USC 1113                                |
| 702 | -12 | Petitions                                    | 0.75              | --       | 0.75  | HC                      | --        | IR      | From date of filing or election: initiative, referendum, recall. Signatures are Confidential   | ELEC 17200;<br>ELEC 17400; 14700<br>GOV 7253.5; 3756.8   |
| 703 |     | CITY ATTORNEY                                |                   |          |       |                         |           |         |  |  |
| 703 | -01 | General Information                          | 2                 | --       | 2     | E HC                    | --        | CA      |  | GOV 34090  |
| 703 | -02 | City Attorney Case Index                     | C                 | --       | C     | E HC                    | --        | CA      | Including notations on activities related to case  | GOV 6254   |
| 703 | -03 | Case Records (Significant)                   | C                 | P        | P     | E HC                    | --        | CA IR   | Significant cases which have importance or set legal precedence, summons and subpoenas, executed settlement agreements   | GOV 6254   |
| 703 | -04 | Case Records                                 | C                 | 7        | C+7   | E HC                    | yes       | CA      | Includes logs, complaints, police reports, court orders, motions, notes, briefs, closing (minors retain 3 years after attaining 18), administrative records  | 42 USC 1983  |
| 703 | -05 | Opinions                                     | 10                | --       | 10    | E HC                    | --        | CA      | Confidential   | GOV 34090; GOV 6254                                      |
| 703 | -06 | Closed Sessions                              | C                 | 10       | C+10  | E HC                    | --        | CA IR   | Confidential Matters   | GOV 34090  |
| 703 | -07 | Appeals of Administrative Citations          | C                 | 3        | C+3   | E HC                    | --        | CA      |  | GOV 34090;<br>GOV 583.320(a)(3)                          |
| 703 | -08 | Grand Jury Reports                           | 2                 | 8        | 10    | E HC D                  |           |         | Includes responses.  | GOV 34090  |
| 704 |     | LEGAL DOCUMENTS                              |                   |          |       |                         |           |         |  |  |
| 704 | -01 | General Information                          | 2                 | --       | 2     | E HC                    | --        | Various |  | GOV 34090  |
| 704 | -02 | Conveyances from or to the City (Deeds etc.) | C                 | P        | P     | E HC                    | yes       | IR      | Includes Deeds, Grant Deeds, Deeds of Trust and Assignment of Rents, Quitclaim Deeds, Deed Restrictions, Subordination Agreement with Deeds, Promissory notes secured by property, Substitution of Trustee, Trust Transfer Deeds, Installment Note, Easements, Full or Partial (re)conveyances, Covenant of Easement, Public Access Easements, Grant of Storm Drain Easements, Sanitary Sewer Connection Permit Agreements (Check originals for historic value), Covenant Restrictions on Property, Notices of Default | GOV 34090(a);<br>24CFR 570.502(b)(3);<br>OMB Circ. A-110 |
| 704 | -03 | Joint Powers Authority                       | C                 | P        | P     | E HC                    | yes       | IR      | Any JPAs the City has signed   | GOV 34090  |
| 704 | -04 | Liens  | C                 | P        | P     | E HC                    | yes       | FF      | Liens, releases, utilities, abatement, licenses, recorded  | GOV 34090  |

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| 704 | -05                                 | Contracts and Agreements - Excluding Capital Improvement, Purchase Money Security Agreement, Construction contracts, and Leases for City Property | C        | 5     | C+5                     | E HC      | yes |         | Includes leases by City of outside equipment, agreements or contracts for services and supplies, Mills Act Agreements, software, licenses for City to enter private property, grant contracts, Inclusionary Housing agreements, Down Payment Assistance, volunteer agreements, design and professional services contracts. | CCP 337.2; CCP 343                      |
| 704 | -06                                 | Contracts and Agreements – Including Capital Improvement, Purchase Money Security Agreements and Construction Contracts                           | C        | 10    | C+10                    | E HC      | yes | IR      | Includes construction contract, accepted proposal, affidavit of non- collusion, insurance certificates, performance bond, labor and material bond, bid bond, notice of completion, plans and specifications, and other documents as incorporated into the agreement.   | GOV 34090; 37090(a); CCP 337.2; CCP 343 |
| 704 | -07                                 | Foreclosures  | C        | P     | P                       | E HC      | yes | FF      |  | GOV 34090                               |
| 704 | -08                                 | City Property Leases and Licenses   | C        | P     | P                       | E HC      | yes | IR      | Includes lease and all support documentation (e.g. staff reports or related approvals, conditions of approval), estoppel certificates, and other agreements for the use of City property (e.g. license agreements, permits, and facility use agreements)   | GOV 34090                               |
| 704 | -09                                 | Lease by City of Private Property   | C        | P     | P                       | E HC      | yes | IR      | Includes lease and all support documentation (e.g. staff reports or related approvals, conditions of approval), estoppel certificates  | GOV 34090                               |
| 704 | -10                                 | Development Agreements  | 2        | P     | P                       | E HC      | yes | IR      |  | CCP 337; GOV 34090                      |
| 704 | -11                                 | Subdivision Agreements  | C        | P     | P                       | D E HC    | yes | IR      |  | GOV 34090                               |
| 704 | -12                                 | Releases  | C        | 2     | C+2                     | E HC      | --  | IR      | Image/sound recording/video recording release, or other release where City receives a liability release, hold harmless release, or other form of benefit. The release should include an expiration date.   | GOV 34090                               |
| 704 | -13                                 | Authorizations  | C        | 2     | C+2                     | E HC      | yes | IR      | Authorized Exception Forms   | GOV 34090                               |
| 704 | -14                                 | Loans   | C        | P     | P                       | E HC      | yes | IR      |  | GOV 34090(a)                            |
| 704 | -15                                 | Employee Bargaining Unit MOUs   | C        | P     | P                       | E HC      | yes | IR      | Includes side letters and any other amendments to employee bargaining unit MOUs  | GOV 34090; 29 USC 211(c)                |
| 704 | -16                                 | Franchise Agreements  | C        | P     | P                       | E HC      | yes | IR      |  | GOV 34090                               |
| 705 | CODE ENFORCEMENT                    |   |          |       |                         |           |     |         |  |   |
| 705 | -01                                 | General Information   | 2        | --    | 2                       | E HC      | --  | CD      |  | GOV 34090                               |
| 705 | -02                                 | Case Files  | C        | 7     | C+7                     | D E       | --  | CD      | Building, housing and mobile home code violation records including inspections; public nuisance, rubbish and weed abatement, vehicle abatement, watercraft abatement, citations, sidewalk / hazard abatement, citation, massage parlor permits.  | GOV 34090(d)                            |
| 705 | -03                                 | Graffiti  | C        | --    | C+2                     | D E HC    | --  | CD      | Service requests, invoices, public facilities work orders; graffiti removal  | GOV 34090(d)                            |
| 705 | -04                                 | Reports to State and Federal Government   | P        | P     | P                       | D E       | --  | PW      | Storm water violations   | GOV 34090(a)                            |
| 705 | -05                                 | Vehicle Abatement/Abandoned Vehicles  | C        | 2     | C+2                     | E HC      |     |         |  | GOV 34090(d)                            |
| 706 | FAIR POLITICAL PRACTICES COMMISSION |   |          |       |                         |           |     |         |  |   |
| 706 | -01                                 | General Information   | 2        | --    | 2                       | E HC      | --  | IR      | Includes Conflict of Interest Code agenda reports  | GOV 34090                               |
| 706 | -02                                 | Forms   | C        | --    | C                       | E HC      | --  | IR      |  | GOV 34090                               |
| 706 | -03                                 | Manuals and Publications  | C        | --    | C                       | E HC      | --  | IR      |  | GOV 34090                               |
| 706 | -04                                 | Administration  | C        | --    | C                       | E HC      | --  | IR      | FPPC Opinions  | GOV 34090                               |
| 706 | -05                                 | Ethics Education  | C        | 5     | C+5                     | D E HC    | --  | IR      | Ethics training certificates and staff reports   | GOV 53235.2(b)                          |

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| 706 | -06   | Campaign Disclosure, Elected  | P                 | -        | P     | D E HC                  | -         | IR | This includes incumbent, retired and out of office elected officials' 410s, 460s, 470s, 490s, 501s, etc. Must be held in paper format for the first two years, then may be retained digitally.   | GOV 81009(b),(g)        |
| 706 | -07   | Campaign Disclosure, Not Elected  | C                 | 5        | 5     | E HC                    | -         | IR | 410s, 460s, 470s, 490s, 501s, etc. Must be held in paper format for the first two years, then may be retained digitally until destruction.   | GOV 81009(b),(g)        |
| 706 | -08   | Campaign Disclosure, Other Committees   | C                 | 7        | C+7   | E HC                    | -         | IR | 410s, 460s, 470s, 490s, 501s, etc. Must be held in paper format for the first two years, then may be retained digitally until destruction.   | GOV 81009(e)            |
| 706 | -09   | Statement of Economic Interest (Form 700) - Elected   | C                 | 7        | C+7   | D E HC                  | -         | IR | Councilmembers have the ability to e-file through FPPC's site.   | GOV 81009(e)            |
| 706 | -10   | Statement of Economic Interest (Form 700) - Unelected Candidates for Council                    | C                 | 7        | C+7   | E HC                    | -         | IR |  | GOV 81009(e)            |
| 706 | -11   | Statement of Economic Interest (Form 700) Designated Employees and Board and Commission Members | C                 | 7        | C+7   | D E HC                  | -         | IR | Board and Commission members, designated employee and consultant 700s and CC staff reports on conflict of interest code; 87200 designated filers have the ability to e-file through FPPC's site. | GOV 81009(e)            |
| 706 | -12   | Agency's Public Official Appointments (Form 806)  | C                 | 2        | C+2   | E HC                    | -         | IR | Paper record of form posted on city website, inactivated when replaced   | GOV 34090               |
| 706 | -13   | Gift to Agency Report (Form 801)  | C                 | 2        | C+2   | E HC                    | -         | IR | Paper record of form posted on city website, inactivated when replaced   | GOV 34090               |
| 800 | WATER AND WASTEWATER                              |   |                   |          |       |                         |           |    |  |                         |
| 801 | SANITATION - SOLID WASTE - WASTEWATER - RECYCLING |   |                   |          |       |                         |           |    |  |                         |
| 801 | -01   | General Information   | 2                 | -        | 2     | E HC                    | -         | PW |  | GOV 34090               |
| 801 | -02   | Billing Records   | C                 | 2        | C + 2 |                         |           |    | Customer name, service address, meter reading, usage, monthly activity, payments, applications/cancellations   | GOV 34090               |
| 801 | -03   | Collections/Landfill  | C                 | 2        | C+2   | E HC                    | -         | PW | Daily records, usage, grease traps   | GOV 34090               |
| 801 | -04   | History, Sanitation   | 2                 | P        | P     | E HC                    | -         | PW | Where City-owned   | GOV 34090               |
| 801 | -05   | Franchise Agreements  | C                 | P        | P     | E HC                    |           |    | Includes solid waste/garbage and cable   | GOV 65864; 65869.5      |
| 801 | -06   | Maintenance and Operations  | C                 | 2        | C+2   | E HC                    | -         | PW | Includes work orders, inspections, repairs, reports, backflow, includes recycling inspections & audits   | GOV 34090               |
| 801 | -07   | Maps, Septic Tank   | C                 | P        | P     | E HC                    | yes       | PW | Location maps  | GOV 34090               |
| 801 | -08   | Rates and Services  | C                 | 2        | C+2   | E HC                    | -         | PW |  | GOV 34090               |
| 801 | -09   | Recycling Programs  | C                 | 2        | C+2   | E HC                    | -         | PW |  | GOV 34090               |
| 801 | -10   | Regulations   | C                 | 2        | C+2   | E HC                    | -         | PW | Includes legislation on these topics   | GOV 34090               |
| 801 | -11   | Sewer Pumping Stations  | C                 | 2        | C+2   | E HC                    | -         | PW |  | GOV 34090               |
| 801 | -12   | Studies and tonnage Reports   | C                 | 2        | C+2   | E HC                    | -         | PW |  | GOV 34090               |
| 801 | -13   | Sewer and Sewage  | C                 | 2        | C+2   | E HC                    | -         | PW | sewer connections, sewer condition assessment surveys  | GOV 34090               |
| 801 | -14   | Green Programs  | C                 | 2        | C+2   | E HC                    | -         | PW | Sustainability, climate change   | GOV 34090               |
| 801 | -15   | Sewer Condition Assessment Surveys / Videos   | C                 | 2        | C+2   | E HC                    | -         | PW |  | GOV 34090               |
| 802 | STREETS - TRAFFIC                                 |   |                   |          |       |                         |           |    |  |                         |
| 802 | -01   | General Information   | 2                 | -        | 2     | E HC                    | -         | PW | Traffic ordinances relative to streets (e.g. weight maximum)   | GOV 34090               |
| 802 | -02   | Abandonment/Vacations   | 2                 | P        | P     | E HC                    | -         | PW | Supporting documentation and includes temporary construction easements   | GOV 34090(a)            |
| 802 | -03   | Street Openings and Closures  | 2                 | P        | P     | E HC                    | -         | PW |  | GOV 34090               |
| 802 | -04   | Easements, Dedications, Rights of Way, and Other Access Agreements                              | 2                 | P        | P     | E HC                    | -         | PW | Supporting documentation, includes emergency access and alternate access routes  | GOV 34090               |
| 802 | -05   | Field Books   | 2                 | P        | P     | E HC                    | -         | PW |  | GOV 34090               |

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CITY OF HUGHSON - RECORDS RETENTION/DISPOSITION SCHEDULE

Adopted June 8, 2020 - Resolution No. 2020-22

EXHIBIT A

|     |           |                                   | RETENTION PERIODS |          |       | FORMAT                  | VITAL DoR | REMARKS       | CITATION  |   |
|-----|-----------|-----------------------------------|-------------------|----------|-------|-------------------------|-----------|---------------|---|---|
|     |           |                                   | ACTIVE            | INACTIVE | TOTAL | See legend on last page |           |               | See legend on last page   |   |
| 802 | -06       | Intersection Records              | C                 | 2        | C+2   | E HC                    | --        | PW            | Includes correspondence, volume counts, accidents   | GOV 34090                                   |
| 802 | -07       | Inventory, Traffic Control Device | C                 | 2        | C+2   | D E HC                  | --        | PW            | Signs, lights, add or remove stop signs   | GOV 34090                                   |
| 802 | -08       | Landscaping                       | C                 | 2        | C+2   | D E HC                  | --        | PW            | Plants, tree maintenance, work orders   | GOV 34090                                   |
| 802 | -09       | Lighting                          | C                 | 2        | C+2   | D E                     | --        | PW            | Maintenance, work orders  | GOV 34090                                   |
| 802 | -10       | Maintenance/Operations            | C                 | 2        | C+2   | D E                     | --        | PW            | Work orders, inspection, repairs, cleaning, reports, striping, etc  | GOV 34090                                   |
| 802 | -11       | Traffic Operations                | C                 | P        | P     | E HC                    | --        | PW            | Fire hydrants, lighting districts, wheel chair ramps, storm drains, streets, sidewalks  | GOV 34090                                   |
| 802 | -12       | Traffic Studies                   | C                 | 10       | C+10  | E HC                    | --        | PW            | Includes analyses and surveys that are studies  | GOV 34090                                   |
| 802 | -13       | Encroachment Permits              | C                 | P        | P     | D E                     | yes       | IR<br>Various | Encroachment permits, street opening permits, driveway permits  | GOV 34090(a);<br>HSC 19850                  |
| 802 | -14       | Other Permits                     | C                 | 2        | C+2   | D HC                    | --        | PW            | Improvement, oversize load, parking, paving, temporary street banners   | GOV 34090                                   |
| 802 | -15       | Street Naming and Numbering       | 2                 | P        | P     | D                       | yes       | PW            |   | GOV 34090;<br>GOV 34090(a)                  |
| 802 | -16       | Speed Limits                      | C                 | 2        | C+2   | E HC                    | --        | PW            | Engineering & Traffic Surveys   | GOV 34090                                   |
| 802 | -17       | Traffic Safety                    | C                 | 2        | C+2   | E HC                    | --        | PW            | Drivers Education, pedestrian safety, crosswalks, bicycle lanes, traffic calming, safe routes to school, school circulation   | GOV 34090                                   |
| 802 | -18       | Bridges & Overpasses              | C                 | 2        | C+2   | E HC                    | --        | PW            | Life of structure   | GOV 34090                                   |
| 802 | -19       | Inspection                        | C                 | 2        | C+2   | D E HC                  | --        | PW            | Includes intersection, sidewalks, bridges and overpasses - keep for the life of structure   | GOV 34090                                   |
| 802 | -20       | Traffic Count - Traffic Data      | C                 | 7        | 7     | E HC                    | --        | PW            | Evaluation of traffic volume, Counts for ADT/Segments, turning movements, bike and pedestrian, LOS Calcs, queuing, speed data, collision data, historical trends, origin destination  | GOV 34090                                   |
| 802 | -21       | Collision Data                    | C                 | 2        | C+2   | D                       | --        | PW            | Collision database and related information  | GOV 34090                                   |
| 802 | -22       | Truck Routes & Oversized Vehicles | C                 | 2        | C+2   | HC                      | --        | PW            |   | GOV 34090                                   |
| 802 | -23       | Traffic Signs                     | C                 | 2        | C+2   | D E HC                  | --        | PW            | Log books, index register cards, inventory  | GOV 34090                                   |
| 802 | -24       | Traffic Signals                   | C                 | 2        | C+2   | D E HC                  | yes       | PW            | Logs, drawings, wiring diagrams, codes, circuits, installation records, testing & maintenance, traffic signal system, fiber optic comms, timing plans, special event timing, signals, lighted crosswalk warning, flashing beacons, dynamic message signs, signals for other jurisdictions | GOV 34090                                   |
| 802 | -25       | Traffic Stripes and Markings      | C                 | 2        | C+2   | D E HC                  | yes       | PW            |   | GOV 34090                                   |
| 802 | -26       | Temporary Traffic Control         | C                 | 2        | C+2   | D E HC                  | yes       | PW            |   | GOV 34090                                   |
| 802 | -27       | Traffic Calming                   | C                 | 2        | C+2   | D E HC                  | yes       | PW            |   | GOV 34090                                   |
| 803 | UTILITIES |                                   |                   |          |       |                         |           |               |   |   |
| 803 | -01       | General Information               | 2                 | --       | 2     | HC                      | --        | PW            |   | GOV 34090                                   |
| 803 | -02       | Facilities                        | C                 | 2        | C+2   | HC E                    | --        | PW            | If City owned   | GOV 34090                                   |
| 803 | -03       | Franchises                        | P                 | P        | P     | E HC                    |           |               | Includes cable  | GOV 65864; 65869.5;<br>34090                |
| 803 | -04       | Gas & Electric Rates              | C                 | 2        | C+2   | HC                      | --        | FF            |   | GOV 34090                                   |
| 803 | -05       | Underground                       | 2                 | P        | P     | HC                      | yes       | PW            |   | GOV 34090; GOV 4003;<br>GOV 4004; HSC 19850 |
| 803 | -06       | Water Utilities                   | 2                 | P        | P     | HC                      | yes       | PW            |   | GOV 34090                                   |
| 804 | MAPPING   |                                   |                   |          |       |                         |           |               |   |   |
| 804 | -01       | General Information               | 2                 | --       | 2     | HC                      | --        | PW            |   | GOV 34090                                   |
| 804 | -02       | GIS System                        | C                 |          | C     | D                       | --        | PW            |   | GOV 34090                                   |
| 804 | -03       | Aerial Photos                     | C                 | 10       | C+10  | D E HC                  | --        | PW            |   | GOV 34090                                   |

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|-----|--|-------------------|----------|-------|-------------------------|-----------|---------|--|
|     |  | ACTIVE            | INACTIVE | TOTAL | See legend on last page |           |         | See legend on last page  |
| 805 | WATER/STORM DRAINAGE/FLOOD CONTROL                           |                   |          |       |                         |           |         |  |
| 805 | -01 General Information                                      | 2                 | --       | 2     | HC                      | --        | PW      | GOV 34090  |
| 805 | -02 Billing Records  | C                 | 2        | C+2   | E HC                    |           |         | Customer name, service address, meter reading, usage, monthly activity, payments, applications/cancellations<br>GOV 34090  |
| 805 | -03 Flood Control  | C                 | P        | P     | HC                      | yes       | PW      | Drainage, flood zones, dams, lakes, creeks<br>GOV 34090  |
| 805 | -04 Flood Control Insurance Programs, Policies, Reports      | C                 | 2        | C+2   | HC                      | --        | PW      | Includes policies, rules, programs<br>GOV 34090  |
| 805 | -05 Drainage Maps  | C                 | P        | P     | HC                      | yes       | PW      | Line location, easements<br>GOV 34090  |
| 805 | -06 Drainage Complaints                                      | 2                 | --       | 2     | E HC                    | --        | PW      | GOV 34090  |
| 805 | -07 Inventory, Equipment                                     | C                 | 2        | C+2   | E HC                    | yes       | PW      | GOV 34090  |
| 805 | -08 Locations  | C                 | P        | P     | E HC                    | yes       | PW      | Mains, valves, hydrants, wells<br>GOV 34090  |
| 805 | -09 Maintenance & Operations                                 | C                 | 2        | C+2   | D                       | --        | PW      | Work orders, inspection, repairs, cleaning, reports<br>GOV 34090   |
| 805 | -10 Well & Pumping   | C                 | 2        | C+2   | E HC                    | --        | PW      | Times operational, power used<br>GOV 34090   |
| 805 | -11 Water Master Plans                                       | C                 | 2        | C+2   | HC                      | --        | PW      | GOV 34090  |
| 805 | -12 Permits: NPDES   | C                 | P        | P     | HC                      | yes       | PW      | National Pollutant Discharge Elimination System (Stormwater permits)<br>40 CFR 122.28                                      |
| 805 | -13 Permits: California Regional Water Quality Control Board | C                 | P        | P     | HC                      | yes       | PW      | Bilge water discharges, Areas of Special Biological Significance (ASBS)<br>GOV 34090                                       |
| 805 | -14 Policies & Procedures                                    | C                 | 2        | C+2   | HC                      | --        | PW      | GOV 34090  |
| 805 | -15 Rates  | C                 | 2        | C+2   | HC                      | --        | PW      | GOV 34090  |
| 805 | -16 Reclamation  | C                 | 5        | C+5   | E HC                    | --        | PW      | Daily operations<br>40 CFR 122.41  |
| 805 | -17 Conservation & Consumption Reports                       | C                 | 2        | C+2   | HC                      | --        | PW      | GOV 34090  |
| 805 | -18 Corrosion Control  | C                 | 12       | C+12  | HC                      | --        | PW      | Compliance documentation<br>40 CFR 141.91  |
| 805 | -19 Discharge Monitoring                                     | C                 | 5        | C+5   | E HC                    | --        | PW      | Average amount of pollution discharged into water<br>40 CFR 122.41   |
| 805 | -20 Hydrograph   | C                 | P        | P     | HC                      | yes       | PW      | Daily flow of streams<br>GOV 34090   |
| 805 | -21 Lead Service Lines                                       | C                 | 12       | C+12  | HC                      | yes       | PW      | Compliance documentation<br>40 CFR 141.91  |
| 805 | -22 Public Education   | C                 | 12       | C+12  | HC                      | --        | PW      | Compliance documentation<br>40 CFR 141.91  |
| 805 | -23 Quality Parameters                                       | C                 | 12       | C+12  | HC                      | --        | PW      | Compliance documentation<br>40 CFR 141.91  |
| 805 | -24 Sanitary Surveys   | C                 | 10       | C+10  | HC                      | --        | PW      | Compliance documentation<br>40 CFR 141.91  |
| 805 | -25 Source Water   | C                 | 12       | C+12  | HC                      | --        | PW      | Compliance documentation<br>40 CFR 141.91  |
| 805 | -26 State Certification                                      | C                 | 12       | C+12  | HC                      | --        | PW      | Compliance documentation<br>40 CFR 141.91  |
| 805 | -27 Variances, Water System                                  | C                 | 5        | C+5   | HC                      | --        | PW      | Records concerning a variance or exemption granted to the system<br>40 CFR 141.33  |
| 805 | -28 Well Level   | C                 | 2        | C+2   | HC                      | --        | PW      | GOV 34090  |
| 805 | -29 Surveyor Field Notes                                     | C                 | P        | P     | HC                      | --        | PW      | Notes preparatory to maps of water installation<br>GOV 34090   |
| 805 | -30 Surveys, Water Systems Sanitary                          | C                 | 10       | C+10  | HC                      | --        | PW      | Statistics, reports, summaries or correspondence<br>40 CFR 141.33  |
| 805 | -31 Bacteriological Analysis                                 | C                 | 5        | C+5   | HC                      | --        | PW      | Compliance records include location, date, method and results; corrections, analysis of bacterial content<br>40 CFR 141.33 |
| 805 | -32 Chemical analysis  | C                 | 10       | C+10  | HC                      | --        | PW      | Compliance records include location, date, method and results; corrections, analysis of chemical content<br>40 CFR 141.33  |
| 805 | -33 Quality  | C                 | 12       | C+12  | HC                      | --        | PW      | Compliance Documentation including sampling data, analysis, reports, surveys, evaluation, schedules, etc.<br>40 CFR 141.91 |
| 805 | -34 Valve Main Records                                       | 2                 | P        | P     | HC                      | yes       | PW      | GOV 34090  |
| 805 | -35 Violations, Drinking Water                               | C                 | 3        | C+3   | E HC                    | --        | PW      | Retention applies to each violation; includes records of any action to correct violations<br>40 CFR 141.33                 |

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|-----|---------------------------|--|-------------------|----------|-------|-------------------------|-----------|---|--------------------------|
|     |                           |  | ACTIVE            | INACTIVE | TOTAL | See legend on last page |           |   | See legend on last page  |
| 805 | -36                       | Monitoring Plans                                 | C                 | 10       | C+10  | E HC                    |           | Copies of monitoring plans developed to address microbiological and turbidity | 40 CFR 141.33            |
| 805 | -37                       | Public Notices                                   | C                 | 3        | C+3   | E HC                    |           | Copies of public notices of drinking water violations                         | 40 CFR 141.33            |
| 806 | CAPITAL IMPROVEMENT FILES |  |                   |          |       |                         |           |   |                          |
| 806 | -01                       | General Information                              | 2                 | --       | 2     | D E HC                  | --        | PW  | GOV 34090                |
| 806 | -02                       | Capital Improvement Projects                     | C                 | 10       | C+10  | D E HC                  | --        | PW  | CCP 337.15;<br>GOV 34090 |
| 806 | -03                       | CIP Construction Design Plans and Specifications | C                 | P        | P     | D E HC                  | yes       | PW  | GOV 34090;<br>HSC 19850  |
| 807 | PARKS                     |  |                   |          |       |                         |           |   |                          |
| 807 | -01                       | General Information                              | C                 | 2        | C+2   | E HC                    | --        | PR  | GOV 34090                |
| 807 | -02                       | Inventory, Equipment                             | Au                | 2        | Au+2  | E HC                    | --        | PR  | GOV 34090                |
| 807 | -03                       | Maintenance/Operations                           | C                 | 2        | C+2   | D                       | --        | PR  | GOV 34090                |
| 807 | -04                       | Reports & Studies                                | C                 | 2        | C+2   | HC                      | --        | PR  | GOV 34090                |
| 807 | -05                       | Parks Policies, Programs & Procedures            | C                 | 2        | C+2   | E                       | --        | PR  | GOV 34090                |
| 807 | -06                       | Pest Control                                     | C                 | 2        | C+2   | HC                      | yes       | PR  | GOV 34090(d)             |
| 807 | -07                       | Districts, Agencies, Organizations               | C                 | 2        | C+2   | HC                      | --        | PR  | GOV 34090                |
| 807 | -08                       | Parks, Playgrounds                               | C                 | 3        | C+3   | E                       | --        | PR  | GOV 34090                |
| 807 | -09                       | Plans  | C                 | 2        | C+2   | HC                      | --        | PR  | GOV 34090                |
| 807 | -10                       | Recreational Trail                               | C                 | 2        | C+2   | HC                      | --        | PR  | GOV 34090                |
| 808 | CITY-OWNED VEHICLES       |  |                   |          |       |                         |           |   |                          |
| 808 | -01                       | General Information                              | 2                 | --       | 2     | HC                      | --        | PW  | GOV 34090                |
| 808 | -02                       | Inventory, Equipment, Parts & Supplies           | C                 | 2        | C+2   | D E HC                  | yes       | PW  | GOV 34090                |
| 808 | -03                       | Owner's Manual and Vehicle Information           | C                 | C        | C     | HC                      | yes       | PW  | GOV 34090                |
| 808 | -04                       | Licenses, Permits                                | C                 | 2        | C+2   | HC                      | yes       | FF  | GOV 34090                |
| 808 | -05                       | Maintenance Operations                           | C                 | 2        | C+2   | D HC                    | --        | PW  | GOV 34090                |
| 808 | -06                       | Fueling  | Au                | 3        | Au+3  | D HC                    | --        | PW  | CCP 337                  |
| 808 | -07                       | Accident Reports                                 | 3                 | --       | 3     | HC                      | --        | PW  | GOV 34090                |
| 808 | -08                       | Vehicle Assignment                               | C                 | 2        | C+2   | HC                      | --        | PW  | GOV 34090                |
| 900 | PUBLIC FACILITIES         |  |                   |          |       |                         |           |   |                          |
| 901 | PARKING                   |  |                   |          |       |                         |           |   |                          |
| 901 | -01                       | General Information                              | 2                 | --       | 2     | E HC                    | --        | PW  | GOV 34090                |
| 901 | -02                       | Lots   | C                 | 2        | C+2   | E HC                    | --        | PW  | GOV 34090                |
| 901 | -03                       | Regulations                                      | C                 | 2        | C+2   | E HC                    | --        | PW  | GOV 34090                |
| 901 | -04                       | Parking Meters                                   | 2                 | 8        | 10    | E HC                    | --        | PW  | GOV 34090                |
| 901 | -05                       | Parking Permits and Programs                     | C                 | 2        | C+2   | D E                     | --        | PW  | GOV 34090                |
| 901 | -06                       | Parking Enforcement                              | C                 | 2        | C+2   | D E                     | --        | PW  | GOV 34090;<br>GOV 40215  |
| 902 | FACILITIES MAINTENANCE    |  |                   |          |       |                         |           |   |                          |
| 902 | -01                       | General Information                              | 2                 | --       | 2     | E HC                    | --        | PW  | GOV 34090                |
| 902 | -02                       | Government Building & Streets Maintenance        | C                 | 2        | C+2   | D E                     | --        | PW  | GOV 34090                |
| 902 | -03                       | Recreation Facilities Maintenance                | C                 | 2        | C+2   | D E                     | --        | PW  | GOV 34090                |

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|-----|-----|---------------------------|-------------------|----------|-------|-------------------------|-----------|---------|------------------------------|-------------------------|
|     |     |                           | ACTIVE            | INACTIVE | TOTAL | See legend on last page |           |         |                              | See legend on last page |
| 902 | -04 | Corporation Yard          | C                 | 2        | C+2   | D E                     | --        | PW      |                              | GOV 34090               |
| 902 | -05 | City Building Maintenance | C                 | 2        | C+2   | D E                     | --        | PW      | excludes Recreation          | GOV 34090               |
| 903 |     | CITY HALL COMPLEX         |                   |          |       |                         |           |         |                              |                         |
| 903 | -01 | General Information       | 2                 | --       | 2     | E HC                    | --        | CM      |                              | GOV 34090               |
| 903 | -02 | City Council Chamber      | 2                 | P        | P     | HC                      | --        | IR      | Systems, general information | GOV 34090               |
| 903 | -03 | Facility Rental           | 2                 | 2        | C+2   | E HC                    | --        | Various |                              | GOV 34090               |

GEND

ation Codes (California Law: <http://leginfo.legislature.ca.gov/faces/codes.xhtml>)

C - California Business and Professions Code  
P - California Code of Civil Procedure  
R - Code of California Regulations (<http://ccr.oal.ca.gov/>)  
QA - California Environmental Quality Act  
R - Code of Federal Regulations (<https://www.govinfo.gov/app/collection/cfr>)  
WVP - Disaster Service Worker Volunteer Program  
EC - California Elections Code  
OC - Equal Employment Opportunity Commission  
ID - California Evidence Code  
V - California Finance Code  
ILA - Family and Medical Leave Act  
JV - California Government Code  
C - California Health and Safety Code  
S - Internal Revenue Service  
B - California Labor Code  
MH - Maternal and Child Health Services  
S - California Office of Emergency Services  
MB - Federal Office of Management & Budget  
HA - Occupational Safety and Health Administration  
N - Penal Code  
C - Revenue and Taxation Code  
C - Uniform Fire Code  
C - United States Code (<http://uscode.house.gov/>)  
H - California Vehicle Code  
C - California Welfare and Institutions Code

Retention Period Codes

A/E - After Expiration  
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Numbers in the retention period fields refer to years unless otherwise noted.

Format Codes

D - Database  
E - Electronic/Image File  
HC - Hard Copy  
M - Microfilm  
S - Samples

When a record may be retained in multiple formats (example: "E HC"), any listed retention format may be used with neither format considered preferable to the other(s).  
Example: When a hard copy is scanned and the scanned file is retained digitally, the hard copy may then be destroyed after 24 hours (once backup procedures are completed) to generate multiple digital copies as required by GOV 34090.5).

Department of Record (DoR) Codes

CA - City Attorney  
CD - Community Development  
CM - City Manager  
FF - Finance  
FD - Fire  
HR - Human Resources  
IR - Information Resources  
LB - Library  
PD - Police  
PR - Parks and Recreation  
PW - Public Works

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FEB 22 2001

CITY OF HUGHSON

RECORDS MANAGEMENT PROGRAM MANUAL

Chapter 1. Statutory Authority

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## CHAPTER 1. STATUTORY AUTHORITY

### 1. Government Code

#### Section 34090. Destruction of city records; excepted records; construction

Unless otherwise provided by law, with the approval of the legislative body by resolution and the written consent of the city attorney the head of a city department may destroy any city record, document, instrument, book or paper, under his charge, without making a copy thereof, after the same is no longer required.

This section does not authorize the destruction of:

- (a) Records affecting the title to real property or liens thereon.
- (b) Court records.
- (c) Records required to be kept by statute.
- (d) Records less than \* \* \* two years old.
- (e) The minutes, ordinances, or resolutions of the legislative body of a city board or commission.

This section shall not be construed as limiting or qualifying in any manner the authority provided in Section 34090.5 for the destruction of records, documents, instruments, books and papers in accordance with the procedure therein prescribed.

#### Section 34090.5. Destruction of records; conditions

Notwithstanding the provisions of Section 34090, the city officer having custody of public records, documents, instruments, books, and papers, may, without the approval of the legislative body or the written consent of the city attorney, cause to be destroyed any or all of such records, documents, instruments, books, and papers, if all of the following conditions \* \* \* are complied with:

(a) \* \* \* The record, paper, or document is photographed, microphotographed, or reproduced on form of a type approved for permanent photographic records by the National Bureau of Standards.

(b) The device used to reproduce such record, paper, or document on film is one which accurately and legibly reproduces the original thereof in all details.

(c) The photographs, microphotographs, or other reproductions on film are made as accessible for public reference as the book records were.

(d) A true copy of archival quality of such film reproductions shall be kept in a safe and separate place for security purposes.

Provided, however, that no page of any record, paper, or document shall be destroyed if any such page cannot be reproduced on film with full legibility. Every such unreproducible page shall be permanently preserved in a manner that will afford easy reference.

Section 34090.6. Destruction of recorded radio and telephone communications

Notwithstanding the provisions of Section 34090, the head of a department of a city, county, or city and county, public safety communications center, or the head of a special district after 100 days may destroy recordings of telephone and radio communications maintained by the department or the special district. Such destruction shall be approved by the legislative body and the written consent of the agency attorney shall be obtained. In the event that such recordings are evidence in any claim filed or any pending litigation, such recordings shall be preserved until pending litigation is resolved.

For purposes of this section, "recordings of telephone and radio communications" means the routine daily taping and recording of telephone communications to and from a city, county, city and county, or special district, department, and all radio communications relating to the operations of such departments or special districts.

Section 34090.7. Duplicate records less than two years old; destruction; video recording media

Notwithstanding the provisions of Section 34090, the legislative body of a city may prescribe a procedure under which duplicates of city records less than two years old may be destroyed if they are no longer required.

For purposes of this section, video recording mediums, such as video tapes and films, shall be considered duplicate records if the city keeps another record, such as written minutes or an audio tape recording, of the event which is recorded in the video medium. However, a video recording medium shall not be destroyed or erased pursuant to this section for a period of at least 90 days after occurrence of the event recorded thereon.

## 2. City Council Resolution

Resolution No. 88-34, attached to this Manual as Exhibit "A", adopted by the Hughson City Council on September 26, 1988 sets forth the records retention/destruction policy of all City of Hughson departments.

## CHAPTER 2. GOALS AND SPECIFIC OBJECTIVES

1. The goals of the Records Management Program are:
  - A. To control the handling and disposition of City records so that vital records will be properly preserved and the quality of records and the accompanying administrative procedures will be improved and costs reduced.
  - B. To reduce the volume of records maintained and thus control expenditures for new filing equipment; to reduce time spent on filing and retrieving records and make active records easily accessible; to insure that records which have outlived their usefulness are destroyed; and to reduce the amount of office area required for filing and maintaining records.
2. The Records Management Supervisor will be responsible for:
  - A. Establishing and maintaining protection, retention, and destruction of all records in accordance with appropriate laws, authorized procedures and the established retention/destruction schedule.
  - B. Establishing standard filing procedures, organizing and reorganizing files to assure conformity with standard procedures.
  - C. Conducting periodic reviews of departmental files, reporting back to the department with regard to findings and suggestions for improvements.
  - D. Training City personnel in the proper methods and procedures for handling records.
  - E. Maintaining the Records Center.

3. To achieve the stated goals the Records Management Supervisor has the following specific objectives:
  - A. To reduce the cost of records to the lowest practical minimum by:
    - a. establishing retention schedules for each series of records generated by each department; and
    - b. auditing retention schedules periodically to determine the need for revision.
  - B. To maintain an inventory of all permanent records.
  - C. To train personnel in each department in records control procedures; providing advice to the department on records control problems.
  - D. To insure the timely removal of non-current records from office space and equipment, encouraging the use of the Records Center for storage of records with reduced activity.
  - E. To provide assistance and advice on records disposition matters to all departments throughout the City.
  - F. To approve or disapprove all requests for filing equipment by evaluating need and by checking compliance with authorized records disposition instructions.

### CHAPTER 3. RECORDS MANAGEMENT

#### Section 1. Records Status

A record, regardless of its type, passes through three basic phases:

Active - when reference is frequent and immediate access is important.

Inactive - files which are no longer being added to, but must be retained for legal reasons. These records should be transferred to the Records Center.

Obsolete - records no longer needed by the department. Records of historical value to be retained in the Records Center, others to be destroyed according to established procedure.

## Section 2. Record Categories

There are four basic categories of records. These are (1) Administrative, (2) legal, (3) fiscal, and (4) research or historical. These four categories fulfill the three basic requirements for retention: contractual, protection and reference. Depending upon its use, a record may be value in one or more of these areas. The following descriptions of the four categories may be used as criteria in records appraisal:

Administrative Value - Records created to help accomplish the functions for which the City is responsible. These have value as long as they assist the city in performing either its current or future work.

Fiscal Value - Records relating to the financial transactions of the City. Retention for audit purposes has been taken into consideration.

Legal Value - Records have legal value if they contain evidence of legally enforceable rights or obligations. Examples (1) legal decisions or opinions; (2) documents representing agreements, leases, titles, contracts; and (3) records of action such was claims and/or litigation matters.

Historical Value - Records which contain information concerning significant events or documenting the history of the City.

## Section 3. Records Retention/Destruction

The first step to an effective retention/destruction schedule is to establish the importance of record series.

Using the four basic categories of records as initial criteria (see Section 2), and in keeping with established statutes and practices of the various departments, a Records Retention/Destruction schedule has been developed for the records of the City of Hughson, which is attached hereto as Exhibit "B".

### Retention periods designations:

A - Active (department) file

RC - Records Center

T - Total retention period (A + RC)

Retention Codes:

- AA - After Audit
- AE - After Expiration/Termination
- C - Current (until superseded)
- P - Permanent
- R - Review
- Y - year

NOTE: All periods represent year PLUS CURRENT YEAR, unless otherwise noted.

Duplicate Records:

Duplicate copies of records, not provided for in the Retention Schedule, should be destroyed as soon as they have satisfied administrative or operating requirements, provided the information is contained on original (record) copies retained elsewhere.

In addition, the following records should also be disposed of when there is no question as to the value of the material to the City or department concerned:

- a. Duplicate copies of records which are in addition to what is ordinarily required for filing, or which has not continuing purposes. These could include "reading" files, "tickler" files, copies of correspondences, and identical copies maintained in the same file.
- b. Material which has been obtained from other agencies which is of no use to the department in relation to the duties performed; such as publications, unused out-dated forms and examination schedules, etc.
- c. Material which has been received, or has been accumulated but which has not been produced by a government agency, (federal or state) and is not required to support or substantiate any city transactions.
- d. Extra copies of printed or processed material where sufficient copies have been retained for official purposes.

### Original (or Record ) Copies not Listed

Original (or record) copies not specifically listed in the Retention Scheduled may be destroyed only upon written approval of the Department Head, City Attorney or City Manager.

### Section 4. The Records Center

The purpose of the Records Center is to provide low cost storage space for inactive City records. The Records Center is located in City Hall vault.

#### 1. Selecting Records for Transfer to the Center

Generally, records should be transferred to the Records Center as soon as their use drops to an inactive status.

Small quantities of records (less than one storage box) should not be transferred. They should be retained in the department until the storage box is filled and then transferred to the Records Center.

#### 2. Criteria for Files Transfer

The Records Retention Schedule establishes the length of time a record series must be kept prior to its disposition. If the total time a record must be kept prior to its ultimate destruction is less than one year, it is not economical to transfer these records to the Center.

Files should be cut off periodically so as to make their transfer and disposition in uniform chronological blocks as easy as possible. This technique is called "breaking the files" and simply means that on a given date, a new set of files is established and old files transferred. Files can be broken monthly, annually, biannually, etc. depending on the rate of activity or the rate at which they accumulate.

Advice and assistance on transfer of records should be obtained from the Records Management Supervisor.

#### 3. Ownership of Records

The department is always the legal owner of their records. Records transferred to the Records Center shall remain in the legal ownership of the department.

The Records Center is the physical custodian of all records transferred for storage. This responsibility includes measures to protect unauthorized access, fire, deterioration, and misuse of files.

4. How to Use Records Center

It is essential that procedures be followed in order that all records are properly stored. The Records Center should not be a burial ground where records are never looked at nor should it be an active record storage area. NO records will be accepted into the Center if they are not properly packed and accompanied by a completed transfer form.

5. Standardized Boxes Must be Used

Acceptable Boxes are R-Kive No. 725 or the equivalent. For transfer of records too large to fit into R-Kive boxes, such as maps, blue prints, etc., contact the Records Management Supervisor for instructions.

6. Steps to be Followed

- Department:
1. Remove from file folders all records that serve no administrative, legal, fiscal or historical value to the file.
  2. Pack records in appropriate boxes in upright position. DO NOT LAY FLAT. Remove all rubber bands, 3-ring binders (if possible), paper clips, etc. It is not necessary to remove staples.
  3. Leave 1-1/2" space to facilitate servicing of the records. DO NOT OVER-FILL - Boxes will be returned if sides or tops bulge.
  4. All records in any one box should have the same disposition.



5. Complete transfer form.  
(See Exhibit "C")
6. Deliver to Records Center.
- Records Center: 7. Receives records and transfer sheet; indexes and enters records into Center.
8. Returns copy of transfer sheet to department. This copy will indicate Records location of records (section, shelf, box number, etc.)

7. Who May Request Reference Service (See Exhibit "D")

Records and/or information contained in the Records Center will be given only to authorized persons. To be properly authorized you must:

- Be an authorized employee of the department with legal custody of the record, or
- Have written authorization from the legal custodian of the record.

The Records Center will take all necessary and proper action to prevent unauthorized access.

8. Guidelines for Retrieving Information From the Records Center

Personnel requesting records must give the following information:

Title, description, Center location of the record.

Name of Department.

Name of person to whom the record is to be delivered.

Date the record will be returned for refiling.

At least one working day should be allowed for retrieval requests.

The Records will replace each records box of records with a "charge out slip" which will remain in the place of the record or box until the record or box of records has been refiled.

Records withdrawn from the Records Center should be returned within 30 days. A reminder to return will be issued once material is out more than 30 days.

#### Section 5. Disposal of Records

All records transferred to the Records Center must be scheduled and have definite disposal dates.

Prior to any record being destroyed, the following procedure must be followed:

- Records center will forward list of scheduled records to the appropriate department head. (See Exhibit "E")
- Department head will review list and indicate any records which should be further retained, scheduling a new disposal date. List is then returned to Records Center.
- Records Center reschedules any records as indicated, destroying the remainder.

#### Destruction

Records will be destroyed by one of the following methods:

- Shredding or burial (all confidential records)
- Recycle where possible.
- Regular refuse disposal.

A list of destroyed records will be retained permanently at the Records Center. Departments will be furnished with lists of records as they are destroyed.

EXHIBIT "A"

RESOLUTION NO. 88-34

RESOLUTION OF THE CITY OF HUGHSON ADOPTING A RECORDS MANAGEMENT PROGRAM FOR THE CITY OF HUGHSON, AND AUTHORIZING THE DESTRUCTION OF CITY RECORDS IN ACCORDANCE WITH ARTICLE 4, SECTION 34090, 34090.5, 34090.6 and 34090.7 OF THE CALIFORNIA GOVERNMENT CODE

At a regular meeting of the City Council of the City of Hughson, duly called and held on September 26, 1988, at 7:00 p.m. of the said day, it was moved by Council Member JACOBS and duly carried that the following resolution be adopted:

WHEREAS, a Records Management Program has been established in the City of Hughson to ensure the proper preservation of records of continuing value and the systematic elimination of all other records; and

WHEREAS, the Records Management Manual which outlines the procedures for preservation and/or elimination of records, is hereby adopted by the City Council for all City of Hughson records; and

WHEREAS, Section 34090 of the Government Code provides that with the approval of the legislative body by resolution and the written consent of the City Attorney, the head of the City department may destroy any City record, document, instrument, book or paper, under his charge without making a copy thereof, after the same is no longer required, with the exception that Section 34090 does not authorize the destruction of:

(a) Records affecting the title of real property or liens thereon

(b) Court records

(c) Records to be kept by statute

(d) Records less than two years old

(e) The minutes, ordinances or resolutions of the legislative body or of a City Board, Commission, or Committee, and

WHEREAS, Section 34090.7 of the Government Code states that the legislative body of a City may prescribe a procedure under which duplicates of City records less than two years old may be destroyed that are no longer required.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Hughson does hereby authorize the Department Heads, subject to the written consent of the City Manager and the City Attorney, to destroy or cause the destruction of "Original Copies" in their respective departmental records in accordance with the applicable sections of the Government Code and the provisions of this resolution.

BE IT FURTHER RESOLVED that the specific records authorized for destruction are shown in the Records Retention Schedule of the Records Management Manual, pertaining to "Original Copies" of City records and are restricted to those listed specifically in the Records Retention Schedule, as it is written or may from time to time be amended.

BE IT FURTHER RESOLVED that Department Heads are hereby authorized to destroy or cause to be destroyed "duplicate copies" of any City record in accordance with the provisions specified in the Records Management Manual.

Passed and adopted at a regular meeting of the City  
-- Council of the City of Hughson, duly called and held on Sep-  
tember 26, 1988, by the following vote:

|          |                |               |
|----------|----------------|---------------|
| AYES:    | Council Member | <u>HOUSE</u>  |
|          |                | <u>LEMA</u>   |
|          |                | <u>JACOBS</u> |
|          |                | <u>OAKES</u>  |
|          | Mayor          | <u>SPEARS</u> |
| NOES:    | Council Member | <u>None</u>   |
| ABSTAIN: | Council Member | <u>None</u>   |
| ABSENT:  | Council Member | <u>None</u>   |

APPROVED:   
Mayor

ATTEST:   
City Clerk

STATE OF CALIFORNIA     )  
COUNTY OF STANISLAUS     )  
CITY OF HUGHSON     )

I, MARY JANE CANTRELL City Clerk of the City of Hughson, do  
hereby certify that the foregoing resolution was duly passed  
and adopted at a regular meeting of the City Council of the  
City of Hughson held on the 26th day of September, 1988.

DATED: September 27, 1988

  
City Clerk



## EXHIBIT "B"

## RECORDS RETENTION SCHEDULE

CITY OF HUGHSON

| Record Title  | Suggested Retention Periods |                   |            |                       | Adopt.<br>Reten.<br>Period |
|---|-----------------------------|-------------------|------------|-----------------------|----------------------------|
|   | Active                      | Records<br>Center | TOTAL      | Dept. Hd.<br>Attorney |                            |
| Abandonments  | . C                         | . P               | . P        | .                     | .                          |
| Abatement Files                                       | . 5Y                        | . -               | . 5Y       | .                     | .                          |
| Accident Reports, injury<br>claims & settlements      | . C                         | . 5Y AE           | . 5Y AE    | .                     | .                          |
| Account Files, Monthly, Utility                       | . C                         | . P               | . P        | .                     | .                          |
| Accounts Payable:                                     | .                           | .                 | .          | .                     | .                          |
| Purchase Orders                                       | . 1Y                        | . 4Y              | . 5Y AA    | .                     | .                          |
| Claims/Demands  | . 1Y                        | . 4Y              | . 5Y AA    | .                     | .                          |
| Invoices  | . 1Y                        | . 4Y              | . 5Y AA    | .                     | .                          |
| Cancelled Checks                                      | . 1Y                        | . 14Y             | . 15Y      | .                     | .                          |
| Check Register  | . 1Y                        | . 14Y             | . 15Y      | .                     | .                          |
| Remittance Advice                                     | . 1Y                        | . 4Y              | . 5Y AA    | .                     | .                          |
| Accounts Receivable Invoices                          | . 1                         | . 4Y              | . 5Y AA R. | .                     | .                          |
| Adjusting/Collection Report,<br>Utility               | . 1                         | . -               | . -        | .                     | .                          |
| Affidavits of Publication                             | . C                         | . P               | . P        | .                     | .                          |
| Agendas (Council, Boards,<br>Committees, Commissions) | . 5Y                        | . P               | . P        | .                     | .                          |
| Agreements/Contracts/Franchises                       | . 1 AE                      | . 4 AE            | . 5 AE     | .                     | .                          |
| Assessments   | . C                         | . P               | . P        | .                     | .                          |
| Annual Reports (Departmental)                         | . 2Y                        | . 3Y              | . 5Y       | .                     | .                          |
| Applications/Recruitment<br>(Employment)              | . C                         | . 3Y              | . 3Y       | .                     | .                          |
| Arson File  | . 5Y                        | . -               | . 5Y R     | .                     | .                          |
| Assessment Districts                                  | . C                         | . P               | . P        | .                     | .                          |
| Audit Reports   | . C                         | . P               | . P        | .                     | .                          |
|   | .                           | .                 | .          | .                     | .                          |
|   | .                           | .                 | .          | .                     | .                          |
|   | .                           | .                 | .          | .                     | .                          |

## RETENTION CODE

AA--After Audit

AE--After Expiration/Termination

C --Current (until superseded)

P --Permanent

R --Review

Y --Year

NOTE: All periods represent year PLUS  
CURRENT YEAR, except where otherwise noted

## RECORDS RETENTION SCHEDULE

CITY OF HUGHSON

| Record Title                 | Suggested Retention Periods |                   |          |                       | Adopt.<br>Reten.<br>Period |
|------------------------------|-----------------------------|-------------------|----------|-----------------------|----------------------------|
|                              | Active                      | Records<br>Center | TOTAL    | Dept. Hd.<br>Attorney |                            |
| Banking Files:               |                             |                   |          |                       |                            |
| Deposit Slips                | 1Y                          | 4Y                | 5Y AA    |                       |                            |
| Bank Transmittal Advice      | 1Y                          | 4Y                | 5Y       |                       |                            |
| Bank Statements              | 1Y                          | 4Y                | 5Y       |                       |                            |
| Investment Receipts of       |                             |                   |          |                       |                            |
| Inactive Deposits            | 1Y                          | 4Y                | 5Y EA R. |                       |                            |
| Treasury Bills, Federal      |                             |                   |          |                       |                            |
| Agencies                     | 1Y                          | 4Y                | 5Y EA R. |                       |                            |
| Bonds, Etc.                  | 1Y                          | 4Y                | 5Y EA R. |                       |                            |
| Confirmation of Sale         |                             |                   |          |                       |                            |
| or Purchase                  | 1Y                          | 4Y                | 5Y EA R. |                       |                            |
| Billing Register - Utility   | 1                           | 3                 | 4        |                       |                            |
| Boards, Commissions &        |                             |                   |          |                       |                            |
| Committees, General Info.    | C                           | -                 | -        |                       |                            |
| Boards, Commissions &        |                             |                   |          |                       |                            |
| Committees Agendas & Minutes | 5Y                          | P                 | P        |                       |                            |
| Budget Files:                |                             |                   |          |                       |                            |
| General Information          | 5Y                          | -                 | -        |                       |                            |
| Annual Budget                | C                           | 10Y               | 10Y      |                       |                            |
| Work Papers                  | C                           | 5Y                | 5Y       |                       |                            |
| Revenue Sharing Program      | C                           | 5Y AE             | 5Y AE    |                       |                            |
| Community Development        |                             |                   |          |                       |                            |
| Block Grant                  | C                           | 5Y AE             | 5Y AE    |                       |                            |
| Building Board of Appeals    |                             |                   |          |                       |                            |
| (See Boards, Commissions &   |                             |                   |          |                       |                            |
| Committees)                  |                             |                   |          |                       |                            |
| Building Permits             | C                           | P                 | P        |                       |                            |
| Building Plans:              |                             |                   |          |                       |                            |
| Commercial                   | C                           | P                 | P        |                       |                            |
| Residential--Multi-Family    | C                           | 7Y                | 7Y       |                       |                            |
| Residential--Single Family   | C                           | -                 | -        |                       |                            |
| Burn Permits                 | 2Y                          | 2Y R              | 4Y R     |                       |                            |
| Business Licenses:           |                             |                   |          |                       |                            |
| Paid Copies                  | C                           | 5Y                | 5Y AA    |                       |                            |
| Applications                 | C                           | 5Y                | 5Y       |                       |                            |
| Gross Receipt Statements     | C                           | 5Y                | 5Y AA    |                       |                            |
| Register (Acct. History      |                             |                   |          |                       |                            |
| Ledger)                      | C                           | 20Y               | 20Y      |                       |                            |
| Campaign Statements          |                             |                   |          |                       |                            |
| Candidates elected           | C                           | P                 | P        |                       |                            |
| Candidates not elected       | C                           | 5Y                | 5Y       |                       |                            |
| Cash Receipts (Copies)       | 1Y                          | 4Y                | 5Y AA    |                       |                            |
| Census Information           | C                           | P                 | P        |                       |                            |
| Certificate of Destruction-  |                             |                   |          |                       |                            |
| Records                      | 2Y                          | P                 | P        |                       |                            |
| Certificate of Occupancy     | C                           | P                 | P        |                       |                            |
| City Owned Facilities Const. | C                           | 10Y               | 10Y R    |                       |                            |
| Claims Against City          | C                           | 5Y                | 5Y AE    |                       |                            |



## RECORDS RETENTION SCHEDULE

CITY OF HUGHSON

| Record Title                                      | Suggested Retention Periods |        |          |                    |                      |
|---|-----------------------------|--------|----------|--------------------|----------------------|
|   | Active                      | Center | TOTAL    | Dept. Hd. Attorney | Adopt. Reten. Period |
| Commercial Plans                                  | C                           | P      | P        |                    |                      |
| Committees, Internal                              | 5Y R                        | -      | -        |                    |                      |
| Communication Systems, FireDept.                  | 5Y R                        | -      | -        |                    |                      |
| Complaints  | 2Y R                        | -      | -        |                    |                      |
| Conflict of Interest Code                         | C                           | -      | -        |                    |                      |
| Conflict of Interest Statements                   | C                           | P      | P        |                    |                      |
| Connection Forms - Utility                        | 2Y                          | -      | -        |                    |                      |
| Contracts/Franchises/Agreements                   | 1Y                          | 4Y     | 5Y EA R. |                    |                      |
| Contracts, Recreation Programs                    | 2Y EA                       | -      | -        |                    |                      |
| Construction Projects                             | C                           | P      | P        |                    |                      |
| Corrections (Requests for Change - Utility)       | 2Y                          | -      | -        |                    |                      |
| Correspondence, External                          | 2Y                          | 2Y     | 4Y       |                    |                      |
| Correspondence, Internal                          | 2Y                          | 2Y     | 4Y       |                    |                      |
| Daily Journal, Fire Dept.                         | C                           | P      | P        |                    |                      |
| Deeds   | C                           | P      | P        |                    |                      |
| Department Operations Files                       | C                           | -      | -        |                    |                      |
| Disability/Workers Comp. Claims                   | C                           | 20Y    | 20Y R    |                    |                      |
| Dog Licenses                                      | C                           | -      | -        |                    |                      |
| Account History Ledger                            | P                           | P      | P        |                    |                      |
| Easements   | C                           | P      | P        |                    |                      |
| Election Files - Gen. Municipal                   | C                           | 5Y     | 5Y       |                    |                      |
| Eligibility Lists - Employment                    | C                           | 3Y     | 3Y       |                    |                      |
| Employee Applications/Recruitmt.                  | C                           | 3Y     | 3Y       |                    |                      |
| Encroachment Permits - Temp.                      | 1Y                          | -      | -        |                    |                      |
| Encroachment (Buildings, Right-of-way, etc.)      | C                           | P      | P        |                    |                      |
| Engineering Studies and Surveys                   | 5Y                          | P      | P        |                    |                      |
| Equipment Files - Fire Dept.:                     |                             |        |          |                    |                      |
| Vehicles  | 10Y                         | -      | 10Y R    |                    |                      |
| Firefighter Equip.                                | 5Y                          | -      | 5Y R     |                    |                      |
| Equipment Program                                 | 5Y                          | -      | 5Y R     |                    |                      |
| Financial Management System:                      |                             |        |          |                    |                      |
| Annual General Appro. and Revenue Ledger & Sbsdrs | 2Y                          | 8Y     | 10Y R    |                    |                      |
| Journals  | 2Y                          | 3Y     | 5Y AA    |                    |                      |
| FMS Info. Reports; Appro. Status                  | 3Y                          | 2Y     | 5Y       |                    |                      |
| Revenue Realizations                              | 3Y                          | 2Y     | 5Y       |                    |                      |
| Vendor History                                    | C                           | 5Y     | 5Y       |                    |                      |
| Monthly Cash Receipts                             | 2Y                          | 3Y     | 5Y       |                    |                      |
| Trial Balance                                     | 2Y                          | 3Y     | 5Y       |                    |                      |
| Daily Cash Record                                 | 2Y                          | 3Y     | 5Y       |                    |                      |
| Deposit Permits                                   | 2Y                          | 3Y     | 5Y       |                    |                      |
| Fire Department Program Files:                    |                             |        |          |                    |                      |
| Fire Prevention                                   | 5Y                          | -      | 5Y R     |                    |                      |
| Training  | 5Y                          | -      | 5Y R     |                    |                      |
| Hazardous Material                                | 5Y                          | -      | 5Y R     |                    |                      |
| Physical Fitness                                  | 5Y                          | -      | 5Y R     |                    |                      |
| Public Education                                  | 5Y                          | -      | 5Y R     |                    |                      |
| Safety  | 5Y                          | -      | 5Y R     |                    |                      |

## RECORDS RETENTION SCHEDULE

CITY OF HUGHSON

| Record Title                           | Suggested Retention Periods |                   |         |                       | Adopt.<br>Reten.<br>Period |
|--|-----------------------------|-------------------|---------|-----------------------|----------------------------|
|  | Active                      | Records<br>Center | TOTAL   | Dept. Hd.<br>Attorney |                            |
| Fire Loss Reports                      | 5Y                          | P                 | P       |                       |                            |
| Fire Protection Testing                | 5Y                          | -                 | 5Y R    |                       |                            |
| Fire Service Reports                   | 25Y                         | -                 | 25Y R   |                       |                            |
| Fireworks Permits                      | 2Y                          | -                 | 2Y R    |                       |                            |
| Franchises/Agreements/Contracts        | 1Y AE                       | 4Y                | 5Y AE   |                       |                            |
| General Plan                           | C                           | P                 | P       |                       |                            |
| General Plan Amendments                | C                           | P                 | P       |                       |                            |
| Grant Programs                         | C                           | 5Y AE             | 5Y AE   |                       |                            |
| Historic Resources Commission          |                             |                   |         |                       |                            |
| (See Boards, Commissions & Committees) |                             |                   |         |                       |                            |
| Historic Resources Permits             | C                           | P                 | P       |                       |                            |
| Home Occupation Permits                | C                           | P                 | P       |                       |                            |
| Hydrant Files                          | 5Y                          | -                 | 5Y R    |                       |                            |
| Injury or Damage Against City          | C                           | 5Y AE             | 5Y AE   |                       |                            |
| Insurance Policies                     | C                           | 15Y AE            | 15Y AE  |                       |                            |
| Inventory Records                      | C                           | -                 | -       |                       |                            |
| Investigation, Fire                    | 5Y                          | -                 | 5Y R    |                       |                            |
| Job Announcements                      | C                           | 5Y                | 5Y      |                       |                            |
| Job Order forms - Utility              | 2Y                          | -                 | 2Y AA R |                       |                            |
| Job Order Work Files                   | 2Y                          | 3Y                | 5Y AE R |                       |                            |
| Legal Opinions                         | C                           | P                 | P       |                       |                            |
| Litigation Files                       | C                           | P                 | P       |                       |                            |
| Lot Line Adjustments                   | C                           | P                 | P       |                       |                            |
| Main Extension Agreements-Water        | C                           | 5Y AE             | 5Y AE R |                       |                            |
| Meter Deposits - Form                  | 5Y                          | -                 | 5Y AE   |                       |                            |
| Meter Deposits - Register              | 5Y                          | -                 | 5Y AE   |                       |                            |
| Minutes, Council, Bds., Com. & Comt.   | 5Y                          | P                 | P       |                       |                            |
| Monthly Activity Reports               | 2Y                          | -                 | 2Y      |                       |                            |
| Nomination Papers (Elections)          | C                           | 4Y AE             | 4Y AE   |                       |                            |
| Oaths of Office - Council              | 4Y AE                       | -                 | 4Y AE   |                       |                            |
| Occupancy Inspections                  | 5Y                          | -                 | 5Y R    |                       |                            |
| Ordinances                             | P                           | -                 | P       |                       |                            |
| Outside Organizations                  | 2Y                          | -                 | 2Y      |                       |                            |
| Parcel Maps                            | C                           | P                 | P       |                       |                            |
| Parcel Map Waivers                     | C                           | P                 | P       |                       |                            |
| Park & Recreation Commission           |                             |                   |         |                       |                            |
| (See Boards, Commissions & Committees) |                             |                   |         |                       |                            |
| Parking and Traffic Commission         |                             |                   |         |                       |                            |
| (See Boards, Commissions & Committees) |                             |                   |         |                       |                            |
| Payment Stubs - Utility                | 1Y                          | -                 | 1Y      |                       |                            |

## RECORDS RETENTION SCHEDULE

CITY OF HUGHSON

| Record Title   | Suggested Retention Periods |                   |        |                       | Adopt.<br>Reten.<br>Period |
|--|-----------------------------|-------------------|--------|-----------------------|----------------------------|
|  | Active                      | Records<br>Center | TOTAL  | Dept. Hd.<br>Attorney |                            |
| Payroll:   |                             |                   |        |                       |                            |
| Checks   | 5Y AA                       | -                 | 5Y AA  |                       |                            |
| Check Register   | 5Y                          | P                 | P      |                       |                            |
| Employee Data Sheets   | C                           | 10Y AE            | 10Y AE |                       |                            |
| Labor Allocation Time<br>Sheets & Worksheet                      | C                           | P                 | P      |                       |                            |
| Overtime Sheets  | 5Y                          | P                 | P      |                       |                            |
| Payroll Information<br>Reports (Special)                         | C                           | P                 | P      |                       |                            |
| PERS Reports   | C                           | P                 | P      |                       |                            |
| (Payroll/Prsnl Actn Frms)  | C                           | P                 | P      |                       |                            |
| Time Cards   | 5Y                          | P                 | P      |                       |                            |
| Wage Garnishment & Tax   | 5Y                          | 5Y                | 10Y AE |                       |                            |
| Withholding Exemption Cert.                                      | C                           | 10Y               | 10Y    |                       |                            |
| Permits:   |                             |                   |        |                       |                            |
| Building   | C                           | P                 | P      |                       |                            |
| Burn   | 2Y                          | -                 | 2Y R   |                       |                            |
| Fire Dept. (Underground<br>tanks, etc.)                          | 10Y                         | -                 | 10Y R  |                       |                            |
| Signs  | C                           | P                 | P      |                       |                            |
| Taxi, Card Rooms, Bingo,<br>Dance                                | C                           | 5Y AE             | TY AE  |                       |                            |
| Personnel Files, Individual<br>Employee                          | C                           | 10Y AE            | 10Y AE |                       |                            |
| Personnel Rules & Regulations                                    | C                           | P                 | P      |                       |                            |
| Petty Cash:  |                             |                   |        |                       |                            |
| Check Register   | C                           | 5Y                | 5Y AA  |                       |                            |
| Cancelled Checks   | C                           | 5Y                | 5Y AA  |                       |                            |
| Claims   | C                           | 5Y                | 5Y AA  |                       |                            |
| Planning Commission<br>(See Boards, Commissions &<br>Committees) |                             |                   |        |                       |                            |
| Proclamations/Commendations                                      | 2Y                          | -                 | -      |                       |                            |
| Purchase Orders  | 2Y                          | 3Y                | 5Y AA  |                       |                            |
| Purchasing & Contracting:  |                             |                   |        |                       |                            |
| Bids File  | C                           | 5Y                | 5Y     |                       |                            |
| Quotation/Prices   | C                           | -                 | -      |                       |                            |
| Purchase Orders  | 2Y                          | 3Y                | 5Y AA  |                       |                            |
| Real Property - Purchases  | C                           | P                 | P      |                       |                            |
| Real Property - Sales  | C                           | P                 | P      |                       |                            |
| Receipt Books - Department                                       | 3Y                          | -                 | 3Y     |                       |                            |
| Recreation Program Contracts                                     | 2Y AE                       | -                 | 2Y AE  |                       |                            |
| Recruitment Files:   |                             |                   |        |                       |                            |
| Job Announcements  | C                           | 5Y                | 5Y     |                       |                            |
| Applications, Tracking<br>Forms                                  | C                           | 3Y                | 3Y     |                       |                            |
| Work Folder  | C                           | 5Y                | 5Y     |                       |                            |

## CITY OF HUGHSON

Page 6 of 6

## RECORDS TRANSFER FORM

EXHIBIT "C"

Print or type in triplicate. Keep third copy. Send original and second copy along with your boxed records to the Records Center. Second copy will be returned to you showing the permanent Records Center Box No. and location assigned. When second copy is received, destroy your third copy.

TO: RECORDS CENTER . FROM:

DATE RECEIVED:

BY: \_\_\_\_\_ . BY: \_\_\_\_\_

|             |                               |                |                  |
|-------------|-------------------------------|----------------|------------------|
| Temporary . |                               | Retention .    | Records Center   |
| Box No. .   | RECORD TITLE OR DESCRIPTION . | Instructions . | Box No./Location |

[illegible]

## RECORDS TRANSFER FORM

EXHIBIT "D"

Print or type in triplicate. Send all copies to the Records Center. FIRST copy will be put in Records Center Tickler file, SECOND copy on the record itself, THIRD copy on the out card in the file.

DEPARTMENT

. REQUESTED BY

RECORD TITLE

. DATE OF RECORD

. R.C. BOX NO/LOCATION

RECORD DETAIL

TIME REQUIRED

. REQUESTED BY

Phone

Visit

SEARCHED BY

. RETURN DATE

. FILED BY

# DESTRUCTION OF RECORDS NOTICE

EXHIBIT "E"

TO: . Record Center Date:

The retention period has expired for your records listed below. If you have no further use for them, please indicate your approval for their destruction by initialing and indicating the date. Please indicate new destruction date for any records you wish retained in the Center.

[illegible]

Approvals: Department Head \_\_\_\_\_ Date \_\_\_\_\_  
City Attorney \_\_\_\_\_  
City Manager \_\_\_\_\_  
Rcds. Mgmt. Supv. \_\_\_\_\_

Destruction Date: . Destroyed by: (method) . Destroyed by: (name)





#### CHAPTER 4. FUNCTIONAL SUBJECT FILING SYSTEM DEFINED

The real test of a filing system is not how quickly records can be filed, but how quickly they can be found when needed. Extracting information from records easily and translating it into usable formats is dependent upon an efficient universal records retention and filing system. The lack of a filing system results in deterioration of filing service and eventually leads to failure to meet departmental needs. Records should be prepared, classified and filed with care.

The filing system that has been selected for the records of the City of Hughson is the Functional Subject Filing System. The Functional Subject Filing System outlined in this manual is based upon present functions of the City. There are many advantages in the use of a systematic, written, universal filing system based upon organizational functions.

- 1) The function classifications are common to all departments.
- 2) Valuable information that normally departs with knowledgeable employees when they retire can be preserved by development of the system.
- 3) The system is modular in that the addition or deletion of functions do not affect the balance of the system.
- 4) It is three-tiered, pointing the user to a specific group files. This narrows the search field quickly.
- 5) Written definitions of functional classifications have been provided in this manual. This will help all users to understand what types of records are filled under each functional classification.
- 6) Finally, since the written system is available to all, all staff members can locate needed information.

In initiating the Functional Subject Filing System, the various City functions have been reviewed. Next, the type of activities related to the various functions were defined and those titles placed under the appropriate function. Appropriate subject headings were chosen by which to place records under the proper activities and functions. In choosing headings at all levels of the functional system, we ask not "Who does it?", but "Why is it

done?"; "What is the purpose of this activity?"; "Is it basically a financial activity or a letter (or other) activity?".

Numbers and colors are utilized to assist in the identification, filing and retrieval of file folder.

## CHAPTER 5 NUMERIC AID/COLOR CODING

### NUMERIC AIDS

A simple numbering system is added to assist in the identification of each function, activity and file folder. A number is placed on all file folders under each function. For example, the number 1 is assigned to the functional classification, Administration and Policy Management. There are 99 possible activities under each function. Each activity under that function is given an individual number using the "1" and adding two digits. The activity heading "Administration - City Wide" could be given the number "101". All file folders under the activity "Administration - City Wide" would bear the number "101" plus an additional sequential number after a decimal, or: 101.1, 101.2, etc.

### COLOR CODING

Each function has been assigned a certain color or colors. The number labels bear the assigned colors. This assists in refiling file folders under the correct function and in identifying a file folder as belonging to a specific function and activity by looking at the colors.

To restate the logic of the basic system, functional classifications and activity headings are headings only. The third layer consists of the file folders holding the subject files.

## CHAPTER 6 SUBJECT HEADING/CROSS REFERENCE

### SUBJECT HEADINGS

Subject headings must be as specific as possible. Using the title "Miscellaneous" as a subject title means "I don't know what to call this". The word "general" is not much better and if used, should always be qualified.

Subject headings can be too broad. A heading such as "Streets" results in a multitude of materials pertaining to a number of street related issues being placed together in one folder. This makes it difficult to find material quickly on a specific street-related issue. Subject headings can be too narrow. A heading such as "Center Street Paving" may result in a very small amount of correspondence being placed in a folder, unless such a project is very large. It also results in the generation of a multitude of such files. The scope of the subject headings must be based on the volume of materials to be placed in the folder.

In assigning subject headings, it is wise to avoid headings such as "To & From", "Memo", "Correspondence", "Reports", "Letters", etc. Such headings indicate the format of the materials filed and give no clue to the subject or subjects of the material filed.

An outline of the functional subject filing system, including the definition of each function, is provided in this manual to assist the user in designing future functions, activities and file folder headings.

#### CROSS REFERENCE

If a record has more than one subject, or may be requested in more than one way, the material can be cross referenced as a retrieval aid.

a) Select the appropriate subject heading for the additional subject(s) to cross reference(s) and place the file number and first heading in the index, followed immediately by "see also". For example:

104.2 Awards, Presentations and Commendations  
- See also 104.4.

b) Sometimes cross filing may be necessary. In that event file the original record copy under the subject heading and a reproduced copy under the second or cross reference heading.

### CHAPTER 7 RECORDS RETRIEVAL

#### LOCATING RECORDS IN THE FILES

To locate records in the files, relate information concerning

them to the filing system using the following procedures:

- a) Obtain enough information to identify the file: subject, names of individuals or agencies, date, etc.
- b) Search the Subject File Index for the subject in question.
- c) If the subject is not readily discernible, search the Alphabetical Cross Index, using known points of reference.
- d) If the subject still cannot be located and it has been before the City Council, search the Index of Council Minutes, using known points of reference.
- e) If a recent record cannot be located in the files, search the unfiled records.

#### THE CHARGE OUT SYSTEM

The charge out system is necessary for the files to remain complete. An Out Card should be completed for any file removed. Prior to removal of the record, the Out Card should be placed in the files at the exact location of the record. The Out Card indicates where the file may be found while it is out and where to put it when it comes back. Out Cards are larger than file folders, so they can be seen easily.

#### CHAPTER 8 FILES MAINTENANCE

The maintenance of neat and orderly files is basic to easy filing and retrieval of records. The following maintenance standards are presented as a guide:

##### 1) Daily Filing

Records should be filed daily. The most frequently requested records are those most recently received.

##### 2) Unnecessary Filing

Avoid unnecessary filing. It is a time and space waster. Limit the filing of reference materials in the subject files when possible. Place such materials in an area where they can be destroyed when no longer in use.

### 3) Folder Capacity

When normal folder capacity (1-1/2" to 2") has been reached, place additional records in a new folder. Place the new folder in front of the old folder(s). Number the new folders (V-1 of 2, V-2 of 2, etc.) to maintain order and to indicate that the records of this subject are in more than one folder. Use expansion folders for files that must hold more materials.

### 4) Visibility

Keep records completely within folders to avoid damage and to provide visibility of folder labels.

When folder contents reach 1" in volume, crease the folder along the second line at the bottom so the folder will rest flat on the bottom of the drawer or shelf.

Allow approximately four inches of empty working space in each file drawer and two inches on each shelf.

### 5) Filing Supplies

#### a) File Drawer Labels File labels should show:

- 1) Year(s) of coverage
- 2) Portion of the files contained in the drawer or shelf and inclusive numerical function and activity numbers.

#### b) Guide Cards Guide cards should be placed in the files at the beginning of every function, and activity heading. Guide card labels should show:

- 1) Function or activity of the folders behind the guide card.

#### c) Folder Labels Folder labels should shows:

- 1) Appropriate color code
- 2) Numeric code showing function, activity and subject file headings.
- 3) Year in which folder was initiated.

#### d) Placement of Labels Guide card labels and folder labels should be placed on the cards and folders in an orderly fashion.

#### e) Folder Preparation Prepare folders only for subjects used. If there is no need to use some subjects do not

prepare folders for them.

## CHAPTER 9 SYSTEM GROWTH

### ADDING SUBJECTS

The Subject File is adaptable to the growth of City operations and is readily expandable. However, before adding subject to the outline, consider the following:

a) The use of an existing subject rather than adding an additional one.

b) If a heading is added, place it logically at the proper level function, activity or subject.

c) All new headings, at any level must be approved and entered in the master copy of the Subject File Index.

### UPGRADING EXISTING SUBJECTS

Growth in an existing subject can be accommodated by raising the level of the subject. A subject may be raised to an activity; an activity may be raised to a function. Great care should be exercised in defining the levels appropriately or by adding a layer of files below a subject.

|          |         |                   |
|----------|---------|-------------------|
| Example: | 209.1   | Bank Statement    |
|          | 209.1.1 | Central Bank      |
|          | 209.1.2 | Great Valley Bank |
|          | 209.1.3 | Bank of America   |

## CHAPTER 10 DEFINITIONS

### 100 ADMINISTRATION AND POLICY MANAGEMENT

This function contains records related to City-wide administration as well as records necessary for the administration of the originating department's functions. Included are organizational files, policy and procedure files, studies and surveys, files related to public organizations files, agendas and minutes of City boards, commissions and committees. The records relating to the concerns addressed by boards, commissions and committees will be found under the activities to which they are

related.

200 FINANCIAL SERVICES

This function contains all records related to the administration of the fiscal affairs of the City. Included are accounting, billing, budget, audit, banking, grant administration, investment, payroll, purchasing risk management, revenue taxation files and financial reports.

300 LEGAL AND LEGISLATIVE SERVICES

This function relates to the duties of the legal officer and legally constituted authorities of the City, such as its code. It is related to subject which have basically legal orientation or which are mandated by law, such as elections, conflict of interest codes, claims, litigations, contracts, etc. Correspondence related to County, State and Federal legislation is placed in this function.

400 PERSONNEL SERVICES

This function contains records related to all facets of City personnel administration and related programs.

500 PLANNING AND COMMUNITY DEVELOPMENT

This function contains records related to the entire range of planning activities from inception to completion of project development or changes to property and structures lying within the City's jurisdiction. It does not contain records relating to City facilities which are to be found under Staff Services and Facilities function. It also applies to the General Plan as a part of planning for change, use and development and the ongoing design of City standards for zoning, building inspection, housing and redevelopment.

600 PUBLIC SAFETY AND HEALTH

The function includes records directly related to the safety functions within the City's jurisdiction, other than building conditions. Activities range in scope from fire and police protection to animal control, environmental protection and traffic and parking



regulation.

700 PUBLIC SERVICE FACILITIES AND ACTIVITIES

This function contains records related to publicly developed and owned facilities within the jurisdiction of the City, constructed and maintained for the use and/or recreation of the public, such as parks, Community/Senior Center, etc. It also contains records related to recreation programs and other conducted by the City for the public.

800 PUBLIC WORKS AND UTILITIES

The function includes materials related to facilities constructed for public use, i.e., streets, sidewalks and highways; provision of services essential to the maintenance of life, such as water, solid waste management, wastewater management and drainage; engineering and maintenance services are included.

900 REAL PROPERTY MANAGEMENT

This function contains files which deal with the acquisition and disposition of City-owned property. It contained departmental copies of deeds, easements and leases.

1000 STAFF SERVICES AND FACILITIES

This function holds material related to all services which assist City employees in the discharge of their duties by provision of facilities such as City Hall, the Corporation Yard, Council Chambers, offices, equipment, vehicles, systems, and their maintenance.



## MASTER FILE INDEX

(Note to file users: The notation "file by name and assign number" means to file material to or from a specific organization, or relating to a certain subject, in separate folders and assign a number to each folder under the activity as listed)

### 100 ADMINISTRATION AND POLICY MANAGEMENT

- 101 Administration - City Wide
- 102 Administration - Departmental
- 103 City History
- 104 City Council
- 105 Boards, Commissions & Committees
- 106 Cities and Counties
- 107 Federal Jurisdiction
- 108 Organizations at Large
- 109 Organizations - Local
- 110 Public Information/Public Relations
- 111 State and Regional Jurisdictions
- 112 Studies and Surveys

### 200 FINANCIAL SERVICES

- 201 Accounting
- 202 Financial Policies & Procedures
- 203 Audits
- 204 Budgets
- 205 Debt Service
- 206 Financial Reports
- 207 Grant Administration
- 208 Investments
- 209 Licenses & Permits, Business
- 210 Payroll
- 211 Purchasing
- 212 Revenues & Taxation
- 213 Risk Management

214 State Revenue Programs

300 LEGAL AND LEGISLATIVE SERVICES

- 301 Annexations
- 302 Litigation - Case Files
- 303 Campaign Statements
- 304 Conflict of Interest  
Regulations & Filings
- 305 Contracts (Leases, Agreements  
& Franchises)
- 306 Deeds & Easements
- 307 Elections
- 308 Legislation - Federal
- 309 Legislation - State & City
- 310 Legal Opinions
- 311 Publications & Advertising

400 PERSONNEL SERVICES

- 401 Administration
- 402 Position Evaluations
- 403 Recruitment & Selection

500 PLANNING & COMMUNITY DEVELOPMENT

- 501 Administration - Guidelines
- 502 Property Use Administration
- 503 Redevelopment
- 504 Subdivisions
- 505 Transportation Planning
- 506 Parking

600 PUBLIC SAFETY & HEALTH

- 601 Emergency Preparedness & Services





## **CITY COUNCIL AGENDA ITEM NO. 3.4**

### **SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Adopt Resolution No. 2020-23, Approving the Professional Service Agreement with Moss, Levy & Hartzheim, LLP, for Independent Auditing Services  
**Enclosures:** Moss, Levy & Hartzheim, LLP:  
Statement of Qualifications  
Cost Proposal  
**Presented By:** Merry Mayhew, City Manager  
**Approved By:** Merry Mayhew, City Manager

---

#### **Staff Recommendations:**

1. Adopt Resolution No. 2020-23, approving the Professional Service Agreement with Moss, Levy & Hartzheim, LLP, for independent auditing services.
2. Authorize the City Manager to execute the Professional Service Agreement and subsequent one-year extensions, with Moss, Levy & Hartzheim, LLP, inclusive of any final edits by the City Attorney.

#### **Background and Overview:**

The City of Hughson has used several independent auditing services firms over the years. Most recently, Moss, Levy & Hartzheim has been performing the City's annual audit services. The last contract the City of Hughson entered into with Moss, Levy, & Hartzheim was signed in October 2010.

Based on prior City Council general direction to periodically reevaluate current city services contracts, City staff released a Request for Statement of Qualifications for auditing services on January 27, 2020. The response period closed on February 28, 2020. The City received six proposals from various firms throughout the State of California. The Director of Finance and Administrative Services, the Finance Manager, and the Management Analyst held interviews on April 23, 2020, with the six firms that submitted proposals. In addition to Moss, Levy, & Hartzheim, the firms Price Paige & Company Accountancy Corporation; Mann, Urrutia, Nelson CPAs & Associates, LLP; Rogers, Anderson, Malody & Scott, LLP; Cropper Accountancy Corporation; and Badawi & Associates were interviewed.

After the interviews, City staff selected Moss, Levy & Hartzheim as the firm that best meets the City's current needs. The relationship between the City of Hughson and Moss, Levy & Hartzheim, has been a positive relationship with value added services. In order to comply with Government Code section 12410.6.(b), if the City Council approves the contract with Moss, Levy & Hartzheim, a new audit partner will have primary responsibility for the audit.

### **Discussion:**

City staff is asking City Council to approve the negotiated Professional Service Agreement with Moss, Levy & Hartzheim. The specific agreement with detailed terms is attached for reference and has been reviewed to form by the City Attorney. The term of the Agreement is for three years (annual audits for Fiscal Years 2019-2022) with two optional additional years. The information below highlights terms of the attached agreement:

Consultants will:

- perform annual audits of the City of Hughson's financial statements, in accordance with auditing standards generally accepted in the United States as set forth by the American Institute of Certified Public Accountants;
- perform, if applicable, a single audit on the expenditures of federal grants;
- compile and file the Annual Report for Financial Transactions and Streets Report to the State Controller of California;
- perform certain limited procedures involving the management's discussion and analysis and the required supplementary information as mandated by auditing standards generally accepted;
- issue a separate management letter that includes recommendations for improvements of internal control, accounting procedures and other significant observations that are non-reportable conditions;
- participate and staff up to two Finance Committee meetings per year;
- participate and staff up to two City Council meetings;
- at the City's request, general consultation will be provided on financial reporting matters;
- All irregularities and illegal acts or indications of illegal acts of which we become aware of, during the course of the audit will be immediately reported, in writing, to the City Council, City Manager, City Attorney, and Finance Director.
- Complete annual audits by the end of December each year.
- The term of the Agreement is for three years with the possibility of two additional years by mutual agreement.

Moss, Levy and Hartzheim have agreed to substantially discount the cost as they recognize that contractors need to reassess their fees during these economic uncertainties. Moss, Levy, Hartzheim have reduced their fees substantially (19%) in order to assist the City in these challenging times.



**Fiscal Impact:**

Currently, the City of Hughson pays \$38,000 for the annual audit and an additional \$2,500 to submit a required State Controller's Office report, for a total of \$40,500. In addition, if the City spends more than \$750,000 in federal funds in one year, a Single Audit is required. A Single Audit is intended to provide assurance to the Federal Government that a non-federal entity has adequate internal controls in place and is generally in compliance with program requirements. There is an additional cost to complete a Single Audit report, which has not been necessary for the last several years.

This agreement will lower the annual audit cost by approximately 19%, a savings of \$7,830 the first year. Each subsequent year would include a very minimal increase of \$173 the second year, \$121 the third year, \$120 the fourth year, and \$123 the fifth year.

|                       |          |
|-----------------------|----------|
| Fiscal Year 2019-2020 | \$32,670 |
| Fiscal Year 2020-2021 | \$32,843 |
| Fiscal Year 2021-2022 | \$32,964 |
| Fiscal Year 2022-2023 | \$33,084 |
| Fiscal Year 2023-2024 | \$33,207 |

**CITY COUNCIL**  
**CITY OF HUGHSON**  
**RESOLUTION NO. 2020-23**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUGHSON APPROVING  
THE PROFESSIONAL SERVICES AGREEMENT WITH MOSS, LEVY AND  
HARTZEIM, LLP FOR INDEPENDENT AUDIT SERVICE**

**WHEREAS**, on January 27, 2020 the City of Hughson released a Request for Statement of Qualifications for independent audit services; and

**WHEREAS**, the response period closed on February 28, 2020 and the City received six proposals from various firms throughout the State; and

**WHEREAS**, on April 23, 2020 City staff interviewed six firms that met the City's minimum requested qualifications; and

**WHEREAS**, Moss, Levy and Hartzheim, LLP was the most qualified candidate, and chosen by staff to provide independent audit services for three years with the option to terminate by either party.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of Hughson does hereby approve the Professional Services Agreement with Moss, Levy and Hartzheim, LLP for Independent Audit Services attached hereto as Attachment "A" and authorize the City Manager or his/her designee to sign the agreement.

**PASSED AND ADOPTED** by the City Council of the City of Hughson at its regularly scheduled meeting on this 8<sup>th</sup> day of June 2020 by the following roll call vote:

**AYES:**

**NOES:**

**ABSTENTIONS:**

**ABSENT:**

\_\_\_\_\_  
**JERAMY YOUNG, Mayor**

**ATTEST:**

\_\_\_\_\_  
**ASHTON GOSE, Deputy City Clerk**

**MASTER  
PROFESSIONAL SERVICE AGREEMENT**  
(City of Hughson/Moss, Levy & Hartzheim, LLP)

THIS PROFESSIONAL SERVICES AGREEMENT (“Agreement”) is entered into by and between the City of Hughson, a California municipal corporation (“City”) and Moss, Levy & Hartzheim, LLP (“Consultant”).

**RECITALS**

WHEREAS, the City has determined that it requires the professional services of a consultant to provide independent audit services.

WHEREAS, the Consultant represents that it is fully qualified to perform such professional services by virtue of its experience and the training, education and expertise of its principals and employees.

WHEREAS, the Consultant further represents that it is willing to accept responsibility for performing such services in accordance with the terms and conditions set forth in this Agreement.

**NOW, THEREFORE**, for and in consideration of the mutual covenants and conditions herein contained, City and Consultant agree as follows:

1. DEFINITIONS

1.1. “Scope of Services” means the professional services as are generally set forth in Consultant’s February 28, 2020 proposal to City attached hereto as Exhibit A.

1.2. “Approved Fee Schedule” means the compensation rates as are set forth in Section 5 “Cost Proposal” of Consultant’s Fee Schedule & Basis of Charges attached hereto as Exhibit B.

1.3. “Commencement Date” means start date.

1.4. “Expiration Date” means the date the contract is expired.

2. TERM

The term of this Agreement shall commence at 12:00 a.m. on July 1, 2020 and shall expire at 11:59 p.m. on June 30, 2023 unless extended by written agreement of the parties or terminated earlier in accordance with Section 14 (“Termination”) below.

### 3. CONSULTANT'S SERVICES

3.1. Consultant shall perform the services identified in the Scope of Services submitted on February 28, 2020. City shall have the right to request, in writing, changes in the Scope of Services. Any such changes mutually agreed upon by the parties, and any corresponding increase or decrease in compensation, shall be incorporated by written amendment to this Agreement. In no event shall the total compensation and costs payable to Consultant under this Agreement exceed the sums specified by each Task Order unless specifically approved in advance and in writing by City.

3.2. Consultant shall perform all work to the highest professional standards of Consultant's profession and in a manner reasonably satisfactory to City. Consultant shall comply with all applicable federal, state and local laws and regulations, including the conflict of interest provisions of Government Code Section 1090 and the Political Reform Act (Government Code Section 81000 et seq.).

3.3. Consultant represents that it has, or will secure at its own expense, all personnel required to perform the services identified in the Scope of Services. All such services shall be performed by Consultant or under its supervision, and all personnel engaged in the work shall be qualified to perform such services. The Director of Finance and Administrative Services, or his/her designee shall be Consultant's project administrator and shall have direct responsibility for management of Consultant's performance under this Agreement. No change shall be made in Consultant's project administrator without City's prior written consent.

### 4. COMPENSATION

4.1. City agrees to compensate Consultant for the services provided under this Agreement, and Consultant agrees to accept in full satisfaction for such services, payment in accordance with the Approved Fee Schedule, attached as Exhibit B.

4.2. Consultant shall submit to City an invoice for the services performed pursuant to this Agreement. Each invoice shall itemize the services rendered during the billing period and the amount due. Within ten business days of receipt of each invoice, City shall notify Consultant in writing of any disputed amounts included on the invoice. Within thirty days (30) calendar days of receipt of each invoice, City shall pay all undisputed amounts included on the invoice. City shall

not withhold applicable taxes or other authorized deductions from payments made to Consultant.

4.3. Payments for any services requested by City and not included in the Scope of Services shall be made to Consultant by City on a time-and-materials basis using Consultant's fee schedule included in Exhibit B.

## 5. OWNERSHIP OF WRITTEN PRODUCTS

5.1. All reports, documents or other written material ("written products"), excluding records identified in Business and Professions Code 5037, developed by Consultant in the performance of this Agreement shall be and remain the property of City without restriction or limitation upon its use or dissemination by City. Consultant may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by Consultant.

## 6. RELATIONSHIP OF PARTIES

6.1. Consultant is, and shall at all times remain as to City, a wholly independent contractor. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise to act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not represent that it is, or that any of its agents or employees are, in any manner employees of City.

## 7. CONFIDENTIALITY

7.1. All data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without prior written consent by City. City shall grant such consent if disclosure is legally required. Upon request, all City data shall be returned to City upon the termination or expiration of this Agreement.

## 8. INDEMNIFICATION

8.1. To the fullest extent permitted by law, Consultant shall indemnify, hold harmless and defend City, its officers, agents, employees and volunteers from and against any and all claims and losses, costs or expenses for any damage due to death or injury to any person and injury to any property resulting from any alleged acts that arise out of, pertain to, or relate to the negligence, recklessness, or willful

misconduct of the Consultant or any of its officers, employees, servants, agents, or subcontractors in the performance of this Agreement, except those matters arising from City's sole negligence or willful misconduct. Such costs and expenses shall include reasonable attorneys' fees incurred by counsel of City's choice.

8.2. City shall have the right to offset against the amount of any compensation due Consultant under this Agreement any amount due City from Consultant as a result of Consultant's failure to pay City promptly any indemnification arising under this Section 8.

8.3. The obligations of Consultant under this Section 8 will not be limited by the provisions of any workers' compensation act or similar act. Consultant expressly waives any statutory immunity under such statutes or laws as to City, its officers, agents, employees and volunteers.

8.4. Consultant agrees to obtain executed indemnity agreements with provisions identical to those set forth here in this Section 8 from each and every subcontractor or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. In the event Consultant fails to obtain such indemnity obligations from others as required herein, Consultant agrees to be fully responsible and indemnify, hold harmless and defend City, its officers, agents, employees and volunteers from and against any and all claims and losses, costs or expenses for any damage due to death or injury to any person and injury to any property resulting from any alleged intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of Consultant's subcontractors or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. Such costs and expenses shall include reasonable attorneys' fees incurred by counsel of City's choice.

8.5. City does not, and shall not, waive any rights that it may possess against Consultant because of the acceptance by City, or the deposit with City, of any insurance policy or certificate required pursuant to this Agreement. This hold harmless and indemnification provision shall apply regardless of whether or not any insurance policies are determined to be applicable to the claim, demand, damage, liability, loss, cost or expense.

## 9. INSURANCE

9.1. During the term of this Agreement, Consultant shall carry, maintain, and keep in full force and effect insurance against claims for death or injuries to persons or damages to property that may arise from or in connection with

Consultant's performance of this Agreement. Such insurance shall be of the types and in the amounts as set forth below:

9.1.1. Comprehensive General Liability Insurance with coverage limits of not less than One Million Dollars (\$1,000,000), per occurrence and in the aggregate, including products and operations hazard, contractual insurance, broad form property damage, independent consultants, personal injury, underground hazard, and explosion and collapse hazard where applicable.

9.1.2. Automobile Liability Insurance for vehicles used in connection with the performance of this Agreement with minimum limits of One Million Dollars (\$1,000,000) per claimant and One Million dollars (\$1,000,000) per incident.

9.1.3. Worker's Compensation insurance as required by the laws of the State of California.

9.1.4. Professional Errors and Omissions Insurance with coverage limits of not less than One Million Dollars (\$1,000,000).

9.2. Consultant shall require each of its subcontractors to maintain insurance coverage that meets all of the requirements of this Agreement.

9.3. The policy or policies required by this Agreement shall be issued by an insurer admitted in the State of California and with a rating of at least A:VII in the latest edition of Best's Insurance Guide.

9.4. Consultant agrees that if it does not keep the aforesaid insurance in full force and effect, City may either (i) immediately terminate this Agreement; or (ii) take out the necessary insurance and pay, at Consultant's expense, the premium thereon.

9.5. At all times during the term of this Agreement, Consultant shall maintain on file with City a certificate or certificates of insurance showing that the aforesaid policies are in effect in the required amounts and naming the City and its officers, employees, agents and volunteers as additional insureds. Consultant shall, prior to commencement of work under this Agreement, file with City such certificate(s).

9.6. Consultant shall provide proof that policies of insurance required herein expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage. Such proof will be furnished at least two weeks prior to the expiration of the coverages.

9.7. The general liability and automobile policies of insurance required by this Agreement shall contain an endorsement naming City and its officers, employees,



agents and volunteers as additional insureds. All of the policies required under this Agreement shall contain an endorsement providing that the policies cannot be canceled or reduced except on thirty days' prior written notice to City. Consultant agrees to require its insurer to modify the certificates of insurance to delete any exculpatory wording stating that failure of the insurer to mail written notice of cancellation imposes no obligation, and to delete the word "endeavor" with regard to any notice provisions.

9.8. The insurance provided by Consultant shall be primary to any coverage available to City. Any insurance or self-insurance maintained by City and/or its officers, employees, agents or volunteers, shall be in excess of Consultant's insurance and shall not contribute with it.

9.9. All insurance coverage provided pursuant to this Agreement shall not prohibit Consultant, and Consultant's employees, agents or subcontractors, from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against the City.

9.10. Any deductibles or self-insured retentions must be declared to and approved by the City.

9.11. Procurement of insurance by Consultant shall not be construed as a limitation of Consultant's liability or as full performance of Consultant's duties to indemnify, hold harmless and defend under Section 8 of this Agreement.

## 10. MUTUAL COOPERATION

10.1. City shall provide Consultant with all pertinent data, documents and other requested information as is reasonably available for the proper performance of Consultant's services under this Agreement.

10.2. In the event any claim or action is brought against City relating to Consultant's performance in connection with this Agreement, Consultant shall render any reasonable assistance that City may require.

## 11. RECORDS AND INSPECTIONS

11.1. Consultant shall maintain full and accurate records with respect to all matters covered under this Agreement for a period of three years after the expiration or termination of this Agreement. City shall have the right to access and examine such records, without charge, during normal business hours. City shall further have the right to audit such records, to make transcripts therefrom and to inspect all program data, documents, proceedings, and activities.

## 12. NOTICES

12.1. Any notices, bills, invoices, or reports required by this Agreement shall be deemed received on: (i) the day of delivery if delivered by hand, facsimile or overnight courier service during Consultant's and City's regular business hours; or (ii) on the third business day following deposit in the United States mail if delivered by mail, postage prepaid, to the addresses listed below (or to such other addresses as the parties may, from time to time, designate in writing).

If to City:

City of Hughson  
P.O. Box 9  
Hughson, CA 95326  
Telephone: (209) 883-4054  
Facsimile: (209) 883-2638

With courtesy copy to:

Daniel J. Schroeder, City Attorney  
Neumiller & Beardslee  
P.O. Box 20  
3121 W. March Lane, Suite 100  
Stockton, CA 95219  
Telephone: (209) 948-8200  
Facsimile: (209-) 948-4910

Consultant:

Moss, Levy & Hartzheim, LLP  
5800 Hannum Ave Suite E  
Culver City, CA 90230  
Telephone: (310) 670-2745  
With a copy to: Hadley Hui CPA, Partner

### 13. SURVIVING COVENANTS

13.1. The parties agree that the covenants contained in Section 7, Section 8, Paragraph 10.2 and Section 11 of this Agreement shall survive the expiration or termination of this Agreement.

### 14. TERMINATION

14.1. City shall have the right to terminate this Agreement for any reason on five calendar days' written notice to Consultant. Consultant shall have the right to

terminate this Agreement for any reason on thirty calendar days' written notice to City. Consultant agrees to cease all work under this Agreement on or before the effective date of any notice of termination. All City data, documents, objects, materials or other tangible things shall be returned to City upon the termination or expiration of this Agreement.

14.2. If City terminates this Agreement due to no fault or failure of performance by Consultant, then Consultant shall be paid based on the work satisfactorily performed at the time of termination. In no event shall Consultant be entitled to receive more than the amount that would be paid to Consultant for the full performance of the services required by this Agreement.

#### GENERAL PROVISIONS

14.3. Consultant shall not delegate, transfer, subcontract or assign its duties or rights hereunder, either in whole or in part, without City's prior written consent, and any attempt to do so shall be void and of no effect. City shall not be obligated or liable under this Agreement to any party other than Consultant.

14.4. In the performance of this Agreement, Consultant shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability or medical condition.

14.5. Consultant agrees to comply with the regulations of City's "Conflict of Interest Code." Said Code is in accordance with the requirements of the Political Reform Act of 1974. Consultant covenants that it presently has no interest, and shall not have any interest, direct or interest, which would conflict in any manner with the performance of service required hereunder. The term "conflict" shall include, as a minimum, the definition of a "conflict of interest" under the California Fair Political Practices Act and the City of Hughson Conflict of Interest Code, as that term is applied to consultants.

14.6. In accomplishing the scope of services of this Agreement, Consultant(s) may be performing a specialized or general service for the City, and there is a substantial likelihood that the consultant's work product will be presented, either written or orally, for the purpose of influencing a governmental decision. As a result, employees of the Consultant or the Consultant itself may be subject to a Category "1" disclosure of the City's Conflict of Interest Code. If in fact this applies to the Consultant a form 700 must be filed.

14.7. The captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph thereof at the head of which it appears, the section or paragraph thereof, as the case may be, and not such heading, shall control and

govern in the construction of this Agreement. Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

14.8. The waiver by City or Consultant of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of such term, covenant or condition or of any subsequent breach of the same or any other term, covenant or condition herein contained. No term, covenant or condition of this Agreement shall be deemed to have been waived by City or Consultant unless in writing.

14.9. Consultant shall not be liable for any failure to perform if Consultant presents acceptable evidence, in City's sole judgment, that such failure was due to causes beyond the control and without the fault or negligence of Consultant.

14.10. Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance of the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by such party of any of all of such other rights, powers or remedies. In the event legal action shall be necessary to enforce any term, covenant or condition herein contained, the party prevailing in such action, whether reduced to judgment or not, shall be entitled to its reasonable court costs, including accountants' fees, if any, and attorneys' fees expended in such action. [NTD: this clause is duplicated in section 14.13]

14.11. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, then such term or provision shall be amended to, and solely to, the extent necessary to cure such invalidity or unenforceability, and in its amended form shall be enforceable. In such event, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

14.12. This Agreement shall be governed and construed in accordance with the laws of the State of California.

14.13. If either party initiates an action to enforce the terms hereof or declare rights hereunder, the parties agree that the venue thereof shall be the County of Stanislaus, State of California. Consultant hereby waives any rights it might have

to remove any such action pursuant to California Code of Civil Procedure Section 394.

14.14. All documents referenced as exhibits in this Agreement are hereby incorporated into this Agreement. In the event of any material discrepancy between the express provisions of this Agreement and the provisions of any document incorporated herein by reference, the provisions of this Agreement shall prevail. This instrument contains the entire Agreement between City and Consultant with respect to the transactions contemplated herein. No other prior oral or written agreements are binding upon the parties. Amendments hereto or deviations here from shall be effective and binding only if made in writing and executed by City and Consultant.

TO EFFECTUATE THIS AGREEMENT, the parties have caused their duly authorized representatives to execute this Agreement on the dates set forth below.

“City”

City of Hughson

By: \_\_\_\_\_

Merry Mayhew, City Manager

Date: \_\_\_\_\_

“Consultant”

Moss, Levy & Hartzheim, LLP

By:  \_\_\_\_\_

Hadley Hui, Partner

Date: 05/14/2020

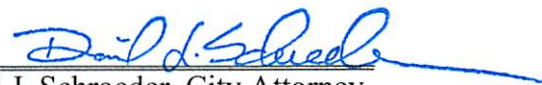
Attest:

By \_\_\_\_\_

Ashton Gose, Deputy City Clerk

Date: \_\_\_\_\_

Approved as to form:

By:  \_\_\_\_\_  
Daniel J. Schroeder, City Attorney

Date: May 21, 2020

EXHIBIT A  
SCOPE OF WORK

Attach Exhibit A – Statement of Qualifications Proposal

EXHIBIT B  
APPROVED FEE SCHEDULE

Attach Exhibit B –Cost Proposal for Professional Auditing Services



**CITY OF HUGHSON**

**STATEMENT OF QUALIFICATIONS**

**For the Fiscal Years Ending June 30, 2020, 2021 and 2022  
(Optional Fiscal Years Ending June 30, 2023, and 2024)**

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**Submitted By:**

Moss, Levy & Hartzheim, LLP  
5800 Hannum Avenue, Suite E  
Culver City, California 90230  
Phone: (310) 670-2745  
Fax: (310) 670-1689  
CA License No. 6998  
Email: [mlhbh@mlhcpas.com](mailto:mlhbh@mlhcpas.com)  
Website: [www.mlhcpas.com](http://www.mlhcpas.com)

**Submitted On:**

February 28, 2020

**Contact Person:**

Craig A. Hartzheim, CPA: Partner  
Ron A. Levy, CPA: Partner  
Hadley Y. Hui, CPA: Partner

**CITY OF HUGHSON**  
**STATEMENT OF QUALIFICATIONS**  
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## MOSS, LEVY & HARTZHEIM LLP

CERTIFIED PUBLIC ACCOUNTANTS

### PARTNERS

RONALD A LEVY, CPA  
CRAIG A HARTZHEIM, CPA  
HADLEY Y HUI, CPA  
ALEXANDER C HOM, CPA  
ADAM V GUISE, CPA  
TRAVIS J HOLE, CPA

### COMMERCIAL ACCOUNTING & TAX SERVICES

9107 WILSHIRE BLVD, SUITE 500  
BEVERLY HILLS, CA 90210  
TEL: 310.273.2745  
FAX: 310.670.1689  
[www.mlhcpas.com](http://www.mlhcpas.com)

### GOVERNMENTAL AUDIT SERVICES

5800 HANNUM AVE., SUITE E  
CULVER CITY, CA 90230  
TEL: 310.670.2745  
FAX: 310.670.1689  
[www.mlhcpas.com](http://www.mlhcpas.com)

Merry Mayhew,  
Director of Finance  
City of Hughson- Finance Department  
7018 Pine Street  
Hughson, CA 95326

Dear Ms. Mayhew,

We are pleased to respond to the Request for Statement of Qualifications from the City of Hughson (City) for independent auditing services. We have prepared our Statement of Qualifications to address each of the specifications included in the City's Request.

After 62 years in public accounting and 42 years of performing local governmental and non-profit audits, it is extremely gratifying to witness the continued growth of Moss, Levy & Hartzheim, LLP. The firm is a regional full-service public accounting firm with offices in Culver City, Beverly Hills, and Santa Maria, and clients throughout the State of California, as well as thirty-one other states. We and the entire staff are pleased with not only the continuing development of the firm, but also the progress and economic health of our clients. We understand that governmental accounting is a specialized industry with its own accounting standards and requirements, and that is why we strive to constantly improve the quality of our professional services. This degree of dedication, coupled with our ability to inform our clients of any new accounting and auditing issues, is paramount to our success.

Our firm currently provides the following services:

- Audits
- Accounting services
- Management Advisory Services (Non-Audit Clients)
- Income Tax Services

We feel that our size is such that we are large enough to provide a broad spectrum of services and experience backed by an in-house training program, professional development courses, and an extensive professional library, yet not so large as to become impersonal and rigid. Our informal style allows us to be flexible enough to complete our engagements in a timely manner that is the most convenient for each client. Also, this style allows us to be more accessible to our clients when our clients have questions or concerns.

It is our understanding that we will perform an audit of the City of Hughson, in accordance with auditing standards generally accepted in the United States of America as set forth by the American Institute of Certified Public Accountants, with the objective of expressing an opinion on the fair presentation of the basic financial statements, which will be in full compliance with the Government Finance Officers Association's (GFOA) Blue Book. We will express an "in-relation-to" opinion on the government-wide financial statements and the fund financial statements and supporting schedules based on the auditing procedures applied during the audit of the basic financial statements. We will also perform, if applicable, a single audit on the expenditures of federal grants in accordance with U.S. Office of Management and Budget (OMB) Title 2 U.S. Code Federal Regulation Part 200, *Uniform Administrative Requirements, Audits of State, Local Governments, and Nonprofit Organizations*; and test compliance with the Single Audit Act as amended in 1996 and applicable laws and regulations, and provide an "in-relation-to" report on the schedule of federal financial assistance.

We understand that we will prepare a single audit report, if needed. We understand that the City may send its Comprehensive Annual Financial Report (CAFR) to the Government Finance Officers Association (GFOA) for review in their Certificate of Achievement for Excellence in Financial Reporting award program. We understand that we will be required to provide special assistance to the City in meeting the requirements of this program, at the option of the City.

In addition to the procedures deemed necessary to express our opinion on the basic financial statements, we understand that we will also be responsible for performing certain limited procedures involving the management's discussion and analysis (MD&A) and the required supplementary information (RSI), as mandated by auditing standards generally accepted in the United States of America.

Our audit will be conducted in accordance with auditing standards generally accepted in the United States of America; *Government Auditing Standards*, issued by the Comptroller General of the United States, including all applicable auditing standards issued by the American Institute of Certified Public Accountants; the provisions of the Single Audit Act Amendments of 1996; if applicable; the U.S. Office of Management and Budget (OMB) Title 2 U.S. Code Federal Regulation Part 200, *Uniform Administrative Requirements, Audits of State, Local Governments, and Nonprofit Organizations*; and all relevant Governmental Accounting Standards Board (GASB) Statements, in accordance with the RFP.

It is our understanding that we will be responsible for preparing the single audit reports which will include appropriate schedule of expenditures of federal awards, footnotes, findings and questioned costs, including reportable conditions and material weaknesses, and follow up on prior audit findings required. Also, we will issue a separate management letter that includes recommendations for improvements of internal control, accounting procedures and other significant observations that are non-reportable conditions. We will also provide compile and file the Annual Report for Financial Transactions to the State Controller of California, from data provided by the City. In addition, we will participate and staff up to two Finance Committee meetings per year with the City of Hughson and up to two Finance Committee meetings for the Hughson Calabasas Community Center. At the City's request, general consultation will be provided on financial reporting matters.

All irregularities and illegal acts or indications of illegal acts of which we become aware of during the course of our audit will be immediately reported, in writing, to the City Council, City Manager, City Attorney, and Finance Director.

Our firm agrees and will comply with all the general terms and conditions disclosed in the City's RFP. Regular meetings will be scheduled with the City Manager as needed, to discuss various topics.

The percentage of the audit work we expect to accomplish for the 2020 audit year, by month, is shown below:

| <u>April</u> | <u>October</u> | <u>November</u> | <u>Total</u> |
|--------------|----------------|-----------------|--------------|
| 40%          | 50%            | 10%             | 100%         |

This proposal for auditing services is an irrevocable offer until April 28, 2020.

**The audit work will be completed by staff from our Culver City office.**

Thank you for your consideration and please do not hesitate to contact the authorized representatives listed below with any questions, problems, or concerns.

(1) Craig A. Hartzheim, CPA  
Partner  
5800 Hannum Avenue, Suite E  
Culver City, CA 90230  
(310) 670-2745  
chartzheim@mlhcpas.com

(2) Ron A. Levy, CPA  
Partner  
2400 Professional Parkway, Suite 205  
Santa Maria, CA 93455  
(805) 922579  
rlevy@mlhcpas.com

(3) Hadley Hui, CPA  
Partner  
5800 Hannum Avenue, Suite E  
Culver City, CA 90230  
(310) 670-2745  
hhui@mlhcpas.com

Sincerely,

A handwritten signature in black ink, appearing to read 'CA Hartzheim', with a large, stylized loop at the end.

Craig A. Hartzheim, CPA  
Partner

## **CITY OF HUGHSON**

### **STATEMENT OF QUALIFICATIONS**

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#### **LICENSE TO PRACTICE IN CALIFORNIA**

Moss, Levy & Hartzheim, LLP is a properly licensed certified public accounting firm in the State of California. All certified public accountants engaged in the audit of the City of Hughson are licensed to practice in the State of California and have received at least the minimum number of governmental continuing professional education hours required by the State Board of Accountancy and *Government Auditing Standards* to perform governmental audits.

#### **INDEPENDENCE**

Moss, Levy & Hartzheim, LLP is independent of the City of Hughson as defined by auditing standards generally accepted in the United States of America, the U.S. General Accounting Office's *Government Auditing Standards (1998)*, the U.S. Securities and Exchange Commission, and all other authoritative bodies with standard or rule-making authority over the auditing profession.

The firm uses checklists and questionnaires to determine that staff members are independent of each client being audited and each staff member signs a personal independence declaration prior to commencing work on an audit client. The partner in charge of the audit reviews all independence work papers prior to staffing each audit. No subcontractors will be used for this engagement.

#### **BUSINESS LICENSE**

Our firm will obtain a business license if awarded the contract for this engagement.

#### **INSURANCE**

The firm will maintain the minimum insurance requirements in accordance with the Consulting Service Agreement attached to the RFP.

Please see *Appendix A – Certificate of Liability Insurance* for current policy coverage.

#### **FIRM QUALIFICATIONS AND EXPERIENCE**

Moss, Levy & Hartzheim, LLP is a regional firm that performs audits of governmental and non-profit entities throughout the State of California, from the Oregon border to the Mexico border. For most of our governmental clients, we also prepare their Comprehensive Annual Financial Report (CAFR). Our firm also performs review and compilation engagements as well as tax and consulting services to clients throughout the United States. The firm currently employs 28 professionals, all of whom are trained in governmental auditing, and has annual gross revenues in excess of \$4 million dollars. The firm has three offices in California: Culver City, Beverly Hills, and Santa Maria.

#### **The audit work will be completed by staff from our Culver City office.**

The Culver City office is currently staffed by six certified public accountants (three partners, two managers, and one senior accountant). In addition, the Culver City office employs managers, senior accountants, and staff accountants. All certified public accountants, managers, senior accountants, and staff accountants are part of the governmental and non-profit audit practice.

The City will have one partner and one manager assigned to the audit on a full-time basis. In addition, a supervising senior and one to two staff accountants will be assigned to the audits on a full-time basis. These employees will not be changed except due to unforeseen circumstances.

**CITY OF HUGHSON**  
**STATEMENT OF QUALIFICATIONS**

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**FIRM QUALIFICATIONS AND EXPERIENCE (CONTINUED)**

Our firm currently provides the following services:

**Audits:**

Governmental (cities, special districts, single audits, and school districts)  
Non-Profit  
Commercial  
Compliance  
Transient Occupancy Tax  
Employee Benefit Plans

**Accounting Services:**

Reviews  
Compilations  
Bookkeeping  
Payroll Taxes

**Management Advisory Services (Non-Audit Clients):**

Data Processing Services  
Business Consultation  
Pension and Profit-Sharing Plan Assistance  
Acquisition and Mergers

**Income Tax Services:**

Preparation  
Planning  
Tax Audits and Negotiations with Internal Revenue Service and Other Taxing Authorities

Please see *Appendix B – Current and/or Recently Completed Governmental Audits* for a list of current governmental audits performed by the firm.

Our firm has never been the object of any disciplinary action from any federal or state regulatory body or professional organization nor is there any disciplinary action pending.

The firm's recent local similar auditing experience includes the following:

**1. CSMFO and GFOA Award Programs**

The firm has or is currently auditing the following entities that have participated in and have received the CSMFO and/or GFOA Award:

|                      |   |
|----------------------|---|
| City of Bellflower   | City of Paso Robles                       |
| City of Brawley      | City of Santa Maria                       |
| City of Calabasas    | City of Scotts Valley                     |
| City of Campbell     | City of Susanville                        |
| City of Covina       | City of Tracy                             |
| City of Culver City  | City of Watsonville                       |
| City of El Centro    | City of Westlake Village                  |
| City of Eureka       | City of Winters                           |
| City of Fort Bragg   | City of Yuba City                         |
| City of Indio        | County Sanitation Districts of            |
| City of Laguna Hills | Los Angeles County                        |
| City of Lathrop      | Encina Wastewater Authority               |
| City of Lompoc       | Los Angeles County Flood Control District |
| City of Los Alamitos | Ross Valley Sanitary District             |
| City of Pacifica     |   |



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**FIRM QUALIFICATIONS AND EXPERIENCE (CONTINUED)**

The firm's recent local similar auditing experience includes the following: (Continued)

**2. Uniform Guidance**

We have performed compliance audits in accordance with Title 2 U.S. Code of Federal Regulation Part 200, *Uniform Administrative Requirements, Cost Principle and Audit Requirements for Federal Awards* (Uniform Guidance), for our Municipal clients who are required to have compliance audits (which is the majority of our municipal clients) and for all of our School District clients.

**3. Federal and State Grant Programs and the Single Audit**

Each of our municipal clients, the majority of our Special District clients, and all of our School District clients receive Federal and State Grants, which require compliance audits. Some of our most commonly audited programs are as follows:

**Municipal Major Programs:**

- Community Development Block Grant Funds (CDBG)
- Federal Emergency Management Act Funds (FEMA)
- Section 8 Housing Assistance Payments
- Transportation Enhancement Act (TEA)
- Airport Improvement Program (AIP)
- Economic Development Grants (EDG)
- Home Investment Partnerships Program (HOME)
- Transportation Development Act (TDA)
- Capitalization Grants for State Revolving Funds
- Surveys, Studies, Investigations, and Special Purpose Grants

**Other Common Municipal Programs:**

- COPS Grants (including LLEBG)
- Asset Seizure Funds
- Retired Senior Volunteer Program

**Other Major Programs:**

- Senior Nutrition Programs
- Child Nutrition Programs
- Title I
- Title VI
- Migrant Education
- Vocational Education
- Special Education

**4. Non-profit Agencies**

We have audited numerous non-profit agencies and have also prepared their federal and state tax returns. Currently, our firm performs audit and/or tax preparation services for sixty non-profit agencies.

**5. State Controller's Report and Street Reports**

We have prepared State Controller's Reports, Transit, and Street Reports for numerous Cities, Special Districts, and Redevelopment Agencies. We feel this experience allows us to assist our clients in their preparation of the State Controller's Reports or prepare the reports as a separate engagement for our clients.

**FIRM QUALIFICATIONS AND EXPERIENCE (CONTINUED)**

The firm's recent local similar auditing experience includes the following: (Continued)

**6. Investment Compliance**

In addition to financial statement audits, we also review our clients' compliance with their investment policies and examine investment types, including, but not limited to, an evaluation of maturity dates (short-term or long-term), types and category, and collateral to ensure proper disclosure of risk in the basic financial statements.

**7. Bond Reporting**

The firm has assisted several Cities in reviewing franchise financial statements as part of reviewing franchise requests for rate increases. In addition, the firm has performed transient occupancy audits for ten Municipalities and has performed various audits of operating lease charges (such as use of a sewage treatment plant based on percentage of use by our client and actual expense as recorded by the treatment plant operator).

**8. TOT, Refuse and Other Audits**

The firm has recently concluded auditing lease agreements between the County of Los Angeles and a lessee for a period of 15 years. The firm has assisted several cities in reviewing franchise financial statements as part of reviewing franchise requests for rate increases. In addition, the firm has performed transient occupancy audits for ten municipalities and has performed various audits of operating lease charges (such as use of a sewage treatment plant based on percentage of use by our client and actual expense as recorded by the treatment plant operator). The firm has also performed franchise audits of Comcast, AT&T, a local sports park, and others for Municipal clients who have requested them.

**9. School Districts**

Currently, our firm audits thirty-five School Districts and related Schools throughout the State of California, including three Charter Schools. We have also performed audits of student bodies for nearly all of our School District clients.

**10. Special Districts**

Currently, our firm audits in excess of one hundred and seventeen special districts including Sanitary Districts, an Open Space District, the County Sanitation Districts of Los Angeles County (all 25 Districts), Water Districts, Recreation Districts, Utility Districts, Cemetery Districts, Community Services Districts, Fire Districts, Ambulance Services Districts, Airport Districts, and Vector Control Districts.

**11. Joint Powers Authorities**

We have audited the following Joint Powers Authorities (JPAs):

North Coast Emergency Medical Services  
Public Agency Self Insurance System  
County of San Diego – Emergency Services Organization  
Exclusive Risk Management Authority of California  
Santa Barbara County Special Education Local Plan Area Joint Powers Agency  
Santa Barbara Water Purveyors Joint Powers Agency  
Tracy Area Public Facilities Financing Authority  
Transportation Authority of Marin  
West Contra Costa Integrated Waste Management Authority

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**FIRM QUALIFICATIONS AND EXPERIENCE (CONTINUED)**

In addition to the joint powers authorities listed above, the vast majority of our governmental clients are members of joint powers authorities. As such, our firm has experience in reviewing JPA statements and disclosing the appropriate JPA information in the financial statements for each governmental client.

Our firm has never been the object of any disciplinary action from any federal or state desk review or field review in the past three (3) years, nor is there any unsettled litigation or disciplinary action pending with any state regulatory bodies or professional organization during the past three (3) years.

None of our audit members of our firm are reviewers in the GFOA Certificate of Achievement for Excellence in Financial Reporting program.

**PARTNER, SUPERVISORY AND QUALIFICATIONS AND EXPERIENCE**

It is the firm's policy to have our partners and audit managers involved in the managing function of our governmental audits. Having both the partner and audit manager involved in the engagement allows the City to receive immediate response to questions about accounting and audit topics, concerns, and findings.

It is expected that Mr. Ron A. Levy, CPA would be the technical (concurring) partner in charge of the audits of the City. He will be responsible for reviewing the City's basic financial statements and all other required statements and reports. He may also be responsible for addressing any City questions or concerns that arise during the year. He has assisted numerous municipal clients and has prepared award-winning CAFRs.

Mr. Hadley Hui, CPA will be the engagement partner assigned to the audits. As engagement partner, he will oversee the day-to-day operations of the audits, review all audit areas, and be on-site for a majority of the fieldwork. He has assisted many municipal clients and has also prepared numerous award-winning CAFRs. It is the firm's policy during the first year on the audit engagement to have a partner on-site for a majority of the fieldwork. This policy enables the partner to become acquainted with the City's daily operations and key personnel.

Mr. Bin Zeng, will be the manager assigned to the audit. He will oversee the day-to-day operations of the audits and perform more difficult audit sections.

Mr. David Ortiz will be the computer specialist assigned to the audits, when needed. Mr. Ortiz has extensive knowledge in auditing EDP functions. Mr. Ortiz may also perform the statistical sampling procedures for the audit and also document and test the internal control structure of the computer systems.

In addition to the supervisory staff listed above, one or two staff accountants will be assigned to the audits. All staff accountants have degrees from accredited colleges or universities, have received in-house governmental audit training, and at present, have at least one year of governmental auditing experience. All staff accountants will be directly supervised by the supervising senior accountant and manager assigned to the audits at all times. All partners, managers, and staff members have worked on numerous governmental engagements together. Consistently working together will provide the City with a knowledgeable, proficient, and efficient audit team.

Please see *Appendix C – Peer Quality Review Report* for a copy of our firm's July 22, 2015 quality review report, which includes a review of governmental and non-profit engagements. The Firm's 2018 Quality Review Report is in the review stage with the Peer Reviewer.

The firm conducts an annual firm-wide two-day training seminar to update all governmental auditors on new pronouncements and improved audit techniques. In addition to this firm sponsored seminar, each governmental auditor attends the annual governmental accounting conference and many other continuing

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**PARTNER, SUPERVISORY AND QUALIFICATIONS AND EXPERINCE (CONTINUED)**

education courses and is updated on current accounting/auditing issues through our journals and supplements, which we receive on a regular basis.

Our firm experiences relatively low turnover in employees as can be seen on individual resumes, so that even our staff auditors have more experience than most other firms can offer. **The firm will not use the City as a training ground for its employees.**

The firm will maintain staff continuity on the engagement throughout the term of the contract, barring any terminations, illnesses, or other unforeseen circumstances (departure from the firm, promotion, or assignment to another office). At the written request of the City, any Moss, Levy & Hartzheim, LLP employee assigned to the audits can be removed and replaced by another qualified employee. The City retains the right to approve or reject replacements.

Please see *Appendix D – Resumes* for each individual's qualifications and experience.

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**SIMILAR ENGAGEMENTS WITH OTHER GOVERNMENT ENTITIES**

The following is the list of all cities for which the Culver City office has performed audits during the last three years:

**Most Significant:**

| Governmental Agency                       | Total Staff<br>Hours | Scope of Work                    | Fiscal<br>Years<br>Audited | Contact and<br>Telephone number |
|---|----------------------|----------------------------------|----------------------------|---------------------------------|
| <b><u>City of Bellflower</u></b>          |                      |                                  |                            |                                 |
| Basic Financial Statements/CAFR           | 625                  | Financial Audit, Single Audit    | 2002                       | Mr. Tae Rhee                    |
| CAFR prepared in accordance with GAAP     |                      | and State Controller's Report    | -2012                      | Finance Director                |
| Audit Partner - Craig A. Hartzheim, C.P.A |                      | GANN Limit , GASB Pronouncements | 2017-                      | (562) 804-1424                  |
|   |                      | GFOA Certification               | Present                    |                                 |
| <b><u>City of Westlake Village</u></b>    |                      |                                  |                            |                                 |
| Basic Financial Statements/CAFR           | 500                  | Financial Audit, GANN Limit      | 2009-                      | Daniel Jordan                   |
| CAFR prepared in accordance with GAAP     |                      | and State Controller's Report    | Present                    | Finance Director                |
| Audit Partner - Craig A. Hartzheim, C.P.A |                      | GASB Pronouncements              |                            | (818) 760-1613                  |
|   |                      | GFOA Certification               |                            |                                 |
| <b><u>City of La Mirada</u></b>           |                      |                                  |                            |                                 |
| Basic Financial Statements/CAFR           | 480                  | Financial Audit, Single Audit,   | 2016-                      | Mrs. Melissa Pascual            |
| CAFR prepared in accordance with GAAP     |                      | and State Controller's Report    | Present                    | Finance Manager                 |
| Audit Partner - Craig A. Hartzheim, C.P.A |                      | GASB Pronouncements              |                            | (562) 943-0131                  |
|   |                      | GFOA Certification               |                            |                                 |
| <b><u>City of Arcadia</u></b>             |                      |                                  |                            |                                 |
| Basic Financial Statements/CAFR           | 450                  | Financial Audit, Single Audit,   | 2015-                      | Mr. Henry Chen                  |
| CAFR prepared in accordance with GAAP     |                      | GANN Limit , GASB Pronouncements | Present                    | Finance Manager                 |
| Audit Partner - Hadley Y. Hui, C.P.A      |                      | GFOA Certification               |                            | (626) 574-5401                  |
| <b><u>City of Calabasas</u></b>           |                      |                                  |                            |                                 |
| Basic Financial Statements/CAFR           | 400                  | Financial Audit, Single Audit,   | 2004-                      | Dr. Gary Lysik                  |
| CAFR prepared in accordance with GAAP     |                      | and State Controller's Report    | Present                    | City Manager                    |
| Audit Partner - Craig A. Hartzheim, C.P.A |                      | GASB Pronouncements              |                            | (818) 224-1600                  |
|   |                      | GFOA Certification               |                            |                                 |

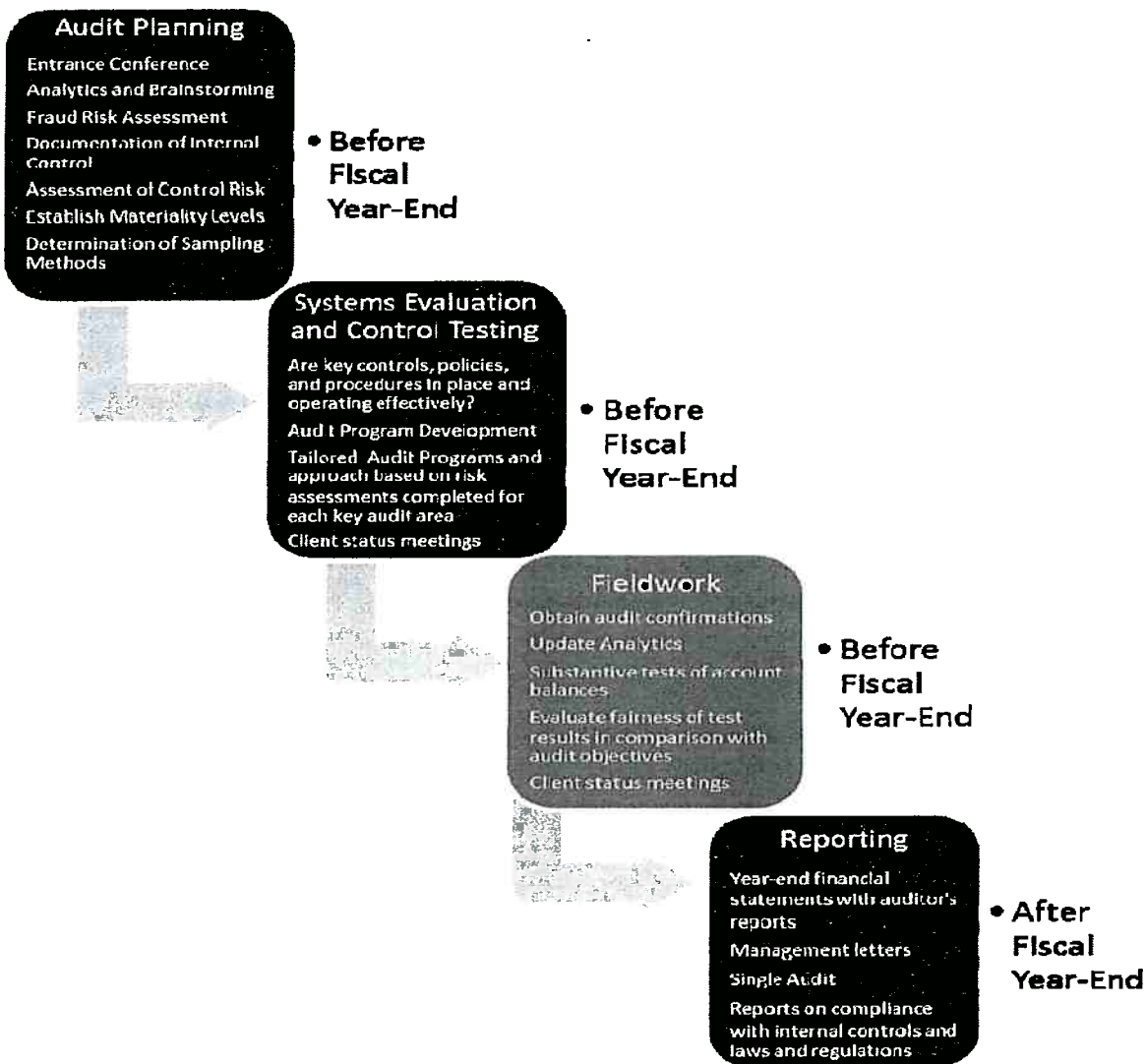
Please see *Appendix E* – for more *References*.

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**SPECIFIC AUDIT APPROACH**

**Overview of the MLH Audit Process**



During the first year of the engagement, we will utilize the prior year's financial statements, the current year's budget, and our knowledge of the City's systems to determine materiality for the different audit sections. Each year, we will select a sample of transactions to determine to what extent the systems are functioning as described to us. The extent of our sample size will depend upon our assessment of the internal control structure and the results of our assessment in accordance with *Government Auditing Standards*.

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**SPECIFIC AUDIT APPROACH (CONTINUED)**

The selection of transactions for testing will be made using a combination of random, systematic, and haphazard sampling techniques. We will identify the strength of the systems upon which we can rely in planning our substantive tests. Our internal control review will meet all of the following requirements of AICPA: Statement on Auditing Standards (SAS) No. 55, *Consideration of the Internal Control Structure in a Financial Statement Audit*, as amended by SAS No. 78; SAS No. 99, *Consideration of Fraud in a Financial Statement Audit*; SAS No. 106, *Audit Evidence*; SAS No. 107, *Audit Risk and Materiality in Conducting an Audit*; SAS No. 108, *Planning and Supervision*; SAS No. 109, *Understanding the Entity and Its Environment and Assessing the Risks of Material Misstatement*; and SAS No. 110, *Performing Audit Procedures in Response to Assessed Risks and Evaluating the Audit Evidence Obtained*.

It is estimated that the sampling size for transaction testing for compliance with systems as actually implemented would be as follows:

- I. Minimum of 60 disbursement items, including automatic and manual checks and bank debits
- II. Minimum of 40 - 60 payroll checks, including direct deposits
- III. Minimum of 40 - 60 receipt items

We have extensive knowledge in auditing computer systems. We have assisted numerous clients with the implementation of accounting software and database business systems. This assistance has provided our firm with a thorough background in computer systems with respect to both the software applications aspect and also insight into auditing such systems. It is our policy to have a computer specialist as part of the audit team and to be used on an as-needed basis. This individual assists the audit team in documenting the computer system internal control structure and highlighting strengths and weaknesses relating to the computer structure of the City.

In addition, all of our staff is equipped with not only word processing and spreadsheet capabilities, but also various functional software, such as PPC Audit – e-Tools, Creative Solutions Accounting, Adobe Acrobat, random sampling software, Lacerte Tax Program, and Easy Accounting Software, which contain amortization programs and depreciation programs, and other applications as well (including the Governmental Accounting Research System which includes all GASB publications).

We will perform preliminary analytical review procedures using the prior fiscal year's audited statements and the current fiscal year's budget. In the preliminary stage, we will adopt ratio analysis procedures to compare the relationships between account balances and classes of transactions between prior periods and against budgets and industry statistics. This may include budgets, trial balances, and/or draft financial statements to help us identify the source of individual fluctuations. We will then adopt trend analysis to compare current data with prior periods, which is particularly useful for analyzing revenue and expenditures. Any unexpected trends or deviations will be discussed with the City's staff to obtain explanations.

Please see *Appendix F – Segmentation and Budgeted Hours by Segment* for a schedule of the level of staff and number of hours to be assigned to each segment of the engagement.



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**SPECIFIC AUDIT APPROACH (CONTINUED)**

The chart below shows some of MLH's preliminary audit procedures:

| Documents   | Strategy   | Procedures  |
|---|--|---|
| None  | Go over timing and planning with Management  | Set meeting   |
| Letter  | Discuss any matters with predecessor   | Standard required communications  |
| Internal control memos  | Set location site visits   | Visit sites and go through internal controls, such as parks and recreation, fire, police, transit, etc.               |
| Obtain budget and budget amendments   | Ensure budgetary compliance  | Analyze budget-to-actual variances. Look at capital projects, status of property tax assessments as part of the focus |
| Obtain grant documents  | Ensure grant compliance  | Analyze grants  |
| Obtain policies and procedures  | Evaluate effectiveness of policies, updates and relate to key compliance matters   | Analyze policies and procedures   |
| Obtain client internal control memos of client, if they exist   | Evaluate internal controls<br>Short interviews of accounting and selected operating personnel for documentation of process | Analyze internal controls, including computer controls  |
| Obtain prior year financials  | Determine which items are important for testing  | Set preliminary "materiality" limits  |
| Obtain appropriate schedules  | Ensure effective procedures  | Testing of cash receipts, cash disbursements, and payroll transactions  |
| Obtain Council minutes  | Ensure knowledge of key government communication, Look for major agreements and key decisions                              | Analyze important events highlighted in Council meetings, test and inquire as necessary                               |
| Draft confirmations – third party letters for independent verification of cash, property taxes, attorney, etc. for client to sign and auditor to mail | Independent verification of selected balances  | Client to prepare letters and auditor to send letters   |
| Develop document request list for client to review and agree upon   | To clarify client – auditor requests   | Meet with client and agree upon document request list for audit   |
| Preliminary trial balance   | Ensure preliminary results make sense  | Perform selected testing on balances such as receipts, disbursements, and payroll                                     |
| Obtain updates on retirement plans  | Discuss GASB 68 & 75 and any changes   | Audit selected components of any new reports and changes for compliance   |
| Request screen view access only for computer analysis   | Minimize client interruptions and view transactions  | Scan ledgers and accounts for accounting propriety  |
| Consider site visitations on areas where there are significant cash, card, deposits and billing controls, internet site controls                      | Focus on controls where the risk assessment of material misstatement of cash, card and internet transactions could occur   | Site visitations  |
| Legal bills, key litigation   | Look for commitments, contingencies and disclosure   | Discuss with client, prepare attorney letters for confirmation and response   |
| Obtain long-term debt   | Analyze for disclosure and compliance  | Obtain and prepare long term debt schedules   |
| Commitments and Contingencies   | Ensure auditing standards are applied for proper accrual and disclosure  | Send confirmation letters, talk with client, review disclosures   |

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**SPECIFIC AUDIT APPROACH (CONTINUED)**

As part of our audit procedures, we usually request a working trial balance in excel format and access to view general ledger detail directly from the software system.

We will also review the following documents in order to determine compliance with applicable laws and regulations:

1. Minutes of the governing body with special attention to: indications of new revenue sources, including federal and state grants; expense authorizations and related appropriations, including any special or restrictive provisions; appropriation transfers; authorization for bank or other debt incurred; awards to successful bidders; authorization for new leases entered into; changes in licenses, fines, or fees; authorization for fund balance commitments or assignments; and authorization for significant new employees hired
2. New agreements and amendments to agreements including, but not limited to: grant agreements; debt and lease agreements; labor agreements; joint venture agreements; disposition and development agreements; and other miscellaneous agreements
3. Administrative Code
4. Investment Policy

The main extent of our work would be what is required to enable us to express an opinion on the basic financial statements in accordance with:

1. *AICPA Industry Audit Guide for State and Local Governmental Units*
2. *AICPA Audit Standards*
3. *National Committee on Governmental Accounting, Auditing and Financial Reporting (Amended) Publication*
4. *Laws of the State of California*
5. *Requirements of Title 2 U.S Code of Federal Regulation Part 200, Uniform Administrative Requirements, Cost Principle and Audit Requirements for Federal Awards (Uniform Guidance).*
6. *GAO Standards for Audit of Governmental Organizations, Activities and Functions, the Guidelines for Financial and Compliance Audits of Federally Assisted Programs*
7. *Transportation Development Act.*
8. Our firm's own additional standards and procedures

The audit will be conducted in accordance with auditing standards generally accepted in the United States of America. The primary purpose of the audit is to express opinions on the basic financial statements, and such an audit is subject to the inherent risk that material errors or fraud may exist and not be detected by us. If conditions are discovered which lead to the belief that material errors, defalcations, or fraud may exist, or if any other circumstances are encountered that require extended services, we will promptly advise the City.

If convenient for the City's staff, the approximate target dates for the fiscal year 2020 audits would be as follows:

1. Written audit plan and list of schedules for fieldwork – No later than April 3<sup>rd</sup>, 2020
2. Entrance Conference with the City – No later than April 12<sup>th</sup>, 2020
3. Interim fieldwork – Week of April 12<sup>th</sup>, 2020
4. Progress conference with the City – Monthly after Interim fieldwork
5. Year-end fieldwork – Week of October 12<sup>th</sup>, 2020
6. Exit conference – No later than October 16<sup>th</sup>, 2020
7. Provide Drafts of all required reports – No later than November 13<sup>th</sup>, 2020
8. Finalize all required reports – No later than December 11<sup>th</sup>  
(All reports will be due in accordance with RFP dates)
9. Presentation to the Board- Open

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**SPECIFIC AUDIT APPROACH (CONTINUED)**

Our audit would begin when it is convenient for the City's staff. We estimate that in the second week of April, we will perform interim work. Each year, the partner or manager of the firm will contact the Accounting Manager. The purpose of this contact will be to discuss the scope and timing of the annual audit, to review any accounting issues known at that time, and to address any City's personnel concerns about the impending audit.

We will schedule one week of interim if necessary and for final for the first year. The other years will be coordinated at a convenient time for the City's Staff. During the first year, we will prepare narrative flow charts and other documentation of the internal control structure and of the major systems, such as revenue and cash receipts, purchasing and cash disbursements, payroll and personnel, inventory, property and equipment, grant compliance, investment activities, and the budget process. We will gain this information through discussions with the appropriate City's staff and the review of available documented policies, organizational charts, manuals, programs, and procedures. Once we obtain this information, we will evaluate the systems of internal controls and revise our standard governmental audit programs.

In April, we will contact Accounting Manager to provide our detailed audit plan for the audit fieldwork. We will also discuss with the Accounting Manager any matters that may impact our audit procedures or your financial reporting. Before year-end fieldwork, we will discuss with the City any assistance the City may need with the year-end closing.

Our year-end fieldwork would begin on October 12<sup>th</sup>. The year-end audit work would begin with an analytical review of all significant balance sheet and revenues and expenditures/expense accounts for each fund, which includes substantive tests on all balance sheet accounts. **Analytical procedures will be used to supplement the substantive tests, not supplant them.** We will perform analytical procedures during interim and year-end fieldwork on all balance sheet and revenue and expense/expenditure accounts.

The primary objective of the year-end audit work is to audit the final numbers that will appear in the basic financial statements of the City. Our fieldwork would also consist of procedures required under SAS No. 99, *Consideration of Fraud in a Financial Statement Audit*.

We will perform procedures such as:

- (a) Confirmations by positive and negative circularization including but not limited to all cash and investment accounts; selected receivable and revenue balances; all bonds, loans, notes payable, and capital leases; all notes receivable; all insurance carriers; all legal firms employed on the City's business; and other miscellaneous confirmations deemed necessary
- (b) Physical verification and observation
- (c) Analysis and review of evidential material
- (d) Interviews and investigative efforts
- (e) Electronic data processing testing for computer and software reliability
- (f) Numerous other procedures

During the entire engagement, our audit team will be determining whether the audit is in compliance with *Uniform Guidance*, and if this is required through review of the City Council minutes, examination of the general ledger, and discussion with finance personnel. If a Single Audit is required, we would perform tests of specific requirements; claims for advances and reimbursements; and amounts claimed or used for matching in compliance with the Single Audit Act. The compliance audit will be conducted in accordance with auditing standards generally accepted in the United States of America, the *GAO Standards for Audits of Governmental Organizations, Programs, Activities, and Functions*, and the *GAO Guidelines for Financial and Compliance Audits of Federally Assisted Programs*.

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**SPECIFIC AUDIT APPROACH (CONTINUED)**

The chart below shows some of MLH's final audit procedures:

| Document  | Strategy  | Approach  |
|---|---|---|
| None  | Set Timing  | Entrance conference   |
| Policies and procedures   | Review and start risk assessment  | Set visitation of locations such as, Parks and Rec, Transit, etc. Cash and other controls testing |
| Obtain updated general ledger   | Ensure proper closing of books  | Analyze records and update analytical procedures  |
| Obtain internal control memos, if there are any changes- all key locations        | Re-evaluate internal controls. Assess risk and dollar significance, brainstorm, look at IT controls | Update understanding of internal controls and document key changes                                |
| Obtain prior GFOA CAFR comments   | Ensure improvement in financial reporting   | Implement significant changes in financial reporting methods                                      |
| Obtain further agreed upon audit schedules as agreed upon in the contract and RFP | To commence audit properly on final numbers   | Apply auditing procedures   |
| Obtain prior year GASB 34 conversion entries prepare GASB 34 Entries              | Ensure that all GASB 34 conversion entries are proper   | Work on current year GASB 34 presentations  |
| Analyze capital asset ledgers   | Review or updates from preliminary and analyze for impairment                                       | Obtain capital asset documents and update for impairments   |
| Contracts and agreements  | Analyze agreements  | Test schedules of agreements  |
| Journal entries and post-closing  | Look for proper accruals and revenue payments   | Look at selected billings and revenue agreements  |
| Risk Management   | Determine coverage  | Confirm balances and analyze for proper accruals as necessary                                     |
| Cost allocations  | Internal service allocation propriety   | Discuss and analyze internal service cost allocations   |
| Allocation agreements   | Ensure agreement compliance   | Analyze allocations as necessary from client calculations and documents                           |
| Obtain OPEB and PERS documents  | Review for any needed updates, GASB 68 and GASB 75  | Read documents and necessary update   |
| Bond agreements   | Bond compliance   | Test bond compliance and obtain bond ratings  |
| Contributions   | Compliance  | Analyze significant contributions for compliance  |
| Third party letters   | Independent verification of accounts  | Match to year-end books and records and reconcile to accounts                                     |
| None  | Ensure proper audit process   | Hold timely status meetings with the client   |
| Adjusting entries, and any possible management points                             | Obtain client agreement   | Post as necessary with client   |
| None  | Compliance with contract and governance   | Attend finance and board meetings   |
| MD&A, prepare financials, reports and supplementary information                   | Ensure documents match, are consistent and appropriately completed                                  | Read MD&A, prepare financials, reports and read supplementary information                         |

The year-end fieldwork should be completed no later than October 16<sup>th</sup>.

The *Governmental Accounting, Auditing and Financial Reporting* (GAAFR), issued by the Government Finance Officers Association (the "Blue Book") and other GFOA publications are often used as additional tools when preparing and reviewing the financial statements of our governmental clients. The firm has and uses its extensive library of current AICPA, GFOA, and GASB publications and pronouncements.

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**SPECIFIC AUDIT APPROACH (CONTINUED)**

As part of our audit engagements, we issue our clients management letters if we note certain observations or recommendations that we feel need to be disclosed. Our firm's philosophy regarding the management letter is that the management letter is to help management improve its internal control and accounting procedures and not to criticize the management in charge. This is why we present our management letters to management in draft form for open discussion prior to issuance.

The workpapers for this engagement are the property of Moss, Levy & Hartzheim, LLP and constitute confidential information. However, we may be requested to make certain workpapers available to a Cognizant Agency pursuant to authority given to it by law or regulation. If requested, access to such workpapers will be provided under the supervision of Moss, Levy & Hartzheim, LLP's personnel. Furthermore, upon request we may provide photocopies of selected workpapers to the Cognizant Agency. The Cognizant Agency may intend, or decide, to distribute the photocopies or information contained therein to others, including other governmental agencies.

The workpapers and related audit reports for this engagement will be retained for a minimum of seven (7) years after the date the auditor's report is issued or for any additional period requested by the parties designated by the Federal or State government or by the City for audit. If we are aware that the auditee is contesting an audit finding, we will contact the auditee for guidance prior to destroying the workpapers.

**IDENTIFICATION OF ANTICIPATED POTENTIAL AUDIT PROBLEMS**

We do not anticipate any potential problems for this engagement, minimal assistance of the City's staff is required during the course of the audit; however, we do ask that the City provide the following: cooperation in answering questions, requested confirmations, bank reconciliations, a general ledger, and other miscellaneous items.

Minimal assistance of the City's staff is required during the course of the audit; however, we do ask that the City provide the following: cooperation in answering questions, requested confirmations, bank reconciliations, a general ledger, and other miscellaneous items.

**CITY OF HUGHSON**  
**STATEMENT OF QUALIFICATIONS**

---

**DISCUSSION OF RELEVANT ACCOUNTING ISSUES**

During the City's audit(s), we will ensure the City is implementing any of the following or newer Accounting Pronouncements, in accordance with the Governmental Accounting Standards:

GASB Statements listed below will be implemented in future financial statements:

|                  |   |  |
|------------------|---|--|
| Statement No. 75 | "Post Employment Benefits Other Than Pensions"  | The provision of this statement is effective for fiscal years beginning after June 15, 2017.     |
| Statement No. 83 | "Certain Asset Retirement Obligations"  | The provision of this statement is effective for fiscal years beginning after June 15, 2018.     |
| Statement No. 84 | "Fiduciary Activities"  | The provision of this statement is effective for fiscal years beginning after December 15, 2018. |
| Statement No. 87 | "Leases"  | The provision of this statement is effective for fiscal years beginning after December 15, 2019. |
| Statement No. 88 | "Certain Disclosure Related to Debt, including Direct Borrowings and Direct Placements" | The provision of this statement is effective for fiscal years beginning after June 15, 2018.     |
| Statement No. 89 | "Accounting for Interest Cost Incurred before the End of a Construction Period"         | The provision of this statement is effective for fiscal years beginning after December 15, 2019. |
| Statement No. 90 | "Majority Equity Interest-an Amendment of GASB Statements No. 14 and No. 61"            | The provision of this statement is effective for fiscal years beginning after December 15, 2018. |

Please note that some of these GASB Statements previously mentioned will be in effect by the time we enter into a contract for audit services.

Moss, Levy & Hartzheim, LLP will perform the audit work within the specified time period, pending no unforeseen circumstances which the City imposes on our work.

Our firm agrees and will comply with all of the requirements stipulated in the sample Contract for Professional Services.

Under penalties of perjury, I declare that I am an authorized signer and that there are no and have never been any financial interests between any officials or employees of the City of Hughson and Moss, Levy & Hartzheim, LLP.

Respectfully submitted,

Craig A. Hartzheim, CPA  
Partner



CITY OF HUGHSON  
APPENDIX A - CERTIFICATE OF LIABILITY INSURANCE



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
03/13/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

|   |  |   |  |
|---|--|---|--|
| <b>PRODUCER</b><br>RIC INSURANCE GENERAL AGENCY<br>PO BOX 12279<br>SANTA ROSA, CA 95406<br>(888) 661-3938 |  | <b>CONTACT</b><br>NAME:<br>PHONE (AC, No, Ext): (888) 661-3938 FAX (AC, No): (877) 972-7604<br>E-MAIL:<br>ADDRESS: service.center@travelers.com |  |
|   |  | <b>INSURER(S) AFFORDING COVERAGE</b>  |  |
|   |  | INSURER A : TRAVELERS PROPERTY CASUALTY COMPANY OF AMERICA  |  |
|   |  | INSURER B : TRAVELERS CASUALTY INSURANCE COMPANY OF AMERICA   |  |
|   |  | INSURER C :   |  |
|   |  | INSURER D :   |  |
|   |  | INSURER E :   |  |
|   |  | INSURER F :   |  |

COVERAGES

CERTIFICATE NUMBER: 396944646470270

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE  | ADDL INSD | SUBR WVD | POLICY NUMBER   | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS   |
|----------|--|-----------|----------|-----------------|-------------------------|-------------------------|--|
| B        | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY<br><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR<br><br>GEN'L AGGREGATE LIMIT APPLIES PER:<br><input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC<br><input type="checkbox"/> OTHER: |           |          | 680-8G690184-19 | 03/05/2019              | 03/05/2020              | EACH OCCURRENCE \$2,000,000<br>DAMAGE TO RENTED PREMISES (Ea occurrence) \$300,000<br>MED EXP (Any one person) \$5,000<br>PERSONAL & ADV INJURY \$2,000,000<br>GENERAL AGGREGATE \$4,000,000<br>PRODUCTS - COMPIOP AGG \$4,000,000<br>\$ |
| B        | AUTOMOBILE LIABILITY<br><input checked="" type="checkbox"/> ANY AUTO<br><input checked="" type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> SCHEDULED AUTOS<br><input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY  |           |          | BA-8L534181-19  | 03/05/2019              | 03/05/2020              | COMBINED SINGLE LIMIT (Ea accident) \$1,000,000<br>BODILY INJURY (Per person) \$<br>BODILY INJURY (Per accident) \$<br>PROPERTY DAMAGE (Per accident) \$<br>\$   |
| A        | <input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR<br><input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE<br><input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 0  |           |          | CUP-8G692478-19 | 03/05/2019              | 03/05/2020              | EACH OCCURRENCE \$1,000,000<br>AGGREGATE \$1,000,000<br>\$   |
| A        | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY<br>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)<br>If yes, describe under DESCRIPTION OF OPERATIONS below   | Y/N       | N/A      | UB-3K867175-19  | 03/05/2019              | 03/05/2020              | <input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER<br>E.L. EACH ACCIDENT \$1,000,000<br>E.L. DISEASE - EA EMPLOYEE \$1,000,000<br>E.L. DISEASE - POLICY LIMIT \$1,000,000                                   |
| B        | PRINTERS ERRORS AND OMISSIONS  |           |          | 680-8G690184-19 | 03/05/2019              | 03/05/2020              | \$500 \$1,000,000  |
| B        | HIRED PD - COLL  |           |          | BA-8L534181-19  | 03/05/2019              | 03/05/2020              |  |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CANCELLATION

|  |   |
|--|---|
| COUNTY OF LOS ANGELES<br>ATTN: CINDY LEE<br>DEPARTMENT OF AUDITOR-CONTROLLER<br>500 W. TEMPLE ST., ROOM 410<br>LOS ANGELES, CA 90012 | SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.<br><br>AUTHORIZED REPRESENTATIVE <i>Mary Kuckelman</i> |
|--|---|

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ACORD 25 (2016/03)

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## **CITY OF HUGHSON**

### **APPENDIX B – CURRENT AND/OR RECENTLY COMPLETED GOVERNMENTAL AUDITS**

---

#### **CITIES AND REDEVELOPMENT AGENCIES**

Adelanto, CA  
Arcadia, CA  
Arroyo Grande, CA  
Atascadero, CA  
Buellton, CA  
Calabasas, CA  
California City, CA  
Carmel-by-the-Sea, CA  
Covina, CA  
Culver City, CA  
Dinuba, CA  
Duarte, CA  
El Centro, CA  
Eureka, CA  
Greenfield, CA  
Grover Beach, CA  
Holtville, CA  
Hughson, CA  
Indio, CA  
La Cañada Flintridge, CA  
La Habra Heights, CA  
La Mirada, CA  
Los Alamitos, CA  
Morgan Hill, CA  
Ojai, CA  
Paso Robles, CA  
Santa Maria, CA  
Signal Hill, CA  
South Pasadena, CA  
Taft, CA  
Watsonville, CA  
Westlake Village, CA  
Windsor, CA  
Yorba Linda, CA  
Yuba City, CA

#### **PUBLIC FINANCING AUTHORITIES**

The majority of our Municipalities issue debt and do so through an established Public Financing Authority.

#### **OTHER SCHOOL ENTITIES**

Academia Semillas del Pueblo Charter School  
Albert Einstein Academy  
Antelope Valley Schools Transportation District  
Bright Star Secondary Charter Academy  
East Bay Regional Occupational Program  
Carr Academy of Mathematics and Entrepreneurial Studies  
Pacoima Charter School  
Santa Ynez Valley Charter School  
The Accelerated Schools  
Southern California Regional Occupational Center  
Stella Middle Charter Academy  
Synergy Charter Academy  
Tri-Valley Regional Occupational Program

#### **SCHOOL DISTRICTS**

Acton-Agua Dulce Unified School District  
Ballard School District  
Bellflower Unified School District  
Beverly Hills Unified School District  
Blochman Union School District  
Bradley Elementary School District  
Buellton Union School District  
Calaveras County Schools  
Calexico Unified School District  
Calipatria Unified School District  
Carpinteria Unified School District  
Casmalia School District  
Castaic Union School District  
Cayucos Elementary School District  
Coast Unified School District  
Cold Springs School District  
College Elementary School District  
Eastside School District  
El Segundo Unified School District  
Garvey School District  
Goleta Union School District  
Graves School District  
Heber School District  
Hughes-Elizabeth Lakes Union School District  
Keppel Union School District  
Lancaster School District  
Magnolia Union School District  
Manhattan Beach Unified School District  
Mark Twain Union Elementary School District  
Meadows Union School District  
Mission School District  
Monrovia Unified School District  
Montecito Union School District  
Mulberry School District  
Novato Unified School District  
Orcutt Union School District  
Pacific Unified School District  
Pacoima Charter School  
Palmdale School District  
Pleasant Valley Union School District  
Rosemead School District  
San Ardo Elementary School District  
San Lucas School District  
San Miguel Joint Union School District  
Santa Maria Joint Union High School District  
Santa Monica-Malibu Unified School District  
Shandon Unified School District  
Solvang Elementary School District  
Temple City Unified School District  
Torrance Unified School District  
Vallecito Union School District  
Westmoreland Elementary School District  
Wilsona School District

## **CITY OF HUGHSON**

### **APPENDIX B – CURRENT AND/OR RECENTLY COMPLETED GOVERNMENTAL AUDITS**

---

#### **COUNTIES**

Los Angeles County, CA (Master List)  
San Diego County, CA (Master List)

#### **SANITATION DISTRICTS**

Carpinteria Sanitation District, CA  
Cayucos Sanitation District, CA  
County Sanitation Districts of Los Angeles County, CA  
- All 25 Districts  
Encina Wastewater Authority, CA  
Montecito Sanitation District, CA  
Orange County Sanitation District, CA - Internal Audits  
Ross Valley Sanitary District, CA  
Triunfo Sanitation District, CA

#### **UTILITY DISTRICTS**

Georgetown Divide Public Utility District

#### **WATER/IRRIGATION DISTRICTS**

Aldercroft Heights County Water District, CA  
Foothill Municipal Water District, CA  
Main San Gabriel Basin Watermaster, CA  
Marina Water District, CA  
North Marin Water District, CA  
Sweetwater Springs Water District, CA  
Valley County Water District, CA  
Valley of the Moon Water District, CA

#### **AMBULANCE SERVICES DISTRICT**

Cambria Community Healthcare District  
North Coast Emergency Medical Services

#### **CEMETERY DISTRICTS**

Arroyo Grande Cemetery District, CA  
Atascadero Cemetery District, CA  
Gridley-Biggs Cemetery District, CA  
San Miguel Cemetery District, CA  
Santa Maria Cemetery District, CA

#### **COMMUNITY SERVICES DISTRICTS**

Cambria Community Services District, CA  
Cuyama Community Services District, CA  
Groveland Community Services District, CA  
Heritage Ranch Community Services District, CA  
Los Alamos Community Services District, CA  
Nice Community Services District, CA  
Rancho Murieta Community Services District, CA  
Santa Ynez Community Services District, CA  
Vandenberg Village Community Services District, CA

#### **RECREATION AND PARK DISTRICTS**

Conejo Recreation and Park District, CA  
Isla Vista Recreation and Park District, CA  
Mountains Recreation and Conservation Authority, CA  
Rancho Simi Recreation and Park District, CA  
Hayward Recreation and Park District, CA

#### **BUILDING AUTHORITY**

County of San Diego Regional Building Authority, CA

#### **FIRE PROTECTION DISTRICTS**

Cayucos Fire Protection District, CA  
Lakeport Fire Protection District, CA  
Orcutt Fire Protection District, CA

#### **OTHER DISTRICTS**

Beach Cities Health District  
County of San Diego Emergency Services Organization  
County of San Diego First 5 Commission  
County of San Diego In-Home Supportive Services  
Public Authority  
County of San Diego Health and Human Services Agency  
Child Development Program Grant  
County of San Diego MIOCR Grant  
County of San Diego RLETC Grant  
County of Los Angeles Delta Sigma Theta, Head Start  
Program, Inc.  
County of San Diego DA Office of Auto Ins. Fraud  
Grant, Urban Auto Fraud Grant, WC Ins Fraud Grant  
Los Angeles County Flood Control District  
Marin/Sonoma Mosquito and Vector Control District  
Peninsula Health Care District  
San Diego Geographic Information Source  
Tracy Area Public Facilities Financing Agency  
West Contra Costa Integrated Waste Management  
Authority

#### **TRANSPORTATION DEVELOPMENT ACT**

Arroyo Grande, CA  
Brawley, CA  
Calexico, CA  
El Centro, CA  
Grover Beach, CA  
Holtville, CA  
Paso Robles, CA  
San Luis Obispo County and Cities Area Planning  
Council:  
Local Transportation Fund  
State Transit Assistance Fund  
South County Area Transit, CA  
South County/San Luis Obispo Transit, CA  
Transportation Agency for Monterey County, CA  
Transportation Authority of Marin  
Association of Monterey Bay Area Governments  
Santa Cruz Regional Transportation Commission

#### **TRANSIENT OCCUPANCY TAX AUDITS**

Represented the following municipalities and/or counties  
in the audit of the hotel "bed tax" records:

|                   |                      |
|-------------------|----------------------|
| Arroyo Grande, CA | Pismo Beach, CA      |
| Bellflower, CA    | Santa Maria, CA      |
| Bishop, CA        | South Lake Tahoe, CA |
| Calexico, CA      | Whittier, CA         |
| Carmel, CA        | Ojai, CA             |

CITY OF HUGHSON  
APPENDIX C – PEER QUALITY REVIEW REPORT

Our Peer Review included reviews of governmental, water districts, school districts, and non-profit engagements. The Firm's 2018 Quality Review Report is in the review stage with the Peer Reviewer.



POWELL & SPAFFORD, INC.

CERTIFIED PUBLIC ACCOUNTANTS

System Review Report

James C. Powell, CPA (Ret.)

Edward D. Spafford, CPA

Excluded by the California Council of Accountants  
As a result of being a Certified Public Accountant

To the Partners of  
Moss, Levy & Hartzheim, LLP  
and the Peer Review Committee of the California Society of CPAs

We have reviewed the system of quality control for the accounting and auditing practice of Moss, Levy & Hartzheim, LLP (the firm) in effect for the year ended December 31, 2014. Our review was conducted in accordance with standards for Performing and Reporting on Peer Reviews established by the Peer Review Board of the American Institute of Certified Public Accountants. As a part of our peer review, we considered reviews by regulatory entities, if applicable, in determining the nature and extent of our procedures. The firm is responsible for designing a system of quality control and complying with it to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Our responsibility is to express an opinion on the design of the system of quality control and the firm's compliance therewith based on our review. The nature, objectives, scope, limitations of, and the procedures performed in a System Review are described in the standards at [www.aicpa.org/summary](http://www.aicpa.org/summary).

As required by the standards, engagements selected for review included engagements performed under *Government Auditing Standards* and audits of employee benefit plans.

We noted the following deficiencies during our review:

1. **Deficiency** – The firm does not have quality control policies and procedures to address the form and content of workpaper documentation or a related file review process by the engagement partner for its audit engagements, including audits of employee benefit plans and audits subject to *Government Auditing Standards*. As a result, we noted documentation deficiencies on the engagements reviewed in the following areas: 1) compliance payroll testing for an ERISA audit engagement; 2) proper testing of certain major program compliance requirements, low risk determination and fraud considerations; 3) the 80 hour requirement for engagements performed under *Government Auditing Standards* was not met for certain engagement team members; and 4) lock down of audit files. The firm also did not perform annual monitoring that properly covered all areas of quality control. There were documentation issues noted in the firm's previous peer review. The firm will perform the required procedures when subsequent engagements are performed, which is imminent.

**Recommendation** – We recommend that the firm modify its current policies and procedures to include a mechanism for assuring the firm's documentation is properly prepared, reviewed and included in the work files. The firm should also expand on its monitoring procedures to cover these areas.

In our opinion, except for the deficiency described above, the system of quality control for the accounting and auditing practice of Moss, Levy & Hartzheim, LLP in effect for the year ended December 31, 2014, has been suitably designed and complied with to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Firms can receive a rating of *pass*, *pass with deficiency (ies)* or *fail*. Moss, Levy & Hartzheim, LLP has received a peer review rating of *pass with deficiencies*.

July 22, 2015

447 Mission Creek • Folsom, CA 95733 • PO Box 8547 • Folsom, CA 95733  
Tel: 916.799.4850 • Fax: 916.799.2015

**CITY OF HUGHSON**  
**APPENDIX D – RESUMES**

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**Ron A. Levy, C.P.A. – Partner**  
**License No. 33490**

- California licensed C.P.A. with 40 years of audit experience with governmental and non-profit entities
- Technical partner (concurring) in charge of all governmental and non-profit audits, currently including 38 municipal audits, 75 special district audits, and 35 school district and related audits
- Has assisted governmental clients with year-end closing, key position interviews, preparation of award winning CAFRs, and preparation of State Controller's Reports
- Has met or exceeded all continuing education requirements, including recent courses in the following:
  - 2019, 2018, and 2017 Governmental Accounting Conference*
  - 2019, 2018, and 2017 School District Conference*
  - GASB 34 Training Seminars*
  - Planning a Governmental Audit Engagement*
  - Auditor's Reports on Audits of Local Governments*
  - Governmental Accounting Update*
  - Audits of State and Local Governments*
  - Compliance Auditing, Auditing Sampling, and Concluding the Audit*
  - The Single Audit Act*
- Member of the following:
  - American Institute of Certified Public Accountants*
  - California Society of Municipal Finance Officers*
  - California Society of Certified Public Accountants*
  - California Association of School Business Officials*
  - Kiwanis Club*
- Bachelor of Science degree from Oregon State University, was conferred in 1977
- Taught accounting courses at a branch of La Verne College and Chapman College
- Knowledgeable in all areas of tax law including non-profit tax issues

**CITY OF HUGHSON**  
**APPENDIX D – RESUMES**

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**Craig A. Hartzheim, C.P.A. – Partner**  
**License No. 58792**

- California licensed C.P.A. with 35 years of audit experience with governmental, non-profit, and commercial entities
- Engagement partner for governmental and non-profit audits (Culver City office) including 15 municipal audits, 40 special district audits (including Los Angeles County Flood Control District and the County Sanitation Districts of Los Angeles County), and 12 school districts and related audits
- Has assisted governmental clients with year-end closings, key position interviews, preparation of award winning CAFRs, and preparation of State Controller's Reports
- Has met or exceeded all continuing education requirements including recent courses in the following:

*2019, 2018, and 2017 Governmental Accounting Conference*  
*2019, 2018, and 2017 School District Conference*  
*Single Audits of Governmental Entities*  
*Preparing Governmental Financial Statements*  
*Yellow Book, Government Auditing Standards*  
*GAAS Guide*  
*Other Comprehensive Basis of Accounting (OCBOA) Statements*  
*Audit Standards update*  
*Implementing SAS 112 and 114*  
*Fraud in Audits*  
*Auditing update*

- Bachelor of Science degree in Accounting from Marquette University, was conferred in 1982
- Member of the following:

American Institute of Certified Public Accountants  
California Society of Certified Public Accountants

- Knowledgeable in all areas of tax law including non-profit and payroll tax issues

**CITY OF HUGHSON**  
**APPENDIX D – RESUMES**

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**Hadley Y. Hui, C.P.A. – Partner**  
**License No. 81093**

- California licensed C.P.A. with 20 years of audit experience with governmental, non-profit, and commercial entities
- Partner in charge of 10 municipal audits, 26 special district audits, 8 special audits for the County of San Diego, and 20 school districts and related audits
- Supervisor for the CSS and DPSS Monitoring Projects for Los Angeles County
- Has met or exceeded all continuing education requirements including recent courses in the following:

*2019, 2018, and 2017 Governmental Accounting Conference*

*2019, 2018, and 2017 School District Conference*

*Fraud in Audits*

*Risk-Based Auditing Part 1, Part 2*

*Accounting and Auditing Update*

*Guide to Auditing Control Course 1, Course 2*

- Extensive knowledge of database systems, networking, and various accounting software
- Bachelor of Arts degree in Economics with a minor in Accounting from University of California – Los Angeles, was conferred in 1997
- Member of the following:

*American Institute of Certified Public Accountants*

*California Society of Certified Public Accountants*

- Knowledgeable in all areas of tax law including non-profit and payroll tax issues

**CITY OF HUGHSON**  
**APPENDIX D – RESUMES**

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**Bin Zeng – Manager**

- Auditor with 10 years of audit experience with governmental and commercial entities
- Auditor for 9 municipal audits and 12 special district audits
- Has met or exceeded all continuing education requirements including recent courses in the following:

*2019, 2018, and 2017 Governmental Accounting Conference*  
*2019, 2018, and 2017 School District Conference*  
*2019, 2018, and 2017 Accounting and Auditing Standards Update: Risk Assessment Standards*  
*2019 Advanced Audit Standards Workshop: Understanding Risk Assessment*  
*2019, 2018, and 2017 GAAS Update*  
*Auditors' Responsibilities for Detection of Fraud*  
*Internal Control and Fraud in Governmental Engagements*  
*Government Auditing Standards – Yellow Book*  
*Implementing SAS 112 & 114*  
*Advanced Fraud Techniques*  
*Grants Management*

- Bachelor of Arts degree in Business Economics from the University of California – Los Angeles, was conferred in 2007

**Cody Hartzheim – Senior Accountant**

- Auditor with 6 years of audit experience with governmental, non-profit, and commercial entities
- Auditor for 10 municipal audits and 6 school district audits
- Has met or exceeded all continuing education requirements including recent courses in the following:

*2019, 2018, and 2017 Governmental Accounting Conference*  
*2019, 2018, and 2017 School District Conference*  
*2019, 2018, and 2017 Accounting and Auditing Standards Update: Risk Assessment Standards*  
*2019 Advanced Audit Standards Workshop: Understanding Risk Assessment*  
*2019, 2018, and 2017 GAAS Update*

- Bachelor of Science in Accounting and Finance from Marquette University, was conferred in 2014

**CITY OF HUGHSON**  
**APPENDIX D – RESUMES**

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**Israel Morel – Staff Accountant**

- Auditor with 6 years of audit experience with governmental, non-profit, and commercial entities
- Auditor for 9 municipal audits and 10 school district audits
- Has met or exceeded all continuing education requirements including recent courses in the following:

*2019, 2018, and 2017 Governmental Accounting Conference*  
*2019, 2018, and 2017 School District Conference*

- Bachelor of Science in Business Administration with emphasis in accounting from California State University – Dominguez Hills, was conferred in 2013

•

**Susan Chin – Staff Accountant**

- Auditor with 10 years of audit experience with governmental, non-profit, and commercial entities
- Auditor for 14 municipal audits, 2 special district audits, and 9 school district audits
- Staff accountant for the Los Angeles County DMH Monitoring Projects
- Has met or exceeded all continuing education requirements including recent courses in the following:

*2019, 2018, and 2017 Governmental Accounting Conference*  
*2019, 2018, and 2017 School District Conference*  
*Government Auditing Standards – Yellow Book*

- Bachelor's degree from University of California – Los Angeles, was conferred in 1992

**Kristell Villacorta – Staff Accountant**

- Auditor with 3 years of audit experience with governmental, school districts and commercial entities
- Auditor for 6 municipal audits, 6 school district audits
- Has met or exceeded all continuing education requirements including recent courses in the following:

*2019 and 2018 Governmental Accounting Conference*  
*2019 and 2018 School District Conference*  
*Government Auditing Standards – Yellow Book*

- Bachelor of Arts in Business Administration with emphasis in Accounting from California State University – Fullerton, was conferred in 2014



**David Ortiz – Computer Specialist**

- Auditor with 22 years of audit experience with governmental and commercial entities
- Computer specialist – with emphasis in fund accounting software
- Extensive knowledge of database systems, networking, and accounting software
- Bachelor of Science degree in Business Administration with an emphasis in Accounting from California Polytechnic State University, San Luis Obispo, was conferred in 2000

**CITY OF HUGHSON**  
**APPENDIX E – REFERENCES**

---

**CITY OF EUREKA**

Audit of basic financial statements, Single Audit Report, GASB 34  
2012 to Present

Engagement Partner – Craig A. Hartzheim, CPA  
Contact: Ian Miller (707) 441-4144  
531 K Street, Eureka, CA 95501

**CITY OF LAGUNA HILLS**

Audit of basic financial statements, Single Audit Report, GASB 34  
Prepared City's State Controller's Report, and review of the City's GAAN Limit  
2009 to 2015

Engagement Partner – Craig A. Hartzheim, CPA  
Contact: Janice Mateo-Reyes (949) 707-2623  
24035 El Toro Road, Laguna Hills CA 92653

**CITY OF HEALDSBURG**

Audit of basic financial statements, GASB 34, Single Audit, GANN Limit  
Present

Engagement Partner – Craig A. Hartzheim, CPA  
Contact: Heather Ippolito, Finance Director  
(707) 431-3570

**CITY OF BELLFLOWER**

Audit of basic financial statements, Single Audit Report, GASB 34  
2000- 2012, 2017 – Present

Engagement Partner – Craig A. Hartzheim, CPA  
Contact: Tae Rhee (562) 804-1424  
16600 Civic Center Dr, Bellflower, CA 90706

**CITY OF LA MIRADA**

Audit of basic financial statements, GASB 34  
Prepared City's State Controller's Report, and review of the City's GAAN Limit  
2016 to Present

Engagement Partner – Craig A. Hartzheim, CPA  
Contact: Melissa Pascual (562) 943-0131  
13700 La Mirada Boulevard, La Mirada, CA 90638

**CITY OF ARCADIA**

Audit of basic financial statements, former Redevelopment Agency, GASB 34  
2015 to Present

Engagement Partner – Hadley Y. Hui, CPA  
Contact: Henry Chen, (626) 574-5426  
240 West Huntington Drive, Arcadia, CA 91007

**CITY OF CALABASAS**

Audit of basic financial statements, Single Audit Report,  
and preparation of State Controller's Report, GANN Limit  
2004 – Present

Engagement Partner – Craig A. Hartzheim, CPA  
Contact: Dr. Gary J. Lysik (818) 224-1600  
100 Civic Center Way, Calabasas, CA 91302

**CITY OF HUGHSON****APPENDIX F – SEGMENTATION AND BUDGETED HOURS BY SEGMENT**

| <u>AUDIT SEGMENTS</u>                                     | <u>Estimated Hours</u> |              |                    |                |                |              |
|---|------------------------|--------------|--------------------|----------------|----------------|--------------|
|   | <u>Clerical</u>        | <u>Staff</u> | <u>Supervising</u> |                | <u>Partner</u> | <u>Total</u> |
|   |                        |              | <u>Senior</u>      | <u>Manager</u> |                |              |
| Planning  |                        | 4            | 8                  | 12             | 4              | 28           |
| Risk Assessment   |                        | 4            | 8                  | 8              | 4              | 24           |
| Audit Conferences<br>(Preliminary, Progress,<br>and Exit) |                        |              |                    | 8              | 4              | 12           |
| Correspondence  | 2                      | 4            |                    |                |                | 6            |
| Review/Documentation of<br>Internal Controls:             |                        |              |                    |                |                |              |
| Documentation of systems                                  |                        | 6            | 12                 | 6              |                | 24           |
| Testing of systems  |                        | 6            | 12                 | 6              |                | 24           |
| Compliance Testing (including single audit)               |                        | 6            | 12                 | 10             |                | 28           |
| Year End Balances Testing                                 |                        | 20           | 28                 | 8              | 2              | 58           |
| Revenue and Expense<br>Analysis (Analytical Procedures)   |                        | 20           | 20                 | 8              | 2              | 50           |
| Preparation, Review, and Findings                         | <u>5</u>               | <u>15</u>    | <u>20</u>          | <u>24</u>      | <u>9</u>       | <u>73</u>    |
| <b>GRAND TOTAL</b>  | <u>7</u>               | <u>85</u>    | <u>120</u>         | <u>90</u>      | <u>25</u>      | <u>327</u>   |

**CITY OF HUGHSON**

**COST PROPOSAL FOR PROFESSIONAL AUDITING SERVICES**

**For the Fiscal Years Ending June 30, 2020, 2021, and 2022  
(Optional Fiscal Years Ending June 30, 2023, and 2024)**

---

**Submitted By:**

Moss, Levy & Hartzheim, LLP  
5800 Hannum Avenue, Suite E  
Culver City, California 90230  
Phone: (310) 670-2745  
Fax: (310) 670-1689  
CA License No. 6998  
Email: [mlhbh@mlhcpas.com](mailto:mlhbh@mlhcpas.com)  
Website: [www.mlhcpas.com](http://www.mlhcpas.com)

**Submitted On:**

February 28, 2020

**Contact Person:**

Craig A. Hartzheim, CPA: Partner  
Ron A. Levy, CPA: Partner  
Hadley Y. Hui, CPA: Partner

**TOTAL ALL-INCLUSIVE MAXIMUM PRICE**

| Classification      | Quoted Rates        | Estimated Hours | Fiscal Years      |                   |                   |                   |                   |
|---------------------|---------------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                     |                     |                 | 2019-20           | 2020-21           | 2021-22           | Optional          |                   |
|                     |                     |                 |                   |                   |                   | 2022-23           | 2023-24           |
| Partner             | \$ 175              | 25              | \$ 4,375          | \$ 4,419          | \$ 4,463          | \$ 4,508          | \$ 4,554          |
| Manager             | 135                 | 90              | 12,150            | 12,272            | 12,395            | 12,519            | 12,644            |
| Senior              | 115                 | 120             | 13,800            | 13,938            | 14,077            | 14,218            | 14,360            |
| Staff               | 90                  | 85              | 7,650             | 7,727             | 7,804             | 7,882             | 7,961             |
| Clerical            | 60                  | 7               | 420               | 424               | 428               | 432               | 436               |
| <b>Grand Totals</b> | <b>Grand Totals</b> | <b>327</b>      | <b>\$ 38,395</b>  | <b>\$ 38,780</b>  | <b>\$ 39,167</b>  | <b>\$ 39,559</b>  | <b>\$ 39,955</b>  |
| <b>Discount</b>     |                     |                 | <b>\$ (2,975)</b> | <b>\$ (3,182)</b> | <b>\$ (3,443)</b> | <b>\$ (3,710)</b> | <b>\$ (3,978)</b> |
| <b>Total</b>        |                     |                 | <b>\$ 35,420</b>  | <b>\$ 35,598</b>  | <b>\$ 35,724</b>  | <b>\$ 35,849</b>  | <b>\$ 35,977</b>  |

| Classification         | Fiscal Years     |                  |                  |                  |                  |
|------------------------|------------------|------------------|------------------|------------------|------------------|
|                        | 2019-20          | 2020-21          | 2021-22          | 2022-23          | 2023-24          |
| <b>Audit Fee</b>       | \$ 32,220        | \$ 32,378        | \$ 32,484        | \$ 32,584        | \$ 32,682        |
| <b>SCO Reports</b>     | \$ 450           | \$ 465           | \$ 480           | \$ 500           | \$ 525           |
| <b>Single Audit **</b> | \$ 2,750         | \$ 2,755         | \$ 2,760         | \$ 2,765         | \$ 2,770         |
| <b>Grand Totals</b>    | <b>\$ 35,420</b> | <b>\$ 35,598</b> | <b>\$ 35,724</b> | <b>\$ 35,849</b> | <b>\$ 35,977</b> |

\*\*Single Audit may not occur in every year of the contract term; we have priced one major program to test in this fee. It is subject to the City's expending of current federal awards granted and any new awards received and expended in future years. Therefore, a single audit with an additional major program required to be tested will be \$2,500 per additional program, if necessary. If no Single Audit is necessary, please subtract this amount.

**DISCOUNT**

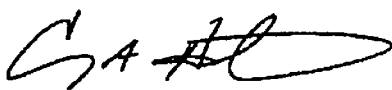
Due to the current economic environment, Moss, Levy & Hartzheim, LLP has accepted the fact that in order for government entities to survive some of the revenue cutbacks, contractors will need to reassess their hourly fees or total estimate of costs. Therefore, we are reducing our blended hourly rate and maximum fee to assist the City in these challenging economic times.

**MANNER OF PAYMENT**

Progress payments will be made on the basis of hours of work completed during the course of the engagement and out-of-pocket expenses incurred in accordance with the firm's proposal. Interim billings shall cover a period of not less than one calendar month.

I, the undersigned, certify I am duly authorized to represent the above-named firm and am empowered to submit this bid. In addition, I certify I am authorized to contract with the City of Cotati on behalf of the above-named firm.

|                         |         |                   |
|-------------------------|---------|-------------------|
| Craig A. Hartzheim, CPA | Partner | February 28, 2020 |
| Name                    | Title   | Date              |

  
 \_\_\_\_\_  
 Signature

**Moss, Levy & Hartzheim, LLP is an Equal Opportunity Employer**

**RATES FOR ADDITIONAL PROFESSIONAL SERVICES**

Our firm is always willing to perform additional work, as long this does not impede our independence as the City's Auditors.

| Classification                | Standard<br>Hourly Rate | <b><u>Quoted Hourly Rates</u></b> |         |         |                             |         |
|-------------------------------|-------------------------|-----------------------------------|---------|---------|-----------------------------|---------|
|                               |                         | Fiscal Years                      |         |         | Optional<br>( Fiscal Years) |         |
|                               |                         | 2019-20                           | 2020-21 | 2021-22 | 2022-23                     | 2023-24 |
| Partner                       | \$ 225                  | \$ 175                            | \$ 176  | \$ 177  | \$ 178                      | \$ 179  |
| Manager                       | \$ 175                  | \$ 135                            | \$ 136  | \$ 137  | \$ 138                      | \$ 139  |
| In-Charge (Supervisor/Senior) | \$ 155                  | \$ 115                            | \$ 116  | \$ 117  | \$ 118                      | \$ 119  |
| Staff                         | \$ 125                  | \$ 90                             | \$ 91   | \$ 92   | \$ 93                       | \$ 94   |
| Clerical                      | \$ 75                   | \$ 60                             | \$ 61   | \$ 62   | \$ 63                       | \$ 64   |



## **CITY COUNCIL AGENDA ITEM NO. 3.5**

### **SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Adopt Resolution No. 2020-24, Approving the Second Amendment to the Agreement with Gilton Solid Waste Management, Inc. for Street Sweeping Services  
**Presented By:** Lea C. Simvoulakis, Community Development Director  
**Approved By:** Merry Mayhew, City Manager

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#### **Staff Recommendations:**

1. Adopt Resolution No. 2020-24, approving the Second Amendment to the Agreement with Gilton Solid Waste Management, Inc. for \$22,186.13 for annual Street Sweeping Services and a Contracted Hourly Rate for After Event Sweeping and Emergency Sweeping Services.
2. Authorize the City Manager to execute the Amendment inclusive of any final edits by the City Attorney.

#### **Background:**

On July 15, 2016, the City entered into an agreement ("Agreement") with Gilton Solid Waste Management, Inc. (Gilton) for Street Sweeping Services for an initial term of three years, with a one-year extension of the contract at the discretion of the City. The Agreement was set to expire on July 14, 2019. The City exercised its discretion to renew the contract for an additional year until July 14, 2020. As part of this Amendment, Gilton requested that a Consumer Price Index (CPI) be added to the Agreement. The City agreed to the addition of a 2.5% CPI and extended the Street Sweeping Agreement until July 15, 2020. With the First Amendment set to expire shortly, the City is seeking a Second Amendment to the Agreement for an additional year, expiring on July 14, 2021.

#### **Discussion:**

In the original agreement between the City of Hughson and Gilton, the rate for the Regular Scheduled Services was set at \$21,645 per year from July 2016 through July 2019. As discussed above, when the City requested a year extension to the Agreement, Gilton requested a 2.5% CPI increase. With the 2.5% CPI increase, the regular scheduled service rate increased to \$22,186.13. The Council found this to



be a reasonable increase as there had been no contract increases for the first three years of the agreement.

Given the recent decline in revenues to the City due to COVID-19, Gilton agreed to eliminate the 2.5% CPI increase for the term of this Second Amendment. As such, the Second Amendment will maintain the current rate of \$22,186.13 for the current contract plus \$92.25 per hour for after event sweeping and \$128.13 per hour in emergency sweeping. These rates will remain in effect until July 14, 2021. All other terms of the existing agreement will stay in place.

**Fiscal Impact:**

The cost associated with the Second Amendment to the Agreement will be \$22,186 funded through the Gas Tax 2107 fund for City Streets and through the Benefit Assessment Districts for the percentage of the costs to clean the streets that are within the various Districts. This anticipated expense was incorporated into the annual budget process for Fiscal Year 2020-2021.

**SECOND AMENDMENT TO THE CONTRACT BETWEEN  
THE CITY OF HUGHSON AND GILTON SOLID WASTE MANAGEMENT, INC. FOR  
STREET SWEEPING SERVICES**

THIS SECOND AMENDMENT ("Second Amendment") to that certain Contract for Street Sweeping Services dated July 25, 2016 ("Agreement") is made and entered into as of June 22, 2020 ("Amendment Effective Date"), by and between the City of Hughson, a General Law City ("City") and Gilton Solid Waste Management, Inc. ("Contractor"). City and Contractor may each be referred to herein as "Party" or collectively as "Parties."

**RECITALS**

WHEREAS, the City and the Contractor entered into the Agreement on July 25, 2016, with an effective date of July 15, 2016, for the provision of street sweeping services as described in the Agreement; and

WHEREAS, in June of 2019, the parties executed a First Amendment to the Agreement extend the term of the Agreement by one-year expiring on July 15, 2020;

WHEREAS, the parties desire to extend the Agreement for an additional year at the current Rate without providing an annual CPI inflator to the terms of the Agreement; and

WHEREAS, the City now desires, and the Contractor agrees, to execute this Second Amendment extending the term of the Agreement for one year.

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

**AGREEMENT**

1. The recitals listed above are hereby incorporated into this Amendment.
2. Subsection A of Section V of the Agreement is hereby amended in full to read as follows:

"A. City agrees to pay Contractor for Regular Schedule Services performed of Twenty-Two Thousand One Hundred and Eighty-Six dollars and 13 cents (\$22,186.13) ("Rate") per year and Unscheduled Services at the rate set forth in the accepted bid **Exhibit "C"**, a copy of which is attached hereto and incorporated herein. The mileage and hourly rates identified in this paragraph shall apply to any additional curb miles added to this Contract by the parties pursuant to Section I, Paragraph B, of this Contract.

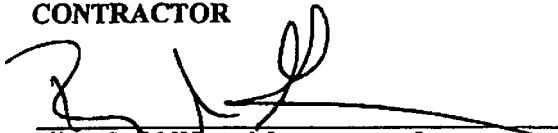
3. Subsection A of Section IV of the Agreement is hereby amended in full to read as follows:

“A. This Contract shall be effective on July 15, 2016 and will continue in effect until it expires at 11:59:59 p.m. on July 14, 2021 unless terminated sooner as provided in this Contract.”


4. All provisions of the Agreement, except as modified by this Amendment, remain in full force and effect.
5. The terms and provisions of this Amendment are incorporated by this reference into the Agreement as though set forth in full therein.
6. In the event of any conflict between this Amendment and the Agreement, this Amendment shall govern and control the intent and agreement of the parties.
7. This Amendment may be executed in any number of counterparts with the same effect as if the parties had all signed the same document, and which together shall constitute one and the same instrument.
8. Facsimile, electronically scanned and photocopied signatures shall be valid as original signatures only for purposes of demonstrating execution of the Amendment until such time as originally executed documents can be circulated. Said originally executed documents shall be binding and shall constitute evidence of the execution of this Amendment for all purposes.

TO EFFECTUATE THIS AMENDMENT, the parties have caused their duly authorized representatives to execute this Amendment on the dates set forth below.

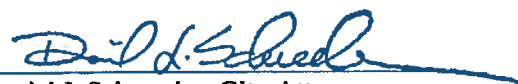
**CONTRACTOR**

  
Gilton Solid Waste Management, Inc.  
Title: Pres  
Date: 5-15-2020

**CITY OF HUGHSON**

  
Merry Mayhew, City Manager  
Date: June, 2020

**APPROVED AS TO FORM**

By:   
Daniel J. Schroeder, City Attorney  
Date: May 15, 2020

**CITY COUNCIL**  
**CITY OF HUGHSON**  
**RESOLUTION NO. 2020-24**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUGHSON APPROVING  
THE SECOND AMENDMENT TO THE AGREEMENT WITH GILTON SOLID WASTE  
MANAGEMENT, INC. FOR STREET SWEEPING SERVICES AND AUTHORIZING  
THE CITY MANAGER TO EXECUTE THE AMENDMENT**

**WHEREAS**, on July 15, 2016 the City and Gilton Solid Waste Management, Inc., entered into an agreement (“Agreement”) for Street Sweeping Services as well as after event sweeping services and emergency sweeping services; and

**WHEREAS**, on July 8, 2019, the parties executed a First Amendment to the Agreement to extend the term of the Agreement by one year, expiring on July 14, 2020; and

**WHEREAS**, the parties to the Agreement wish to extend the Agreement for an additional year at the current Rate without providing an annual CPI inflator to the terms of the Agreement; and

**WHEREAS**, the current Rate is \$22,186.13 plus \$92.25 per hour for after event sweeping and \$128.13 per hour in emergency sweeping; and

**WHEREAS**, all provisions of the Agreement, except for those terms subject to this Amendment, are to remain enforceable.

**NOW, THEREFORE**, that the City Council of the City of Hughson does hereby adopt this Resolution approving the attached Second Amendment to the Agreement with Gilton Solid Waste Management, Inc., for Street Sweeping Services and authorizing the City Manager to sign the amendment and related documents inclusive of any final edits by the City Attorney.

**PASSED AND ADOPTED** by the City Council of the City of Hughson at its regular meeting held on this 8<sup>TH</sup> day of June 2020 by the following roll call votes:

>  
>  
>  
>  
>  
>

**AYES:**

**NOES:**

**ABSTENTIONS:**

**ABSENT:**

**ATTEST:**

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**JERAMY YOUNG, Mayor**

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**ASHTON GOSE, Deputy City Clerk**

## **Contract for Street Sweeping Services**

THIS CONTRACT ("Contract") dated this 25 day of July, 2016, is entered into by and between the City of Hughson, a municipal corporation ("City"), and Gilton Resource Recovery/Transfer Facility, Inc., a California Corporation, doing business as Gilton Solid Waste Management, Inc. ("Contractor"), for street sweeping services to be provided by Contractor. City and Contractor may each be referred to as "Party" or collectively as "Parties". There are no other Parties to this Contract.

NOW, THEREFORE, the City and Contractor agree to all terms and provisions contained within the Contract as follows:

### **SECTION I. SCOPE OF SERVICES**

A. Contractor shall provide street sweeping services ("Services") to the City for the purpose of removing debris from all roads, streets and highways within the City including gutters, uncurbed streets, and intersections (collectively "Streets"). The debris to be removed includes, but is not limited to, sand, glass, cans, litter, light leaves and other debris normally swept by mechanical street sweepers from Streets. The Services provided shall leave the area of the Streets within eight feet of the curb or uncurbed edge free of debris. Contractor shall be responsible for leaves that fall off trees within the area eight feet from the curb or uncurbed edge of the Streets; however, Contractor shall not be responsible for piles of leaves located within eight feet from the curb or uncurbed edge of Streets.

B. Streets in which Services shall be provided within the City of Hughson are as indicated on the map attached hereto as **Exhibit "A"**, which is hereby incorporated herein by reference. The City reserves the right to amend the map by providing 10 days written notice to Contractor indicating the amended Streets in which Services shall be provided.

C. Contractor shall establish a regular schedule in which Services will be provided within the City ("Regular Schedule"). The Regular Schedule shall provide for the Services to be performed in all residential areas of the Streets bi-weekly. Services shall not be provided in residential areas on weekends or between the hours of 5 PM and 6 AM. Services shall be performed in commercial areas between the hours of 12 AM and 6 AM. Contractor shall provide the City of Hughson Public Works Director the Regular Schedule of Services.

D. If Contractor cannot perform Services pursuant to the Regular Schedule due to adverse weather conditions, Contractor shall immediately notify the City Public Works Superintendent to substantiate the conditions which prevent the performance of Services. The Contractor shall then perform said Services within three days of the notification in the areas which did not receive Services, provided that weather and garbage collection days permit.

E. If the Regular Schedule provides for Services to be performed on any of the following designated holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day or Christmas Day, Contractor shall perform such Services on the next weekday.

F. Except as provided for in paragraphs D and E of this Section, amendments or exceptions to the performance of Services pursuant to the Regular Schedule shall only be permitted upon written notification by the contractor or through prior direction from the City Community Development Director. Contractor agrees to provide additional unscheduled Services ("Unscheduled Services") in addition to the Regular Schedule upon request for the City Community Development Director.

G. Contractor shall provide a supervisor or foreman available via phone at all times to direct Services as needed. The supervisor, foreman, or operator shall report any problems or concerns that occur or exist to the City Public Works Superintendent. Contractor shall update City with cell phone numbers where the supervisor or foreman may be reached at any time of the day and week.

H. The Contract is not exclusive, and City may utilize other street sweeping services as it may desire.

I. Contractor shall cooperate with other City operations, including, but not limited to, garbage collection, street maintenance and construction activities. Contractor's foreman or supervisor shall coordinate such cooperation through the City Public Works Superintendent.

J. This Contract shall be over seen by the City Community Development Director and the City Public Works Superintendent.

## **SECTION II. EQUIPMENT AND SPECIFICATIONS**

A. Contractor shall provide all supplies, tools, machines and equipment required to perform the Services pursuant to this Contract.

B. Contractor's machines and equipment shall be furnished with an efficient water spray system for dust control, and Contractor shall maintain the spray system in good operating condition.

C. Contractor's machines and equipment shall be properly registered and insured by Contractor in accordance with the laws of the State of California. Contractor's operators shall also be properly licensed and insured in accordance with the laws of the State of California.

D. Contractor's machines and equipment shall be maintained by Contractor in good working condition at all times and in the event that machine or equipment operation problems exist, Contractor will provide backup machines and equipment, or alternatively, perform the Services pursuant to the Regular Schedule during the next regularly scheduled Services day.

E. Contractor shall maintain a sufficient supply of spare brooms and other parts to ensure timely and continuous fulfillment of this Contract.

F. Contractor's machines and equipment shall be capable of removing litter, sand, light leaves, and debris to meet reasonable community cleanliness standards.



G. Contractor's machines and equipment shall comply with all federal, State, and local safety regulations, rules or requirements, including compliance with the City's Storm Water Discharge Permit, which is attached hereto as **Exhibit "B"**.

H. Contractor's machines and equipment shall have a safety beacon operating at all times while performing Services.

I. The Contractor shall immediately remedy any spill or discharge of street sweeping debris, waste, fluids or other such materials from either the equipment or other service activity, and shall contain and clean up such materials at no cost to the City. Contractor shall prevent any materials from entering any storm water inlet, drains, basins, or sewer system; and shall submit within twenty-four (24) hours by email or hand delivery, a report describing the type(s) and quantities of such release, and the clean-up actions taken.

### **SECTION III. CITY OF HUGHSON OBLIGATIONS**

A. City will provide access to, and use of, the existing water hydrants at locations designated by the City at no cost to Contractor for filling water spray systems necessary for the performance of Services.

B. Following reasonable requests by Contractor, City shall provide that trees or shrubs are trimmed to allow accessibility by Contractor to streets without interference.

C. City shall dispose of all debris generated by Services.

### **SECTION IV. COMPENSATION**

A. City agrees to pay Contractor for Regular Schedule Services performed and Unscheduled Services at the rate set forth in the accepted bid **Exhibit "C"**, of Twenty-Five Thousand Nine Hundred and Forty-Five dollars (\$21, 645.00) per year, a copy of which is attached hereto and incorporated herein. The mileage and hourly rates identified in this paragraph shall apply to any additional curb miles added to this Contract by the parties pursuant to Section I, Paragraph B, of this Contract.

B. City will provide payment to Contractor within thirty (30) days of receipt of Contractor's invoice for Services performed. Contractor shall not provide invoices to City more than once each month.

C. For Unscheduled Services provided where the City requests Service be performed at least twenty-four (24) hour of its request, the City shall pay the Contractor at a rate of Ninety dollars (\$90.00) per hour. For Unscheduled Services provided in an emergency situation where the City requests Service be performed within one (1) hour of its request, the City shall pay the Contractor at a rate of one-hundred and twenty-five dollars (\$125.00) an hour.

D. Contractor may request an increase in rates based upon substantial increase in operating costs; i.e. wages, insurance, equipment maintenance, fuel, etc. The City Council may

amend the Contract and grant such an increase in an amount that it deems reasonable, if in its sole judgment, the reasons for such an increase are justifiable. The City may require an independent audit. The City reserves the right to require adjustments in operations of the Contractor due to changing community needs or developments in street sweeping and cleaning.

## **SECTION V. TERM OF CONTRACT**

A. This Contract shall be effective on July 15, 2016, and will continue in effect for three years or until terminated as provided in this Contract. The City, at its sole discretion, may extend the term of the contract by one year term(s).

## **SECTION VI. STATUS OF CONTRACTOR**

A. Contractor shall enter into this Contract, and remain throughout the term of the Contract, as an independent contractor. Contractor agrees that it is not and will not become an employee, partner, agent, or principal of City while the Contract is in effect. Contractor agrees it, and its employees, are not entitled to the rights or benefits afforded to City's employees, including disability or unemployment insurance, workers' compensation, medical insurance, sick leave, or any other employment benefit.

B. Contractor is responsible for providing, at his own expense, disability, unemployment, and other insurance, workers' compensation, training, permits and licenses for itself and for its employees and subcontractors. Contractor agrees to hold harmless and indemnify City for any and all claims arising out of or any injury, disability, or death of any Contractor employees or agents.

C. Contractor is responsible for paying all income taxes, including estimated taxes, incurred as a result of the compensation paid by City to Contractor pursuant to the Contract. Contractor agrees to indemnify City for any claims, costs, losses, fees, penalties, interest, or damages suffered by City resulting from Contractor's failure to comply with this provision.

D. Contractor may, at Contractor's own expense, use any employees or subcontractors as Contractor deems necessary to perform the Services. City may control, direct, or supervise those situations where the City deems it necessary for the purpose of ensuring public safety, or Contractor's apparent non-conformance with laws, permits, regulations, or contract provisions, or in the absence of Contractor's required supervision.

## **SECTION VII. INSURANCE AND INDEMNITY**

A. Contractor agrees to maintain an insurance policy with a minimum coverage amount of \$1,000,000.00 to cover negligent acts or omissions committed by Contractor, its employees, subcontractors, or agents during the performance of any duties under this Contract. Contractor further agrees to indemnify, defend and hold City free and harmless from any and all claims arising from any such negligent act or omission.

B. Contractor agrees to indemnify, defend, and hold City free and harmless from any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties, attorneys' fees, and costs, that City may incur as a result of a breach by Contractor of any representation or provision contained in this Contract.

## **SECTION VIII. TERMINATION OF CONTRACT**

A. Termination on Notice Without Cause. This Contract may be terminated by the City without cause upon thirty-day (30) advance written notice to the Contractor, or by the Contractor upon ninety-day (90) advance written notice to the City.

B. Termination on Occurrence of Stated Events. This Contract will terminate automatically on the occurrence of any of the following events:

1. Bankruptcy or insolvency of Contractor.
2. Sale of the business of Contractor.
3. Assignment of this Contract by either Party without the consent of the other.

C. Termination for Default. If either Party defaults in the performance of this Contract or materially breaches any of its provisions, the non-breaching Party may terminate this Contract by giving written notification to the breaching Party. Termination will take effect immediately on receipt of notice by the breaching Party or five days after mailing of notice, whichever occurs first. For the purposes of this paragraph, material breach of this Contract includes, but is not limited to, the following:

1. City's failure to pay Contractor any compensation due within thirty (30) days, after written demand for payment.
2. Contractor's failure to complete the Services specified in this Contract.

## **SECTION IX. NOTICES**

A. Any notices required by this Contract shall be made by either personal delivery in writing or by U.S. first class mail postage prepaid. Notices delivered personally will be deemed communicated as of actual receipt. Mailed notices will be deemed communicated the fifth day after mailing. Notices shall be made to the following:

CITY  
City of Hughson  
Attn: Public Works Director  
67018 Pine Street  
P.O. Box 9  
Hughson, CA 95326  
Phone: (209) 883-4054

**CONTRACTOR**

Gilton Solid Waste Management, Inc.  
755 South Yosemite Ave.  
Oakdale, CA 95361  
Phone: (209) 527 – 3781

**SECTION X.  
MISCELLANEOUS PROVISIONS**

A. Contractor's Qualifications. Contractor represents that it has the qualifications and skills necessary to perform the Services under this Contract in a competent, professional manner, without the advice or direction of City. This means Contractor is able to fulfill the requirements of this Contract. Failure to perform all the Services required under this Contract constitutes a material breach. Contractor has complete and sole discretion for the manner in which Services under this Contract will be performed.

B. Assignment. Neither this Contract, nor any duties or obligations under this Contract, may be assigned by Contractor without the prior written consent of City.

C. Prevailing Wages. Contractor will comply with the requirements of Labor Code Section 1720 *et seq.* and pay its employees prevailing wages for Services provided pursuant to this Contract.

D. Entire Contract of the Parties. This Contract supersedes any and all contracts, either oral or written, between the parties with respect to the rendering of Services by Contractor to City and contains all representations, covenants, and contracts between the parties with respect to the rendering of those Services. Both City and Contractor acknowledges that no representations, inducements, promises, or Contracts, orally or otherwise, have been made by any Party, or anyone acting on behalf of any Party, which are not contained in this Contract, and that no other contract, statement, or promise not contained in this Contract will be valid or binding. Any modification of this Contract will be effective only if it is in a writing signed by the Party to be charged.

E. Partial Invalidity. If any provision of this Contract is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions will continue in full force and effect without being impaired or invalidated in any way.

F. Arbitration. Any controversy between the City and the Contractor involving the construction or application of any of the terms, covenants, or conditions of this Contract will, on the written request of one Party served on the other, be submitted to binding arbitration. The arbitration will comply with and be governed by the provisions of the California Arbitration Act, Section 1280 through 1294.2 of the California Code of Civil Procedure. The parties will each appoint one person to hear and determine the dispute. If those two persons are unable to agree, then they will select a third impartial arbitrator whose decision will be final and conclusive on both parties. The cost of arbitration will be borne in a proportion determined by the arbitrators.

this Contract, the prevailing Party is entitled to reasonable attorneys' fees, which may be set by the court in the same action or in a separate action brought for that purpose, in addition to any other relief to which that Party may be entitled.

H. Governing Law. This Contract will be governed by and construed in accordance with the laws of the State of California, on the date this Contract was executed.

I. It is expressly understood and agreed that a waiver of any of the conditions or covenants of this Contract shall not be considered a waiver of any of the other provisions hereof.

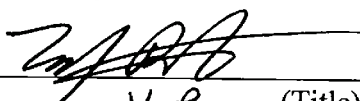
## **SECTION XI. CONTRACT DOCUMENTS**

It is mutually agreed and understood that the complete Contract shall consist of this Contract, referenced Exhibits, and the following component documents, all of which are fully incorporated herein as if attached, and which together constitute the Contract Documents:

- Instructions For Bidders
- Faithful Performance Bond and Labor and Materials Bond (if applicable)
- General Conditions
- Any Published Addenda or Supplements

IN WITNESS WHEREOF, the Parties hereto have executed this Contract on this 28<sup>th</sup> day of July, 2016.

CONTRACTOR  
Gilton Solid Waste Management, Inc.

  
\_\_\_\_\_  
V.P. (Title)

CITY OF HUGHSON

  
\_\_\_\_\_  
MATT BEEKMAN, MAYOR

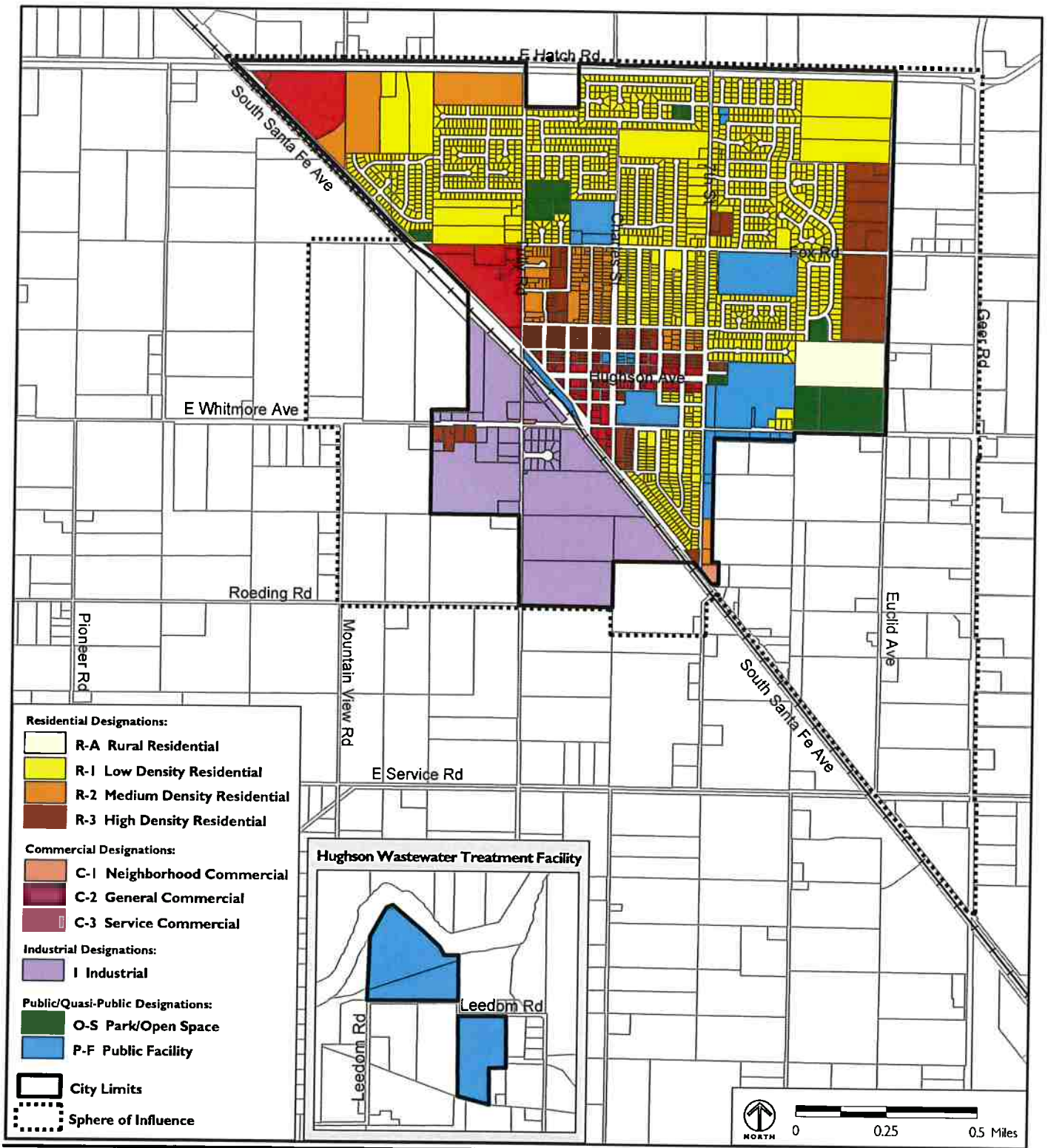
ATTEST:

  
\_\_\_\_\_  
SUSANA DIAZ, DEPUTY CITY CLERK



# EXHIBIT A

CITY OF HUGHSON



Note: There are currently no parcels designated C-3, but it is included on this map to show that the zoning district exists.

ZONING DESIGNATIONS

ADOPTED JULY 2008

**Exhibit C**  
**Gilton Solid Waste Management, Inc. Submitted Bid**

**Gilton Solid Waste  
Management, Inc.**

755 South Yosemite, Ave  
Oakdale, CA 95361  
(209) 527-3781  
FAX (209) 527-2077

June 28, 2016

Mr. Sam Rush  
Public Works Superintendent  
City of Hughson  
7018 Pine Street  
Hughson, CA 95326

RE: BID FOR STREET SWEEPING SERVICES - CITY OF Hughson

Dear Mr. Rush:

In response to the Request for Proposal, Gilton Solid Waste Management, Inc. is pleased to submit the attached proposal to provide street sweeping services in the city of Hughson.

Thank you for considering our proposal. Should the City select our company, I can assure you that we will not only meet, but whenever possible, exceed your expected performance standards for this critical service to your community

If you have any questions, please feel free to contact me at any one of the following:

Phone: (209) 840-5664  
FAX: (209) 527-2077  
E-Mail: [aarond@gilton.com](mailto:aarond@gilton.com)

Respectfully,



Aaron Danhoff  
Environmental Resource Specialist

*Gilton Solid Waste Management, Inc.*

*"Our Business is Just Picking Up"*

Recycled Paper 



***Gilton Solid Waste Management, Inc.***  
***Hughson Street Sweeping Services***

---

**COMPANY HISTORY**

Background & Philosophy

The owners and management of Gilton Solid Waste Management, Inc. (GSWM) are excited with the opportunity of expanding our services to the City of Hughson. Locally owned since 1947, the Gilton family has continuously provided reliable, high quality Street Sweeping services to thousands of customers throughout the central valley of California. We welcome the chance to once again show that we can not only meet, but exceed all of our customer's expectations.

GSWM is uniquely qualified and positioned to provide the most cost-effective street sweeping services for the City of Hughson. As we have proven in the past, GSWM's ability to efficiently and effectively spread our equipment, labor and management costs over multiple jurisdictions has routinely resulted in the lowest costs to our customers.

We have consistently provided street sweeping services to Riverbank, Gustine, Escalon, Livingston, and most recently Oakdale. We pride ourselves on the efficiency and excellence of our services as well as our customer service and response to any and all issues of concern or inquiries regarding our services.

We look forward to adding the City of Hughson to our growing list of very satisfied customers and we relish the opportunity to work with City staff to best serve the citizens of Hughson

# **1. Statement of Ownership**

**Ownership Information: Gilton Resource Recovery /Transfer Facility, Inc.**

|                   |   |
|-------------------|---|
| Richard Gilton:   | President                                   |
| Shares Owned:     | 25%   |
| Home Address:     | 12725 Sierra View<br>Oakdale, CA 95361      |
| Home Phone:       | (209) 847-6449                              |
| Business Address: | 755 S. Yosemite Avenue<br>Oakdale, CA 95361 |
| Business Phone:   | (209) 527-3781                              |

|                   |   |
|-------------------|---|
| Tedford Gilton:   | Vice President                              |
| Shares Owned:     | 25%   |
| Home Address:     | 12724 Sierra View<br>Oakdale, CA 95361      |
| Home Phone:       | (209) 845-2625                              |
| Business Address: | 755 S. Yosemite Avenue<br>Oakdale, CA 95361 |
| Business Phone:   | (209) 527-3781                              |

|                         |   |
|-------------------------|---|
| Karen Gilton Hardister: | Vice President                              |
| Shares Owned:           | 25%   |
| Home Address:           | 6031 Skittone<br>Modesto, CA 95356          |
| Home Phone:             | (209) 602-2670                              |
| Business Address:       | 755 S. Yosemite Avenue<br>Oakdale, CA 95361 |
| Business Phone:         | (209) 527-3781                              |

|                    |   |
|--------------------|---|
| Donna Gilton Love: | Vice President, Secretary,<br>Treasurer     |
| Shares Owned:      | 25%   |
| Home Address:      | 2524 Beatrice Lane<br>Modesto, CA 95355     |
| Home Phone:        | (209) 551-3144                              |
| Business Address:  | 755 S. Yosemite Avenue<br>Oakdale, CA 95361 |
| Business Phone:    | (209) 527-3781                              |

## **2. Statement of Financial Support**

Oak Valley Community Bank  
125 N. 3<sup>rd</sup> Avenue  
Oakdale, CA 95361  
Contact – Mr. Gary Stephens  
Phone - (209) 758-8045

Priest, Amistadi, CPAs  
1021 14<sup>th</sup> Street  
Modesto, CA 95354  
Contact - Mr. Howard Priest  
Phone - (209) 544-7090

## **3. Statement of Operational Capability**

### **3 A. - Responsible Person**

|                   |   |
|-------------------|---|
| Richard Gilton:   | President/General Manager                   |
| Home Address:     | 12725 Sierra View<br>Oakdale, CA 95361      |
| Home Phone:       | (209) 847-6449                              |
| Business Address: | 755 S. Yosemite Avenue<br>Oakdale, CA 95361 |
| Business Phone:   | (209) 527-3781                              |

### **3 B. - Key Employees and Organizational Structure**

#### **Richard Gilton, President/General Manager**

Richard is charged with the responsibility to ensure that the overall goals for the company are being met. Through consultation and cooperation with the Management Team, he sets both long and short term objectives for the company. He negotiates contracts and franchise agreements, and has the responsibility to monitor the progress of the Management Team on a day-to-day basis.

Richard has been leading the Management Team for the last 30 years. Prior to his assuming the position of General Manager, he was responsible for all issues related to permitting, franchise agreements, contracts and special service

agreements. He has held almost every position in the company at one time or another, including driver's helper, mechanic, accounts receivable clerk and secretary. He is extremely knowledgeable in all aspects of solid waste management, operations, regulations, recycling and diversion programs. He has been with the company for 43 years.

**David Blom, Operations Manager**

David is in charge of all the daily operations of GSWM and GRR. He directs four managers responsible for routing, hauling, collection, and fleet maintenance. David handles personnel matters and safety coordination. He began his career with the company as a route driver, became an accomplished mechanic, and subsequently worked his way up to Shop Manager. David has been the Operations Manager for 27 years, has worked for GSWM for 43 years and is experienced in all waste management systems and operations.

**Robert Pritchard, Controller/Office Manager**

Robert is in charge of financial accounting and manages the accounting, personnel and customer services staff. He assists in franchise negotiations and contracts, manages accounts receivable/payable programs, and our benefit program. Robert is a Certified Public Accountant and worked in a public accounting firm after graduating from CSU, Stanislaus in 1981. He has had 31 years of experience in corporate accounting and has been with GSWM for 28 years.

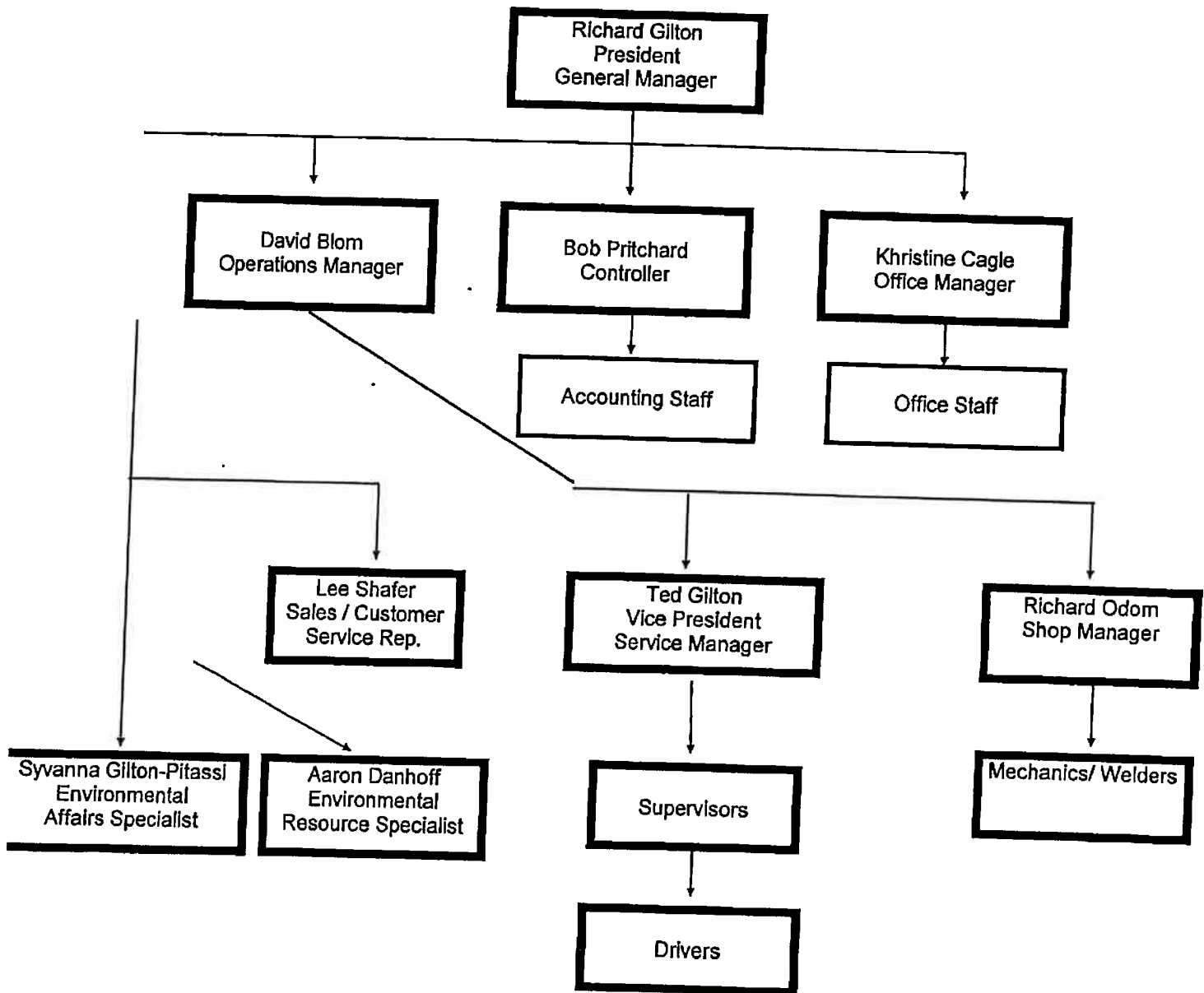
**Ted Gilton, Vice President/Residential Services Manager**

Ted manages the collection and transfer of all residential wastes. He oversees transportation and equipment for seven cities and three counties. Ted has developed his experience by working for GSWM for over 36 years and has held many positions in the company. He currently handles residential and commercial routing, long haul, waste transfer, and manages personnel attached to these operations.

**Richard Odom, Shop Manager**

Richard is responsible for the maintenance and repairs of all GRR vehicles and equipment. GRR equipment includes front, side, and rear loaders, tractor trailers, roll-off trucks, heavy loading equipment, a tub grinder, screener, and service vehicles. He also manages the company's welding department. Richard has been with the Company for 28 years and currently supervises approximately 25 employees. He has oversight for fabrication, equipment purchases, parts, repair stock, and the Company's B.I.T. program.

## Organizational Chart



### STATEMENT OF SUBCONTRACTORS

The Bidder shall list the name and address of each subcontractor to whom the Bidder proposes to subcontract portions of the work, as required by the provisions in "Designation of Subcontractors" in Section 1-2.

WRITE IN "NONE" IF NO SUBCONTRACTORS WILL BE USED  
AND SIGN.

| Work to be Performed by Subcontractor | Name and Address of Subcontractor | Dollar Value of Contract |
|---------------------------------------|-----------------------------------|--------------------------|
|                                       |                                   |                          |
|                                       |                                   |                          |
|                                       |                                   |                          |
|                                       | None                              |                          |
|                                       |                                   |                          |
|                                       |                                   |                          |
|                                       |                                   |                          |
|                                       |                                   |                          |
|                                       |                                   |                          |
|                                       |                                   |                          |
|                                       |                                   |                          |
|                                       |                                   |                          |

NAME OF BIDDER:

Richard Gilten  
(Please Print)

SIGNATURE OF BIDDER:



**SIGNATURE PAGE**

Name of Contractor: Gilten Solid Waste Management, Inc.

Address: 755 South Yosemite, Ave Oakdale, CA

Telephone: (209) 527-3781

E-mail Address: aarand@gilten.com

Type of Business      ☐ Individual doing business under own name  
                                 ☐ Individual doing business using contractor name  
                                 ☒ Corporation  
                                 ☐ Partnership

Richard Gilten / President, Gen. Manager  
Type or Print Name and Title

  
Signature

## NON-COLLUSION AFFIDAVIT

(California Public Contract Code Section 7106)

In accordance with California Public Contract Code §7106,

The undersigned declares:

I am the President of Gilton Solid Waste the party making the foregoing proposal. The proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The proposal is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham proposal. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham proposal, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other bidder. All statements contained in the proposal are true. The bidder has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, proposal depository, or to any member or agent thereof, to effectuate a collusive or sham proposal, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 6/29/16 [date], at Oakdale [city], California [state].

x

A handwritten signature in blue ink, appearing to be "RLA", is written over a horizontal line.



***Gilton Solid Waste Management, Inc.***  
***Response to Request for Proposals***  
***City of Hughson***  
***Street Sweeping Services***

---

**Client & References List**

**Gilton Street Sweeping Service**

**City of Riverbank**

Kathleen Cleek, Senior Management Analyst  
209-863-7120

**City of Escalon**

Tammy Alcantar, Finance Director  
209-691-7421

**City of Gustine**

Sean Scully, City Manager  
209-854-6471

**City of Oakdale**

Jeff Gravel, Public Works Superintendent  
209-845-3618

**City of Livingston**

Humberto Molina, Public Works Director  
209-394-8044

Please contact the any of the above representatives regarding Gilton Solid Waste Management, Inc. and our commitment to high quality, professional street sweeping services.

| Item No.  | Quantity/Units  | Description                         | Unit Price            | Extended Price                                      |
|-----------|---|-------------------------------------|-----------------------|---|
| 1.        | curb miles/year<br><i>39.5 mi X 26 weeks</i><br><i>(1,027 mi)</i> | Scheduled Street Sweeping Service   | \$ <i>18.50</i> /mi.  | (unit x # curbed miles)<br>\$ <i>18,999.59</i> /yr. |
| 2.        | Uncurbed miles/year<br><i>5.5 X 26</i><br><i>(143 mi)</i>         | Scheduled Street Sweeping Service   | \$ <i>18.50</i> /mi   | \$ <i>2,645.59</i> /yr.                             |
| 3.        | 20 hours/year   | Unscheduled Street Sweeping Service | \$ <i>90.00</i> /hr.  | \$ <i>1,800.00</i> /yr.                             |
| 4.        | 20 hours/year   | Emergency Street Sweeping Service   | \$ <i>125.00</i> /hr. | \$ <i>2,500.00</i> /yr.                             |
| Base Bid: |   |                                     |                       | \$ <i>25,945.00</i>                                 |

BASE PROPOSAL AMOUNT IN WORDS \_\_\_\_\_

*Twenty Five Thousand Nine Hundred and Forty-Five Dollars*

Curb miles and hours are annual estimates only. The proposal will be evaluated against the Contractors total extended price.

Payment will be made for actual curb and uncurbed miles swept and actual hours of unscheduled and emergency sweeping service.

The project may be awarded based solely on the base bid, the base bid and any combination of the two bid alternatives at the sole discretion of the City of Hughson.



## **CITY COUNCIL AGENDA ITEM NO. 3.6**

### **SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Adopt Resolution No. 2020-25, Accepting the Public Improvements for the Euclid South Subdivision  
**Presented By:** Lea C. Simvoulakis, Community Development Director  
**Approved:** Merry Mayhew, City Manager

---

#### **Staff Recommendation:**

Adopt Resolution No. 2020-25, accepting the public improvements for the Euclid South Subdivision.

#### **Background:**

On January 8, 2007, the Hughson City Council adopted Ordinance No. 06-15 for the Vesting Tentative Subdivision Map No. 06-15 and the Development Agreement between the City of Hughson and Florsheim Homes for the development known as Euclid South. Euclid South is a 69-unit single-family subdivision located on Euclid Avenue, approximately 625 feet south of Hatch Road. On November 27, 2017, the City Council amended this Development Agreement and renewed the Agreement and Vesting Tentative Map approval until November 21, 2021. The Final Vesting Tentative Map was approved by the City Council on March 9, 2020. As part of this subdivision, the developer (Florsheim Homes) offered for dedication to the public for public use, all public utility easements, all street right-of-ways (Drives, Ways, Places, Lanes, and Courts), and all other dedications as shown on the exterior boundary of the land being divided on the Final Map. The public utility easements and all street right-of-ways were designed in accordance with the requirements of the City of Hughson. At this time, the developer has requested City acceptance of these public improvements.

#### **Discussion:**

Upon final acceptance by the City of the public improvements, and after the lapse of 35 days from the filing of this Notice of Completion, the developer will furnish the City with a warranty bond in the amount of 10% of the improvement costs to guarantee the public improvements for a period of one year. This warranty bond will protect the City against any defective work or labor done, or defective materials furnished, or adverse effects to any portion of adjacent properties in the construction of the public improvements. Any defective construction of the improvements will be repaired within one year of acceptance.

Since construction, the City has inspected all the public improvements and has determined that they have been properly constructed per the Conditions of Approval, standard specifications, and all design expectations. At this time, City staff recommends acceptance of these improvements. The developer has agreed to remedy any defects in the improvements arising from faulty or defective construction of said improvements that occur within one year of this acceptance.

**Fiscal Impact:**

The developer will furnish the City with a warranty bond in the amount of 10% of the improvement costs to guarantee the public improvements for a period of one year following this acceptance against any defective work or labor done, or defective materials furnished, or adverse effect to any portion of adjacent properties in the construction of these improvements. Additionally, as a Condition of Approval, the developer agreed to incur all expenses of such repairs that exceed the 10% bond.

**CITY OF HUGHSON**  
**CITY COUNCIL**  
**RESOLUTION NO. 2020-25**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUGHSON ACCEPTING  
THE PUBLIC IMPROVEMENTS FOR THE EUCLID SOUTH SUBDIVISION**

**WHEREAS**, the City Council of the City of Hughson seeks to provide for the public good through the installation of public improvements; and

**WHEREAS**, at its regularly scheduled meeting on January 8, 2007, the Hughson City Council adopted Ordinance No. 06-15 approving a Vesting Tentative Subdivision Map and Development Agreement between the City of Hughson and Florsheim Homes for the development known as Euclid South for 69 single-family homes; and

**WHEREAS**, on November 27, 2017, the City Council amended the Development Agreement and extended the term until November 21, 2021; and

**WHEREAS**, the developers of the Euclid South Subdivision have offered public improvements offered for dedication to the public for public use, all public utility easements, all street right-of-ways (drives, Ways, Places, Lanes, and courts), and all other dedications as shown on the exterior boundary of the land being divided on the Final Map approved by the City Council on March 9, 2020; and

**WHEREAS**, the City's inspection consultants have determined the public improvements have been properly made and have recommended acceptance.

**NOW THEREFORE BE IT RESOLVED** that the Hughson City Council hereby accepts the dedication of the public improvements identified in the approved public improvement plans, consistent with the project conditions of approval and Development Agreement for the Euclid South Subdivision.

**PASSED AND ADOPTED** by the City Council of the City of Hughson at its regular meeting held on this 8<sup>th</sup> day of June 2020 by the following roll call votes:

**AYES:**

**NOES:**

**ABSTENTIONS:**

**ABSENT:**

---

**Jeramy Young, Mayor**

---

**ASHTON GOSE, Deputy City Clerk**



## **CITY COUNCIL AGENDA ITEM NO. 3.7**

### **SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Adopt Resolution No. 2020-26, Accepting the Santa Fe Overlay Project (Phase 2) and Authorizing the City Clerk to File a Notice of Completion  
**Presented By:** Lea C. Simvoulakis, Community Development Director  
**Approved:** Merry Mayhew, City Manager

---

#### **Staff Recommendation:**

Adopt Resolution No. 2020-26, accepting the Santa Fe Overlay Project (Phase 2) and authorizing the City Clerk to file a Notice of Completion (NOC).

#### **Background:**

At its regularly scheduled meeting on February 10, 2020, the Hughson City Council awarded a contract for the Santa Fe Overlay Project (Phase 2) to the lowest responsible bidder, Tom Mayo Construction, Inc., in the amount of \$325,955. The City Council authorized a 10% construction contingency and a 10% set-aside for construction management. The project was funded through Measure L funds, trench cut fees, and SB1 funds.

#### **Discussion:**

The Santa Fe Overlay Project (Phase 2) consisted of widening Santa Fe Avenue to 28 feet and grinding/milling the existing roadway 0.15" deep and applying an overlay of asphalt concrete, Type A (1/4" design mix) at a minimum depth of 3" between Whitmore Avenue and Seventh Street (approximately .5 miles).

Project construction commenced on May 4, 2020 and the majority of the work was completed by May 11, 2020. Minor corrections were completed on May 29, 2020. The City has no outstanding items associated with the project and the City Engineer has inspected the work and found it to be complete and in compliance with the scope of specifications of the project. City staff recommends that the City Council accept the project and direct staff to file the Notice of Completion with the Stanislaus County Clerk-Recorder to begin the 30-day lien period wherein sub-contractors and suppliers have an opportunity to file a lien for non-payment by the contractor. If no liens are filed within the 30-day period, the City will release the 5% retention to be paid to the contractor.

**Fiscal Impact:**

The project bid was for \$325,955 and there was one change order for \$5,821.59. While the construction budget is over the approved bid, the engineering cost and construction management are approximately \$20,000, which still puts the project under the expected \$391,147 budgeted for the project. The project will be funded with Measure L funds, trench cut fees, and SB1 funds.

**CITY OF HUGHSON**  
**CITY COUNCIL**  
**RESOLUTION NO. 2020-26**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUGHSON ACCEPTING  
THE SANTA FE OVERLAY PROJECT (PHASE 2) AND AUTHORIZING THE CITY  
CLERK TO FILE A NOTICE OF COMPLETION**

**WHEREAS**, at its regularly scheduled meeting of February 10, 2020, the Hughson City Council awarded a contract for the Santa Fe Overlay Project (Phase 2) to the lowest responsible bidder, Tom Mayo Construction Inc., in the amount of \$325,955. The City Council authorized a 10% construction contingency and a 10% set-aside for construction management; and

**WHEREAS**, the Santa Fe Overlay Project (Phase 2) consisted of widening Santa Fe Avenue to 28 feet and grinding/milling the existing roadway 0.15" deep and applying an overlay of asphalt concrete, type A (1/4" design mix) at a depth of 3"; and

**WHEREAS**, the work performed by Tom Mayo Construction, Inc. has been inspected and found to be complete and in compliance with the scope and specifications of the project.

**NOW THEREFORE BE IT RESOLVED** that the Hughson City Council hereby accepts the Santa Fe Overlay Project (Phase 2) and authorizes the City Clerk to File a Notice of Completion with the Stanislaus County Clerk-Recorder.

**PASSED AND ADOPTED** by the City Council of the City of Hughson at its regular meeting held on this 8<sup>th</sup> day of June by the following roll call votes:

**AYES:**

**NOES:**

**ABSTENTIONS:**

**ABSENT:**

---

**Jeramy Young, Mayor**

---

**ASHTON GOSE, Deputy City Clerk**



**Recording Requested By:**

CITY OF HUGHSON

**When Recorded Mail to:**

City of Hughson  
 City Clerk  
 P.O. Box 9  
 7018 Pine Street  
 Hughson, CA 95326

**NOTICE OF COMPLETION****NOTICE IS HEREBY GIVEN THAT:**

1. The undersigned is **OWNER** or Agent of the **OWNER** of the interest or estate stated below in the property hereinafter described.

2. The **FULL NAME** of the **OWNER** is City of Hughson

3. The **FULL ADDRESS** of the **OWNER** is P.O. Box 9, 7018 Pine Street, Hughson, CA 95326

4. The **NATURE OF THE INTEREST** or **ESTATE** of the undersigned is: In Fee.

(if other than fee, Strike "In Fee" and insert, for example, "Purchaser under contract of purchase," or "Lessee.")

5. The **FULL NAMES** and **FULL ADDRESSES** of **ALL PERSONS**, if any, **WHO HOLD SUCH INTEREST** or **ESTATE** with the undersigned as **JOINT TENANTS IN COMMON** are:

Names

Addresses

6. The full names and full addresses of the predecessors in interest of the undersigned if the property was transferred subsequent to the commencement of the work of improvement herein referred to:

Names

Addresses

7. A work of improvement on the property hereinafter described was **COMPLETED** May 29, 2020

8. The work of improvement completed is described as follows: Santa Fe Avenue Pavement Improvement Project, Phase II  
Grinding and repaving of the asphalt roadway, minor widening and shoulder backing.

9. The **NAME OF THE ORIGINAL CONTRACTOR**, if any, for such work of improvement is: Tom Mayo Construction, Inc.

10. The street address of said property is: Santa Fe Avenue from Whitmore Avenue to 7th Street

11. The property on which said work of improvement was completed is in the City of Hughson County of Stanislaus, State of California, and is described as follows:

Santa Fe Avenue from Whitmore Avenue to 7th Street

Date

Merry Mayhew, City Manager

Verification for **INDIVIDUAL** owner

I, the undersigned, declare under penalty of perjury under the laws of the State of California that I am the owner of the aforesaid interest or estate in the property described in the above notice; that I have said notice, that I know and understand the contents thereof, and that the facts stated therein are true and correct.

NA

NA

Date and Place

Signature of Owner named in paragraph 2

Verification for **NON-INDIVIDUAL** owner: I, the undersigned, declare under penalty of perjury under the laws of the State of California that I am the **City Manager** of the aforesaid interest or estate in the property described in the above notice; that I have read the said notice, that I know and understand the contents thereof, and that the facts stated therein are true and correct.

Date and Place

Merry Mayhew City Manager

**SUBSCRIBED AND SWORN TO** before me on

Ashton Gose, City Clerk



## **CITY COUNCIL AGENDA ITEM NO. 3.8**

### **SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Consideration to Adopt Resolution No. 2020-27,  
Authorizing the City Manager to Execute an Annual  
Funding Agreement with the City of Turlock/Stanislaus  
County HOME Consortium Designating the City of  
Hughson as a Subrecipient of HOME Investment  
Partnership Program Funds for Fiscal Year 2020-2021  
**Enclosure:** Fiscal Year 2020-2021 HOME Investment Partnerships  
Program Subrecipient Agreement  
**Presented By:** Lea C. Simvoulakis, Community Development Director  
**Approved By:** Merry Mayhew, City Manager

---

#### **Staff Recommendations:**

1. Adopt Resolution 2020-27, Approving the 2020-2021 Subrecipient Agreement for the HOME Investment Partnership Program Funds through the City of Turlock/Stanislaus County HOME Consortium.
2. Authorize the City Manager to sign the Agreement.

#### **Background:**

At the April 27, 2020 Hughson City Council meeting, the City Council approved a resolution of concurrence and support of the Urban County's Consolidated Plan, which encompasses the HOME program. The City of Hughson joined the HOME Consortium in 2008 to be eligible for HOME Investment Partnership funds to help develop affordable housing, help low-income first time homebuyers with down payment assistance, and to offer owner-occupied housing rehabilitation assistance to members of the community. The City left the HOME Consortium in 2014 due to an inability to administer the program funds. The City has elected to rejoin the HOME Consortium as a member City and administer a home improvement loan program.

The City of Turlock is the "lead entity" for the HOME Consortium on behalf of Stanislaus County. During the five-year Consolidated Plan period, the HOME Consortium expects to receive \$1,363,238 in HOME funding, with a five-year total of \$6,816,190. The City of Hughson will be awarded \$151,972.00 this fiscal year for HOME-eligible projects and \$2,500 in administration allowances.

In order to be eligible for HOME-funded housing activities, the City is required to enter into an agreement with the City of Turlock/Stanislaus County HOME

Consortium to be designated as a subrecipient of HOME funds on an annual basis. The agreement attached to the staff report is the required agreement for the 2020-2021 fiscal year.

**Discussion:**

The HOME program provides Federal funds for the development and rehabilitation of affordable rental and ownership housing for low- and moderate-income households.

The City will offer a Housing Rehabilitation program with HOME funds. This program will be for the repair of homes within the City and assist income eligible clients including the elderly, handicapped and other special needs to improve their housing conditions. This loan program will help homeowners and investors preserve and upgrade homes for homeowners in need with a low interest loan. Homeowners will have to live within the city limits of Hughson and must have an income that is 80% or below the median for Stanislaus County. If it is investor owned, tenants must live in a unit within the city limits of Hughson and have an income at 80% or below the median of Stanislaus County. The investor must show an ability to repay the loan while maintaining affordable rent. The work being done must be for essential repairs (electrical, plumbing, roofing, paint, etc.).

**Fiscal Impact:**

The Housing Rehabilitation loans will come from the specific pool of funding allocated to the City through the HOME Consortium (\$151,972). No money will come from the City's General Fund. Loan amounts will be determined by the scope of the work to be performed. There will be a 0% interest rate for fully amortized loans and a 2% interest rate for deferred loans. A deferred payment plan will be available for homeowners with very low income. The City has a two-year expenditure deadline. Since this will be Hughson's first year back in the Consortium in over five years, it will take some time for staff to figure out the logistics of administering the program. The goal is to get this program started and up and running in the 2020-2021 year so that the funds can be used by the end of the two-year deadline.

**CITY OF HUGHSON**  
**CITY COUNCIL**  
**RESOLUTION 2020-27**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUGHSON  
AUTHORIZING THE CITY MANAGER TO EXECUTE AN ANNUAL FUNDING  
AGREEMENT WITH THE CITY OF TURLOCK/STANISLAUS COUNTY HOME  
CONSORTIUM DESIGNATING THE CITY OF HUGHSON AS A SUBRECIPIENT  
OF HOME INVESTMENT PARTNERSHIP PROGRAM FUNDS FOR FISCAL  
YEAR 2020-2021**

**WHEREAS**, the City of Hughson has rejoined as a member of the City of Turlock/Stanislaus County HOME Consortium along with the other Urban County cities of Ceres, Newman, Oakdale, Patterson, and Waterford; and

**WHEREAS**, the City of Turlock is the designated lead agency who administers and distributes awarded funds to its members for the purpose of providing local HOME-eligible housing activities and,

**WHEREAS**, the City of Hughson is required to enter into an annual agreement with the City of Turlock/Stanislaus County HOME Consortium to be designated as a subrecipient of HOME funds on an annual basis; and

**WHEREAS**, the City of Hughson's allocation of HOME funds is \$151,972.00 with \$2,500 of these funds available for administrative purposes for the 2020-2021 Fiscal Year.

**NOW, THEREFORE, BE IT RESOLVED**, that the City Council of the City of Hughson authorizes the City Manager to execute an Annual Funding agreement with the City of Turlock/Stanislaus County HOME Consortium designating the City of Hughson as a subrecipient of HOME Investment Partnership Program Funds for Fiscal Year 2020-2021.

**PASSED AND ADOPTED** by the City Council of the City of Hughson at its regularly scheduled meeting on this 8<sup>th</sup> day of June 2020, by the following vote:

**AYES:**

**NOES:**

**ABSTENTIONS:**

**ABSENT:**

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**JERAMY YOUNG, Mayor**

**ATTEST:**

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**ASHTON GOSE, Deputy City Clerk**



**ANNUAL FUNDING AGREEMENT  
DESIGNATING CITY OF HUGHSON AS A SUBRECIPIENT OF  
HOME INVESTMENT PARTNERSHIPS PROGRAM FUNDS THROUGH THE  
CITY OF TURLOCK/STANISLAUS COUNTY HOME CONSORTIUM  
FISCAL YEAR 2020-2021**

**THIS SUBRECIPIENT AGREEMENT** is made and entered into this 26th day of May 2020, by and between the **CITY OF TURLOCK**, hereafter called "TURLOCK" and the CITY OF CITY OF HUGHSON, hereinafter called "MEMBER".

**W I T N E S S E T H:**

**WHEREAS**, on May 28, 2019, TURLOCK and Stanislaus County ("County"), acting on behalf of the Stanislaus Urban County, entered into an Inter-Governmental Agreement Renewing the Turlock/Stanislaus County HOME Consortium ("Cooperative Agreement") for a period of three years, with the effective dates of October 1, 2020 through September 30, 2023; to qualify for HOME Investment Partnerships Program ("HOME") funds funded through the United States Department of Housing and Urban Development ("HUD"); and

**WHEREAS**, members of the Turlock/Stanislaus County HOME Consortium ("Consortium") include the City of Turlock and the Stanislaus Urban County, which includes the unincorporated areas of Stanislaus County and the Cities of Ceres, Hughson, Newman, Oakdale, Patterson, Riverbank, and Waterford (collectively "Consortium Members"); and

**WHEREAS**, TURLOCK serves as the lead agency of the Consortium, designated by HUD as the HOME Program Participating Jurisdiction; and

**WHEREAS**, TURLOCK shall disburse HOME funds for HOME-eligible activities in the Consortium Members' localities; and

**WHEREAS**, MEMBER must be designated a HOME Subrecipient in order to implement activities using HOME funds; and

**WHEREAS**, TURLOCK and MEMBER desire to enter into this Subrecipient Agreement ("Agreement") for the purpose of designating the MEMBER as a HOME subrecipient;

**NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:**

I. Consortium Allocation, Administration Funds, Program Activities, and Agreement Term

1. Upon execution of this Agreement, MEMBER shall be designated as a HOME Subrecipient for 2020-2021 Fiscal Year funds for the purpose of administering HOME-eligible activities, as further defined in subparagraph 2. below, in MEMBER'S locality, the funds for which shall be disbursed by TURLOCK.
2. The maximum amount of Fiscal Year 2020-2021 HOME funds covered by this Agreement shall be One Hundred Fifty-Four Thousand Four Hundred Seventy-Two Dollars

(\$154,472), of which One Hundred Fifty-One Thousand Nine Hundred Seventy-Two Dollars (\$151,972) shall be available for Homeowner Rehabilitation, Homebuyer, and Rental Development Program Activities as defined in subparagraphs a., b. and c., Two Thousand Five Hundred Dollars (\$2,500) shall be available for Program Administration. This funding will be disbursed on a reimbursement basis upon receipt of required program forms. In the event that HUD reduces the HOME allocation to the Consortium, MEMBER'S allocation may be reduced. Should MEMBER be unable to draw down all or a portion of its allocated administration funds by June 30, 2021, the remaining HOME funds will revert back to TURLOCK pursuant to the Re-Allocation Process described in Section I.6 below.

- a. Homeowner Rehabilitation funding will be provided for repairs and rehabilitation of owner-occupied units of income eligible person and families who meet the criteria of the HOME Program.
  - b. Homebuyer Program funding will be provided for down payment assistance for income eligible families and persons who meet the criteria of the HOME Program.
  - c. Rental Development activities will be used to acquire and or rehabilitate safe and affordable rental housing units of income eligible person and families who meet the criteria of the HOME Program.
3. This Agreement shall be in effect until June 30, 2021, or until all Fiscal Year 2020-2021 HOME funds are disbursed to MEMBER or for the duration of any affordability period required pursuant to 24 CFR Part 92 in conjunction with a project financed with Fiscal Year 2020-2021 HOME funds, whichever is longer.
4. This Agreement may not be changed or amended except by a written amendment signed by both MEMBER and.
5. MEMBER acknowledges that there are timeliness deadlines in the commitment and expenditure of the funds in accordance with the HOME Program regulations. Failure to commit and expend the funds in a timely manner as set forth in this Agreement and as required under the 24 CFR Part 92 will result in funds being re-allocated to other Consortium activities.
  - a. MEMBER must commit funds under this Agreement to HOME-eligible projects within twelve (12) months ("Commitment Date") of the effective date of this Agreement in accordance with the definition of "commitment" as found in 24 CFR Part 92.2.
  - b. MEMBER must expend funds committed through this Agreement within four (4) years of the Commitment Date in accordance with 24 CFR 92.205(e)(2) and the definition of "project completion" as found in 24 CFR Part 92.2.
6. **Consortium Funding Re-allocation Process** – At the end of Fiscal Year 2020-2021, HOME funds not committed by MEMBER by the Commitment Date shall be re-allocated to TURLOCK for use on other HOME-eligible activities in the Consortium, through the following process administered by TURLOCK and as outlined in the Consortium's *HOME Program Policies and Procedures Manual*.
  - a. Funding shall be available on a first-come-first-served basis to Consortium Members, with first priority given to Consortium Member jurisdictions who fully committed their annual funding allocation during Fiscal Year 2020-2021 and who demonstrate an active pipeline of homeowner rehabilitation and/or homebuyer projects which will be completed within six (6) months.
  - b. Re-allocated funding requests shall be made by Member Jurisdiction(s) no earlier than

July 15, 2021 and no later than September 30, 2021.

- c. Funding not committed through the Re-allocation Process by September 30, 2021 shall be prioritized for development activities.

## II. Activities and Program Delivery

1. As a subrecipient, MEMBER is responsible for identifying, selecting and implementing HOME-eligible activities within its jurisdiction. This includes contracting for the performance of these activities with other entities for HOME-eligible activities. In its role as subrecipient, MEMBER is responsible for fulfilling all the requirements of the HOME Program and for ensuring that HOME requirements are fulfilled by its contractors, as applicable.
2. MEMBER is responsible for managing Fiscal Year 2020-2021 HOME funds in a manner satisfactory to TURLOCK and consistent with the standards, policies and procedures required as a condition of providing these funds under 24 CFR Part 92 and as outlined in the Consortium's *HOME Program Policies and Procedures Manual*.
3. **Exhibit A** attached hereto and incorporated herein contains MEMBER's projected HOME activities to be undertaken during the 2020-2021 Fiscal Year, including the number of units to be assisted through Housing Rehabilitation Activities, the number of units to be assisted through Homebuyer Activities, the number of units to be assisted through Rental Development, the projected budget for each activity, tasks to be performed, projected schedule for commitment of funding, projected schedule for completing the activity, and proposed sources of match.
4. MEMBER is responsible for preparing the environmental review record for any project assisted through this Agreement in compliance with the National Environmental Protection Act and 24 CFR 58 and the California Environmental Quality Act. The environmental review record shall include, but not be limited to, all documents which have been prepared, circulated, posted, or published to reflect an environmental determination made by the City. The MEMBER's HOME administration funds may be used to cover costs associated with environmental review compliance. A copy of any such review shall be sent to TURLOCK for TURLOCK's review and approval. Turlock may require changes or modifications by Member prior to providing approval and formal signature as Responsible Entity, prior to MEMBER entering into a commitment of HOME funds for the subject activity.
5. MEMBER agrees that prior to project commitment, it shall conduct an underwriting and subsidy layering analysis for each HOME-funded project proposed to be funded with Fiscal Year 2020-2021 HOME funds as required by the standards, policies and procedures outlined in the Consortium's *HOME Program Policies and Procedures Manual* and if applicable by activity type.
6. MEMBER agrees that any HOME-eligible activities funded through this Agreement shall be confirmed with a written contract that contains the provisions specified in 24 CFR Part 92.504. In addition, any contract made between MEMBER and another entity for the use of HOME funds pursuant to this Agreement shall comply with all applicable HOME regulations and shall be enforced by deed restriction where applicable. The form of the contract and deed restriction shall be approved by TURLOCK in advance of its execution. A copy of all contracts for HOME-funded activities shall be made available

to TURLOCK upon request.

7. MEMBER agrees to abide by uniform administrative requirements stated in 24 CFR Part 92.505, specifically MEMBER agrees to comply with the requirements of 2 CFR Part 200 formerly Office of Management and Budget (OMB) Circular No. A-87 "Cost Principles for States, Local, and Indian Tribal Governments", and 24 CFR Part 85 (the "common rule"), "Administrative Requirements for Grants and Cooperative Agreements to State, Local and Federally Recognized Indian Tribal Governments". The requirements of 2 CFR part 200 formerly OMB Circular No. A-122 and requirements of 24 CFR part 84 apply to subrecipients receiving HOME funds that are nonprofit organizations and that are not a governmental subrecipient:
8. To comply with the HOME regulation at 24 CFR Part 92.502(c)(2) that funds be spent within 15 days of disbursement, MEMBER shall request reimbursement of expenditures from TURLOCK. The amount of the reimbursement request may not exceed the amount needed by MEMBER and MEMBER shall expend program income before requesting a reimbursement from TURLOCK.
9. MEMBER agrees that program income and assets will be retained by MEMBER and must be accounted for and kept separately from other funds in compliance with HOME regulations. MEMBER shall report on program income in compliance with the policies and procedures outlined in the Consortium's *HOME Program Policies and Procedures Manual*.
10. Loan repayments, interest or other return on MEMBER's investments of HOME funds disbursed through this contract shall be collected by MEMBER and MEMBER may retain payments for future activities funded with HOME funds in accordance with HOME regulations. However, at the end of the fiscal year, all program income must be returned to Turlock for accounting and activity completion purposes.
11. Upon expiration of this Agreement, MEMBER must transfer to TURLOCK any HOME funds on hand at the time of expiration and any accounts receivable attributable to the use of HOME funds.
12. TURLOCK and MEMBER will cooperate in the preparation of, and will furnish any and all information required for reports to be prepared as may be required by HOME regulations including but not limited to the Consolidated Plan, the annual performance report and any quarterly reports required by TURLOCK.
13. MEMBER shall ensure that written agreements with for-profit owners or developers, nonprofit owners or developers or sponsors, subrecipients, homeowners, homebuyers, tenants (or landlords) receiving tenant-based rental assistance, or contractors are prepared in accordance with 24 CFR 92.504. Such agreements must state if repayment of HOME funds or recaptured HOME funds must be remitted to TURLOCK or retained by MEMBER for additional eligible activities.
14. TURLOCK and MEMBER shall maintain, on a current basis, complete records, including, but not limited to, contracts, books of original entry, source documents supporting accounting transactions, eligibility and service records as may be applicable, a general ledger, personnel and payroll records, canceled checks and related documents and records to assure proper accounting of funds and performance of this contract in accordance with HOME regulations. To the extent permitted by law,



TURLOCK and MEMBER will also permit access to all books, accounts or records of any kind for purposes of audit or investigation, in order to ascertain compliance with the provisions of this contract. Records shall be maintained for a period of five (5) years or in accordance with 24 CFR Part 92.508(c), whichever is longer.

### III. Administrative and Financial Requirements

1. MEMBER shall comply with 24 CFR Parts 84.20 and 85.20 and Treasury Circular 1075 and comply with the following financial management standards.
  - a. *Accounting Standards* - MEMBER agrees to comply with 24 CFR 84.21–28 and agrees to adhere to the accounting principles and procedures required therein, utilize adequate internal controls, and maintain necessary source documentation for all costs incurred.
  - b. *Auditing* - MEMBER shall retain all books, records, and other documents to this contract for five (5) years after reconveyance and affordability period, whichever is longer. The U.S. Comptroller General and his representatives are vested with the authority to:
    - i. Examine any records of MEMBER or any of its subcontractors, or any State or local agency administering such contract, that directly pertain to, and involve transactions relating to, the contract or any subcontract; and
    - ii. Interview any officer or employee of MEMBER or any of its subcontractors, or of any State or local government agency administering the contract, regarding such transactions.
    - iii. Additionally, HOME provides authority for any representatives of an appropriate Inspector General to examine any records or interview any employee or officers of MEMBER or its subcontractors working on this contract. MEMBER is advised that any representatives of an appropriate Inspector General appointed have the authority to examine any record and interview any employee or officer of the contractor, its subcontractors, or other firms working on this contract. This right of examination shall also include inspection at all reasonable times of MEMBER plans, or parts of them, engaged in performing the agreement. Any deficiencies noted in audit reports must be fully cleared by TURLOCK within thirty (30) days after receipt by MEMBER. TURLOCK shall have, in addition to any other audit or inspection right in this Agreement, all the audit and inspection rights contained in this section, including the right to monitor MEMBER for its performance under the terms and provisions of this Agreement and MEMBER's use of Fiscal Year 2020-2021 HOME funds.
2. *Close-outs* - MEMBER's obligation to TURLOCK shall not end until all close-out requirements are completed. Activities during this close-out period shall include, but are not limited to: making final payments, disposing of program assets (including the return of all unused materials, equipment, unspent cash advances, program income balances, and accounts receivable to TURLOCK), and determining the custodianship of records. Notwithstanding the foregoing, the terms of this Agreement shall remain in effect during any period that MEMBER has control over HOME funds.
3. *Compliance* - MEMBER shall comply with current HUD policy concerning uniform

administrative requirements and shall maintain inventory records of all non-expendable personal property as defined by such policy as may be procured with funds provided herein. All program assets (unexpended program income, property, equipment, etc.) shall revert to the TURLOCK upon termination of this agreement. (Refer to 24 CFR Part 85).

4. *Procurement Standards* - Unless specified otherwise within this agreement, MEMBER shall procure all materials, property, or services in accordance with the requirements of 24 CFR 84.40–48.
5. *Fees* – MEMBER may not charge servicing, origination, or other fees for the costs of administering the HOME program, except as permitted by § 92.214(b)(1).
6. *Land Covenants* - This Agreement is subject to the requirements of Title VI of the Civil Rights Act of 1964 (P. L. 88-352). In regard to the sale, lease, or other transfer of land acquired, cleared or improved with assistance provided under this Agreement, MEMBER shall cause or require a covenant running with the land to be inserted in the deed or lease for such transfer, prohibiting discrimination as herein defined, in the sale, lease or rental, or in the use or occupancy of such land, or in any improvements erected or to be erected thereon, providing that the MEMBER and the United States are beneficiaries of and entitled to enforce such covenants. MEMBER, in undertaking its obligation to carry out the program assisted hereunder, agrees to take such measures as are necessary to enforce such covenant, and will not itself so discriminate.

#### IV. Other Federal Requirements

1. The Federal requirements set forth in 24 CFR Part 5, subpart A, are applicable to MEMBER, inclusive of: nondiscrimination and equal opportunity; disclosure requirements; debarred, suspended or ineligible contractors; and drug-free workplace.
2. MEMBER shall carry out each HOME activity in compliance with all Federal laws and regulations described in subpart H of the HOME Rule at 24 CFR Part 92, with the exception that TURLOCK shall review and approve the environmental review before HOME funds are committed, as noted in Section II.4 above. These requirements are further specified as follows:
  - a. *Affirmative Marketing* – MEMBER must follow the Consortium’s affirmative marketing procedures and requirements for rental and homebuyer projects containing five (5) or more HOME-assisted housing units. Affirmative marketing requirements and procedures also apply to all HOME-funded programs, including, but not limited to, tenant-based rental assistance and down-payment assistance programs. Affirmative marketing steps consist of actions to provide information and otherwise attract eligible persons in the housing market area to the available housing without regard to race, color, national origin, sex, religion, familial status, or disability. If a written agreement with a project owner permits the rental housing project to limit tenant eligibility or to have a tenant preference in accordance with §92.253(d)(3), the Consortium’s affirmative marketing procedures and requirements shall apply in the context of the limited/preferred tenant eligibility for the project.
  - b. *Affirmative Action - Approved Plan* - MEMBER agrees that it shall be committed to carry out pursuant to the applicable provisions of 24 CFR 92.351 the Affirmative Action Program in keeping with the principles as provided in President’s Executive Order

11246 of September 24, 1966.

- i. *Women and Minority-Owned Businesses (W/MBE)* - MEMBER will use its best efforts to afford small businesses, minority business enterprises, and women's business enterprises the maximum practicable opportunity to participate in the performance of this contract. As used in this contract, the terms "small business" means a business that meets the criteria set forth in section 3(a) of the Small Business Act, as amended (15 U.S.C. 632), and "minority and women's business enterprise" means a business at least fifty-one (51) percent owned and controlled by minority group members or women. For the purpose of this definition, "minority group members" are Afro-Americans, Spanish-speaking, Spanish surnamed or Spanish-heritage Americans, Asian-Americans, and American Indians. MEMBER may rely on written representations by businesses regarding their status as minority and female business enterprises in lieu of an independent investigation.
  - ii. *Equal Employment Opportunity and Affirmative Action (EEO/AA) Statement* - MEMBER, in all solicitations or advertisements for employees placed by or on behalf of MEMBERS, will state that it is an Equal Opportunity or Affirmative Action employer, in accordance with 24 CFR 5.105.
  - iii. Public notices, job vacancies should be published in minority publications whenever possible.
- c. *Displacement, Relocation, and Acquisition* – MEMBER shall ensure that it has taken all reasonable steps to minimize the displacement of persons (families, individuals, businesses, nonprofit organizations, and farms) as a result of a project assisted with HOME funds. To the extent feasible, residential tenants must be provided a reasonable opportunity to lease and occupy a suitable, decent, safe, sanitary, and affordable dwelling unit in the building/complex upon completion of the project. MEMBER shall adhere to each of the provisions of 24 CFR 92.353 with respect to a person (family individual, business, nonprofit organization, or farm, including any corporation, partnership or association) that moves from real property or moves personal property from real property, permanently, as a direct result of acquisition, rehabilitation, or demolition for a project assisted with HOME funds. Temporary relocation is required pursuant to 24 CFR 92.353(b) for residential tenants who will not be required to move permanently, but who must relocate temporarily for the project. The acquisition of real property for a project is subject to the URA and the requirements of 49 CFR Part 24, Subpart B.
- d. *Labor Standards* – MEMBER shall ensure that every contract for the construction (rehabilitation or new construction) of housing that includes twelve (12) or more units assisted with HOME funds must contain a provision requiring the payment of not less than the wages prevailing in the locality, as predetermined by the Secretary of Labor pursuant to the Davis-Bacon Act (40 U.S.C. 276a-276a-5), to all laborers and mechanics employed in the development of any part of the housing. Such contracts must also be subject to the overtime provisions, as applicable, of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-332). The HOME Program requires that all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part by and through the Federal Government shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code. Pursuant to

Reorganization Plan No. 14 and the Copeland Act, 40 U.S.C. 3145, the Department of Labor has issued regulations at 29 CFR parts 1, 3, and 5 to implement the Davis-Bacon and related Acts. Regulations in 29 CFR 5.5 instruct agencies concerning application of the standard Davis-Bacon contract clauses set forth in that section. The following standard Davis-Bacon contract clauses found in 29 CFR 5.5(a) are incorporated into this contract and any subcontracts for HOME-funded activities subject to the Labor Standards provisions of the Davis-Bacon Act.

- e. *Prevailing Wage* – MEMBER will comply with the minimum wage and maximum hourly provisions of the Fair Labor Standards Act, and applicable provisions of the Davis-Bacon Act and the Contract Work Hours Standards Act. Inquiries concerning the application of Davis-Bacon requirements to a particular federally assisted project should be directed to the Federal agency funding the project. The Secretary of Labor retains final coverage authority under Reorganization Plan Number 14.
- f. *Salaries* - The salaries paid under this contract shall be in accordance with the following provision of 2 CFR Part 200 formerly OMB Circular A-87 and 24 CFR Part 92.207 (a) (1) Eligible Administrative and Planning Costs.
- g. *General*. Compensation for personal services includes all remuneration, paid currently or accrued, for services rendered during the period of performance under the grant agreement, including but not necessarily limited to wages, salaries, and supplementary compensation and benefits. The costs of such compensation are allowable to the extent that total compensation for individual employees: (1) is reasonable for the service rendered, (2) follows an appointment made in accordance with State, Local, or Indian Tribal Government laws and rules and which meets Federal merit system or other requirements, where applicable. Compensation for employees engaged in federally assisted activities will be considered reasonable to the extent that it is consistent with that paid for similar work in other activities of the State, Local, or Indian Tribal Government. In cases where the kinds of employees required for the federally assisted activities are not found in the other activities of the State, Local, or Tribal Government, compensation will be considered reasonable to the extent that it is comparable to that paid for similar work in the labor market in which the employing government competes for the kind of employees involved. Compensation surveys providing data representative of the labor market involved will be an acceptable basis for evaluating reasonableness.
- h. MEMBER may, at its discretion, complete a salary comparability study within the intent of 2 CFR Part 200 formerly OMB Circular A-87.
- i. *“Section 3” Clause* – Compliance with the provisions of Section 3 of the HUD Act of 1968, as amended, and as implemented by the regulations set forth in 24 CFR 135, and all applicable rules and orders issued hereunder prior to the execution of this contract, shall be a condition of the Federal financial assistance provided under this contract and binding upon the TURLOCK. MEMBER certifies and agrees that no contractual or other disability exists that would prevent compliance with these requirements. MEMBER further agrees to comply with these “Section 3” requirements and to include the following language in all subcontracts executed under this agreement:
  - i. *“The work to be performed under this agreement is a project assisted under a program providing direct Federal financial assistance from HUD and is subject to*

*the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. 1701). Section 3 requires that to the greatest extent feasible opportunities for training and employment be given to low- and very low-income residents of the project area, and that agreements for work in connection with the project be awarded to business concerns that provide economic opportunities for low- and very low-income persons residing in the metropolitan area in which the project is located."*

- ii. MEMBER further agrees to ensure that opportunities for training and employment arising in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project are given to low- and very low-income persons residing within the metropolitan area in which the project is located; where feasible, priority should be given to low- and very low-income persons within the service area of the project or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs; and award contracts for work undertaken in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project to business concerns that provide economic opportunities for low- and very low-income persons; where feasible, priority should be given to business concerns that provide economic opportunities to low- and very low-income residents within the service area or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs.
- iii. MEMBER certifies and agrees that no contractual or other legal incapacity exists that would prevent compliance with these requirements.
- iv. MEMBER agrees to send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or understanding, if any, a notice advising said labor organization or worker's representative of its commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
- v. MEMBER will include this Section 3 clause in every subcontract and will take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the HUD. MEMBERS will not subcontract with any entity where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 135 and will not let any subcontract unless the entity has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.
- j. *Lead-based paint* - Housing assisted with HOME funds is subject to the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846), the Residential Lead-Based Paint Hazard Reduction Act of 1992 (42 U.S.C. 4851-4856), and implementing regulations at 24 CFR part 35, subparts A, B, J, K, M and R.
- k. *Conflict of Interest* - In the procurement of property and services by MEMBER and any subrecipients, the conflict of interest provisions in 24 CFR 85.36 and 24 CFR 84.42, respectively, apply. In all cases not governed by 24 CFR 85.36 and 24 CFR 84.42, the provisions of 24 CFR 92.356(b) through (f) apply. No member, officer, or

employee of TURLOCK or MEMBER or their designees or agents, including employees, agents, consultants, officers, or elected or appointed official of community and advisory agencies that assist MEMBER in developing the projects, who exercises any functions or responsibilities with respect to the program during his tenure or for one (1) year thereafter, shall have any interest, direct or indirect, in any contract or subcontract or the proceeds thereof for work to be performed in connection with the program assisted under the grant. MEMBER agrees to incorporate or cause to be incorporated in all its agreements with its designees or agents, and including the above described groups, and in all agreements, contracts and subcontracts for work to be performed in connection with the program assisted under the grant, including agreements with MEMBERS as defined in 24 CFR 85.36 and 24 CFR 84.42, respectively, apply. In all cases not governed by 24 CFR 85.36 and 24 CFR 84.42, the provisions of this section apply.

#### V. General Requirements

1. *Architectural Barriers Act of 1968* - The Architectural Barriers Act of 1968 U.S.C. 4151 is applicable to this agreement and requires that the design of any facility constructed with funds from this title comply with the "American Standard Specifications for Making Buildings and Facilities Accessible, and Usable by, the Physically Handicapped," Number A-117.1-19 as modified (42 CFR 101-17.703). It will require that the design of any building constructed or rehabilitated with funds paid to MEMBER by TURLOCK under this Agreement will comply with the "American Standard Specifications for Making Buildings and Facilities Accessible to and Useable by the Physically Handicapped".
2. *Section 504* - MEMBER agrees to comply with all Federal regulations issued pursuant to compliance with Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), which prohibits discrimination against the individuals with disabilities or handicaps in any Federally assisted program.
3. *Prohibited Activity* - MEMBER is prohibited from using funds provided herein or personnel employed in the administration of the program for: political activities; inherently religious activities; lobbying; political patronage; and similar activities. Likewise, MEMBER is prohibited from engaging in nepotism.
4. MEMBER shall comply with all applicable laws, ordinances and codes of Federal, State and local governments, in the performance of this Agreement.
5. MEMBER agrees to comply with all laws, rules, and requirements, which are now, or which may hereafter be imposed by HUD for the HOME Program, as well as such requirements as may be imposed by the Consortium.
6. MEMBER agrees that it will comply with the Americans with Disabilities Act and Title VII of the Civil Rights Acts of 1964, and that no person in the United States shall, on the grounds of race, creed, color, disability, sex, sexual orientation, national origin, age, religion, Vietnam era veteran's status, political affiliation or any other non-merit factors be excluded from participation in, be denied the benefits of or be subjected to discrimination under any program or activity funded in whole or in part with funds made available to TURLOCK and MEMBERS pursuant to this contract.
  - a. Deny any services or other benefit provided under the program or activity;

- b. Provide any service or other benefit which is different or is provided in a different form from that provided to others under the program or activity;
  - c. Subject to segregated or separate treatment in any facility in or in any manner or process related to receipt of any service or benefit under the program or activity;
  - d. Restrict in any way the enjoyment of any advantage or privilege enjoyed by others receiving any service or benefit under the program or activity;
  - e. Treat an individual differently from others in determining whether that individual satisfies any admission enrollment, eligibility, membership or other requirement or condition which individuals must meet in order to be provided any services or other benefit provided under the program or activity; or
  - f. Deny an opportunity to participate in a program or activity as an employee.
7. MEMBER shall comply with Executive Order 13166 to improve access to services for persons with Limited English Proficiency ("LEP") including developing a Language Access Plan.
  8. MEMBER agrees to defend, indemnify and hold harmless TURLOCK and its officers, employees and agents from any and all acts, claims, omissions, liabilities, and losses by whomever asserted arising out of acts or omissions of MEMBER in the performance of the scope of work except those arising by reason of the sole negligence of TURLOCK, its officers, employees or agents.
  9. TURLOCK agrees to defend, indemnify and hold harmless MEMBER and its officers, employees and agents from any and all acts, claims, omissions, liabilities, and losses by whomever asserted arising out of acts or omissions of TURLOCK in the performance of the scope of work except those arising by reason of the sole negligence of MEMBER, its officers, employees or agents.
  10. If MEMBER withdraws from the Consortium and it becomes a HOME Participating Jurisdiction, at MEMBER'S request and with HUD approval TURLOCK shall transfer to MEMBER any accounts receivable attributable to MEMBER'S allocation of HOME funds, any MEMBER'S allocation of HOME funds, and any Program Income attributable to MEMBER'S HOME allocation on hand at the time that MEMBER withdraws from the Consortium. Along with this transfer, MEMBER shall assume all obligations and responsibilities attributable to such funds, and TURLOCK shall be relieved of all such obligations and responsibilities.
  11. If MEMBER withdraws from the Consortium and does not become a HOME Participating Jurisdiction, TURLOCK shall retain any accounts receivable attributable to MEMBER'S allocation of HOME funds, any MEMBER'S allocation of HOME funds, and any Program Income attributable to MEMBER'S HOME allocation on hand at the time that MEMBER withdraws from the Consortium. TURLOCK shall retain all obligations and responsibilities attributable to such funds.
  12. If MEMBER materially fails to comply with any term of this Agreement, suspension or termination of MEMBER as a subrecipient of HOME funds may occur as specified in 24 CFR Part 85.43. TURLOCK may utilize remedies for noncompliance as stipulated in §85.43(a).

13. Any and all notices, writings, correspondences, etc., as required by this Agreement shall be directed to MEMBER and TURLOCK as follows:

**MEMBER**

Merry Mayhew, City Manager  
P.O. Box 9  
Hughson, CA 95326  
(209) 883-4054

**TURLOCK**

Maryn Pitt, Manager  
Housing Program Services Division  
156 South Broadway, Suite 140  
Turlock CA 95380  
(209) 668-5610

14. This Agreement may be amended only by written agreement of the parties hereto.

**IN WITNESS WHEREOF**, the parties have caused this Agreement to be executed by and through their respective officers' thereunto duly authorized.

**CITY OF TURLOCK**

By: \_\_\_\_\_  
Toby Wells, P.E., City Manager

Date: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_  
Douglas L. White, City Attorney

ATTEST:

By: \_\_\_\_\_  
Jennifer Land, City Clerk

**CITY OF CITY OF HUGHSON**

By: \_\_\_\_\_  
Merry Mayhew, City Manager

Date: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_  
Daniel J. Schroeder, City Attorney

ATTEST:

By: \_\_\_\_\_



**EXHIBIT A to Subrecipient Agreement for HOME Funds between City of Turlock and Member Jurisdiction  
Turlock/Stanslaus County HOME Consortium  
ACTIVITY TYPE, GOALS, BUDGET, TASKS & SCHEDULE**

|  |                 |
|--|-----------------|
| <b>Member Jurisdiction Name:</b>   | CITY OF HUGHSON |
| <b>Fiscal Year:</b>  | 2020-2021       |
| <b>Member's Program Activity Allocation (for Homebuyer &amp; Rehab):</b> | \$151,972       |

*\*FY19-20 Allocation TOTAL is amount noted in FY2020-21 Funding Agreement for Homebuyer and Homeowner Rehab Activities (total excludes Program Administration allocation). \*\*Program Income amount is an estimate only; not included in amount in Section I.2 of Agreement.*

|  |           | Goals by Household Income Level |            |            |            |       |
|--|-----------|---------------------------------|------------|------------|------------|-------|
| Homebuyer Down payment Assistance  | FY Goals  | <30% AMI                        | 31-50% AMI | 51-60% AMI | 61-80% AMI | TOTAL |
| Projected Number of Units to be Assisted   |           | 0                               | 0          | 0          | 2          | 2     |
| FY 2020-21 Allocation for Homebuyer Activity   | \$100,000 |                                 |            |            |            |       |
| HOME Program Income (estimated)**  | \$        |                                 |            |            |            |       |
| Projected Commitments  |           |                                 |            |            |            |       |
| Projected Completions  |           |                                 |            |            |            |       |
| <b>General description of tasks to be completed under activity:</b> Advertise program availability as needed and secure applications from clients seeking First Time Home Buyer loan assistance and approve homebuyers; collect and prepare file and loan documents; close out project; prepare completion report. |           |                                 |            |            |            |       |
| <b>Schedule for Completion of tasks:</b> June 2021   |           |                                 |            |            |            |       |
| <b>Proposed source(s) of match (as applicable):</b>  |           |                                 |            |            |            |       |

|  |          | Goals by Household Income Level |            |            |            |       |
|--|----------|---------------------------------|------------|------------|------------|-------|
| Single Family Owner-Occupied Rehabilitation  | FY Goals | <30% AMI                        | 31-50% AMI | 51-60% AMI | 61-80% AMI | TOTAL |
| Projected Number of Units to be Assisted   |          | 0                               | 0          | 0          | 1          | 1     |
| FY 2020-2021 Allocation for Activity   | \$51,972 |                                 |            |            |            |       |
| HOME Program Income (estimated)**  | \$       |                                 |            |            |            |       |
| Projected Commitments  |          |                                 |            |            |            |       |
| Projected Completions  |          |                                 |            |            |            |       |
| <b>General description of tasks to be completed under activity:</b> Provide household with minor home repair loan. Secure applications from homomers seeking rehab loan assistance and approve homeowners; conduct inspection and prepare work write-up; solicit competitive bids and enter contract with contractor for work; prepare loan documents; complete rehabilitation; conduct project final inspection and close out project; prepare completion report. |          |                                 |            |            |            |       |
| <b>Schedule for Completion of tasks:</b> June 2021   |          |                                 |            |            |            |       |
| <b>Proposed source(s) of match (as applicable):</b>  |          |                                 |            |            |            |       |

|  |                 | Goals by Household Income Level |            |            |            |       |
|--|-----------------|---------------------------------|------------|------------|------------|-------|
| Total Annual Goals (All Activities)      | CITY OF HUGHSON | <30% AMI                        | 31-50% AMI | 51-60% AMI | 61-80% AMI | TOTAL |
| Projected Number of Units to be Assisted |                 | 0                               | 0          | 0          | 2          | 2     |
| FY 2020-2021 Allocation TOTAL *          | \$151,972       |                                 |            |            |            |       |
| HOME Program Income (estimated)**        | \$0             |                                 |            |            |            |       |
| Projected Commitments                    | 0               | 0                               | 0          | 0          | 0          | 0     |
| Projected Completions                    | 0               | 0                               | 0          | 0          | 0          | 0     |



## **CITY COUNCIL AGENDA ITEM NO. 3.9**

### **SECTION 3: CONSENT CALENDAR**

**Meeting Date:** June 8, 2020  
**Subject:** Approval of the Treasurer's Report for January 2020  
**Presented By:** Crystal Aguilar, Treasurer  
**Approved By:** Merry Mayhew, City Manager

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#### **Staff Recommendation:**

Review and approve the City of Hughson Treasurer's Report for January 2020.

#### **Background and Discussion:**

The City Treasurer reviews the City's cash and investment practices and approves the monthly Treasury Reports and a quarterly Investment Portfolio Report. As of January 2020, the City of Hughson has a cash and investment balance total of \$22,194,683 with \$2,804,459 invested. All investment actions executed since the last report have been made in full compliance of the City of Hughson's Investment Policy. The City of Hughson will meet its expenditure obligations for the next six months as required by California Government Code Section 53646 (b) (2) and (3) respectively.

The Treasurer report for January 2020 reflects the most current representation of the City's funds and investments and provides a necessary outlook for both past, and present investment and spending habits. While investments and funds differ from time to time, it is the goal of the City to maintain safety and stability with its funds, while additionally promoting prudence and growth.

Attached is the City of Hughson Treasurer's Report for January 2020, along with supplementary graphs depicting the percentage of the City's total funds, a breakdown of the Developer Impact Fees, and an additional line plot graph further demonstrating the Developer Impact Fees. This graph depicts the Developer Impact Fees' actual balance for the past five years. After review and evaluation of the report, City staff has researched funds with a significant deficit balance and submit the following detailed explanation for January 2020:

On March 23, 2017, the City Council approved amending the contract for payment of capital improvement fees with the Hughson Investment Group. The funds owed by Hughson Investment Group for Buildings A and B were paid in full when the

property sold in late 2019 and the funds were deposited in the respective impact fee accounts.

**Water Developer Impact Fee Fund:**

The Water Developer Impact Fee Fund currently reflects a negative balance of (\$64,664), which is a positive change from the previous year's negative balance of (\$119,412). The remaining deficit is attributable to settlement arrangements that were made in Fiscal Year 2008/2009 and Fiscal Year 2009/2010 for the Water Tank on Fox Road near Charles Street. The Project Cost of the Water Tower Project was \$2,400,000. During that period, the City paid out \$650,000 in settlements. This account is currently reflecting positive change due to the impact fees paid for Province Place and Euclid South developments. Additional development is anticipated at Euclid South that will enable this fund to continue to reflect a positive position change.

**Transportation Capital and CDBG Street Project Fund:**

The Transportation Capital Project Fund currently reflects a negative balance of (\$228,552), which is a positive difference of \$25,621 from the previous year. The CDBG Street Project Fund currently reflects a negative balance of (\$14,014) reflecting a positive difference of \$341,404. As the City continues to produce transportation projects, the transportation fund will likely continue to show a negative balance. City staff will continue to monitor and report the status of these reimbursements as the funds become available.

**Fiscal Impact:**

As of January 2020, the City's cash and investments total \$22,194,683. This compares to a January 2019 balance of \$20,455,236 and represents a positive increase of \$1,739,447.

**City of Hughson  
Treasurer's Report  
January 2020**

|                                | <b>MONEY MARKET</b>     | <b>GENERAL</b>       | <b>REDEVELOPMENT**</b> | <b>TOTAL</b>            |
|--------------------------------|-------------------------|----------------------|------------------------|-------------------------|
| Bank Statement Totals          | \$ 18,838,894.96        | \$ 861,115.75        | \$ -                   | \$ 19,700,010.71        |
| Adjustment                     | \$ (335.00)             | \$ 203.97            | \$ -                   | \$ -                    |
| Outstanding Deposits +         | \$ 45,862.56            | \$ -                 | \$ -                   | \$ 45,862.56            |
| Outstanding Checks/transfers - | \$ (20,854.56)          | \$ (334,794.43)      | \$ -                   | \$ (355,648.99)         |
| <b>ADJUSTED TOTAL</b>          | <b>\$ 18,863,567.96</b> | <b>\$ 526,525.29</b> | <b>\$ -</b>            | <b>\$ 19,390,224.28</b> |
| Investments: Various           |                         |                      |                        | \$ 1,130,417.49         |
| Multi-Bank WWTP                |                         |                      |                        | \$ 1,590,247.58         |
| Investments: L.A.I.F.          |                         | \$ 41,963.70         | \$ 41,830.23           | \$ 83,793.93            |

**General Ledger Adjustments**

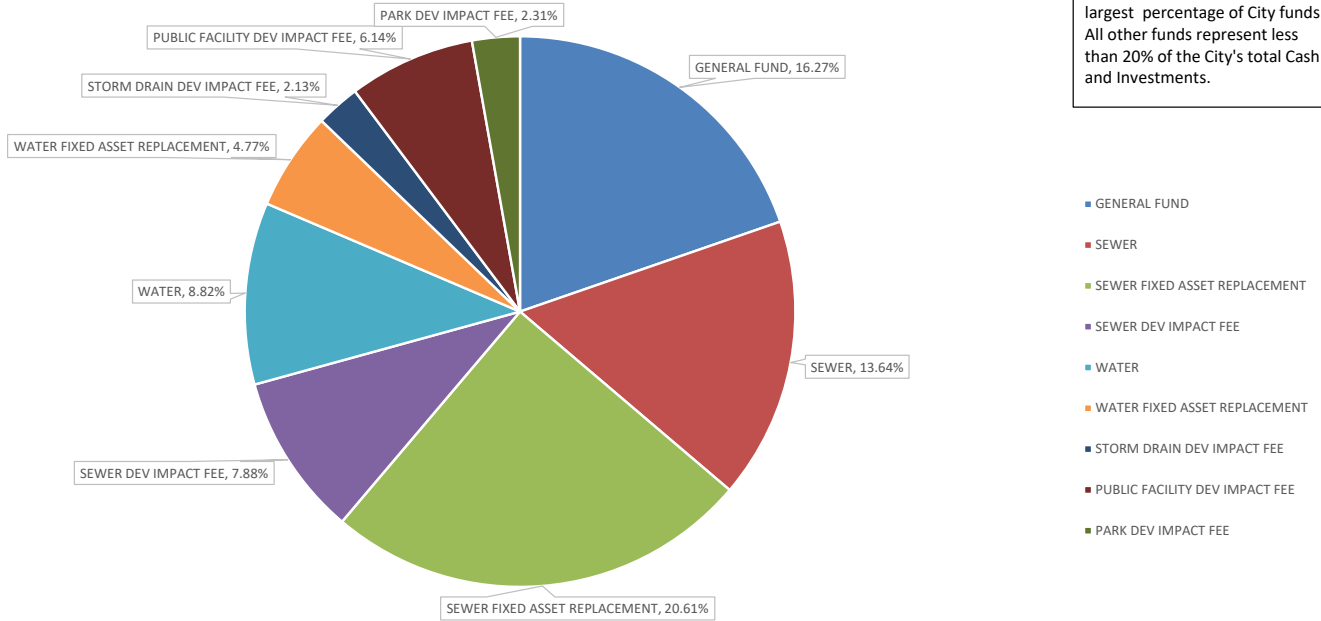
Wages Payable 0.00

**TOTAL CASH & INVESTMENTS \$ 22,194,683.28**

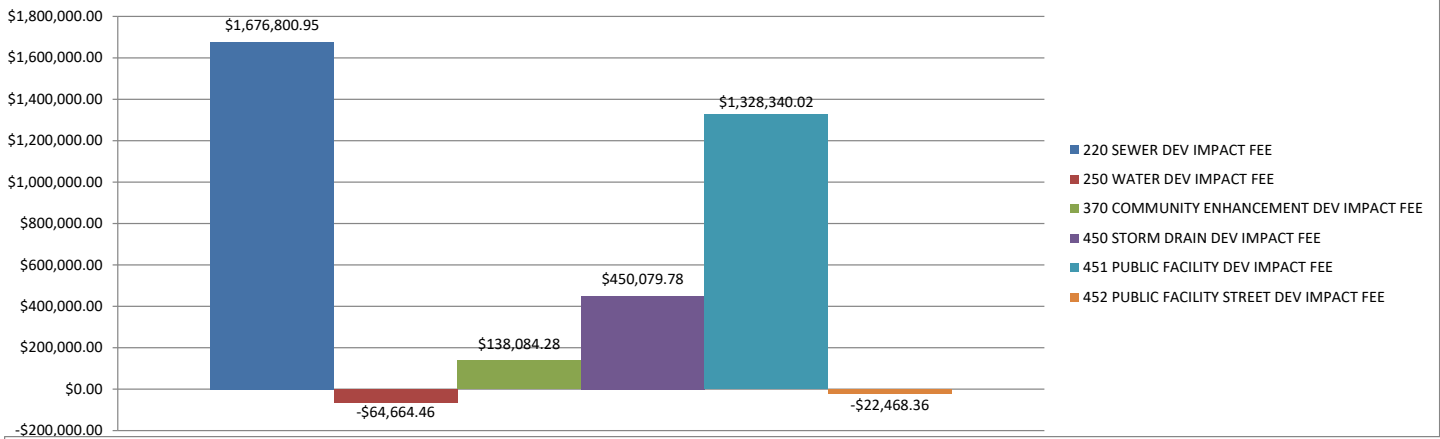
| <b>Books - All Funds</b>                      | <b>January 2019</b>  | <b>January 2020</b>  | <b>Difference</b> | <b>% of Variance</b> |
|---|----------------------|----------------------|-------------------|----------------------|
| 100 GENERAL FUND                              | 2,482,646.16         | 2,636,045.71         | 153,399.55        | 6.18%                |
| 105 GENERAL FUND CONTINGENCY RESERVE          | 944,090.30           | 974,785.80           | 30,695.50         | 3.25%                |
| 110 FIXED ASSETS                              | 0.00                 | 0.00                 | 0.00              | n/a                  |
| 210 SEWER                                     | 3,210,251.06         | 3,027,979.08         | -182,271.98       | -5.68%               |
| 215 SEWER FIXED ASSET REPLACEMENT             | 4,374,824.75         | 4,575,265.88         | 200,441.13        | 4.58%                |
| 220 SEWER DEV IMPACT FEE                      | 1,523,453.99         | 1,748,778.18         | 225,324.19        | 14.79%               |
| 225 WWTP Expansion 2008                       | 718,597.70           | 782,770.71           | 64,173.01         | 8.93%                |
| 240 WATER                                     | 1,216,250.59         | 1,958,173.68         | 741,923.09        | 61.00%               |
| 245 Water TCP123                              | -5,265.68            | -5,355.30            | -89.62            | -1.70%               |
| 250 WATER DEV IMPACT FEE                      | -116,728.33          | -32,675.38           | 84,052.95         | 72.01%               |
| 255 Water Fixed Asset Replacement             | 1,305,410.52         | 1,057,947.43         | -247,463.09       | -18.96%              |
| 270 COMMUNITY/SENIOR CENTER                   | 5,470.73             | 10,888.12            | 5,417.39          | 99.02%               |
| 280 U.S.F. Resource Com. Center               | -986.54              | 157.67               | 1,144.21          | 115.98%              |
| 310 Garbage/Refuse                            | 126,190.75           | 102,926.35           | -23,264.40        | -18.44%              |
| 320 GAS TAX 2103                              | 116,897.28           | 144,636.64           | 27,739.36         | 23.73%               |
| 321 GAS TAX 2105                              | 33,551.36            | 50,170.49            | 16,619.13         | 49.53%               |
| 322 GAS TAX 2106                              | 2,222.33             | -347.24              | -2,569.57         | -115.63%             |
| 323 GAS TAX 2107                              | 31,219.01            | 37,535.73            | 6,316.72          | 20.23%               |
| 324 GAS TAX 2107.5                            | 1,172.14             | 2,172.14             | 1,000.00          | 85.31%               |
| 325 Measure L SALES TAX-ROADS                 | 446,897.50           | 241,876.76           | -205,020.74       | -45.88%              |
| 326 SB-1 ROADS MAINTENANCE REHABILITATION     | 101,389.61           | 248,081.40           | 146,691.79        | 144.68%              |
| 340 LANDSCAPE LIGHTING DISTRICT               | 131,198.16           | -6,368.21            | -137,566.37       | -104.85%             |
| 350 BENEFIT ASSESMENT DISTRICT                | 210,019.18           | -953.96              | -210,973.14       | -100.45%             |
| 360 COMMUNITY FACILITIES DISTRICT             | 8,260.08             | 0.00                 | -8,260.08         | -100.00%             |
| 370 COMMUNITY ENHANCEMENT DEV IMPACT FEE      | 124,749.99           | 144,247.62           | 19,497.63         | 15.63%               |
| 371 TRENCH CUT FUND                           | 77,399.90            | 77,516.70            | 116.80            | 0.15%                |
| 372 IT RESERVE                                | 104,361.66           | 93,346.75            | -11,014.91        | -10.55%              |
| 373 SELF-INSURANCE                            | 73,303.49            | 73,303.49            | 0.00              | 0.00%                |
| 374 DIABILITY ACCESS AND EDUCATION            | 199.34               | 1,176.82             | 977.48            | 490.36%              |
| 381 AB109 PUBLIC SAFETY                       | 35,722.29            | 35,722.29            | 0.00              | 0.00%                |
| 382 ASSET FORFEITURE                          | 1,660.43             | 1,660.43             | 0.00              | 0.00%                |
| 383 VEHICLE ABATEMENT                         | 15,242.41            | 26,394.46            | 11,152.05         | 73.16%               |
| 384 SUPPLEMENTAL LAW ENFORCEMENT SERVICE FUND | 225,045.20           | 235,158.14           | 10,112.94         | 4.49%                |
| 385 FEDERAL FUNDED OFFICER FUND               | 6,620.00             | 6,620.00             | 0.00              | 0.00%                |
| 390 98-EDBG-605 BUSINESS ASSISTANCE           | 93,595.60            | 93,595.60            | 0.00              | 0.00%                |
| 391 96-EDBG-438 Grant                         | 403.43               | 403.43               | 0.00              | 0.00%                |
| 392 94-STBG-799 HOUSING REHAB                 | 223,628.84           | 225,606.64           | 1,977.80          | 0.88%                |
| 393 HOME Program Grant (FTHB)                 | 35,043.29            | 35,043.29            | 0.00              | 0.00%                |
| 394 96-STBG-1013 Grant                        | 209,870.04           | 210,690.74           | 820.70            | 0.39%                |
| 395 CALHOME REHAB                             | 40,000.00            | 40,000.00            | 0.00              | 0.00%                |
| 410 LOCAL TRANSPORTATION                      | 87,795.31            | 71,671.34            | -16,123.97        | -18.37%              |
| 415 LOCAL TRANSPORTATION NON MOTORIZED        | 7,082.00             | 13,219.00            | 6,137.00          | 86.66%               |
| 420 TRANSPORTATION STREET PROJECTS            | -254,172.98          | -228,552.19          | 25,620.79         | 10.08%               |
| 425 PUBLIC WORKS STREET PROJECTS-CDBG         | -355,417.67          | -14,013.98           | 341,403.69        | 96.06%               |
| 450 STORM DRAIN DEV IMPACT FEE                | 409,373.25           | 472,710.87           | 63,337.62         | 15.47%               |
| 451 PUBLIC FACILITY DEV IMPACT FEE            | 1,285,955.08         | 1,361,992.81         | 76,037.73         | 5.91%                |
| 452 PUBLIC FACILITY STREET DEV IMPACT FEE     | -78,704.23           | 23,609.90            | 102,314.13        | 130.00%              |
| 453 PARK DEV IMPACT FEE                       | 459,440.70           | 513,476.19           | 54,035.49         | 11.76%               |
| 454 PARKLAND IN LIEU                          | 360,143.34           | 398,614.63           | 38,471.29         | 10.68%               |
| 510 WATER/SEWER DEPOSIT                       | 56,124.30            | 67,189.16            | 11,064.86         | 19.71%               |
| 520 RDA SUCCESSOR AGENCY                      | 343,738.33           | 373,359.54           | 29,621.21         | 8.62%                |
| 521 RDA FIXED ASSETS                          | 0.00                 | 0.00                 | 0.00              | n/a                  |
| 530 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 7,421.35             | 7,421.35          | n/a                  |
| 531 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 38,267.51            | 38,267.51         | n/a                  |
| 532 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 17,365.31            | 17,365.31         | n/a                  |
| 533 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 22,139.48            | 22,139.48         | n/a                  |
| 534 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | -41,750.40           | -41,750.40        | n/a                  |
| 535 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 7,065.08             | 7,065.08          | n/a                  |
| 536 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 9,293.90             | 9,293.90          | n/a                  |
| 537 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | -45,034.79           | -45,034.79        | n/a                  |
| 538 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | -23,939.09           | -23,939.09        | n/a                  |
| 539 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 23,370.44            | 23,370.44         | n/a                  |
| 540 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 32,309.62            | 32,309.62         | n/a                  |
| 541 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 26,013.49            | 26,013.49         | n/a                  |
| 542 LANDSCAPE LIGHTING DISTRICT               | 0.00                 | 3,997.72             | 3,997.72          | n/a                  |
| 550 BENEFIT ASSESMENT DISTRICT                | 0.00                 | 64,463.34            | 64,463.34         | n/a                  |
| 551 BENEFIT ASSESMENT DISTRICT                | 0.00                 | 7,410.47             | 7,410.47          | n/a                  |
| 552 BENEFIT ASSESMENT DISTRICT                | 0.00                 | 95,872.68            | 95,872.68         | n/a                  |
| 553 BENEFIT ASSESMENT DISTRICT                | 0.00                 | -1,086.44            | -1,086.44         | n/a                  |
| 554 BENEFIT ASSESMENT DISTRICT                | 0.00                 | 36,212.45            | 36,212.45         | n/a                  |
| 560 BENEFIT ASSESMENT DISTRICT                | 0.00                 | 7,035.81             | 7,035.81          | n/a                  |
| Developer Impact Fees ***                     | 3,576,441.47         | 4,003,233.79         | 426,792.32        |                      |
| <b>TOTAL ALL FUNDS:</b>                       | <b>20,455,235.99</b> | <b>22,194,683.28</b> |                   |                      |
| <b>Break Down of Impact Fees ***</b>          |                      |                      |                   |                      |
| 220 SEWER DEV IMPACT FEE                      | 1,518,526.50         | \$1,676,800.95       | 158,274.45        | 10.42%               |
| 250 WATER DEV IMPACT FEE                      | -119,412.37          | -\$64,664.46         | 54,747.91         | 45.85%               |
| 370 COMMUNITY ENHANCEMENT DEV IMPACT FEE      | 124,610.16           | \$138,084.28         | 13,474.12         | 10.81%               |
| 450 STORM DRAIN DEV IMPACT FEE                | 406,231.20           | \$450,079.78         | 43,848.58         | 10.79%               |
| 451 PUBLIC FACILITY DEV IMPACT FEE            | 1,277,000.72         | \$1,328,340.02       | 51,339.30         | 4.02%                |
| 452 PUBLIC FACILITY STREET DEV IMPACT FEE     | -89,440.36           | -\$22,468.36         | 66,972.00         | 74.88%               |
| 453 PARK DEV IMPACT FEE                       | 458,925.62           | \$497,061.58         | 38,135.96         | 8.31%                |
| <b>Break Down of Impact Fees ***</b>          | <b>3,576,441.47</b>  | <b>4,003,233.79</b>  | <b>426,792.32</b> | <b>11.93%</b>        |

## Treasurer's Report - Charts and Graphs January 2020

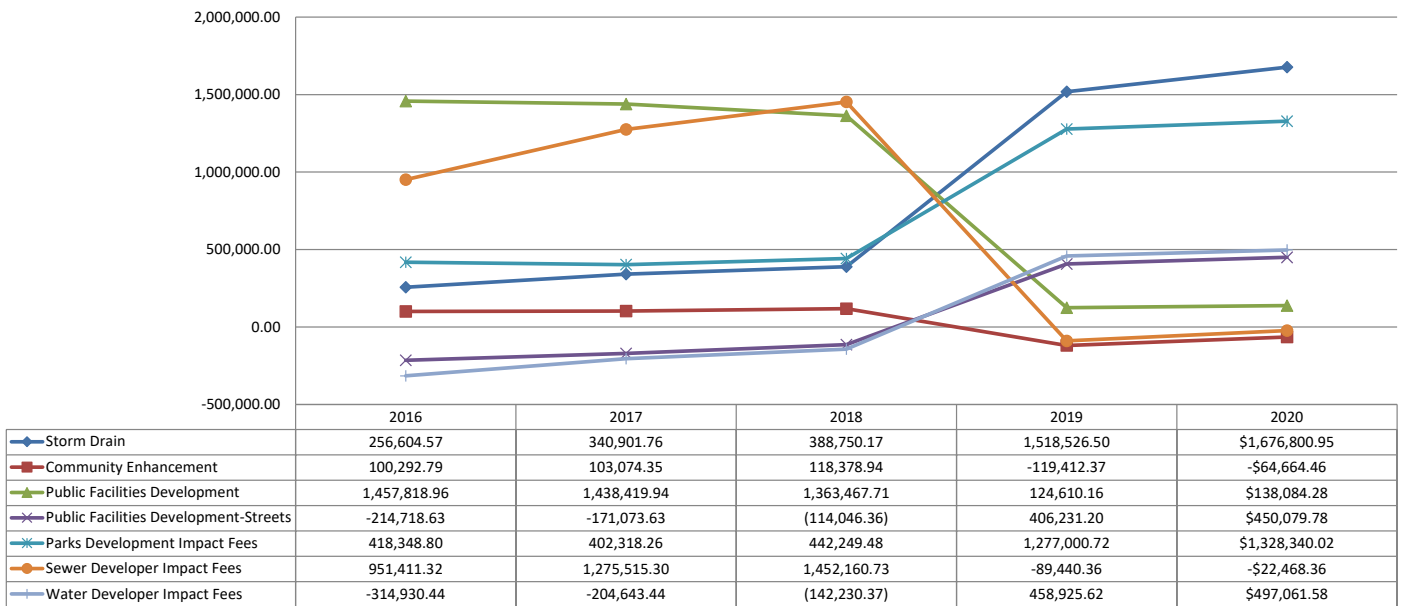
Percentage of Fund - January 2020



January 2020 Breakdown of Developer Impact Fees



5 Year Trend for Developer Impact Fees for the Month of January





## **CITY COUNCIL AGENDA ITEM NO. 6.1**

### **SECTION 6: NEW BUSINESS**

**Meeting Date:** June 8, 2020  
**Subject:** Authorize City Staff to Release Bid Documents for the Well No. 7 Replacement Project, Phase IV  
**Presented By:** Lea C. Simvoulakis, Community Development Director  
**Approved By:** Merry Mayhew, City Manager

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#### **Staff Recommendation:**

Authorize City staff to release bid documents for the Well No. 7 Replacement Project, Phase IV.

#### **Background:**

The Well 7 Replacement Project is a four-phase project that includes the construction of a new water well site (Hughson Well No. 9), which will contain a water treatment system, a 1.0 million gallon concrete storage/blending tank, as well as the re-drilling of Well No. 5 in a new location on the same parcel (to be called Hughson Well No. 10) and a new water distribution pipeline to connect the well sites.

The City Council awarded the bid for Phase I to Anthony J. Prieto Water Well Drilling in the amount of \$891,319 on October 8, 2018. The Notice of Completion was approved by City Council for Phase I on November 12, 2019. On July 8, 2019, the City Council awarded Phase II to Gateway Pacific Construction. This phase will be completed in the next two weeks and a Notice of Completion will likely be presented to the City Council on June 22, 2020. Phase III is a sole source contract with Rescue Engineers, Inc., for the purchase of a water treatment system to be installed in the new replacement Well No. 9 and re-drilled Well No. 5 sites. This proprietary system will be installed by the contractor who is awarded the Phase IV bid.

Phase IV will include the installation of the water treatment equipment from Phase III, the construction of the control building and chemical systems, all mechanical and electrical work, off-site transmission piping, and the restoration of the Well 5 site.

#### **Discussion:**

The City Council approved the engineer's cost estimate for the full project at \$8,327,753, which includes a contingency (20%), design, environmental work, and inspection (15%). The engineer's estimate for Phase IV is \$5.7 million dollars.

Upon authorization, City staff will release the bid documents, hold a bid opening on July 20, 2020, and expects to return to the City Council to award the contract to the lowest responsible bidder after evaluation of the bid. The awarding of the bid will likely be before the City Council at the July 27, 2020 meeting or the August 10, 2020 meeting. Subsequently, City staff will coordinate with the selected contractor to initiate the work. It is expected that work will begin by September 2020 and be completed by the end of Summer 2021.

**Fiscal Impact:**

The City received funding through the California Safe Drinking Water State Revolving Fund (SDWSRF) in the amount of \$8,327,753. The City Council approved a funding agreement with the State of California, which provides up to \$5 million in grant funding with the remainder available in the form of a loan at 0% interest over 30 years. In July 2015, the City of Hughson adopted a water rate increase to be able to finance the debt service associated the project.

The City has spent a total of \$2,892,769 for Phase I and the majority of Phase II. Roughly \$378,478 will be required to finish Phase II, putting the total expenses for both phases at \$3,271,247. The remaining two phases are estimated to cost \$6,324,000. This total, combined with what has already been spent, is \$9,595,247 which is approximately \$1,267,494 over the anticipated budget. This increase in cost is largely due to inflation and the rise in construction costs since the City originally secured the grant and loan from the state. The City's contracted water engineer, Cort Abney, is working with the state to increase the funds available to the City to cover this increase in project costs. There has already been acknowledgement by the state that more funds will be provided to the City to cover the remaining costs of the project. Additionally, construction estimates for the next six months show that the cost of construction goods and services will likely decrease, which will decrease the anticipated costs of Phase IV.

The City of Hughson's Fiscal Year 2020-2021 Preliminary Budget, to be adopted by the City Council in June 2020, will include enough funds to match the engineer's estimate for the Well 7 Replacement Project – Phase IV.

**CITY OF HUGHSON**  
**DEPARTMENT OF PUBLIC WORKS**



**TECHNICAL SPECIFICATIONS**  
**FOR**  
**CITY OF HUGHSON**  
**WELL #7 REPLACEMENT PROJECT**  
**PHASE IV STORAGE TANK**

**(Project No. 5010008-011C)**

**BID SET**

**PREPARED BY:**

SHORELINE ENVIRONMENTAL ENGINEERING  
4120 CAMERON PARK DRIVE, SUITE 100A  
CAMERON PARK, CA 95682  
(916) 806-3970

***April, 2020***



## SECTION 0020 - NOTICE INVITING BIDS

SEALED BIDS will be received at the **Hughson City Hall 7018 Pine Street, Hughson, CA, 95326**, until **2:00 p.m., on Monday, July 20, 2020** at which time they will be publicly opened and read, for performing work as follows:

**Project:** **CITY OF HUGHSON  
COMMUNITY DEVELOPMENT DEPARTMENT**

***WELL 7 REPLACEMENT PROJECT PHASE IV IMPROVEMENTS  
PROJECT NO. 5010008-011C***

Bids received after this time will not be accepted, and will be returned unopened. At said place and time, and promptly thereafter, all Bids that have been duly received will be publicly opened and read aloud. All interested parties are invited to attend.

Copies of the Plans and Specifications are on file and may be examined and purchased at Hughson City Hall, 7018 Pine Street, Hughson, CA 95326, (209) 883-4054, or on our website for viewing only at <http://hughson.org>. **Copies of the Plans and Specifications required for the Bid must be purchased from the Owner (City of Hughson) for a non-refundable fee of \$30.00.**

The work to be performed is described in the Contract Documents.

No bid will be received unless it is made on a Bid Form furnished by the City per the Contract Documents. The proposal shall be submitted in a sealed envelope and it shall be addressed to **the City Clerk, City of Hughson, P.O. Box 9, Hughson, California 95326**, and shall be clearly marked as follows:

**Bid Document :** ***WELL 7 REPLACEMENT PROJECT PHASE IV IMPROVMENTS  
CITY PROJECT NO. 5010008-011C***

This project is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

Bids are required for the entire work described herein.

**Prebid Meeting:** **A mandatory pre-bid meeting will be held on July 6, 2020 Bidders shall meet at City Hall, 7018 Pine Street, Hughson, CA, 95326.**

All proposals or bids shall be accompanied by a cashier's or certified check, or Bid Bond payable to the order of the **City of Hughson** amounting to not less than ten (10%) percent of the bid, as a guarantee that the bidder, if awarded the Contract, will fulfill the terms of the bid.

All bids are to be compared on the basis of the estimated quantities of work to be done. No bidder may withdraw his bid for a period of ninety (90) days after the date of opening the bids. The City reserves the right to reject any and all bids or to waive any irregularities or informalities in any bid or in the bidding, including unbalanced or incomplete bids, or taking exception to bid items.

The State Director of the Department of Industrial Relations has established the general prevailing rates of per diem wages and rates for overtime and legal holidays in the locality in which the work is to be performed. No less than said prevailing wages shall be paid for work on this project.

Pursuant to California Public Contract Code Section 22300, and at the request and expense of the Contractor to whom the Contract is awarded, approved securities shall be permitted in substitution for money withheld by the City to ensure performance under the Contract.

In accordance with the provisions of California Public Contract Code Section 3300, the City has determined that the Contractor shall possess valid **Class 57 Contractor's License** at the time that the contract is awarded. Failure to possess the specified license shall render the bid as non-responsive and shall act as a bar to award of the contract to any bidder not possessing said license at the time of award.

\_\_\_\_\_ Dated: \_\_\_\_\_

\_\_\_\_\_  
Ashton Gose  
Deputy City Clerk  
City of Hughson

Published: **June 16, 2017**

## SECTION 0030 - INSTRUCTIONS TO BIDDERS

### 1.1 BIDDING PROCEDURES

- 1.1.1 Each bidder, by submitting its bid, represents that it understands the scope of work and its obligation with respect to performance. All bidders must submit their proposals on the forms provided. To be valid, a bid must be received at the place and before the time designated, or prior to any extension granted by an addendum. No bidder may withdraw, adjust, or modify its bid for a period of 90 calendar days after the acceptance of bids. Addenda will be provided to each bidder of record and will be placed on file at the location for bidding documents. Should there be reasons why the contract cannot be awarded within the specified period; the time may be extended by mutual agreement between the City and the bidder.

### 1.2 EXAMINATION OF BIDDING DOCUMENTS

- 1.2.1 All interpretations and/or corrections of the bidding documents shall be in writing by the ENGINEER, Shoreline Environmental Engineering, in the form of addenda. No other interpretations or corrections shall be considered valid for bidding purposes. Any bidder planning to submit a proposal is responsible for examining with appropriate care the complete specifications and all addenda, and is also responsible for informing itself with respect to all conditions which might in any way affect the performance of any work.
- 1.2.2 The Contract Documents contain the provisions and performance required for the construction of the project. Information obtained from an officer, agent, or employee of the City or any other person shall not affect the risks or obligations assumed by the Contractor or relieve the Contractor from fulfilling any of the conditions of the contract.
- 1.2.3 No oral interpretations will be made to any bidder as to the meaning of the Contract Documents. Requests for interpretation of the Contract Documents shall be in writing delivered to the ENGINEER at least 5 days before the time announced for the bid opening, at:

**Email: [cort@h2oengr.com](mailto:cort@h2oengr.com)**

### 1.3 QUALIFICATION OF BIDDERS

- 1.3.1 Each Bidder by submitting its bid represents that it is qualified to perform the scope of the work for which it submits its proposal. It further represents that it can do so in the time specified. Each bidder shall submit with its proposal an experience statement substantially in the form included in the Bid Forms of the Contract Documents. In determining the Bidder's qualifications, the following factors will be considered: work previously completed by the Bidder and whether the Bidder (a) maintains a permanent place of business, (b) has adequate plant and equipment to do the Work properly and expeditiously, (c) has the financial resources to meet all obligations incident to the Work, and (d) has appropriate technical experience. Each Bidder may be required to show that he has handled former work so that no just claims are pending against

such work. No bid will be accepted from a Bidder who is engaged on any work, which would impair his ability to perform or finance this work.

The City may make such investigations as deemed necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any bid if the evidence submitted by, or investigation of such bidder, fails to satisfy the City that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional or qualified bids will not be accepted.

#### 1.4 PREPARATION AND SUBMISSION OF PROPOSALS

1.4.1 Proposals shall be submitted on the Bid Forms provided with the Contract Documents. The copy shall be properly executed as described above, and any interlineations, alterations, or erasures shall be formally explained and initialed by the Bidder. Failure to comply with this requirement may be cause for rejection of the proposal. Each proposal shall show the full legal name and business address of the bidder, including its street address, and shall be signed with the usual signature of the person or persons authorized to bind the bidder and shall be dated. Proposals by a partnership or joint venture shall list the full names and addresses of all partners or joint venturers. The State of Incorporation shall be stated when a corporation is a party as a bidder. The name of each signatory shall be typed or otherwise clearly imprinted below each signature. When requested by the City, satisfactory evidence of the authority of any signatory on behalf of the bidder shall be furnished. The proposal shall be enclosed in a sealed envelope, distinctly marked "proposal" and bearing the project title as given and the name and address of the bidder.

1.4.2 All bids must be made on the required bid form. All blank spaces for bid prices must be filled in, in ink or typewritten, and the bid form must be completed and executed when submitted. Only one copy of the bid form is required. Bidders shall follow instructions as defined in the Bid Forms of the Contract Documents.

#### 1.5 SITE INSPECTION AND CONDITIONS

1.5.1 In addition to examination of the drawings and specifications, each prospective bidder shall make whatever other arrangements are necessary to become fully informed regarding all existing and expected conditions and matters which could affect any work or the performance of any work in any way, and especially the cost of performing any work. Any failure to fully investigate the site or the foregoing conditions shall not relieve the bidder from the responsibility of estimating properly the difficulty or cost of successfully performing any work. Neither the City nor any of its representatives or agents assumes the responsibility for any understanding or representation made by the City or any of its representatives or agents prior to execution of the contract pursuant to the specification.

1.5.2 Bidders must satisfy themselves of the accuracy of the contract documents by examination of the site and a review of the drawings and specifications, including addenda. After bids have been submitted, the bidder shall not assert that there was a misunderstanding concerning the work or of the nature of the work to be done. The submission of a Bid will constitute an

incontrovertible representation by Bidder that Bidder has complied with every requirement of this part, that without exception the Bid is premised upon performing and furnishing the work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the work.

## 1.6 PROPOSAL OPENINGS AND AWARD OF CONTRACT

- 1.6.1 Proposals will be kept unopened until the time stated for opening of proposals. At such time, the City will announce the bidder, the total bid price, and listed subcontractors. No responsibility shall be attached to the City or any of its officers, employees, or representatives for the premature opening of proposals. All bidders or their authorized representatives are invited to be present at the proposal opening. The successful bidder will be notified in writing by the City of the award of contract within **90 calendar days** after opening of proposals. Accompanying the City's Notice of Award will be the contract which the successful bidder will be required to sign and return, together with the performance bond, payment bond, and insurance coverage certifications. All the above documents shall be returned to the City within **7 calendar days** following receipt of the Notice of Award. The City will promptly determine whether such contract, bonds, certificates of insurance, and other required documents are as required by the specifications, and upon such determination, will forward a fully signed copy of the contract and a Notice to Proceed to the successful bidder, provided that the City reserves the right to issue a Notice to Proceed at any time prior to forwarding such contract. The failure of any bidder to whom the City may award the contract as aforesaid to properly sign and return to the City the contract, together with the required performance bond, payment bond, certificates of insurance, and other documents within the specified time period, shall entitle the City to declare a breach of contract by such bidder, to award the contract to another bidder in accordance with the provisions of the Contract Documents, and to declare a forfeiture of the bidder's proposal security accompanying its proposal. In the event of such failure, the City will suffer damage, the amount of which is difficult, if not impossible, to ascertain, and the City shall therefore be entitled to retain the amount of such cashier's or certified check, or to enforce the provisions of said bid bond in the amount thereof, as liquidated damages for such breach of contract.
- 1.6.2 If, within **24 hours** after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of his Bid, that Bidder may withdraw his bid, and his Security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the work. Failure to provide notice within the time designated may cause the bidder to forfeit its bid bond, as determined by the City.
- 1.6.3 The City will return the bonds of all except the lowest three responsible bidders. When the agreement is executed, the bonds of the two remaining unsuccessful bidders will be returned. The bid bond of the successful bidder will be retained until the performance bond and payment bond have been executed and approved, after which it will be returned. A cashier's check may be used in lieu of a bid bond.

## 1.7 ACCEPTANCE OR REJECTION OF BIDS

1.7.1 The Contract will be awarded to the lowest responsive, responsible bidder, provided that all bidders acknowledge the right of the City to accept or reject any and all bids and to waive any informality or irregularity in any bid received. The low bidder will be determined by adding the bid amounts for the Base Bid Items.

## 1.8 PROPOSAL SECURITY

1.8.1 No proposal will be considered unless it is accompanied by a proposal security in the form of a certified check or a cashier's check, payable to the order of the **City of Hughson** for a sum not less than 10% of the total bid as set forth in the bidder's proposal, or a bidder's bond in the same amount executed as surety by a corporation acceptable to the City and authorized to issue such surety bond in the State of California. Such bond shall be in substantial conformity with the form included in these Contract Documents.

## 1.9 BONDS AND INSURANCE POLICIES

1.10 The Bidder to whom the contract award is made shall furnish to the City a performance bond and a payment bond, executed as surety by a corporation acceptable to the City and authorized to issue surety bonds in the State of California. Such bonds shall be substantially in the form included in these Contract Documents. Such performance bond and payment bond shall each be 100% of the total bid as set forth in the Bidder's proposal. The entire cost of these bonds shall be borne by the successful Bidder. The successful Bidder shall, at the time of execution of the contract, deliver to the City two copies of the certificates, on the carrier's forms, attesting to the fact that the required policies of insurance have been obtained.

## 1.11 SUBMISSION OF BIDS AND AGREEMENT TO ASSIGN

1.11.1 In submitting a bid, the Contractor agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700)) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

## 1.12 BID PROTEST

1.12.1 Any bid protest must be in writing and received by City at 7018 Pine Street, Hughson California, before 5:00 p.m. no later than two working days following bid opening (the "Bid Protest Deadline") and must strictly comply with the requirements set forth in this Section 1.12.

1.12.2 General. Only a bidder who has actually submitted a proposal is eligible to submit a bid protest against another bidder. Subcontractors are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest.

- 1.12.3 Protest Contents. The bid protest must contain a complete statement of the basis for the protest and all supporting documentation. Material submitted after the Bid Protest Deadline will not be considered. The protest must refer to the specific portion or portions of the Bid Form, Contract Documents, or bidding documents upon which the protest is based. The protest must include the name, address, email address, and telephone number of the person representing the protesting bidder if different from the protesting bidder.
- 1.12.4 Copy to Protested Bidder. A copy of the protest and all supporting documents must be concurrently transmitted by fax or by email, by or before the Bid Protest Deadline, to the protested bidder and any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.
- 1.12.5 Response to Protest. The protested bidder may submit a written response to the protest, provided the response is received by City before 5:00 p.m., within two working days after the Bid Protest Deadline or after actual receipt of the bid protest, whichever is sooner (the "Response Deadline"). The response must include all supporting documentation. Material submitted after the Response Deadline will not be considered. The response must include the name, address, email address, and telephone number of the person representing the protested bidder if different from the protested bidder.
- 1.12.6 Copy to Protesting Bidder. A copy of the response and all supporting documents must be concurrently transmitted by fax or by email, by or before the Bid Protest Deadline, to the protesting bidder and any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.
- 1.12.7 City's Decision. The scope of the bid protest considered by the City shall be limited to the issues set forth in the bid protest timely filed pursuant to this Policy. The City may take any action on the bid protest that is authorized by law, including adoption of City staff's recommended determination of the bid protest, adoption of a determination different from that recommended by City staff, or the rejection of all bids without deciding the bid protest. The decision of the City on a bid protest shall be the final administrative action on the protest and shall exhaust the protesting bidder's administrative remedies.
- 1.12.8 Exclusive Remedy. The procedure and time limits set forth in this section are mandatory and are the bidder's sole and exclusive remedy in the event of bid protest. A bidder's failure to comply with these procedures will constitute a waiver of any right to further pursue a bid protest, including filing a Government Code Claim or initiation of legal proceedings.
- 1.12.9 Right to Award. The City Council reserves the right to award the Contract to the bidder it has determined to be the responsible bidder submitting the lowest responsive bid, and to issue a

notice to proceed with the Work notwithstanding any pending or continuing challenge to its determination.

1.12.10 Rejection of All Bids. The filing of a bid protest shall not preclude the City from rejecting all bids. Rejecting all bids shall render a protest moot and terminate all protest proceedings.

**- END OF SECTION -**



## SECTION 0040 – PROPOSAL AND BID FORMS

### 1 – Proposal

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NAME OF BIDDER

The undersigned hereby proposes to the **City of Hughson** (“City”) to furnish all labor, technical and professional services, supervision, materials, and equipment and to perform all operations necessary and required to complete the

**CITY OF HUGHSON  
COMMUNITY DEVELOPMENT DEPARTMENT**

***WELL 7 REPLACEMENT PROJECT PHASE IV IMPROVEMENTS  
CITY PROJECT NO. 5010008-011C***

The work shall be completed in accordance with the provisions of this document and the associated drawings, and at the prices stated opposite the respective items set forth in the Schedule of Items and Prices attached hereto.

The undersigned agrees that this Proposal constitutes a firm offer to the City which cannot be withdrawn for **90 calendar days** from and after the date set for opening of proposals, or until a contract is fully executed by the City, whichever is earlier.

The undersigned certifies that it has examined and is fully familiar with all of the provisions of this document, the drawings, and any addenda thereto; that it has carefully checked all the words and figures shown in its Schedule of Items and Prices; that it has carefully reviewed the accuracy of all statements in this proposal and attachments hereto; and it understands and agrees that the City will not be responsible for any errors or omissions on the part of the undersigned in preparing this proposal. The undersigned hereby acknowledges the receipt of Addenda (s) \_\_\_\_\_.

The undersigned represents that it has made careful examination of this document and the drawings and by examination of the actual site conditions has satisfied itself as to the nature and location of all work, the general and local conditions to be encountered in the performance of any work, and all other matters which can in any way affect the work or the cost thereof.

If awarded a contract, the undersigned agrees to execute and deliver to the City within **7 calendar days** a signed contract, performance, and payment bonds, the necessary insurance certificates, and all other required documents upon receipt of a *Notice of Award*. Upon receipt of a Notice to Proceed, the undersigned shall complete all work within **330 calendar days**. Liquidated damages in the amount of **five hundred dollars (\$500) per calendar day** shall be assessed after the designated **330 calendar days** have expired, unless otherwise permitted based on the Contract Documents.

The undersigned certifies that it is a **Class A** Contractor now licensed in accordance with the provisions of the Contractor’s License Law of the State of California, and the number of said license is \_\_\_\_\_ and that said license expires \_\_\_\_\_, 20 \_\_\_\_\_.

WELL 7 REPLACEMENT PROJECT PHASE IV IMPROVEMENTS  
CITY OF HUGHSON

4/20/2020  
PROPOSAL AND BID FORMS  
SECTION 0040 - 1

Contractor:\_\_\_\_\_

By:\_\_\_\_\_

Printed Name

\_\_\_\_\_

Signature

\_\_\_\_\_

Dated

\_\_\_\_\_

Title

Bidder's Business Address

\_\_\_\_\_

Telephone Number:\_\_\_\_\_

Fax Number:\_\_\_\_\_

NOTES: (i) All Proposal and Bid Forms must be completed and submitted with bid. Forms must be completed in ink.

(ii) Bid by corporations must be executed in the corporate name by the president or a vice president (or other corporate officer accompanied by evidence of the authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

(iii) Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

(iv) Bids by joint ventures shall be signed by each participant in the joint venture or by an authorized agent of each participant.

(v) The names of all persons signing must also be legibly printed or typed below the signature. A Bid by a person who affixes to his signature the work "president", "secretary", "agent", or other designation without disclosing his principal may be held to be the Bid of the individual signing. When requested by Owner, evidence of the authority of the person signing shall be furnished.

## 2 – Schedule of Items and Prices

---

### CONTRACTOR

In accordance with the CONTRACT DOCUMENTS, the undersigned Bidder hereby proposes to furnish all materials, equipment, tools, labor, and incidentals new and free from defect required for the above stated project as set forth in the Contract Documents and any addenda thereto, and to perform all work in the manner and time prescribed therein.

Bidder declares that this proposal is based upon careful examination of the work site, Plans, Specifications, INSTRUCTIONS TO BIDDERS, and all other contract documents, including but not limited to:

Contract General and Technical Specifications

Project Plans

Geotechnical Report

City Construction Standards

Addenda

If this proposal is accepted for award, Bidder agrees to enter into a contract with the City at the total bid set forth in the following Unit Price Table. Bidder understands that failure to enter into a contract in the manner and time prescribed will result in forfeiture to the City of the Bidder's Bond accompanying this proposal.

The Bidder agrees to furnish all labor, material, equipment, transportation, and services for the construction of the Work complete in its entirety as defined in the Contract Documents. The equipment and material supplied shall be new and free from defects. Incomplete or partial proposals will not be considered. The bid price(s) quoted shall include all taxes, royalties, insurance, transportation, permits, bonds, freight, and fees imposed upon the Bidder. The City reserves the right, after opening bids, to reject all bids or to make an award to the lowest responsive, responsible Bidder.

The Bidder shall submit a single base bid price as required by the Proposal, said base bid being the total of the prices for the various items listed in the Bid Form. The Base Bid shall be stated in words and numerals, in case of a conflict, words will take precedence.

The quantities shown on the Unit Price Table above are for bidding purposes only. The actual quantities of each item may vary. Payment will be the product of the unit price and actual quantity of material or labor provided.

The unit prices provided by Bidder represents the total cost to provide all labor, materials, and equipment necessary to construct each item of work. Unbalanced bids shall be rejected.

**UNIT PRICE TABLE OF BID FORM**

***WELL 7 REPLACEMENT PROJECT PHASE IV IMPROVEMENTS  
CITY PROJECT NO. 5010008-011C***

**Scope of Work:** Furnish all labor, materials, tools, equipment, transportation and incidentals necessary for completion of said Work as defined in said project contract documents.

Submitted By (Contractor Name): \_\_\_\_\_

| ITEM No.      | ITEM                            | Unit of Measure | Estimated Quantity | Unit Price | Amount |
|---------------|---------------------------------|-----------------|--------------------|------------|--------|
| 1             | MOBILIZATION                    | LS              | 1                  |            |        |
| 2             | YARD PIPING                     | LS              | 1                  |            |        |
| 3             | MECHANICAL                      | L.S.            | 1                  |            |        |
| 4             | INSTRUMENTATION                 | L.S.            | 1                  |            |        |
| 5             | SITE ELECTRICAL                 | L.S.            | 1                  |            |        |
| 6             | SWITCHGEAR, MCC, PLC            | L.S.            | 1                  |            |        |
| 7             | SCADA AND TELEMETRY             | L.S.            | 1                  |            |        |
| 8             | CONTROL BUILDING                | SQ. FT.         | 1,344              |            |        |
| 9             | CHEMICAL DISINFECTION SYSTEM    | L.S.            | 1                  |            |        |
| 10            | SITE WORK                       | L.S.            | 1                  |            |        |
| 11            | GENERATOR                       | L.F.            | 1                  |            |        |
| 12            | BACKWASH TANK                   | L.S.            | 1                  |            |        |
| 13            | 16" TRANSMISSION PIPING         | L.F.            | 3,150              |            |        |
| 14            | 12" TRANSMISSION PIPING         | L.F.            | 1,900              |            |        |
| 15            | INSTALLATION OF OWNER'S FILTERS | L.S.            | 1                  |            |        |
| <b>TOTAL:</b> |                                 |                 |                    |            |        |

**TOTAL BID PRICE FOR SCHEDULE (Base Bid)** \$ \_\_\_\_\_

**TOTAL BID AMOUNT IN WORDS** \_\_\_\_\_

Bidder's Initials \_\_\_\_\_

WELL 7 REPLACEMENT PROJECT PHASE IV IMPROVEMENTS  
CITY OF HUGHSON

4/29/2020  
PROPOSAL AND BID FORMS  
SECTION 0040 - 4

**TOTAL BID AMOUNT IN WORDS** \_\_\_\_\_

Bidder's Initials \_\_\_\_\_

Bidder acknowledges receipt and understanding of all addenda associated with the project. Bidder shall list the addenda received by indicating addendum number and date in the spaces below:

Addendum Number \_\_\_\_\_ Date Received \_\_\_\_\_

Addendum Number \_\_\_\_\_ Date Received \_\_\_\_\_

Addendum Number \_\_\_\_\_ Date Received \_\_\_\_\_

### **3 – Equipment, Materials and Systems**

The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the "effective date of the Agreement". The procedure for submittal of any such application by Contractor and consideration by Engineer is set forth in the General Conditions which are supplemented in the General Requirements.

Whenever a material or article is specified or described by using the name of a proprietary product or the name of a particular manufacturer or vendor, the specified item mentioned shall be understood as establishing the type, function, and quality desired. Other manufacturer's products will be accepted provided sufficient information is submitted to allow Engineer to determine that the products submitted are equivalent to those names. Applications for such review will not be considered by Engineer until after the "effective date of the Agreement". The procedure for submittal of any such application by Contractor and consideration by Engineer is set forth in the General Conditions which are supplemented in the General Requirements.

The Bidder shall designate the manufacturer or supplier of the equipment, materials and systems listed below. Bidder guarantees the listed manufacturers and suppliers have products which comply with the requirements of the specifications.

**1. Fabricated Steel Pipe and Coatings**

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**2. Generator**

---

**3. Steel Backwash Tank**

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**4. Booster and Well Pumps/Motors**

---

**5.**

## 4 – Bidder's Bond

KNOW ALL MEN BY THESE PRESENTS, that we \_\_\_\_\_

as Principal, \_\_\_\_\_ and as Surety, are firmly held and bound unto the City of Hughson ("City"), organized and existing under the laws of the State of California, sometimes referred to as the City, in the sum of \$\_\_\_\_\_ (which is a sum not less than ten percent of the amount of the total bid) for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such that, whereas the Principal has submitted to the City the accompanying Proposal dated \_\_\_\_\_ for the construction of:

***WELL 7 REPLACEMENT PROJECT PHASE IV  
STORAGE TANK  
CITY PROJECT NO. 5010008-011C***

NOW, THEREFORE, if the Principal withdraws said proposal within the period specified in said Proposal, or if the Principal shall not, within ten calendar days after the receipt from the City of Notice of Award of the Contract for any reason whatsoever except the fault of the City, enter into the Contract with the City in accordance with the Principal's Proposal, give bonds with good and sufficient surety and furnish the certificates of insurance as stated in said Proposal, then the above obligation shall be and remain in full force and effect, otherwise, it shall be null and void.

In the event suit is brought upon this Bond by the City and judgment is recovered, the Surety shall pay all costs incurred by the City in such suit, including attorney's fees to be fixed by the court.

\_\_\_\_\_  
Dated

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Business Address

In presence of: \_\_\_\_\_

\_\_\_\_\_  
Business Address

WELL 7 REPLACEMENT PROJECT PHASE IV IMPROVEMENTS  
CITY OF HUGHSON

4/20/2020  
PROPOSAL AND BID FORMS  
SECTION 0040 - 7

Seal

---

Surety

---

Business Address

In presence of: \_\_\_\_\_

\_\_\_\_\_

Business Address

\_\_\_\_\_



## 5 – List of Proposed Subcontractors

If awarded the Contract, the Bidder proposes to employ the following subcontractors which will perform work or labor or render service to the Bidder in or about the construction of the work in an amount in excess of one-half of 1.0 percent (0.5%) of the total amount bid, or greater than ten thousand dollars (\$10,000). The Bidder shall not be allowed to substitute another subcontractor for the subcontractor listed below without the written approval of the City. If no subcontract work is proposed, except within the 0.5% limit set forth above, the Bidder shall so state. If additional pages are needed, attach copies of this page.

1. \_\_\_\_\_  
Subcontractor's Name/License No.  
  
\_\_\_\_\_  
Subcontractor's Address  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
Description of Work to be subcontracted
2. \_\_\_\_\_  
Subcontractor's Name/License No.  
  
\_\_\_\_\_  
Subcontractor's Address  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
Description of Work to be subcontracted
3. \_\_\_\_\_  
Subcontractor's Name/License No.  
  
\_\_\_\_\_  
Subcontractor's Address  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
Description of Work to be subcontracted

## 6 – Experience Statement

The Bidder shall submit, as part of its proposal, the following statements as to its experience qualifications. The Bidder certifies that all statements and information set forth are true and accurate.

1. The Bidder has been engaged in the contracting business under its present business name for \_\_\_\_\_ years.
2. Experience in work of nature similar in type and magnitude to that set forth in the specification extends over a period of \_\_\_\_\_ years.
3. The Bidder, as Contractor, has satisfactorily completed all contracts awarded to it, except as follows: (Name any and all exceptions and reasons therefore. Bidders should attach additional pages if necessary.)
  1. \_\_\_\_\_
  2. \_\_\_\_\_

### REFERENCES

|   | <u>Name of Owner</u> | <u>Telephone Number</u> | <u>Year Completed</u> | <u>Type of Work</u> | <u>Contract Amount</u><br>(Round to the<br>Nearest Thousand<br>Dollars) |
|---|----------------------|-------------------------|-----------------------|---------------------|---|
| 1 | _____                | _____                   | _____                 | _____               | \$ _____  |
| 2 | _____                | _____                   | _____                 | _____               | \$ _____  |
| 3 | _____                | _____                   | _____                 | _____               | \$ _____  |
| 4 | _____                | _____                   | _____                 | _____               | \$ _____  |

## **7 – Contractor’s Certification of Prevailing Wages Requirements**

I herby certify that I have reviewed the construction contract requirements imposed on the Contractor and fully understand all my obligations if the project is awarded to me, including the necessity to pay prevailing wage rates and provide certified payroll forms.

---

Name of Contractor

---

Signature

---

Address

---

---

Dated

## 8 – Noncollusion Affidavit

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

**NONCOLLUSION AFFIDAVIT**  
(Title 23 United States Code Section 112 and  
Public Contract Code Section 7106)

In conformance with Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Note: The above Noncollusion Affidavit is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## 9 – Nondiscrimination Clause

During the performance of this contract, Contractor and its Subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. Contractors and Subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractors and Subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12900 et seq.) and the applicable regulations promulgated there under (California Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900, set forth in Chapter 5 of Division 4 of Title 2 or the California Administrative Code are incorporated into this contract by reference and made a part hereof as if set forth in full. Contractor and its Subcontractor shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

This Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

THE UNDERSIGNED CERTIFIES THAT THE BIDDER WILL COMPLY WITH THE ABOVE REQUIREMENTS.

CONTRACTOR OR  
SUBCONTRACTOR NAME: \_\_\_\_\_

CERTIFIED BY:

NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

## 10 – Drug-free Workplace Certification

### CONTRACTOR/APPLICANT

---

The Contractor or applicant named above hereby certifies compliance with Government Code Section 8355 in matters relating to providing a drug-free workplace. The above named Contractor or applicant will:

1. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations, as required by Government Code Section 8355(a).
2. Establish a Drug-Free Awareness Program as required by Government Code Section 8355(b), to inform employees about all of the following:
  - a. The dangers of drug abuse in the workplace;
  - b. The person's or organization's policy of maintaining a drug-free workplace;
  - c. Any available counseling, rehabilitation and employee assistance programs, and
  - d. Penalties that may be imposed upon employees for drug abuse violations.
3. Provide as required by Government Code Section 8355(c), that every employee who works on the proposed contract or loan:
  - a. Will receive a copy of the company's drug-free policy statement,
  - b. Will agree to abide by the terms of the company's statement as a condition of employment on the contract or loan.

---

### CERTIFICATION

---

I, the official named below, hereby swear that I am duly authorized legally to bind the Contractor or loan recipient to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME: \_\_\_\_\_

DATE EXECUTED: \_\_\_\_\_ EXECUTED IN COUNTY OF: \_\_\_\_\_

CONTRACTOR/APPLICANT SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_

**- END OF SECTION -**

## SECTION 0060 – CONSTRUCTION AGREEMENT

**OWNER: CITY OF HUGHSON  
COMMUNITY DEVELOPMENT DEPARTMENT**

**PROJECT: WELL 7 REPLACEMENT PROJECT PHASE IV  
CITY PROJECT NO. 5010008-011C**

THIS AGREEMENT, made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between the City of Hughson, hereinafter called the City, and \_\_\_\_\_ doing business as a \_\_\_\_\_ hereinafter called Contractor.

Witnesseth that for and in consideration of the payments and agreements hereinafter mentioned:

1. The Contractor will commence and complete the construction of said project in accordance with Contract Documents.
2. The Contractor will furnish all materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the project described in the Contract Documents and herein.
3. The Contractor will commence the work required by the Contract Documents within **7 calendar** days after the date of the Notice-to-Proceed and will complete the same within **330 calendar days** unless the period for completion is extended otherwise by the Contract Documents.
4. In case of failure on the part of the Contractor to complete the work within the time stipulated, plus any duly authorized extension of time, the parties hereby agree and recite that Owner's actual damages in the sum of **\$500.00** for each calendar day's delay. Time is of the essence in the completion of this contract.
5. The Contractor agrees to perform all of the work described in the Contract Documents and comply with the terms therein for the sum of \$\_\_\_\_\_, or based on actual quantities installed and said unit prices provided by Contractor.
6. The terms "Contract Documents" means and includes the following:
  - a. Proposal/Unit Price Table

- b. Bid Bond
  - c. Notice of Award
  - d. Construction Agreement
  - e. Performance Bond
  - f. Payment Bond
  - g. Notice-to-Proceed
  - h. General Specifications and Provisions
  - i. Technical Specifications
  - j. Plans/Drawings
  - k. Geotechnical Report
  - l. Insurance Requirements
  - m. Addenda
7. The City will pay to the Contractor such amounts and as required by the Contract Documents.
8. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized officials, this Agreement which shall be deemed an original on the date first above written.

Contractor

By: \_\_\_\_\_  
[official name]/[official title]

Date: \_\_\_\_\_



Approved as to Form:

By \_\_\_\_\_

Daniel J. Schroeder  
City Attorney

City

City of Hughson  
Post Office Box 9  
Hughson, CA 95326

By: \_\_\_\_\_

Merry Mayhew  
City Manager

## SECTION 700 - GENERAL CONDITIONS

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## ARTICLE 1 -- DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated in this Article 1 which meanings are applicable to both the singular and plural thereof. If a word which is entirely in upper case in these definitions is found in lower case in the Contract Documents, then the lower case word will have its ordinary meaning.

**Addenda** - Written or graphic instruments issued prior to the opening of Bids which make additions, deletions, or revisions to the Contract Documents.

**Agreement** - The written contract between the OWNER and the CONTRACTOR covering the WORK to be performed; other documents are attached to the Agreement and made a part thereof as provided therein.

**Application for Payment** - The form accepted by the ENGINEER which is to be used by the CONTRACTOR to request progress payments or final payment and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

**Asbestos** - Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

**Bid** - The offer or proposal of the Bidder submitted on the prescribed form setting forth the price or prices for the WORK.

**Bonds** - Bid, Performance, and Payment Bonds and other instruments of security.

**Change Order** - A document recommended by the ENGINEER, which is signed by the CONTRACTOR and the OWNER, and authorizes an addition, deletion, or revision in the WORK, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

**Clarification** - A document issued by the ENGINEER to the CONTRACTOR that interprets the requirement(s) and/or design intent of the Contract Documents, which may not represent an addition, deletion, or revision in the WORK or an adjustment in the Contract Price or the Contract Times.

**Contract Documents** - The Notice Inviting Bids, Instructions to Bidders, Bid Forms (including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates, affidavits and other documentation), Agreement, Performance Bond, Payment Bond, General Conditions, Supplementary General Conditions, Technical Specifications, Drawings, all Addenda,

and Change Orders executed pursuant to the provisions of the Contract Documents. Shop Drawings are not Contract Documents.

**Contract Price** - The total monies payable by the OWNER to the CONTRACTOR under the terms and conditions of the Contract Documents.

**Contract Times** - The number or numbers of successive calendar days or dates stated in the Contract Documents for the completion of the WORK.

**CONTRACTOR** - The individual, partnership, corporation, joint-venture, or other legal entity with whom the OWNER has executed the Agreement.

**Day** - A calendar day of 24 hours measured from midnight to the next midnight.

**Defective Work** - Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or work that has been damaged prior to the ENGINEER's recommendation of final payment.

**Drawings** - The drawings, plans, maps, profiles, diagrams, and other graphic representations which indicate the character, location, nature, extent, and scope of the WORK and which have been prepared by the ENGINEER and are included and/or referred to in the Contract Documents. Shop Drawings are not Drawings as so defined.

**Effective Date of the Agreement** - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

**ENGINEER** - The individual, partnership, corporation, joint-venture, or other legal entity named as such by the OWNER as set forth in the Supplementary General Conditions.

**Field Order** - A written order issued by the ENGINEER which may or may not involve a change in the WORK.

**General Requirements** - Division 1 of the Technical Specifications.

**Hazardous Waste** - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6906) as amended from time to time.

**Laws and Regulations; Laws or Regulations** - Any and all applicable laws, rules, regulations, ordinances, codes, and/or orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

**Lien or Mechanic's Lien** - A form of security, an interest in real property, which is held to secure the payment of an obligation. When related to public works construction, Lien or Mechanic's Lien may be called Stop Notice.

**Milestone** - A principal event specified in the Contract Documents relating to an intermediate completion date of a separately identifiable part of the WORK or a period of time within which the separately identifiable part of the WORK should be performed prior to Substantial Completion of all the WORK.

**Notice of Award** - The written notice by the OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein within the time specified, the OWNER will enter into an Agreement.

**Notice of Completion** - A form signed by the ENGINEER and the CONTRACTOR recommending to the OWNER that the WORK is Substantially Complete and fixing the date of Substantial Completion. After acceptance of the WORK by the OWNER's governing body, the form is signed by the OWNER and filed with the County Recorder. This filing starts the 30 day lien filing period on the WORK.

**Notice to Proceed** - The written notice issued by the OWNER to the CONTRACTOR authorizing the CONTRACTOR to proceed with the WORK and establishing the date of commencement of the Contract Times.

**OWNER** - The public body or authority, corporation, association, firm, or person with whom the CONTRACTOR has entered into the Agreement and for whom the WORK is to be provided.

**Partial Utilization** - Use by the OWNER of a substantially completed part of the WORK for the purpose for which it is intended prior to Substantial Completion of all the WORK.

**PCBs** - Polychlorinated biphenyls.

**Petroleum** - Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

**Project** - The total construction project of which the WORK to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

**Radioactive Material** - Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

**Resident Project Representative** - The authorized representative of the ENGINEER who is assigned to the Site or any part thereof.

**Samples** - Physical examples of materials, equipment, or workmanship that are representative of some portion of the WORK and which establish the standards by which such portion of the WORK will be judged.

**Shop Drawings** - All drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by or for the CONTRACTOR and submitted by the CONTRACTOR to illustrate some portion of WORK.

**Site** - Lands or other areas designated in the Contract Documents as being furnished by the OWNER for the performance of the construction, storage, or access.

**Specifications** - (Same definition as for Technical Specifications hereinafter).

**Stop Notice** - A legal remedy for subcontractors and suppliers who contribute to public works, but



who are not paid for their work, which secures payment from construction funds possessed by the OWNER. In some states, for public property, the Stop Notice remedy is designed to substitute for a mechanic's lien.

**Subcontractor** - An individual, partnership, corporation, joint-venture, or other legal entity having a direct contract with the CONTRACTOR or with any other Subcontractor for the performance of a part of the WORK at the Site.

**Substantial Completion** - The time at which the WORK (or specified part) has progressed to the point where it is sufficiently complete, in accordance with the Contract Documents, as evidenced by Notice of Completion (or Notice of Partial Utilization) so that the WORK (or specified part) can be utilized for the purposes for which it is intended; or, if no such notice is issued, when final payment is due in accordance with Paragraph 14.8. The terms "substantially complete" and "substantially completed" as applied to any work refer to substantial completion thereof.

**Supplementary General Conditions** - The part of the Contract Documents which make additions, deletions, or revisions to these General Conditions.

**Supplier** - A manufacturer, fabricator, distributor, materialman, or vendor having a direct contract with the CONTRACTOR or with any Subcontractor to furnish materials, equipment, or product to be incorporated in the WORK by the CONTRACTOR or any Subcontractor.

**Technical Specifications** - Divisions 1 through 17 of the Contract Documents consisting of the General Requirements and written technical descriptions of products and execution of the WORK.

**Utilities** - All pipelines, conduits, ducts, cables, wires, tracks, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground or above the ground to furnish any of the following services or materials: water, sewage, sludge, drainage, fluids, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, traffic control, or other control systems.

**WORK** - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. WORK is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

## **ARTICLE 2 -- PRELIMINARY MATTERS**

### **2.1 DELIVERY OF BONDS AND INSURANCE CERTIFICATES**

- A. When the CONTRACTOR delivers the signed Agreement to the OWNER, the CONTRACTOR shall also deliver to the OWNER such Bonds and insurance policies and certificates as the CONTRACTOR may be required to furnish in accordance with the Contract Documents.

## 2.2 COPIES OF DOCUMENTS

- A. The OWNER will furnish to the CONTRACTOR the required number of copies of the Contract Documents specified in the Supplementary General Conditions.

## 2.3 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED

- A. The Contract Times will start to run on the commencement date stated in the Notice to Proceed.

## 2.4 STARTING THE WORK

- A. The CONTRACTOR shall begin to perform the WORK on the commencement date stated in the Notice to Proceed, but no work shall be done at the Site prior to said commencement date.
- B. Before undertaking each part of the WORK, the CONTRACTOR shall review the Contract Documents in accordance with Paragraph 3.3.

## 2.5 PRECONSTRUCTION CONFERENCE

- A. The CONTRACTOR is required to attend a preconstruction conference. This conference will be attended by the OWNER, ENGINEER, and others as appropriate in order to discuss the WORK in accordance with the applicable procedures specified in Section 01010 - Summary of Work.
- B. The CONTRACTOR's initial schedule submittals for shop drawings, obtaining permits, and Plan of Operation and CPM Schedule will be reviewed and finalized. As a minimum, the CONTRACTOR's representatives should include its project manager and schedule expert. The CONTRACTOR should plan on this meeting taking no less than 8 hours. If the submittals are not finalized at the end of the meeting, additional meetings will be held so that the submittals can be finalized prior to the submittal of the first Application for Payment. No Application for Payment will be processed prior to receiving acceptable initial submittals from the CONTRACTOR.

# ARTICLE 3 -- INTENT AND USE OF CONTRACT DOCUMENTS

## 3.1 INTENT

- A. The Contract Documents comprise the entire agreement between the OWNER and the CONTRACTOR concerning the WORK. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the State in which the Project is located.
- B. It is the intent of the Contract Documents to describe the WORK, functionally complete, to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not called for specifically.

- C. When words or phrases which have a well-known technical or construction industry or trade meaning are used to describe work, materials, or equipment such words or phrases shall be interpreted in accordance with that meaning unless a definition has been provided in Article 1 of the General Conditions.

### 3.2 REFERENCE TO STANDARDS

- A. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code shall be effective to change the duties and responsibilities of the OWNER, the CONTRACTOR, the ENGINEER, or any of their consultants, agents, or employees, from those set forth in the Contract Documents, nor shall it be effective to assign to OWNER, ENGINEER, or any of ENGINEER's consultants, agents, or employees any duty or authority to direct the performance of the WORK or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

### 3.3 REVIEW OF CONTRACT DOCUMENTS

- A. If, during the performance of the WORK, CONTRACTOR discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the WORK or of any such standard, specification, manual, or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once, and CONTRACTOR shall not proceed with the work affected thereby (except in an emergency as authorized by Paragraph 6.12) until a Clarification, Field Order, or Change Order to the Contract Documents has been issued.

### 3.4 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS

- A. In resolving conflicts resulting from errors or discrepancies in any of the Contract Documents, the order of precedence shall be as follows:

1. Permits from other agencies as may be required by law
2. Change Orders
3. Agreement
4. Addenda
5. Contractor's Bid (Bid Form)
6. Supplementary General Conditions
7. Notice Inviting Bids
8. Instructions to Bidders
9. General Conditions
10. Technical Specifications
11. Referenced Standard Specifications
12. Drawings

- B. With reference to the Drawings the order of precedence is as follows:

1. Figures govern over scaled dimensions
2. Detail drawings govern over general drawings
3. Addenda/Change Order drawings govern over any other drawings
4. Drawings govern over standard drawings

### 3.5 AMENDING CONTRACT DOCUMENTS

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the WORK or to modify the terms and conditions thereof by a Change Order (pursuant to Article 10).

### 3.6 REUSE OF DOCUMENTS

- A. Neither the CONTRACTOR, nor any Subcontractor or Supplier, nor any other person or organization performing any of the WORK under a contract with the OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Technical Specifications, or other documents used on the WORK, and they shall not reuse any of them on the extensions of the Project or any other project without written consent of OWNER.

## ARTICLE 4 -- SITE OF THE WORK

### 4.1 AVAILABILITY OF LANDS

- A. The OWNER will furnish, as indicated in the Contract Documents, the lands upon which the WORK is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the OWNER, unless otherwise provided in the Contract Documents. Nothing contained in the Contract Documents shall be interpreted as giving the CONTRACTOR exclusive occupancy of the lands or rights-of-way provided. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment; provided, that the CONTRACTOR shall not enter upon nor use any property not under the control of the OWNER until a written temporary construction easement agreement has been executed by the CONTRACTOR and the property owner, and a copy of said easement furnished to the ENGINEER prior to said use; and, neither the OWNER nor the ENGINEER will be liable for any claims or damages resulting from the CONTRACTOR's trespass on or use of any such properties. The CONTRACTOR shall provide the OWNER with a signed release from the property owner confirming that the lands have been satisfactorily restored upon completion of the WORK.

### 4.2 REPORTS OF PHYSICAL CONDITIONS

- A. **Subsurface Explorations:** Reference is made to the Supplementary General Conditions for identification of those reports of explorations and tests of subsurface conditions at the Site that have been utilized by the ENGINEER in the preparation of the Contract Documents.
- B. **Existing Structures:** Reference is made to the Supplementary General Conditions for

identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except underground Utilities referred to in Paragraph 4.3 herein) which are at or contiguous to the Site that have been utilized in the preparation of the Contract Documents.

- C. Neither the OWNER nor ENGINEER makes any representation as to the completeness of the reports or drawings referred to in Paragraph 4.2 A or B above or the accuracy of any data or information contained therein. The CONTRACTOR may rely upon the accuracy of the technical data contained in such reports and drawings. However, the CONTRACTOR may not rely upon any interpretation of such technical data, including any interpolation or extrapolation thereof, or any non-technical data, interpretations, and opinions contained therein.

#### 4.3 PHYSICAL CONDITIONS - UNDERGROUND UTILITIES

- A. **Indicated:** The information and data indicated in the Contract Documents with respect to existing underground Utilities at or contiguous to the Site are based on information and data furnished to the OWNER or the ENGINEER by the owners of such underground Utilities or by others. Unless it is expressly provided in the Supplementary General Conditions and/or Section 01530 - Protection and Restoration of Existing Facilities, the OWNER and the ENGINEER will not be responsible for the accuracy or completeness of any such information or data, and the CONTRACTOR shall have full responsibility for reviewing and checking all such information and data, for locating all underground Utilities indicated in the Contract Documents, for coordination of the WORK with the owners of such underground Utilities during construction, for the safety and protection thereof and repairing any damage thereto resulting from the WORK, the cost of all of which are deemed to have been included in the Contract Price.
- B. **Not Indicated:** If an underground Utility is uncovered or revealed at or contiguous to the Site which was not indicated in the Contract Documents and which the CONTRACTOR could not reasonably have been expected to be aware of, the CONTRACTOR shall identify the owner of such underground Utility and give written notice thereof to that owner and shall notify the ENGINEER in accordance with the requirements of the Supplementary General Conditions and Section 01530 - Protection of Existing Facilities.

#### 4.4 DIFFERING SITE CONDITIONS

- A. The CONTRACTOR shall notify the ENGINEER, in writing, of the following unforeseen conditions, hereinafter called differing Site conditions, promptly upon their discovery (but in no event later than 14 days after their discovery) and before they are disturbed:
  - 1. Subsurface or latent physical conditions at the Site of the WORK differing materially from those indicated, described, or delineated in the Contract Documents, including those reports discussed in Paragraph 4.2, 4.3, and 4.5; and
  - 2. Unknown physical conditions at the Site of the WORK of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents, including those reports and documents discussed in Paragraph 4.2, 4.3, and 4.5.
- B. The ENGINEER will review the pertinent conditions, determine the necessity of obtaining

additional explorations or tests with respect thereto, and advise the OWNER, in writing, of the ENGINEER's findings and conclusions.

- C. If the OWNER concludes that because of newly discovered conditions a change in the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the difference.
- D. In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Times, or any combination thereof, will be allowable to the extent that they are attributable to any such difference. If the OWNER and the CONTRACTOR are unable to agree as to the amount or length thereof, a claim may be made therefor as provided in Articles 11 and 12.
- E. The CONTRACTOR's failure to give notice of differing Site conditions within 14 days of their discovery and before they are disturbed shall constitute a waiver of all claims in connection therewith, whether direct or consequential in nature.

#### 4.5 HAZARDOUS MATERIALS

- A. Reference is made to the Supplementary General Conditions for identification of those reports and drawings relating to Asbestos, Hazardous Waste, PCBs, Petroleum and/or Radioactive Material identified at the Site that have been utilized by the ENGINEER in the preparation of the Contract Documents.
- B. OWNER shall be responsible for any Asbestos, Hazardous Waste, PCBs, Petroleum, or Radioactive Material uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the WORK and which may present a substantial danger to persons or property exposed thereto in connection with the WORK at the Site. OWNER will not be responsible for any such material brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.
  - 1. Upon discovery of any Asbestos, Hazardous Waste, PCBs, Petroleum, or Radioactive Material, the CONTRACTOR shall immediately stop all work in any area affected thereby (except in an emergency as required by Paragraph 6.12) and notify OWNER and ENGINEER (and thereafter confirm such notice in writing). CONTRACTOR shall not be required to resume any work in any such affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR special written notice. Such written notice will specify that such condition and any affected area is or has been rendered safe for the resumption of the work or specify any special conditions under which the work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of adjustment, if any, in Contract Price or Contract Times as a result of such work stoppage or such special conditions under which work is agreed by CONTRACTOR to be resumed, either party may make a claim therefor as provided in Articles 11 and 12.
  - 2. If, after receipt of such special written notice, CONTRACTOR does not agree to resume such WORK based on a reasonable belief it is unsafe, or does not agree to resume such WORK under special conditions, then OWNER may order such portion of the WORK that is in connection with such hazardous condition or in such affected

area to be deleted from the WORK. If OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the WORK then either party may make a claim therefor as provided in Articles 11 and 12. OWNER may have such deleted portion of the WORK performed by OWNER's own forces or others in accordance with Article 7.

3. To the fullest extent permitted by Laws and Regulations, OWNER will indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's consultants, and the officers, directors, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages arising out of or resulting from such hazardous condition; provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the WORK itself), including the loss of use resulting therefrom. Nothing in this Paragraph shall obligate OWNER to indemnify a person or entity from and against the consequences of that person's or entity's own negligence.

- C. The provisions of Paragraphs 4.2, 4.3, and 4.4 are not intended to apply to Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the Site.

#### 4.6 REFERENCE POINTS

- A. The OWNER will provide one bench mark, near or on the Site of the WORK, and will provide two points near or on the Site to establish a base line for use by the CONTRACTOR for alignment control. Unless otherwise specified in the Supplementary General Conditions, the CONTRACTOR shall furnish all other lines, grades, and bench marks required for proper execution of the WORK.
- B. The CONTRACTOR shall preserve all bench marks, stakes, and other survey marks, and in case of their removal or destruction by any party, the CONTRACTOR shall be responsible for the accurate replacement of such reference points by personnel qualified under the applicable state codes governing land surveyors.

### ARTICLE 5 -- BONDS AND INSURANCE

#### 5.1 BONDS

- A. The CONTRACTOR shall furnish Performance and Payment Bonds, each in the amount set forth in the Supplementary General Conditions, as security for the faithful performance and payment of all the CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date of Substantial Completion, except as otherwise provided by Law or Regulation or by the Contract Documents. The CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary General Conditions.
- B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties

on Federal bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

- C. If the surety on any Bond furnished by the CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the WORK is located, the CONTRACTOR shall within 7 days thereafter substitute another Bond and surety, which must be acceptable to the OWNER.
- D. All Bonds required by the Contract Documents to be purchased and maintained by CONTRACTOR shall be obtained from surety companies that are duly licensed or authorized in the State in which the Project is located to issue Bonds for the limits so required. Such surety companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.

## 5.2 INSURANCE

- A. The CONTRACTOR shall purchase and maintain the insurance required under this Paragraph. Such insurance shall include the specific coverages set out herein and be written for not less than the limits of liability and coverages provided in the Supplementary General Conditions, or required by Laws or Regulations, whichever are greater. All insurance shall be maintained continuously during the life of the Agreement up to the date of Substantial Completion and at all times thereafter when the CONTRACTOR may be correcting, removing, or replacing Defective Work in accordance with Paragraph 13.5. The CONTRACTOR's liabilities under this Agreement shall not be deemed limited in any way to the insurance coverage required.
- B. All insurance required by the Contract Documents to be purchased and maintained by the CONTRACTOR shall be obtained from insurance companies that are duly licensed or authorized to issue insurance policies for the limits and coverages so required in the State in which the Project is located. Such insurance companies shall have a current Best's Rating of at least an "A" (Excellent) general policy holder's rating and a Class VII financial size category and shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.
- C. The CONTRACTOR shall furnish the OWNER, with copies to each additional insured who is indicated in the Supplementary General Conditions, with certificates and original endorsements showing the type, amount, class of operations covered, effective dates and dates of expiration of policies. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, reduced in coverage, or renewal refused until at least 30 days' prior written notice has been given to the OWNER and additional insureds by certified mail. All such insurance required herein (except for worker's compensation and employer's liability) shall name the OWNER, the ENGINEER, and their consultants and subconsultants and their officers, directors, agents, and employees as "additional insureds" under the policies. The CONTRACTOR shall purchase and maintain the following insurance:
  - 1. Workers' Compensation and Employer's Liability: This insurance shall protect the CONTRACTOR against all claims under applicable workers' compensation laws or



federal acts, including claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a workers' compensation law. This insurance shall include an "all states" endorsement. In the event of a "monopolistic" state, CONTRACTOR shall certify all employees are covered by the state fund or shall provide a separate policy providing "all states" benefits. Employer's liability "stop gap" coverage for monopolistic states shall be provided under either a worker's compensation policy or general liability policy. The CONTRACTOR shall require each subcontractor similarly to provide workers' compensation insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the CONTRACTOR's workers' compensation insurance. In case any class of employees is not protected under the workers' compensation laws, the CONTRACTOR shall provide and shall cause each Subcontractor to provide adequate employer's liability insurance for the protection of such of its employees as are not otherwise protected. The CONTRACTOR and each Subcontractor shall provide a waiver of subrogation in favor of the OWNER and ENGINEER.

2. Comprehensive or Commercial General Liability: This insurance shall be written in comprehensive form and shall protect the CONTRACTOR against all claims arising from injuries to persons other than its employees or damage to property of the OWNER or others arising out of any act or omission of the CONTRACTOR or its agents, employees, or subcontractors. The policy shall also include protection against claims insured by personal injury liability coverage and contractual coverage to insure the contractual liability assumed by the CONTRACTOR under the indemnification provisions in the General Conditions. To the extent that the CONTRACTOR's work, or work under its direction, may require blasting, explosive conditions, or underground operations, the comprehensive or commercial general liability coverage shall include coverage relative to blasting, explosion, collapse, and/or underground hazards.
3. Commercial Automobile Liability: This insurance shall be written in comprehensive form and shall protect the CONTRACTOR against all claims for injuries to members of the public and damage to property of others arising from the use of motor vehicles, and shall cover operation on or off the Site of all motor vehicles licensed for highway use, whether they are owned, nonowned, or hired.
4. Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The CONTRACTOR shall either require each of the Subcontractors to procure and to maintain subcontractor's public liability and property damage insurance and vehicle liability insurance of the type and in the same amounts specified in the Supplementary General Conditions for the CONTRACTOR or insure the activities of the Subcontractors under the CONTRACTOR's own policies.
5. Builder's Risk:
  - a. This insurance shall be of the "all risks" type, shall be written in completed value form, and shall protect the CONTRACTOR, Subcontractors, the OWNER, and the ENGINEER, against risks of damage to buildings, structures, and materials and equipment (including any stored off-site and while in transit), CONTRACTORS' equipment, debris removal and including demolition and contingent loss occasioned by enforcement of any applicable legal

requirements, and shall cover reasonable compensation for ENGINEER'S services and expenses required as a result of such insured loss. The amount of such insurance shall be not less than the insurable value of the WORK at completion plus equipment. Builder's risk insurance shall provide for losses to be payable to the CONTRACTOR and the OWNER, as their interests may appear. This insurance shall contain a provision that in the event of payment for any loss under the coverage provided, the insurance company shall have no rights of recovery against the CONTRACTOR, the OWNER, and the ENGINEER. This insurance shall insure against all risks of loss (including earthquake, flood and collapse) and, at the option of the OWNER, shall include comprehensive boiler and machinery coverage including coverage for installation and testing.

- b. If the OWNER finds it necessary to occupy or use a portion or portions of the Project prior to Substantial Completion thereof, such occupancy shall not commence prior to the time mutually agreed to by the OWNER and CONTRACTOR and to which the insurance company or companies providing the Builder's Risk Insurance have consented by endorsement to the policy or policies.

## **ARTICLE 6 -- CONTRACTORS RESPONSIBILITIES**

### **6.1 COMMUNICATIONS**

- A. Written communications with the OWNER shall be only through or as directed by the ENGINEER.

### **6.2 SUPERVISION AND SUPERINTENDENCE**

- A. The CONTRACTOR shall supervise, inspect, and direct the WORK competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the WORK in accordance with the Contract Documents. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction and all safety precautions and programs incidental thereto. The CONTRACTOR shall be responsible to see that the completed WORK complies accurately with the Contract Documents.
- B. The CONTRACTOR shall designate in writing and keep on the Site at all times during the performance of the WORK a technically qualified, English-speaking superintendent, who is an employee of the CONTRACTOR and who shall not be replaced without written notice to the OWNER and the ENGINEER. The superintendent will be the CONTRACTOR's representative at the Site and shall have authority to act on behalf of the CONTRACTOR. All communications given to the superintendent shall be as binding as if given to the CONTRACTOR.
- C. The CONTRACTOR's superintendent shall be present at the Site at all times while work is in progress and shall be available by phone for emergencies 24 hours per day, 7 days per week. Failure to observe this requirement shall be considered suspension of the WORK by the CONTRACTOR until such time as such superintendent is again present at the Site.

### 6.3 LABOR, MATERIALS, AND EQUIPMENT

- A. The CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the WORK and perform construction as required by the Contract Documents. The CONTRACTOR shall furnish, erect, maintain, and remove the construction plant and any required temporary works. The CONTRACTOR shall at all times maintain good discipline and order at the Site. Except in connection with the safety or protection of persons or the WORK or property at the Site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all work at the Site shall be performed during regular working hours, and the CONTRACTOR will not permit overtime work or the performance of work on Saturday, Sunday, or any federally observed holiday without the OWNER's written consent. The CONTRACTOR shall apply for this consent through the ENGINEER in writing a minimum of 24 hours in advance.
- B. Except as otherwise provided in this Paragraph, the CONTRACTOR shall receive no additional compensation for overtime work, i.e., work in excess of 8 hours in any one calendar day or 40 hours in any one calendar week, even though such overtime work may be required under emergency conditions and may be ordered by the ENGINEER in writing. Additional compensation will be paid to the CONTRACTOR for overtime work only in the event extra work is ordered by the ENGINEER and the Change Order specifically authorizes the use of overtime work and then only to such extent as overtime wages are regularly being paid by the CONTRACTOR for overtime work of a similar nature in the same locality.
- C. All increased costs of inspection and testing performed during overtime work by the CONTRACTOR which is allowed solely for the convenience of the CONTRACTOR shall be borne by the CONTRACTOR. The OWNER has the authority to deduct the cost of all such inspection and testing from any partial payments otherwise due to the CONTRACTOR.
- D. Unless otherwise specified in the Contract Documents, the CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, lubricants, power, light, heat, telephone, water, sanitary facilities, and all other facilities, consumables, and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the WORK.
- E. All materials and equipment incorporated into the WORK shall be of specified quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of the OWNER. If required by the ENGINEER, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provisions of any such instructions will be effective to assign to the OWNER, ENGINEER, or any of their consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.9 C.

#### 6.4 SCHEDULE

- A. The CONTRACTOR shall comply with the Schedule requirements of Section 01300.

#### 6.5 SUBSTITUTES OR "OR EQUAL" ITEMS

- A. The CONTRACTOR shall submit proposed substitutes or "or equal" items in accordance with the Bidding Requirements. No request for substitution of an ☐or equal☐ item will be considered by the ENGINEER after award of the Contract.

#### 6.6 CONCERNING SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- A. The CONTRACTOR shall be responsible to the OWNER and the ENGINEER for the acts and omissions of its Subcontractors, Suppliers, and their employees to the same extent as CONTRACTOR is responsible for the acts and omissions of its own employees. Nothing contained in this Paragraph shall create any contractual relationship between any Subcontractor and the OWNER or the ENGINEER nor relieve the CONTRACTOR of any liability or obligation under the Contract Documents. The CONTRACTOR shall include these General Conditions and the Supplementary General Conditions as a part of all its subcontract and supply agreements.

#### 6.7 PERMITS

- A. Unless otherwise provided in the Supplementary General Conditions, the CONTRACTOR shall obtain and pay for all construction permits and licenses from the agencies having jurisdiction, including the furnishing of insurance and bonds if required by such agencies. The enforcement of such requirements shall not be made the basis for claims for additional compensation by CONTRACTOR. When necessary, the OWNER will assist the CONTRACTOR, in obtaining such permits and licenses. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the WORK, which are applicable at the time of opening of Bids. The CONTRACTOR shall pay all charges of utility owners for inspection or connections to the WORK.

#### 6.8 PATENT FEES AND ROYALTIES

- A. The CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the WORK or the incorporation in the WORK of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the WORK and if to the actual knowledge of the OWNER or the ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed by the OWNER in the Contract Documents. The CONTRACTOR's indemnification obligation under this Paragraph 6.7 A. for all claims and liabilities arising out of any infringement of patent rights or copyrights incident to the use in the performance of the WORK or resulting from the incorporation in the WORK of any invention, design, process, product, or device not specified in the Contract Documents shall be in accordance with Paragraph 6.16 of these General Conditions.

## 6.9 LAWS AND REGULATIONS

- A. The CONTRACTOR shall observe and comply with all Laws and Regulations which in any manner affect those engaged or employed on the WORK, the materials used in the WORK, or the conduct of the WORK. If any discrepancy or inconsistency should be discovered between the Contract Documents and any such Laws or Regulations, the CONTRACTOR shall report the same in writing to the ENGINEER. Any particular Law or Regulation specified or referred to elsewhere in the Contract Documents shall not in any way limit the obligation of the CONTRACTOR to comply with all other provisions of federal, state, and local laws and regulations. The CONTRACTOR's indemnification obligations for all claims or liability arising from violation of any such law, ordinance, code, order, or regulation, whether by CONTRACTOR or by its employees, Subcontractors or Suppliers shall be in accordance with Paragraph 6.16 of these General Conditions.

## 6.10 TAXES

- A. The CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by the CONTRACTOR in accordance with the laws and regulations of the place of the Project which are applicable during the performance of the WORK.

## 6.11 USE OF PREMISES

- A. The CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site, the land and areas identified in and permitted by the Contract Documents, and the other land and areas permitted by Laws and Regulations, rights-of-way, permits, and easements. The CONTRACTOR shall assume full liability and responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the WORK. Should any claim be made against the OWNER or the ENGINEER by any such owner or occupant because of the performance of the WORK, the CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim through litigation at the CONTRACTOR's sole liability expense. The CONTRACTOR's indemnification obligations for all claims and liability, arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any such owner or occupant against the OWNER, the ENGINEER, their consultants, subconsultants, and the officers, directors, employees and agents of each and any of them to the extent caused by or based upon the CONTRACTOR's performance of the WORK shall be in accordance with Paragraph 6.16 of these General Conditions.

## 6.12 SAFETY AND PROTECTION

- A. The CONTRACTOR shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
  - 1. All persons at the Site and other persons and organizations who may be affected thereby;
  - 2. All the WORK and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of the performance of the WORK.
- B. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property or to the protection of persons or property from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the WORK may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. CONTRACTOR'S duties and responsibilities for safety and for protection of the WORK shall continue until such time as all the WORK is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with Paragraph 14.7 B. that the WORK is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
  - C. The CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.
  - D. Materials that contain hazardous substances or mixtures may be required on the WORK. A Material Safety Data Sheet shall be made available at the Site by the CONTRACTOR for every hazardous product used.
  - E. Material usage shall strictly conform to OSHA safety requirements and all manufacturer's warnings and application instructions listed on the Material Safety Data Sheet and on the product container label.
  - F. The CONTRACTOR shall be responsible for the exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.
  - G. The CONTRACTOR shall notify the ENGINEER if it considers a specified product or its intended use to be unsafe. This notification must be given to the ENGINEER prior to the product being ordered, or if provided by some other party, prior to the product being incorporated in the WORK.

#### 6.13 EMERGENCIES

- A. In emergencies affecting the safety or protection of persons or the WORK or property at the Site or adjacent thereto, CONTRACTOR, without special instruction or authorization from OWNER or ENGINEER, is obligated to immediately act to prevent threatened damage, injury, or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the WORK or variations from the Contract Documents have been caused thereby. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Change Order will be issued to document the consequences of such action.

#### 6.14 SUBMITTALS

- A. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, the CONTRACTOR shall submit to the ENGINEER for review all Shop Drawings in accordance with the accepted schedule of Shop Drawing submittals specified in Section 01300 - Contractor Submittals.
- B. The ENGINEER'S review will be only to determine if the items covered by the submittals will, after installation or incorporation in the WORK, generally conform to the Contract Documents and with the design concept of the completed Project.
- C. The CONTRACTOR shall also submit to the ENGINEER for review all Samples in accordance with the accepted schedule of Sample submittals specified in Section 01300 - Contractor Submittals.
- D. Before submittal of each Shop Drawing or Sample, the CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the WORK and the Contract Documents. The CONTRACTOR shall provide submittals in accordance with the requirements of Section 01300 - Contractor Submittals.

#### 6.15 CONTINUING THE WORK

- A. The CONTRACTOR shall carry on the WORK and adhere to the progress schedule during all disputes or disagreements with the OWNER. No WORK shall be delayed or postponed pending resolution of any disputes or disagreements, except as the CONTRACTOR and the OWNER may otherwise agree in writing.

#### 6.16 CONTRACTOR'S GENERAL WARRANTY AND GUARANTEE

- A. CONTRACTOR warrants and guarantees that all WORK will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:
  - 1. Abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, or Suppliers, or any other individual or entity for whom CONTRACTOR is responsible;
  - 2. Normal wear and tear under normal usage.
- B. CONTRACTOR's obligation to perform and complete the WORK in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of WORK that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents:
  - 1. Observations by ENGINEER;
  - 2. Recommendation by ENGINEER or payment by OWNER of any progress or final

payment;

3. The issuance of a Certificate of Completion by the OWNER;
4. Use or occupancy of the WORK or any part thereof by the OWNER;
5. Any acceptance by OWNER or any failure to do so;
6. Any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice or acceptability by ENGINEER pursuant to Paragraph 14.7 B.;
7. Any inspection, test, or approval by others; or
8. Any correction of Defective Work by OWNER.

#### 6.17 INDEMNIFICATION

- A. To the fullest extent permitted by Laws and Regulations, the CONTRACTOR shall indemnify, defend, and hold harmless the OWNER, the ENGINEER, their consultants, subconsultants, and the officers, directors, employees, and agents of each and any of them, against and from all claims and liability arising under, by reason of, related, or incidental to the Contract Documents or any performance of the WORK, but not from the sole negligence or willful misconduct of the OWNER and/or the ENGINEER. Such indemnification by the CONTRACTOR shall include, but not be limited to, the following:
  1. Liability or claims resulting directly or indirectly from the negligence or carelessness of the CONTRACTOR, its employees, or agents in the performance of the WORK, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction, or by or on account of any act or omission of the CONTRACTOR, its employees, or agents;
  2. Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the CONTRACTOR's, Subcontractor's, or Supplier's own employees, or agents engaged in the WORK resulting in actions brought by or on behalf of such employees against the OWNER and/or the ENGINEER;
  3. Liability or claims arising directly or indirectly from or based on the violation of any Laws or Regulations, whether by the CONTRACTOR, its employees, or agents;
  4. Liability or claims arising directly or indirectly from the use or manufacture by the CONTRACTOR, its employees, or agents in the performance of this Agreement of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance, unless otherwise specifically stipulated in this Agreement;
  5. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the OWNER and/or ENGINEER or any other parties by the CONTRACTOR, its employees, or agents;



6. Liability or claims arising directly or indirectly from the willful misconduct of the CONTRACTOR, its employees, or agents;
  7. Liability or claims arising directly or indirectly from any breach of the obligations assumed in this Agreement by the CONTRACTOR;
  8. Liability or claims arising directly or indirectly from, relating to, or resulting from a hazardous condition created by the CONTRACTOR, Subcontractors, Suppliers, or any of their employees or agents, and;
  9. Liability or claims arising directly, or indirectly, or consequentially out of any action, legal or equitable, brought against the OWNER, the ENGINEER, their consultants, subconsultants, and the officers, directors, employees and agents of each or any of them, to the extent caused by the CONTRACTOR's use of any premises acquired by permits, rights of way, or easements, the Site, or any land or areas contiguous thereto or its performance of the WORK thereon.
- B. The CONTRACTOR shall reimburse the OWNER and the ENGINEER for all costs and expenses, (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court costs including all costs of appeals) incurred by said OWNER and ENGINEER in enforcing the provisions of this Paragraph 6.16.
- C. Pursuant to Public Contract Code section 9201, the OWNER shall provide the CONTRACTOR with timely notification of the receipt of any claim, relating to, arising under, by reason of, related, or incidental to the Contract Documents or any performance of the Work. The OWNER is entitled to recover its reasonable costs incurred in providing such information.
- D. The indemnification obligation under this Paragraph 6.16 shall not be limited in any way by any limitation on the amount or type of insurance carried by CONTRACTOR or by the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR or any Subcontractor or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- 6.18 CONTRACTOR'S DAILY REPORTS
- A. The CONTRACTOR shall complete a daily report indicating location worked, total manpower for each construction trade, major equipment on Site, each Subcontractor's manpower and equipment, weather conditions, and other related information involved in the performance of the WORK. The daily report shall be completed on forms furnished by the ENGINEER, and shall be submitted to the ENGINEER at the conclusion of each work day. The daily report shall comment on the daily progress and status of each major component of the WORK. These components will be decided by the ENGINEER.

## ARTICLE 7 -- OTHER WORK

### 7.1 RELATED WORK AT SITE

- A. The OWNER may perform other work related to the Project at the Site by the OWNER's own forces, have other work performed by utility owners, or let other direct contracts for such other work. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to the CONTRACTOR prior to starting any such other work.
- B. The CONTRACTOR shall afford each person who is performing the other work (including the OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the WORK with theirs. The CONTRACTOR shall do all cutting, fitting, and patching of the WORK that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. The CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of the ENGINEER and the others whose work will be affected.
- C. If the proper execution or results of any part of the CONTRACTOR's work depends upon such other work by another, the CONTRACTOR shall inspect and report to the ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for such proper execution and results. The CONTRACTOR's failure to report such delays, defects, or deficiencies will constitute an acceptance of the other work as fit and proper for integration with the CONTRACTOR's work except for latent or nonapparent defects and deficiencies in the other work.

## 7.2 COORDINATION

- A. If the OWNER contracts with others for the performance of other work at the Site, OWNER will have sole authority and responsibility in respect of such coordination. unless otherwise provided in the Supplementary General Conditions.

## **ARTICLE 8 -- OWNER'S RESPONSIBILITIES**

### 8.1 COMMUNICATIONS

- A. Except as may be otherwise provided in these General Conditions or the Supplementary General Conditions, the OWNER will issue all its communications to the CONTRACTOR through the ENGINEER.

### 8.2 PAYMENTS

- A. The OWNER will make payments to the CONTRACTOR as provided in Article 14.

### 8.3 LANDS, EASEMENTS, AND SURVEYS

- A. The OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.1 and 4.6.

#### 8.4 REPORTS AND DRAWINGS

- A. The OWNER will identify and make available to the CONTRACTOR copies of reports of physical conditions at the Site and drawings of existing structures which have been utilized in preparing the Contract Documents as set forth in Paragraph 4.2.

#### 8.5 CHANGE ORDERS

- A. The OWNER will execute Change Orders as indicated in Article 10.

#### 8.6 INSPECTIONS AND TESTS

- A. The OWNER's responsibility for inspections and tests is set forth in Paragraph 13.3.

#### 8.7 SUSPENSION OF WORK

- A. The OWNER's right to stop work or suspend work is set forth in Paragraphs 13.4 and 15.1.

#### 8.8 TERMINATION OF AGREEMENT

- A. The OWNER's right to terminate services of the CONTRACTOR is set forth in Paragraphs 15.2 and 15.3.

#### 8.9 LIMITATION ON OWNER'S RESPONSIBILITIES

- A. The OWNER shall not supervise, direct or have control or authority over, nor be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the WORK. OWNER will not be responsible for CONTRACTOR's failure to perform or furnish the WORK in accordance with the Contract Documents.

#### 8.10 UNDISCLOSED HAZARDOUS ENVIRONMENTAL CONDITIONS

- A. OWNER's responsibility in respect to an undisclosed hazardous environmental condition is set forth in Paragraph 4.5.

## **ARTICLE 9 -- ENGINEER'S STATUS DURING CONSTRUCTION**

### **9.1 OWNER'S REPRESENTATIVE**

- A. The ENGINEER will be the OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of the ENGINEER as the OWNER's representative during construction are set forth in the Contract Documents.

### **9.2 OBSERVATIONS ON THE SITE**

- A. The ENGINEER will make observations on the Site during construction to monitor the progress and quality of the WORK and to determine, in general, if the WORK is proceeding in accordance with the Contract Documents. The ENGINEER will not be required to make exhaustive or continuous inspections to check the quality or quantity of the WORK.

### **9.3 PROJECT REPRESENTATION**

- A. The ENGINEER may furnish a Resident Project Representative to assist in observing the performance of the WORK. The duties, responsibilities, and limitations of authority of any such Resident Project Representative will be as provided in the Supplementary General Conditions.

### **9.4 CLARIFICATIONS**

- A. The ENGINEER will issue with reasonable promptness such written Clarifications of the requirements of the Contract Documents as the ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

### **9.5 AUTHORIZED VARIATIONS IN WORK**

- A. The ENGINEER may authorize variations in the WORK from the requirements of the Contract Documents. These may be accomplished by a Field Order and will require the CONTRACTOR to perform the WORK involved in a manner that minimizes the impact to the WORK and the Contract Times. If the CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Times, the CONTRACTOR may make a claim therefor as provided in Article 11 or 12.

### **9.6 REJECTING DEFECTIVE WORK**

- A. The ENGINEER will have authority to reject Defective Work and will also have authority to require special inspection or testing of the WORK as provided in Article 13.

### **9.7 CONTRACTOR SUBMITTALS, CHANGE ORDERS, AND PAYMENTS**

- A. In accordance with the procedures set forth in the General Requirements, the ENGINEER will review all CONTRACTOR submittals.
- B. The ENGINEER's responsibilities for Change Orders are set forth in Articles 10, 11, and 12.

- C. The ENGINEER's responsibilities for Applications for Payment are set forth in Article 14.

## 9.8 DECISIONS ON DISPUTES

- A. The ENGINEER will be the initial interpreter of the requirements of the Contract Documents and of the acceptability of the WORK thereunder. Claims, disputes, and other matters relating to the acceptability of the WORK and interpretation of the requirements of the Contract Documents pertaining to the performance of the WORK shall be determined by the ENGINEER. Any claims in respect to changes in the Contract Price or Contract Times shall be resolved in accordance with the requirements set forth in Articles 10, 11, and 12.

## 9.9 LIMITATION ON ENGINEER'S RESPONSIBILITIES

- A. Neither the ENGINEER's authority to act under this Article 9 or other provisions of the Contract Documents nor any decision made by the ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the ENGINEER to the CONTRACTOR, any Subcontractor, any Supplier, any surety for any of them, or any other person or organization performing any of the WORK.
- B. Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as reviewed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," or "satisfactory," or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of the ENGINEER as to the WORK, it is intended that such requirement, direction, review, or judgment will be solely to evaluate the WORK for compliance with the requirements of the Contract Documents, and conformance with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents, unless there is a specific statement indicating otherwise. The use of any such term or adjective shall not be effective to assign to the ENGINEER any duty or authority to supervise or direct the performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.9 C.
- C. The ENGINEER will not supervise, direct, control, or have authority over or be responsible for the CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the CONTRACTOR to comply with Laws and Regulations applicable to the performance of the WORK. The ENGINEER will not be responsible for the CONTRACTOR's failure to perform the WORK in accordance with the Contract Documents. The ENGINEER will not be responsible for the acts or omissions of the CONTRACTOR nor of any Subcontractor, Supplier, or any other person or organization performing any of the WORK.

## ARTICLE 10 -- CHANGES IN THE WORK

### 10.1 GENERAL

- A. Without invalidating the Agreement and without notice to any surety, the OWNER may at any time or from time to time, order additions, deletions, or revisions in the WORK. Such additions, deletions or revisions will be authorized by a Change Order or Field Order. Upon receipt of any such document, CONTRACTOR shall promptly proceed to implement the additions, deletions, or revisions in the WORK in accordance with the applicable conditions of the Contract Documents.
- B. The CONTRACTOR shall not be entitled to an increase in the Contract Price nor an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented by Change Order, except in the case of an emergency and except in the case of uncovering work as provided in Paragraph 13.3.F and G.
- C. The OWNER and the CONTRACTOR shall execute appropriate Change Orders covering:
  - 1. Changes in the WORK which are ordered by the OWNER pursuant to Paragraph 10.1 A.;
  - 2. Changes required because of acceptance of Defective Work under Paragraph 13.6; and
  - 3. Changes in the Contract Price or Contract Times which are agreed to by the parties under Articles 11 and/or 12, respectively.
- D. If notice of any change in the WORK is required to be given to a surety, the giving of any such notice shall be the CONTRACTOR's responsibility. If the change in the WORK affects the Contract Price, the OWNER may require an adjustment to the amount of any applicable Bond and the amount of each applicable Bond shall be adjusted accordingly.
- E. If the OWNER and CONTRACTOR agree as to the extent, if any, of an increase in the Contract Price or an extension or shortening of the Contract Times that should be allowed as a result of a Field Order, the CONTRACTOR shall proceed so as to minimize the impact on and delays to the WORK pending the issuance of a Change Order.
- F. If the OWNER and the CONTRACTOR are unable to agree as to the extent, if any, of an increase in the Contract Price or an extension or shortening of the Contract Times that should be allowed as a result of a Field Order, the ENGINEER can direct the CONTRACTOR to proceed on the basis of time and materials so as to minimize the impact on and delays to the WORK, and the CONTRACTOR may make a claim as provided in Articles 11 and 12.

## 10.2 ALLOWABLE QUANTITY VARIATIONS

- A. In the event of an increase or decrease in the quantity of any bid item under a unit price contract, the total amount of work actually done or materials or equipment furnished will be paid for according to the unit price established for such work under the Contract Documents, wherever such unit price has been established; provided, that an adjustment in the Contract Price may be made for changes which result in an increase or decrease in excess of 25 percent of the estimated quantity of any unit price bid item of the WORK.
- B. In the event a part of the WORK is to be entirely eliminated and no lump sum or unit price is named in the Contract Documents to cover such eliminated work, the price of the eliminated work shall be agreed upon by the OWNER and the CONTRACTOR by Change Order.

## ARTICLE 11 -- CHANGE OF CONTRACT PRICE

### 11.1 GENERAL

- A. The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the WORK. All duties, responsibilities, and obligations assigned to or undertaken by the CONTRACTOR to complete the WORK shall be at its expense without change in the Contract Price.
- B. The Contract Price may only be changed by a Change Order. The value of any work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
  - 1. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.
  - 2. By mutual acceptance of a lump sum, which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.4; or
  - 3. On the basis of the cost of work (determined as provided in Paragraph 11.3) plus the CONTRACTOR's overhead and profit (determined as provided in Paragraph 11.4).
- C. Any claim for an increase in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the ENGINEER promptly (but in no event later than 10 days) after the start of the event giving rise to the claim and shall state the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within 60 days after the start of such event (unless the ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR's written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of such event. All claims for adjustment in the Contract Price will be determined by the ENGINEER. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this Paragraph 11.1 C.



## 11.2 COSTS RELATING TO WEATHER

- A. The CONTRACTOR shall have no claims against the OWNER for damages for any injury to work, materials, or equipment, resulting from the action of the elements. If, however, in the opinion of the ENGINEER, the CONTRACTOR has made all reasonable efforts to protect the materials, equipment, and work, the CONTRACTOR may be granted a reasonable extension of Contract Times to make proper repairs, renewals, and replacements of the work, materials, or equipment.

## 11.3 COST OF WORK (BASED ON TIME AND MATERIALS)

- A. **General:** The term "cost of work" means the sum of all costs necessarily incurred and paid by the CONTRACTOR for labor, materials, and equipment in the proper performance of extra work. Except as otherwise may be agreed to in writing by the OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in Paragraph 11.5.
- B. **Labor:** The costs of labor will be the actual cost for wages prevailing for each craft or type of workers performing the extra work at the time the extra work is done, plus employer payments of payroll taxes, workers compensation insurance, liability insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from federal, state or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. Labor costs for equipment operators and helpers will be paid only when such costs are not included in the invoice for equipment rental. The labor costs for foremen shall be proportioned to all of their assigned work and only that applicable to extra work shall be paid. Nondirect labor costs including superintendence shall be considered part of the markup set out in Paragraph 11.4.
- C. **Materials:** The cost of materials reported shall be at invoice or lowest current price at which materials are locally available and delivered to the Site in the quantities involved, plus the cost of freight, delivery and storage, subject to the following:
  - 1. All trade discounts and rebates shall accrue to the OWNER, and the CONTRACTOR shall make provisions so that they may be obtained;
  - 2. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the ENGINEER. Except for actual costs incurred in the handling of such materials, markup will not be allowed;
  - 3. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on extra work items or the current wholesale price for such materials delivered to the

Site, whichever price is lower; and

4. If in the opinion of the ENGINEER the cost of material is excessive, or the CONTRACTOR does not furnish satisfactory evidence of the cost of such material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned delivered to the Site less trade discount. The OWNER reserves the right to furnish materials for the extra work and no claim will be allowed by the CONTRACTOR for costs and profit on such materials.

D. **Equipment:** The CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the Supplementary General Conditions. Such rental rate will be used to compute payments for equipment whether the equipment is under the CONTRACTOR's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment will be the rate resulting in the least total cost to the OWNER for the total period of use. If it is deemed necessary by the CONTRACTOR to use equipment not listed in the publication specified in the Supplementary General Conditions, an equitable rental rate for the equipment will be established by the ENGINEER. The CONTRACTOR may furnish cost data which might assist the ENGINEER in the establishment of the rental rate. Payment for equipment shall be subject to the following:

1. All equipment shall, in the opinion of the ENGINEER, be in good working condition and suitable for the purpose for which the equipment is to be used;
2. Before construction equipment is used on the extra work, the CONTRACTOR shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the ENGINEER, in duplicate, a description of the equipment and its identifying number;
3. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer;
4. Individual pieces of equipment or tools having a replacement value of \$500 or less, whether or not consumed by use, will be considered to be small tools and no payment will be made therefore.

E. **Equipment Rental Time:** The rental time to be paid for equipment on the Site will be the time the equipment is in productive operation on the extra work being performed and, in addition, will include the time required to move the equipment to the location of the extra work and return it to the original location or to another location requiring no more time than that required to return it to its original location; except, that moving time will not be paid if the equipment is used on other than the extra work, even though located at the Site of the extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made for loading and transporting costs when the equipment is used at the Site of the extra work on other than the extra work. Rental time will not be allowed while equipment is inoperative due to breakdowns. The rental time of equipment on the work Site will be computed subject to the following:

1. When hourly rates are listed, any part of an hour less than 30 minutes of operation will be considered to be half-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation;
2. When daily rates are listed, any part of a day less than 4 hours operation will be considered to be half-day of operation. When owner-operated equipment is used to perform extra work to be paid for on a time and materials basis, the CONTRACTOR will be paid for the equipment and operator, as set forth in Paragraphs 3, 4, and 5, following;
3. Payment for the equipment will be made in accordance with the provisions in Paragraph 11.3 D., herein;
4. Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the CONTRACTOR to other workers operating similar equipment already on the Site, or in the absence of such labor, established by collective bargaining agreements for the type of workmen and location of the extra work, whether or not the operator is actually covered by such an agreement. A labor surcharge will be added to the cost of labor described herein in accordance with the provisions of Paragraph 11.3 B., herein, which surcharge shall constitute full compensation for payments imposed by state and federal laws and all other payments made to or on behalf of workers other than actual wages; and
5. To the direct cost of equipment rental and labor, computed as provided herein, will be added the allowances for equipment rental and labor as provided in Paragraph 11.4, herein.

F. **Special Services:** Special work or services are defined as that work characterized by extraordinary complexity, sophistication, innovation, or a combination of the foregoing attributes which are unique to the construction industry. The ENGINEER will make estimates for payment for special services and may consider the following:

1. When the ENGINEER and the CONTRACTOR, determine that a special service or work is required which cannot be performed by the forces of the CONTRACTOR or those of any of its Subcontractors, the special service or work may be performed by an entity especially skilled in the work to be performed. After validation of invoices and determination of market values by the ENGINEER, invoices for special services or work based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs;
2. When the CONTRACTOR is required to perform work necessitating special fabrication or machining process in a fabrication or a machine shop facility away from the Site, the charges for that portion of the work performed at the off-site facility may, by agreement, be accepted as a special service and accordingly, the invoices for the work may be accepted without detailed itemization; and
3. All invoices for special services will be adjusted by deducting all trade discounts. In lieu of the allowances for overhead and profit specified in Paragraph 11.4, herein, an allowance of 15 percent will be added to invoices for special services.

G. **Sureties:** All work performed hereunder shall be subject to all of the provisions of the

Contract Documents and the CONTRACTOR's sureties shall be bound with reference thereto as under the original Agreement. Copies of all amendments to Bonds or supplemental Bonds shall be submitted to the OWNER for review prior to the performance of any work hereunder.

#### 11.4 CONTRACTOR'S OVERHEAD AND PROFIT

- A. Extra work ordered on the basis of time and materials will be paid for at the actual necessary cost as determined by the ENGINEER, plus allowances for overhead and profit. The allowance for overhead and profit will include full compensation for superintendence, taxes, field office expense, extended overhead, home office overhead, and all other items of expense or cost not included in the cost of labor, materials, or equipment provided for under Paragraph 11.3. The allowance for overhead and profit will be made in accordance with the following schedule:

##### Overhead and Profit Allowance

|                 |            |
|-----------------|------------|
| Labor .....     | 20 percent |
| Materials ..... | 15 percent |
| Equipment ..... | 15 percent |

To the sum of the costs and markups provided for in this Article, an additional 2 percent of the sum will be added as compensation for Bonds and insurance.

- B. It is understood that labor, materials, and equipment for extra work may be furnished by the CONTRACTOR or by the Subcontractor on behalf of the CONTRACTOR. When all or any part of the extra work is performed by a Subcontractor, the allowance specified herein will be applied to the labor, materials, and equipment costs of the Subcontractor, to which the CONTRACTOR may add 5 percent of the Subcontractor's total cost for the extra work. Regardless of the number of hierarchical tiers of Subcontractors, the 5 percent increase above the Subcontractor's total cost which includes the allowances for overhead and profit specified herein may be applied one time only.

#### 11.5 EXCLUDED COSTS

- A. The term "cost of the work" shall not include any of the following:
1. Payroll costs and other compensation of CONTRACTOR's officers, executives, proprietors, partners, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR whether at the Site or in CONTRACTOR's principal or a branch office for general administration of the WORK all of which are to be considered administrative costs covered by the CONTRACTOR's allowance for overhead and profit;
  2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site;
  3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the WORK and charges against CONTRACTOR for delinquent payments;

4. Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except as provided by Paragraph 11.4 above);
5. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of Defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property; and
6. Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in Paragraph 11.4.

#### 11.6 CONTRACTOR'S EXTRA WORK REPORT

- A. In order to be paid for extra work, the CONTRACTOR must submit a daily extra work report on the form furnished by the ENGINEER. The form must be completely filled out based on the provisions of Paragraphs 11.3 through 11.5 and signed by the CONTRACTOR and ENGINEER at the end of each work day. Failure to complete the form and obtain appropriate signatures by the next working day after the extra work of the previous day was completed will result in CONTRACTOR's costs for extra work being disallowed.

### ARTICLE 12 -- CHANGE OF CONTRACT TIMES

#### 12.1 GENERAL

- A. The Contract Times may only be changed by a Change Order. Any claim for an extension of the Contract Times shall be based on written notice delivered by the CONTRACTOR to the ENGINEER promptly (but in no event later than 10 days) after the start of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within 30 days after the start of such event (unless the ENGINEER allows an additional period of time for the submission of additional or more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR's written statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR is entitled as a result of said event. All claims for adjustment in the Contract Times will be determined by the ENGINEER. No claim for an adjustment in the Contract Times will be valid if not submitted in accordance with the requirements of this Paragraph 12.1 A. An increase in Contract Times does not mean that the CONTRACTOR is due an increase in Contract Price. Only compensable time extensions will result in an increase in Contract Price.
- B. All time limits stated in the Contract Documents are of the essence of the Agreement.
- C. When CONTRACTOR is prevented from completing any part of the WORK within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost on the critical path of the WORK due to such delay, if a claim is made therefor as provided in Paragraph 12.1.A. Delays beyond the control of CONTRACTOR shall include, but not be

limited to, acts or neglect by OWNER; acts or neglect of those performing other work as contemplated by Article 7; and fires, floods, epidemics, abnormal weather conditions, or acts of God. Delays attributable to and within the control of any Subcontractor or Supplier shall be deemed to be delays within the control of the CONTRACTOR.

- D. In no event will OWNER be liable to CONTRACTOR, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them, for any increase in the Contract Price or other damages arising out or resulting from the following:

1. Delays caused by or within the control of CONTRACTOR; or
2. Delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by those performing other work as contemplated by Article 7.

#### 12.2 EXTENSIONS OF CONTRACT TIMES FOR DELAY DUE TO WEATHER

- A. The CONTRACTOR's construction schedule shall anticipate delay due to unusually severe weather. The number of days of anticipated delay is set forth in the Supplementary General Conditions.
- B. Contract Times may be extended by the ENGINEER because of delays in excess of the anticipated delay. The CONTRACTOR shall, within 10 days of the beginning of any such delay, notify the ENGINEER in writing and request an extension of Contract Times. The ENGINEER will ascertain the facts and the extent of the delay and extend the Contract Times when, in its judgement, the findings of the fact justify such an extension.

### **ARTICLE 13 -- INSPECTIONS AND TESTS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

#### 13.1 NOTICE OF DEFECTIVE WORK

- A. Prompt notice of Defective Work known to the OWNER or ENGINEER will be given to the CONTRACTOR. All Defective Work, whether or not in place, may be rejected, corrected, or accepted as provided in this Article 13. Defective Work may be rejected even if approved by prior inspection.

#### 13.2 ACCESS TO WORK

- A. OWNER, ENGINEER, their consultants, subconsultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests shall have access to the WORK at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

### 13.3 INSPECTIONS AND TESTS

- A. The CONTRACTOR shall give the ENGINEER not less than 24 hours notice of readiness of the WORK for all required inspections, tests, or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. The OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
  - 1. For inspection, tests, or approvals covered by Paragraphs 13.3C. and 13.3D. below;
  - 2. That costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.3G. shall be paid as provided in said Paragraph 13.3G.; and
  - 3. As otherwise provided in the Contract Documents.
- C. If Laws and Regulations of any public body having jurisdiction require any WORK (or any part thereof) to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests or approvals; pay all costs in connection therewith; and furnish the ENGINEER the required certificates of inspection or approval.
- D. The CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for the ENGINEER's acceptance of materials or equipment to be incorporated in the WORK or acceptance of materials, mix designs, or equipment submitted for approval prior to the CONTRACTOR's purchase thereof for incorporation in the WORK. Such inspections, tests, or approvals shall be performed by organizations acceptable to the ENGINEER.
- E. The ENGINEER will make, or have made, such inspections and tests as the ENGINEER deems necessary to see that the WORK is being accomplished in accordance with the requirements of the Contract Documents. Unless otherwise specified in the Supplementary General Conditions, the cost of such inspection and testing will be borne by the OWNER. In the event such inspections or tests reveal non-compliance with the requirements of the Contract Documents, the CONTRACTOR shall bear the cost of corrective measures deemed necessary by the ENGINEER, as well as the cost of subsequent reinspection and retesting. Neither observations by the ENGINEER nor inspections, tests, or approvals by others shall relieve the CONTRACTOR from the CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents.
- F. If any WORK (including the work of others) that is to be inspected, tested, or approved is covered without written concurrence of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for observation. Such uncovering shall be at the CONTRACTOR's expense unless the CONTRACTOR has given the ENGINEER not less than 24 hours notice of the CONTRACTOR's intention to perform such test or to cover the same and the ENGINEER has not acted with reasonable promptness in response to such notice.
- G. If any WORK is covered contrary to the written request of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for the ENGINEER's observation and

recovered at the CONTRACTOR's expense.

- H. If the ENGINEER considers it necessary or advisable that covered WORK be observed by the ENGINEER or inspected or tested by others, the CONTRACTOR, at the ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, material, and equipment. If it is found that such work is Defective Work, the CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including but not limited to, fees and charges of engineers, architects, attorneys, and other professionals. However, if such work is not found to be Defective Work, the CONTRACTOR will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

#### 13.4 OWNER MAY STOP THE WORK

- A. If Defective Work is identified, the OWNER may order the CONTRACTOR to stop performance of the WORK, or any portion thereof, until the cause for such order has been eliminated; however, this right of the OWNER to stop the WORK shall not give rise to any duty on the part of the OWNER to exercise this right for the benefit of the CONTRACTOR or any other party.

#### 13.5 CORRECTION OR REMOVAL OF DEFECTIVE WORK

- A. If required by the ENGINEER, the CONTRACTOR shall promptly either correct all Defective Work, whether or not fabricated, installed, or completed, or, if the work has been rejected by the ENGINEER, remove it from the Site and replace it with non-defective WORK. The CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such correction or removal, including but not limited to fees and charges of engineers, architects, attorneys, and other professionals made necessary thereby.



### 13.6 ACCEPTANCE OF DEFECTIVE WORK

- A. If, instead of requiring correction or removal and replacement of Defective Work, the OWNER prefers to accept the Defective Work, the OWNER may do so. The CONTRACTOR shall bear all direct, indirect, and consequential costs attributable to the OWNER's evaluation of and determination to accept such Defective Work. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the WORK, and the OWNER shall be entitled to an appropriate decrease in the Contract Price.

### 13.7 OWNER MAY CORRECT DEFECTIVE WORK

- A. If the CONTRACTOR fails within a reasonable time after written notice from the ENGINEER to correct Defective Work, or to remove and replace Defective Work as required by the ENGINEER in accordance with Paragraph 13.5A., or if the CONTRACTOR fails to perform the WORK in accordance with the Contract Documents, or if the CONTRACTOR fails to comply with any other provision of the Contract Documents, the OWNER may, after seven days written notice to the CONTRACTOR, correct and remedy any such deficiency.
- B. In exercising the rights and remedies under this paragraph, the OWNER shall proceed with corrective and remedial action. In connection with such corrective and remedial action, the OWNER may exclude the CONTRACTOR from all or part of the Site, take possession of all or part of the WORK, and suspend the CONTRACTOR's services related thereto and incorporate in the WORK all materials and equipment for which the OWNER has paid the CONTRACTOR whether stored at the Site or elsewhere. The CONTRACTOR shall provide the OWNER, OWNER's representatives, ENGINEER, and ENGINEER's consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.
- C. All direct, indirect, and consequential costs and damages incurred by the OWNER in exercising the rights and remedies under this paragraph will be charged against the CONTRACTOR and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the WORK; and the OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, the OWNER may make a claim therefor as provided in Article 11. Such claim will include, but not be limited to, all costs of repair or replacement of work of others, destroyed or damaged by correction, removal, or replacement of CONTRACTOR's Defective Work and all direct, indirect, and consequential damages associated therewith.
- D. The CONTRACTOR shall not be allowed an extension of Contract Times (or Milestones) because of any delay in the performance of the WORK attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph.

### 13.8 CORRECTION PERIOD

- A. The correction period for Defective Work shall be the longer of:
  - 1. One year after the date of final acceptance;
  - 2. Such time as may be prescribed by Laws and Regulations;
  - 3. Such time as specified by the terms of any applicable special guarantee required by the Contract Documents; or
  - 4. Such time as specified by any specific provision of the Contract Documents.
- B. If, during the correction period as defined in Paragraph 13.8A above, any work is found to be Defective Work, the OWNER shall have the same remedies as set forth in Paragraphs 13.5, 13.6, and 13.7 above.
- C. Where Defective Work (and damage to other work resulting therefrom) has been corrected, removed, or replaced under this paragraph, the correction period hereunder with respect to such work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

## ARTICLE 14 -- PAYMENTS TO CONTRACTOR AND COMPLETION

### 14.1 SCHEDULE OF VALUES (LUMP SUM PRICE BREAKDOWN)

- A. The schedule of values or lump sum price breakdown established as provided in the General Requirements shall serve as the basis for progress payments and shall be incorporated into a form of Application for Payment acceptable to the ENGINEER.

### 14.2 UNIT PRICE BID SCHEDULE

- A. Progress payments on account of unit price work will be based on the number of units completed.

### 14.3 APPLICATION FOR PROGRESS PAYMENT

- A. Unless otherwise prescribed by law, on the 25th of each month, the CONTRACTOR shall submit to the ENGINEER for review, the Application for Payment filled out and signed by the CONTRACTOR covering the WORK completed as of the date of the Application for Payment and accompanied by such supporting documentation as is required by the Contract Documents.
- B. The Application for Payment shall identify, as a subtotal, the amount of the CONTRACTOR total earnings to date; plus the value of materials stored at the Site which have not yet been incorporated in the WORK; and less a deductive adjustment for materials installed which were not previously incorporated in the WORK, but for which payment was allowed under the provisions for payment for materials stored at the Site, but not yet incorporated in the WORK.

- C. The net payment due the CONTRACTOR shall be the above-mentioned subtotal from which shall be deducted the amount of retainage specified in the Supplementary General Conditions and the total amount of all previous payments made to the CONTRACTOR.
- D. The value of materials stored at the Site shall be an amount equal to the specified percent of the value of such materials as set forth in the Supplementary General Conditions. Said amount shall be based upon the value of all acceptable materials and equipment not incorporated in the WORK but delivered and suitably stored at the Site or at another location agreed to in writing; provided, each such individual item has a value of more than \$5,000 and will become a permanent part of the WORK. The Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the CONTRACTOR has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the OWNER's interest therein, all of which will be satisfactory to the OWNER.

#### 14.4 CONTRACTOR'S WARRANTY OF TITLE

- A. The CONTRACTOR warrants and guarantees that title to all WORK, materials, and equipment covered by an Application for Payment, whether incorporated in the WORK or not, will pass to the OWNER no later than the time of payment, free and clear of all Liens.

#### 14.5 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT

- A. The ENGINEER will, within 7 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the application to the OWNER, or return the application to the CONTRACTOR indicating in writing the ENGINEER's reasons for refusing to recommend payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the application. If the ENGINEER still disagrees with a portion of the application, it will submit the application recommending the undisputed portion of the application to the OWNER for payment and provide reasons for recommending non-payment of the disputed amount. Thirty days after presentation of the Application for Payment with the ENGINEER's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.5B.) become due and when due will be paid by the OWNER to the CONTRACTOR.
- B. The ENGINEER, in its discretion, may refuse to recommend the whole or any part of any payment. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:
  - 1. The work is Defective Work or the completed WORK has been damaged requiring correction or replacement.
  - 2. The Contract Price has been reduced by written amendment or Change Order.
  - 3. The OWNER has been required to correct Defective Work or complete WORK in accordance with Paragraph 13.7.
  - 4. ENGINEER has actual knowledge of the occurrence of any of the events

enumerated in Paragraph 15.1 through 15.4 inclusive.

- C. The OWNER may refuse to make payment of the full amount recommended by the ENGINEER because:
1. Claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the WORK.
  2. Liens have been filed in connection with the WORK, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens.
  3. There are other items entitling OWNER to a set-off against the amount recommended, or
  4. OWNER has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.5B. through 14.5C and 15.1 through 15.4 inclusive.

The OWNER must give the CONTRACTOR immediate written notice (with a copy to the ENGINEER) stating the reasons for such action and promptly pay the CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

#### 14.6 SUBSTANTIAL COMPLETION

- A. When the CONTRACTOR considers the WORK ready for its intended use, the CONTRACTOR shall notify the OWNER and the ENGINEER in writing that the WORK is substantially complete. The CONTRACTOR shall attach to this request a list of all work items that remain to be completed and a request that the ENGINEER prepare a Notice of Completion. Within a reasonable time thereafter, the OWNER, the CONTRACTOR, and the ENGINEER shall make an inspection of the WORK to determine the status of completion. If the ENGINEER does not consider the WORK substantially complete, or the list of remaining work items to be comprehensive, the ENGINEER will notify the CONTRACTOR in writing giving the reasons therefor. If the ENGINEER considers the WORK substantially complete, the ENGINEER will prepare and deliver to the OWNER for its execution and recordation the Notice of Completion signed by the ENGINEER and CONTRACTOR, which shall fix the date of Substantial Completion.

#### 14.7 PARTIAL UTILIZATION

- A. The OWNER shall have the right to utilize or place into service any item of equipment or other usable portion of the WORK prior to completion of the WORK. Whenever the OWNER plans to exercise said right, the CONTRACTOR will be notified in writing by the OWNER, identifying the specific portion or portions of the WORK to be so utilized or otherwise placed into service.
- B. It shall be understood by the CONTRACTOR that until such written notification is issued, all responsibility for care and maintenance of all of the WORK shall be borne by the CONTRACTOR. Upon issuance of said written notice of Partial Utilization, the OWNER will accept responsibility for the protection and maintenance of all such items or portions of

the WORK described in the written notice.

- C. The CONTRACTOR shall retain full responsibility for satisfactory completion of the WORK, regardless of whether a portion thereof has been partially utilized by the OWNER, and the CONTRACTOR's one year correction period shall commence only after the date of Substantial Completion for the WORK.

#### 14.8 FINAL APPLICATION FOR PAYMENT

- A. After the CONTRACTOR has completed all of the remaining work items referred to in Paragraph 14.6 and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in the General Requirements), and other documents, all as required by the Contract Documents, and after the ENGINEER has indicated that the WORK is acceptable, the CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to the OWNER) of all Liens arising out of or filed in connection with the WORK.

#### 14.9 FINAL PAYMENT AND ACCEPTANCE

- A. If, on the basis of the ENGINEER's observation of the WORK during construction and final inspection, and the ENGINEER's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, the ENGINEER is satisfied that the WORK has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the ENGINEER will, within 14 days after receipt of the final Application for Payment, indicate in writing the ENGINEER's recommendation of payment and present the application to the OWNER for payment.
- B. After acceptance of the WORK by the OWNER's governing body, the OWNER will make final payment to the CONTRACTOR of the amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Contract Documents, including the following items:
  - 1. Liquidated damages, as applicable;
  - 2. Amounts withheld by OWNER under Paragraph 14.5B. and C. which have not been released; and
  - 3. Two times the value of outstanding items of correction work or punch list items yet uncompleted or uncorrected, as applicable. All such work shall be completed or corrected to the satisfaction of the OWNER within the time stated on the Notice of Completion, otherwise the CONTRACTOR does hereby waive any and all claims to all monies withheld by the OWNER to cover the value of all such uncompleted or uncorrected items.
- C. As a condition of final payment, the CONTRACTOR shall be required to execute a release on the form provided by OWNER, releasing the OWNER from any and all claims of liability for payment on the Project except for such amounts as may be specifically described and

excluded from the release.

#### 14.10 RELEASE OF RETAINAGE AND OTHER DEDUCTIONS

- A. After executing the necessary documents to initiate the Lien period, and not more than 45 days thereafter (based on a 30-day Lien filing period and 15-day processing time), the OWNER will release to the CONTRACTOR the retainage funds withheld pursuant to the Agreement, less any deductions to cover pending claims against the OWNER pursuant to Paragraph 14.5C.
- B. After filing of the necessary documents to initiate the Lien period, the CONTRACTOR shall have 30 days to complete any outstanding items of correction work remaining to be completed or corrected as listed on a final punch list made a part of the Notice of Completion. Upon expiration of the 45 days, referred to in Paragraph 14.10A., the amounts withheld pursuant to the provisions of Paragraph 14.9B. herein, for all remaining work items will be returned to the CONTRACTOR; provided, that said work has been completed or corrected to the satisfaction of the OWNER within said 30 days. Otherwise, the CONTRACTOR does hereby waive any and all claims for all monies withheld by the OWNER under this Agreement to cover two times the value of such remaining uncompleted or uncorrected items.

### ARTICLE 15 -- SUSPENSION OF WORK AND TERMINATION

#### 15.1 SUSPENSION OF WORK BY OWNER

- A. The OWNER may, at any time and without cause, suspend the WORK or any portion thereof for a period of not more than 90 days by notice in writing to the CONTRACTOR. The CONTRACTOR shall resume the WORK on receipt of a notice of resumption of work. The CONTRACTOR will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if the CONTRACTOR makes an approved claim therefor as provided in Articles 11 and 12.

#### 15.2 TERMINATION OF AGREEMENT BY OWNER FOR DEFAULT

- A. In the event of default by the CONTRACTOR, the OWNER may give seven days written notice to the CONTRACTOR of OWNER's intent to terminate the Agreement and provide the CONTRACTOR an opportunity to remedy the conditions constituting the default within a specified period of time. It will be considered a default by the CONTRACTOR whenever CONTRACTOR shall:
  - 1. Declare bankruptcy, become insolvent, or assign its assets for the benefit of its creditors;
  - 2. Disregard or violate the Laws or Regulations of any public body having jurisdiction;
  - 3. Fail to provide materials or workmanship meeting the requirements of the Contract Documents;
  - 4. Disregard or violate provisions of the Contract Documents or ENGINEER's instructions;

5. Fail to prosecute the WORK according to the approved progress schedule;
6. Fail to provide a qualified superintendent, competent workmen, or materials or equipment meeting the requirements of the Contract Documents; or
7. Disregard the authority of the ENGINEER.

B. If the CONTRACTOR fails to remedy the conditions constituting default within the time allowed, the OWNER may then issue the notice of termination.

C. In the event the Agreement is terminated in accordance with Paragraph 15.2A., herein, the OWNER may take possession of the WORK and may complete the WORK by whatever method or means the OWNER may select. The cost of completing the WORK will be deducted from the balance which would have been due the CONTRACTOR had the Agreement not been terminated and the WORK completed in accordance with the Contract Documents. If such cost exceeds the balance which would have been due, the CONTRACTOR shall pay the excess amount to the OWNER. If such cost is less than the balance which would have been due, the CONTRACTOR shall not have claim to the difference.

#### 15.3 TERMINATION OF AGREEMENT BY OWNER FOR CONVENIENCE

A. Upon seven days' written notice to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy of the OWNER, elect to terminate the Agreement. In such case, the CONTRACTOR shall be paid (without duplication of any items):

1. For completed and acceptable WORK executed in accordance with the Contract Documents, prior to the effective date of termination, including fair and reasonable sums for overhead and profit of such WORK;
2. For expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted WORK, plus fair and reasonable sums for overhead and profit on such expenses;
3. For all reasonable claims, costs, losses, and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
4. For reasonable expenses directly attributable to termination.

CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

#### 15.4 TERMINATION OF AGREEMENT BY CONTRACTOR

A. The CONTRACTOR may terminate the Agreement upon 14 days written notice to the OWNER, whenever:

1. The WORK has been suspended under the provisions of Paragraph 15.1, herein, for more than 90 consecutive days through no fault or negligence of the CONTRACTOR, and notice to resume work or to terminate the Agreement has not been received from the OWNER within this time period; or
  2. The OWNER should fail to pay the CONTRACTOR any monies due him in accordance with the terms of the Contract Documents and within 60 days after presentation to the OWNER by the CONTRACTOR of a request therefor, unless within said 14-day period the OWNER shall have remedied the condition upon which the payment delay was based.
- B. In the event of such termination, the CONTRACTOR shall have no claims against the OWNER except for those claims specifically enumerated in Paragraph 15.3, herein, and as determined in accordance with the requirements of said paragraph.

**ARTICLE 16 -- MISCELLANEOUS**Error! Bookmark not defined.

**16.1 GIVING NOTICE**

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

**16.2 TITLE TO MATERIALS FOUND ON THE WORK**

- A. The OWNER reserves the right to retain title to all soils, stone, sand, gravel, and other materials developed and obtained from excavations and other operations connected with the WORK. Unless otherwise specified in the Contract Documents, neither the CONTRACTOR nor any Subcontractor shall have any right, title, or interest in or to any such materials. The CONTRACTOR will be permitted to use in the WORK, without charge, any such materials which meet the requirements of the Contract Documents.



### 16.3 RIGHT TO AUDIT

- A. If the CONTRACTOR submits a claim to the OWNER for additional compensation, the OWNER shall have the right, as a condition to considering the claim, and as a basis for evaluation of the claim, and until the claim has been settled, to audit the CONTRACTOR's books to the extent they are relevant. This right shall include the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which the claim has been submitted. The right to audit shall include the right to inspect the CONTRACTOR's plant, or such parts thereof, as may be or have been engaged in the performance of the WORK. The CONTRACTOR further agrees that the right to audit encompasses all subcontracts and is binding upon Subcontractors. The rights to examine and inspect herein provided for shall be exercisable through such representatives as the OWNER deems desirable during the CONTRACTOR's normal business hours at the office of the CONTRACTOR. The CONTRACTOR shall make available to the OWNER for auditing, all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the OWNER.

### 16.4 SURVIVAL OF OBLIGATIONS

- A. All representations, indemnifications, warranties, and guaranties made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the WORK or termination or completion of the Agreement.

### 16.5 CONTROLLING LAW

- A. This Agreement is to be governed by the law of the state in which the Project is located.

### 16.6 SEVERABILITY

- A. If any term or provision of this Agreement is declared invalid or unenforceable by any court of lawful jurisdiction, the remaining terms and provisions of the Agreement shall not be affected thereby and shall remain in full force and effect.

### 16.7 WAIVER

- A. The waiver by the OWNER of any breach or violation of any term, covenant or condition of this Agreement or of any provision, ordinance, or law shall not be deemed to be a waiver of any other term, covenant, condition, ordinance, or law or of any subsequent breach or violation of the same or of any other term, covenant, condition, ordinance, or law. The subsequent payment of any monies or fee by the OWNER which may become due hereunder shall not be deemed to be a waiver of any preceding breach or violation by CONTRACTOR or any term, covenant, condition of this Agreement or of any applicable law or ordinance.

## ARTICLE 17 -- CALIFORNIA STATE REQUIREMENTS

## 17.1 STATE WAGE DETERMINATIONS

- A. As required by Section 1770 and following, of the California Labor Code, the CONTRACTOR shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations. Copies of such prevailing rate of per diem wages are on file at the office of the OWNER, which copies shall be made available to any interested party on request. The CONTRACTOR shall post a copy of such determination at each job site.
- B. In accordance with Section 1775 of the California Labor Code, the CONTRACTOR shall, as a penalty to the OWNER, forfeit not more than \$50.00 for each calendar day or portion thereof, for each worker paid less than the prevailing rates as determined by the Director for the work or craft in which the worker is employed for any public work done under the contract by him or her or by any subcontractor under him or her.

## 17.2 WORKERS' COMPENSATION

- A. In accordance with the provisions of Section 3700 of the California Labor Code, the CONTRACTOR shall secure the payment of compensation to its employees.
- B. Prior to beginning work under the Contract, the CONTRACTOR shall sign and file with the OWNER the following certification:

"I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the WORK of this Contract."

- C. Notwithstanding the foregoing provisions, before the Contract is executed on behalf of the OWNER, a bidder to whom a contract has been awarded shall furnish satisfactory evidence that it has secured in the manner required and provided by law the payment of workers' compensation.

## 17.3 APPRENTICES ON PUBLIC WORKS

- A. The CONTRACTOR shall comply with all applicable provisions of Section 1777.5 of the California Labor Code relating to employment of apprentices on public works.

## 17.4 WORKING HOURS

- A. The CONTRACTOR shall comply with all applicable provisions of Section 1810 to 1815, inclusive, of the California Labor Code relating to working hours. The CONTRACTOR shall, as a penalty to the OWNER, forfeit \$25.00 for each worker employed in the execution of the Contract by the CONTRACTOR or by any subcontractor for each calendar day during which such worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week, unless such worker receives compensation for all hours worked in excess of 8 hours at not less than 1-1/2 times the basic rate of pay.

17.5 CONTRACTOR NOT RESPONSIBLE FOR DAMAGE RESULTING FROM CERTAIN ACTS OF GOD

- A. As provided in Section 7105 of the California Public Contract Code, the CONTRACTOR shall not be responsible for the cost of repairing or restoring damage to the WORK which damage is determined to have been proximately caused by an act of God, in excess of 5 percent of the contracted amount, provided, that the WORK damaged was built in accordance with accepted and applicable building standards and the plans and specifications of the OWNER. The CONTRACTOR shall obtain insurance to indemnify the OWNER for any damage to the WORK caused by an act of God if the insurance premium is a separate bid item in the bidding schedule for the WORK. For purposes of this Section, the term "acts of God" shall include only the following occurrences or conditions and effects: earthquakes in excess of a magnitude of 3.5 on the Richter Scale and tidal waves.

17.6 NOTICE OF COMPLETION

- A. In accordance with the Sections 3086 and 3093 of the California Civil Code, within 10 days after date of acceptance of the WORK by the OWNER's governing body, the OWNER will file, in the County Recorder's office, a Notice of Completion of the WORK.

17.7 UNPAID CLAIMS

- A. If, at any time prior to the expiration of the period for service of a stop notice, there is served upon the OWNER a stop notice as provided in Sections 3179 and 3210 of the California Civil Code, the OWNER shall, until the discharge thereof, withhold from the monies under its control so much of said monies due or to become due to the CONTRACTOR under this Contract as shall be sufficient to answer the claim stated in such stop notice and to provide for the reasonable cost of any litigation thereunder; provided, that if the ENGINEER shall, in its discretion, permit CONTRACTOR to file with the OWNER the bond referred to in Section 3196 of the Civil Code of the State of California, said monies shall not thereafter be withheld on account of such stop notice.

17.8 CONCRETE FORMS, FALSEWORK, AND SHORING

- A. The CONTRACTOR shall comply fully with the requirements of Section 1717 of the Construction Safety Orders, State of California, Department of Industrial Relations, regarding the design of concrete forms, falsework and shoring, and the inspection of same prior to placement of concrete. Where the said Section 1717 requires the services of a civil engineer registered in the State of California to approve design calculations and working drawings of the falsework or shoring system, or to inspect such system prior to placement of concrete, the CONTRACTOR shall employ a registered civil engineer for these purposes, and all costs therefore shall be included in the price named in the Contract for completion of the WORK as set forth in the Contract Documents.

## 17.9 RETAINAGE FROM MONTHLY PAYMENTS

- A. Pursuant to Section 22300 of the California Public Contract Code, the CONTRACTOR may substitute securities for any money withheld by the OWNER to insure performance under the Contract. At the request and expense of the CONTRACTOR, securities equivalent to the amount withheld shall be deposited with the OWNER or with a state or federally chartered bank in California as the escrow agent, who shall return such securities to the CONTRACTOR upon satisfactory completion of the Contract.
- B. Alternatively, the CONTRACTOR may request and the OWNER shall make payment of retentions earned directly to the escrow agent at the expense of the CONTRACTOR. At the expense of the CONTRACTOR, the CONTRACTOR may direct the investment of the payments into securities and the CONTRACTOR shall receive the interest earned on the investments upon the same terms provided for in this section for securities deposited by the CONTRACTOR. Upon satisfactory completion of the Contract, the CONTRACTOR shall receive from the escrow agent all securities, interest, and payments received by the escrow agent from the OWNER, pursuant to the terms of this section. The CONTRACTOR shall pay to each subcontractor, not later than 20 days of receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to insure the performance of the CONTRACTOR.
- C. Securities eligible for investment under Section 22300 shall be limited to those listed in Section 16430 of the Government Code and to bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the CONTRACTOR and the OWNER.

## 17.10 PUBLIC WORKS CONTRACTS; ASSIGNMENT TO AWARDING BODY

- A. In accordance with Section 7103.5 of the California Public Contract Code, the CONTRACTOR and Subcontractors shall conform to the following requirements. In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the CONTRACTOR or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the CONTRACTOR, without further acknowledgement by the parties.

17.11 PAYROLL RECORDS; RETENTION; INSPECTION; NONCOMPLIANCE PENALTIES; RULES AND REGULATIONS

- A. In accordance with Section 1776 of the California Labor Code the CONTRACTOR and each Subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:
  - 1. The information contained in the payroll record is true and correct.
  - 2. The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.
- B. The payroll records enumerated under Paragraph 17.11A shall be certified and shall be available for inspection at all reasonable hours at the principal office of the CONTRACTOR on the following basis:
  - 1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.
  - 2. A certified copy of all payroll records enumerated in Paragraph 17.11A shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.
  - 3. A certified copy of all payroll records enumerated in Paragraph 17.11A shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to Paragraph 17.11B2 the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the CONTRACTOR, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the CONTRACTOR.
- C. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division.
- D. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the CONTRACTOR awarded the contract or performing the contract shall not be marked or obliterated.
- E. The CONTRACTOR shall inform the body awarding the contract of the location of the

records enumerated under Paragraph 17.11A including the street address, city and county, and shall, within 5 working days, provide a notice of change of location and address.

- F. The CONTRACTOR shall have 10 days in which to comply subsequent to receipt of written notice specifying in what respects the CONTRACTOR must comply with this Section. In the event that the CONTRACTOR fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section.

#### 17.12 CULTURAL RESOURCES

- A. The CONTRACTOR's attention is directed to the provisions of the Clean Water Grant Program Bulletin 76A which augments the National Historic Preservation Act of 1966 (16 U.S.C. 470) as specified under Section 01560 - Temporary Environmental Controls, of the General Requirements.

#### 17.13 PROTECTION OF WORKERS IN TRENCH EXCAVATIONS

- A. As required by Section 6705 of the California Labor Code and in addition thereto, whenever work under the Contract involves the excavation of any trench or trenches 5 feet or more in depth, the CONTRACTOR shall submit for acceptance by the OWNER or by a registered civil or structural engineer, employed by the OWNER, to whom authority to accept has been delegated, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation, of such trench or trenches. If such plan varies from the shoring system standards established by the Construction Safety Orders of the Division of Occupational Safety and Health, the plan shall be prepared by a registered civil or structural engineer employed by the CONTRACTOR, and all costs therefore shall be included in the price named in the Contract for completion of the WORK as set forth in the Contract Documents. Nothing in this Section shall be deemed to allow the use of a shoring, sloping, or other protective system less effective than that required by the Construction Safety Orders. Nothing in this Section shall be construed to impose tort liability on the OWNER, the ENGINEER, or any of their officers, agents, representatives, or employees.
- B. Excavation shall not start until the CONTRACTOR has obtained a permit from the California Division of Industrial Safety and has posted it at the site.

#### 17.14 TRAVEL AND SUBSISTENCE PAY

- A. As required by Section 1773.8 of the California Labor Code, the CONTRACTOR shall pay travel and subsistence payments to each workman needed to execute the WORK, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with this Section.

- B. To establish such travel and subsistence payments, the representative of any craft, classification or type of workman needed to execute the contracts shall file with the Department of Industrial Relations fully executed copies of collective bargaining agreements for the particular craft, classification or type of work involved. Such agreements shall be filed within 10 days after their execution and thereafter shall establish such travel and subsistence payments whenever filed 30 days prior to the call for bids.

#### 17.15 REMOVAL, RELOCATION, OR PROTECTION OF EXISTING UTILITIES

- A. In accordance with the provisions of Section 4215 of the California Government Code, any contract to which a public agency as defined in Section 4401 is a party, the public agency shall assume the responsibility, between the parties to the contract, for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the site of any construction project that is a subject of the contract, if such utilities are not identified by the public agency in the plans and specifications made a part of the invitation for bids. The agency will compensate CONTRACTOR for the costs of locating, repairing damage not due to the failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications with reasonable accuracy, and for equipment on the project necessarily idled during such work.
- B. The CONTRACTOR shall not be assessed liquidated damages for delay in completion of the project, when such delay was caused by the failure of the public agency or the owner of the utility to provide for removal or relocation of such utility facilities.
- C. Nothing herein shall be deemed to require the public agency to indicate the presence of existing service laterals or appurtenances when the presence of such utilities on the site of the construction project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of construction; provided, however, nothing herein shall relieve the public agency from identifying main or trunklines in the plans and specifications.
- D. If the CONTRACTOR while performing the Contract discovers utility facilities not identified by the public agency in the Contract Documents it shall immediately notify the public agency and utility in writing.
- E. The public utility, where they are the owner, shall have the sole discretion to perform such repairs or relocation work or permit the CONTRACTOR to do such repairs or relocation work at a reasonable price.

#### 17.16 CONTRACTOR LICENSE REQUIREMENTS

- A. In accordance with Section 7028.15 of the California Business and Professions Code:
- B. It is a misdemeanor for any person to submit a bid to a public agency in order to engage in the business or act in the capacity of a contractor within this state without having a license therefor, except in any of the following cases:
  - 1. The person is particularly exempted from this chapter.
  - 2. The bid is submitted on a state project governed by Section 10164 of the Public Contract Code or any local agency project governed by Section 20103.5 of the Public

Contract Code.

- C. If a person has previously been convicted of the offense described in this section, the court shall impose a fine of 20 percent of the price of the contract under which the unlicensed person performed contract work, or four thousand five hundred dollars (\$4,500), whichever is greater, or imprisonment in the county jail for not less than 10 days nor more than six months, or both.
- D. In the event the person performing the contracting work has agreed to furnish materials and labor on an hourly basis, "the price of the contract" for the purpose of this subdivision means the aggregate sum of the cost of materials and labor furnished and the cost of completing the work to be performed.
- E. This section shall not apply to a joint venture license, as required by Section 7029.1. However, at the time of making a bid as a joint venture, each person submitting the bid shall be subject to this section with respect to his or her individual licensure.
- F. This section shall not affect the right or ability of a licensed architect, land surveyor, or registered professional engineer to form joint ventures with licensed contractors to render services within the scope of their respective practices.
- G. Unless one of the foregoing exceptions applies, a bid submitted to a public agency by a contractor who is not licensed in accordance with this chapter shall be considered nonresponsive and shall be rejected by the public agency. Unless one of the foregoing exceptions applies, a local public agency shall, before awarding a contract or issuing a purchase order, verify that the contractor was properly licensed when the contractor submitted the bid. Notwithstanding any other provision of law, unless one of the foregoing exceptions applies, the registrar may issue a citation to any public officer or employee of a public entity who knowingly awards a contract or issues a purchase order to a contractor who is not licensed pursuant to this chapter. The amount of civil penalties, appeal, and finality of such citations shall be subject to Sections 7028.7 and 7028.13 inclusive. Any contract awarded to, or any purchase order issued to, a contractor who is not licensed pursuant to this chapter is void.
- H. Any compliance or noncompliance with subdivision (F) of this section, as added by Chapter 863 of the Statutes of 1989, shall not invalidate any contract or bid awarded by a public agency during which time that subdivision was in effect.
- I. A public employee or officer shall not be subject to a citation pursuant to this section if the public employee, officer, or employing agency made an inquiry to the board for the purposes of verifying the license status of any person or contractor and the board failed to respond to the inquiry within three business days. For the purposes of this section, a telephone response by the board shall be deemed sufficient.
- J. In accordance with California Public contract Code section 6109, contractors and subcontractors who are ineligible to perform work on public works projects pursuant to California Labor Code sections 1777.1 or 1777.7 may neither bid on, be awarded, or perform work as a subcontractor on the Project.



17.17 DIGGING TRENCHES OR EXCAVATIONS; NOTICE ON DISCOVERY OF HAZARDOUS WASTE OR OTHER UNUSUAL CONDITIONS; INVESTIGATIONS; CHANGE ORDERS; EFFECT ON CONTRACT

A. If this Contract involves digging trenches or other excavations that extend deeper than four feet below the surface, the following shall apply:

1. The CONTRACTOR shall promptly, and before the following conditions are disturbed, notify the OWNER in writing, of any:
  - a. Material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
  - b. Subsurface or latent physical conditions at the site differing from those indicated.
  - c. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.
  - d. The OWNER shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR'S cost of, or the time required for, performance of any part of the work shall issue a change order the procedures described in the Contract.
  - e. In the event that a dispute arises between the OWNER and the CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the CONTRACTOR'S cost of, or time required for, performance of any part of the work, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. The CONTRACTOR shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

17.18 RETENTION PROCEEDS; WITHHOLDING; DISBURSEMENT

A. In accordance with Section 7107 of the Public Contract Code with respects to all contracts entered into on or after January 1, 1993 relating to the construction of any public work of improvement the following shall apply:

1. The retention proceeds withheld from any payment by the OWNER from the original CONTRACTOR, or by the original CONTRACTOR from any subcontractor, shall be subject to this paragraph 17.18.
2. Within 60 days after the date of completion of the WORK, the retention withheld by the OWNER shall be released. In the event of a dispute between the OWNER and

the original CONTRACTOR, the OWNER may withhold from the final payment an amount not to exceed 150 percent of the disputed amount. For the purposes of this paragraph, "completion" means any of the following:

- a. The occupation, beneficial use, and enjoyment of a work of improvement, excluding any operation only for testing, startup, or commissioning, by the OWNER, accompanied by cessation of labor on the work of improvement.
  - b. The acceptance by the OWNER of the work of improvement.
  - c. After the commencement of a work of improvement, a cessation of labor on the work of improvement for a continuous period of 100 days or more, due to factors beyond the control of the CONTRACTOR.
  - d. After the commencement of a work of improvement, a cessation of labor on the work of improvement for a continuous period of 30 days or more, if the OWNER files for record a notice of cessation or a notice of completion.
3. Subject to subparagraph 17.18 A.4, within 10 days from the time that all or any portion of the retention proceeds are received by the original CONTRACTOR, the original CONTRACTOR shall pay each of its subcontractors from whom retention has been withheld, each subcontractor's share of the retention received. However, if a retention payment received by the original CONTRACTOR is specifically designated for a particular subcontractor, payment of the retention shall be made to the designated subcontractor, if the payment is consistent with the terms of the subcontract.
  4. The original CONTRACTOR may withhold from a subcontractor its portion of the retention proceeds if a bona fide dispute exists between the subcontractor and the original CONTRACTOR. The amount withheld from the retention payment shall not exceed 150 percent of the estimated value of the disputed amount.
  5. In the event that retention payments are not made within the time periods required by this paragraph 17.18, the OWNER or original CONTRACTOR shall be subject to a charge of 2 percent per month on the improperly withheld amount, in lieu of any interest otherwise due. Additionally, in any action for the collection of funds wrongfully withheld, the prevailing party shall be entitled to attorney's fees and costs.
  6. Any attempted waiver of the provisions of this section shall be void as against the public policy of this state.

#### 17.19 TIMELY PROGRESS PAYMENTS; INTEREST; PAYMENT REQUESTS

- A. If the OWNER fails to make any progress payment within 30 days after receipt of an undisputed and properly submitted payment request from the CONTRACTOR, the OWNER shall pay interest to the CONTRACTOR equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.
- B. Upon receipt of a payment request, the OWNER shall act in accordance with both of the following:

1. Each payment request shall be reviewed by the OWNER as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request.
  2. Any payment request determined not to be a proper payment request suitable for payment shall be returned to the CONTRACTOR as soon as practicable, but not later than seven days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.
- C. The number of days available to the OWNER to make a payment without incurring interest pursuant to this paragraph shall be reduced by the number of days by which the OWNER exceeds the seven-day requirement set forth above.
- D. For purposes of this paragraph:
1. A "progress payment" includes all payments due the CONTRACTOR, except that portion of the final payment designated by the contract as retention earnings.
  2. A payment request shall be considered properly executed if funds are available for payment of the payment request, and payment is not delayed due to an audit inquiry by the financial officer of the OWNER.

#### 17.20 PREFERENCE FOR MATERIAL

- A. In accordance with Section 3400 of the California Public Contract Code, the CONTRACTOR will be provided a period prior to award of the contract for submission of data substantiating a request for a substitution of "as equal" item.

#### 17.21 RESOLUTION OF CONSTRUCTION CLAIMS

- A. In accordance with Section 20104 et. Seq. of the California Public Contract Code. This paragraph 17.21 applies to all claims of \$375,000 or less which arise between the CONTRACTOR and the OWNER under this Contract for:
1. A time extension;
  2. Payment of money or damages arising from work done by or on behalf of the CONTRACTOR pursuant to this CONTRACT and payment of which is not otherwise expressly provided for as the CONTRACTOR is not otherwise entitled; or
  3. An amount the payment of which is disputed by the OWNER
- B. For any claim set out in Paragraphs 17.21 A.1, 2, or 3 above, the following requirements apply:
1. The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing herein is intended to extend the time limit or supersede notice requirements otherwise provided by Contract for the filing of claims.

2. For claims of less than fifty thousand dollars (\$50,000), the OWNER shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the OWNER may have against the CONTRACTOR.

If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the OWNER and the CONTRACTOR.

The OWNER'S written response to the claim, as further documented, shall be submitted to the CONTRACTOR within 15 days after receipt of further documentation or within a period of time no greater than that taken by the CONTRACTOR in producing the additional information, whichever is greater.

3. For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the OWNER shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the OWNER may have against the CONTRACTOR.

If additional information is therefore required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the OWNER and the CONTRACTOR.

The OWNER'S written response to the claim, as further documented, shall be submitted to CONTRACTOR within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the CONTRACTOR in producing the additional information or requested documentation, whichever is greater.

4. If the CONTRACTOR disputes the OWNER'S written response, or the OWNER fails to respond within the time prescribed, the CONTRACTOR may notify the OWNER, in writing, either within 15 days of receipt of the OWNER response or within 15 days of the OWNER failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the OWNER shall schedule a meet and confer conference within 30 days for settlement of the dispute.
5. If, following the meet and confer conference the claim or any portion remains in dispute, the CONTRACTOR may file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time CONTRACTOR submits its written claim pursuant to subdivision (a) until the time the claim is denied, including any period of time utilized by the meet and confer conference.

- C. The following procedures are established for all civil actions filed to resolve claims subject to this article:

1. Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.
2. If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure (A) arbitrators shall, when possible, be experienced in construction law, and (B) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party.
3. The OWNER shall not fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in this Contract.
4. In any suit filed under Section 20104.4 of the California Public Contract Code, the OWNER shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

- END OF SECTION -

## SECTION 800 - SUPPLEMENTARY GENERAL CONDITIONS

### PART 1 -- GENERAL

These Supplementary General Conditions make additions, deletions, or revisions to the General Conditions as indicated herein. All provisions which are not so added, deleted, or revised remain in full force and effect. Terms used in these Supplementary General Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

#### SGC-1 DEFINITIONS

Add the following definitions to Article 1:

OWNER – Party issuing Contract and to take ownership of Work is defined as:

**City of Hughson**  
**7018 Pine Street**  
**Hughson, CA 95326**

ENGINEER's Consultant(s): ENGINEER's Consultants are the individuals, partnerships, corporations, joint-ventures, or other legal entities named as such below:

**Shoreline Environmental Engineering**  
**4120 Cameron Park Drive, Suite 100A**  
**Cameron Park, CA 95682**

#### SGC-2.2 COPIES OF DOCUMENTS

The OWNER shall furnish to the CONTRACTOR 3 copies of the final Contract Documents ("Construction Set") which may include bound reduced drawings, if any, together with 3 sets of full-scale Drawings, and one (1) electronic version (pdf). Additional quantities of the Contract Documents will be furnished at reproduction cost plus mailing cost if copies are mailed.

#### SGC-2.4 STARTING THE WORKS

Add the following as Paragraphs 2.4C and 2.4D of the General Conditions:

- C. The CONTRACTOR shall notify the USA North Underground Service Alert (USA) System, Phone No. 1-800-227-2600, or 811, at least 48 hours in advance of the commencement of work at any site to allow the member utilities to examine the construction site and mark the location of the utilities' respective facilities.

The CONTRACTOR shall also contact the **Turlock Irrigation District (TID)** to coordinate working under and around overhead powerlines.

- D. The CONTRACTOR acknowledges that some (or all) of the utility companies with facilities shown on the drawings may not be members of the USA System and, therefore, not automatically contacted by the above referenced telephone number. The CONTRACTOR shall be responsible for making itself aware of utility company facilities not reported by the USA System, and shall be liable for any and all damages stemming from repair or delay costs or any other expenses resulting from the unanticipated discovery of underground utilities. The CONTRACTOR shall be responsible for notifying all of the utilities at least 48 hours in advance of the commencement of work at any site to allow the utilities to examine the construction site and mark the location of the utilities' respective facilities. The CONTRACTOR shall also be responsible for verifying that each utility has responsibly responded to such notification.

#### SGC - 1.1 REPORTS OF PHYSICAL CONDITIONS

**Subsurface Explorations and Recommendations – A report regarding the findings of said exploration and associated recommendations for earthwork was completed for the project. The geotechnical report, titled “Geotechnical Services Report Proposed Well #9 Site Improvements City of Hughson, California” dated January 19, 2018 and the supplemental geotechnical letter the Geotech Engineer provided for this project titled “Supplemental Recommendations Letter Purposed Well #9 Site Improvements Hughson, California” dated March 7, 2019, are incorporated into the contract documents. CONTRACTOR shall follow the recommendations of the report for design and construction, unless (1) the tank designer determines soil report data and/or conclusions are insufficient for design (designer sends request for additional information or clarification), or (2) existing site conditions are not accurately reflected in the soils report (contractor to ask Engineer for soil engineer opinion).**

#### SGC-4.5 HAZARDOUS MATERIALS

In the preparation of the Contract Documents, the ENGINEER has relied upon:

No known documentation is available related to hazardous wastes at the project site.

#### SGC-5.1 BONDS

Delete the first sentence of Paragraph 5.1A and add the following:

The CONTRACTOR shall furnish a satisfactory Performance Bond in the amount of 100 percent of the Contract Price and a satisfactory Payment Bond in the amount of 100 percent of the Contract Price as security for the faithful performance and payment of all the CONTRACTOR's obligations under the Contract Documents.

## SGC-5.2 INSURANCE

Policies shall include premises/operations, products, completed operations, independent contractors, explosion, collapse, theft, vandalism, underground hazards, broad form contractual, personal injury with employment contractual exclusions deleted, and broad form property damage.

All policies shall provide that the CONTRACTOR agrees to waive all rights of subrogation against the OWNER, the ENGINEER, and their subconsultants, employees, officers and directors, for WORK performed under the Agreement. Endorsements shall be provided with certificates of insurance.

**Contractor shall submit proof of insurance to City showing City, its officers, agents, and employees named as Additional Insured and insurance policy shall contain provisions that such policy may not be cancelled except after thirty (30) days written notice to City, ten (10) day's notice if cancellation is due to nonpayment of premium.**

**Contractor agrees that Contractor is responsible to ensure that the requirements set forth in this section/paragraph are also met by Contractor's subcontractors/consultants who provide services pursuant to this Agreement. Copies of insurance certificates shall be filed with the City.**

### **General Liability Limits**

|   |                              |
|---|------------------------------|
| <b>BI &amp; PD combined/per occurrence</b>            | <b>\$1,000,000</b>           |
| <b>/Aggregate</b>                                     | <b>\$1,000,000</b>           |
| <b>Personal Injury/Aggregate</b>                      | <b>\$1,000,000</b>           |
| <b>Workers' Compensation and Employer's Liability</b> | <b>Statutory requirement</b> |

## SGC-5.2C INSURANCE

Add the following to Paragraph 5.2C of the General Conditions:

The CONTRACTOR shall also name **Shoreline Environmental Engineering and MCR Engineering**, and its officers, directors, agents, and employees as "Additional Insureds" under the insurance policies.

## SGC-6.5 SUBCONTRACT LIMITATIONS

Add the following as Paragraph 6.5B of the General Conditions:

- B. The CONTRACTOR shall perform not less than 30 percent of the WORK with its own forces (i.e., without subcontracting). The 30 percent requirement shall apply to the Contract Price less the values of OWNER-assigned contracts and allowances in the Bid



for prenegotiated WORK.

#### SGC-6.6 PERMITS

A. The OWNER will acquire the following permits:

None

B. The CONTRACTOR shall be responsible for complying with the requirements of all permits acquired by the OWNER.

C. Except for the permits specifically set forth in A above, the CONTRACTOR shall acquire all permits required by Laws or Regulations, including, without limitation, the following specific permits (if applicable):

1. State permits to construct and/or operate sources of air pollution.
2. Certificates and permits are required for sources such as, but not limited to:
  - a. Fuel burning equipment
  - b. Gasoline and petroleum distillate storage containers
  - c. Land disturbing activities
  - d. Processing equipment (sand, gravel, concrete batch plant, etc.)
  - e. Odors

3. Permit-Required Confined Space

The workplace in which the WORK is to be performed may contain permit-required confined spaces (permit spaces) as defined in 29 CFR 1910.146 and, if so, permit space entry is allowed only through compliance with a confined space entry program meeting the requirements of 29 CFR 1910.146.

4. City of Hughson Water Permit.

#### SGC-6.16 INDEMNIFICATION

Add the following to Paragraph 6.16A of the General Conditions:

The CONTRACTOR shall also indemnify, defend, and hold harmless Shoreline Environmental Engineering and MCR Engineering, and its officers, directors, agents, and employees, against and from all claims and liability arising under or by reason of the Agreement or any performance of the WORK, but not from the sole negligence or willful misconduct of said parties.

Add the following as Paragraph 6.18 of the General Conditions:

### SGC-9.3 PROJECT REPRESENTATION

- A. The Resident Project Representative, who is the ENGINEER's agent, will act as directed by and under the supervision of the ENGINEER and will confer with the ENGINEER regarding its actions. The Resident Project Representative's dealings in matters pertaining to the WORK shall, in general, be only with the ENGINEER and the CONTRACTOR, and dealings with Subcontractors shall only be through or with the full knowledge of the CONTRACTOR. Written communication with the OWNER will be only through or as directed by the ENGINEER.
- B. The Resident Project Representative shall have the duties and responsibilities set forth in this paragraph.
  - 1. Review the progress schedule of Shop Drawing submittals and schedule of values prepared by the CONTRACTOR and consult with the ENGINEER concerning their acceptability.
  - 2. Attend preconstruction conferences. Arrange a schedule of progress meetings and other job conferences as required in consultation with the ENGINEER and notify in advance those expected to attend. Attend meetings and maintain and circulate copies of minutes thereof.
  - 3. Serve as the ENGINEER's liaison with the CONTRACTOR, working principally through the CONTRACTOR's superintendent and assist said superintendent in understanding the intent of the Contract Documents. Assist the ENGINEER in serving as the OWNER's liaison with the CONTRACTOR.
  - 4. Receive Shop Drawings and samples furnished by the CONTRACTOR.
  - 5. Conduct on-site observations of the WORK in progress to assist the ENGINEER in determining if the WORK is proceeding in accordance with the Contract Documents.
  - 6. Verify that the tests, equipment, and systems startups and operating and maintenance instruction are conducted as required by the Contract Documents and in presence of the required personnel, and that the CONTRACTOR maintains adequate records thereof.
  - 7. Transmit to the CONTRACTOR the ENGINEER's clarifications and interpretations of the Contract Documents.
  - 8. Consider and evaluate the CONTRACTOR's suggestions for modifications in the Contract Documents and report them with recommendations to the ENGINEER.
  - 9. Review applications for payment with the CONTRACTOR for compliance with the

established procedure for their submittal and forward them with recommendations to the ENGINEER, noting particularly their relation to the schedule of values, work completed, and materials and equipment delivered at the Site but not incorporated in the WORK.

10. During the course of the WORK, verify that certificates, maintenance and operation manuals, and other data required to be assembled and furnished by the CONTRACTOR are applicable to the items actually installed.
11. Before the ENGINEER prepares a Notice of Completion, as applicable, submit to the CONTRACTOR a list of observed items requiring completion or correction.
12. Conduct final inspection in the company of the ENGINEER, the OWNER, and the CONTRACTOR, and prepare a punch list of items to be completed or corrected.
13. Verify that all items on the punch list have been completed or corrected and make recommendations to the ENGINEER concerning acceptance.

#### SGC-11.3D EQUIPMENT

The CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the current edition of the following reference publication:

- A. Caltrans' "Labor Surcharge And Equipment Rental Rates" available at all Caltrans District Offices.

#### SGC-12.2 WEATHER DELAYS

The CONTRACTOR's construction schedule shall anticipate no days of delay due to unusually severe weather. Said delays will be determined and approved upon request by CONTRACTOR, per Section 700.

#### SGC-14.3C AMOUNT OF RETENTION

Add the following to Paragraph 14.3C of the General Conditions:

Unless otherwise prescribed by law, the OWNER may retain a portion of the amount otherwise due to the CONTRACTOR, as follows:

1. Retention of 5 percent of each approved progress payment until the work is 50 percent complete; then the OWNER may, at its option, refund that portion of retainage held by the OWNER that is in excess of 2 percent of the total of the WORK done to date and thereafter continue to retain 2 percent of the

value of all approved progress payment requests subsequently submitted.

2. The OWNER may reinstate retention of the total of the WORK done if the OWNER determines, at its discretion, that the CONTRACTOR is not performing the WORK satisfactorily or there is other specific cause for such withholding.

#### SGC-14.3D VALUE OF MATERIALS STORED AT THE SITE

Unless otherwise prescribed by law, the value of materials stored at the Site shall be determined by the OWNER, but not less than 25% of the value of such materials.

### **PART 2 – OTHER REQUIREMENTS SPECIFIC TO THE CONTRACT**

#### **2.1 Buy American Iron and Steel Requirement**

The Consolidated Appropriations Act of 2014 (Public Law 113-76) includes an American Iron and Steel (AIS) requirement. Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) assistance recipients are required to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works and if the project is funded through an assistance agreement.

The Contractor acknowledges to and for the benefit of the City of Hughson ("Purchaser") and the State of California (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b ) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other

provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

## **2.2 DAVIS BACON REQUIREMENTS**

Contractor shall comply with Davis-Bacon wage requirements as provided in Section 850.

## **2.3 DISADVANTAGED BUSINESS ENTERPRISE REQUIREMENTS**

Contractor shall comply with the Disadvantaged Business Enterprise Requirements as provided in Section 860.

**- END OF SECTION-**

## **Guidelines for Meeting the California State Revolving Fund (CASRF) Programs (Clean Water and Drinking Water SRF) Disadvantaged Business Enterprise Requirements**

The Disadvantaged Business Enterprise (DBE) Program is an outreach, education, and objectives program designed to increase the participation of DBEs in the Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) Programs.

### **How to Achieve the Purpose of the Program**

Recipients of CWSRF/DWSRF financing that are subject to the DBE requirements (recipients) are required to seek, and are encouraged to use, DBEs for their procurement needs. Recipients should award a "fair share" of sub-agreements to DBEs. This applies to all sub-agreements for equipment, supplies, construction, and services.

The key functional components of the DBE Program are as follows:

- Fair Share Objectives
- DBE Certification
- Six Good Faith Efforts
- Contract Administration Requirements
- DBE Reporting

### **Disadvantaged Business Enterprises are:**

- Entities owned and/or controlled by socially and economically disadvantaged individuals as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note) (10% statute), and Public Law 102-389 (42 U.S.C. 4370d) (8% statute), respectively;
- Minority Business Enterprise (MBE) - entities that are at least 51% owned and/or controlled by a socially and economically disadvantaged individual as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note), and Public Law 102-389 (42 U.S.C. 4370d), respectively;
- Women Business Enterprise (WBE) - entities that are at least 51% owned and/or controlled by women;
- Small Business Enterprise (SBE);
- Small Business in a Rural Area (SBRA);
- Labor Surplus Area Firm (LSAF); or
- Historically Underutilized Business (HUB) Zone Small Business Concern or a concern under a successor program.

### **Certifying DBE Firms:**

Under the DBE Program, entities can no longer self-certify and contractors and sub-contractors must be certified at bid opening. Contractors and sub-contractors must provide to the CASRF recipient proof of DBE certification. Certifications will be accepted from the following:

- The U.S. Environmental Protection Agency (USEPA)
- The Small Business Administration (SBA)
- The Department of Transportation's State implemented DBE Certification Program (with U.S. citizenship)
- Tribal, State and Local governments
- Independent private organization certifications

If an entity holds one of these certifications, it is considered acceptable for establishing status under the DBE Program.

### **Six Good Faith Efforts (GFE)**

All CWSRF/DWSRF financing recipients are required to complete and ensure that the prime contractor complies with the GFE below to ensure that DBEs have the opportunity to compete for financial assistance dollars.

1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practical through outreach and recruitment activities. For Tribal, State and Local Government Recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
2. Make information on forthcoming opportunities available to DBEs. Posting solicitations for bids or proposals for a minimum of 30 calendar days in a local newspaper, before the bid opening date.
3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs.
4. Encourage contracting with a group of DBEs when a contract is too large for one firm to handle individually.
5. Use the services of the SBA **and/or** Minority Business Development Agency (MBDA) of the US Department of Commerce.
6. If the prime contractor awards subcontracts, require the prime contractor to take the above steps.

The forms listed in the table below and attached to these guidelines; must be completed and submitted with the GFE:

| FORM NUMBER                   | FORM NAME                             | REQUIREMENT                          | PROVIDED BY      | COMPLETED BY     | SUBMITTED TO        |
|-------------------------------|---------------------------------------|--------------------------------------|------------------|------------------|---------------------|
| SWRCB Form 4500-2 or EPA Form | DBE Sub-Contractor Participation Form | As Needed to Report Issues           | Recipient        | Sub-contractor   | EPA DBE Coordinator |
| SWRCB Form 4500-3 or EPA Form | DBE Sub-Contractor Performance Form   | Include with Bid or Proposal Package | Prime Contractor | Sub-Contractor   | SWRCB by Recipient  |
| SWRCB Form 4500-4 or EPA Form | DBE Sub-Contractor Utilization Form   | Include with Bid or Proposal Package | Recipient        | Prime Contractor | SWRCB by Recipient  |

**The completed forms must be submitted with each Bid or Proposal.** The recipient shall review the bidder's documents closely to determine that the GFE was performed **prior** to bid or proposal opening date. Failure to complete the GFE and to substantiate completion of the GFE before the bid opening date could jeopardize CWSRF/DWSRF financing for the project. The following situations and circumstances require action as indicated:

1. If the apparent successful low bidder was rejected, a complete explanation must be provided.
2. Failure of the apparent low bidder to **perform** the GFE **prior** to bid opening constitutes a non-responsive bid. The construction contract may then be awarded to the next low, responsive, and responsible bidder that meets the requirements or the Recipient may re-advertise the project.
3. If there is a bid dispute, all disputes shall be settled **prior** to submission of the Final Budget Approval Form.

### **Administration Requirements**

- A recipient of CWSRF/DWSRF financing must require entities receiving funds to create and maintain a Bidders List if the recipient of the financing agreement is subject to, or chooses to follow, competitive bidding requirements.
- The Bidders list must include all firms that bid or quote on prime contracts, or bid or quote on subcontracts, including both DBEs and non-DBEs.

- Information retained on the Bidder's List must include the following:
  1. Entity's name with point of contact;
  2. Entity's mailing address and telephone number;
  3. The project description on which the entity bid or quoted and when;
  4. Amount of bid/quote; and
  5. Entity's status as a DBE or non-DBE.
- The Bidders List must be kept until the recipient is no longer receiving funding under the agreement.
- The recipient shall include Bidders List as part of the Final Budget Approval Form.
- A recipient must require its prime contractor to pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the Recipient.
- A recipient must be notified in writing by its prime contractor prior to any termination of a DBE subcontractor by the prime contractor.
- If a DBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the six GFEs if soliciting a replacement subcontractor.
- A recipient must require its prime contractor to employ the six GFEs even if the prime contractor has achieved its fair share objectives.

### **Reporting Requirements**

For the duration of the construction contract(s), the recipient is required to submit to the State Water Resources Control Board DBE reports annually by October 10 of each fiscal year on the attached Utilization Report form (UR-334). Failure to provide this information as stipulated in the financial agreement language may be cause for withholding disbursements.

### **CONTACT FOR MORE INFORMATION**

SWRCB, CASRF – Barbara August (916) 341-6952 [barbara.august@waterboards.ca.gov](mailto:barbara.august@waterboards.ca.gov)

US EPA, Region 9 – Joe Ochab (415) 972-3761 [ochab.joe@epa.gov](mailto:ochab.joe@epa.gov)



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**Disadvantaged Business Enterprise (DBE) Program**  
**DBE Subcontractor Participation Form**

A Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE<sup>1</sup> subcontractor<sup>2</sup> the opportunity to describe work received and/or report any concerns regarding the funded project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the DBE Coordinator at any time during the project period of performance.

|                       |  |                        |  |
|-----------------------|--|------------------------|--|
| Subcontractor Name    |  | Project Name           |  |
| Bid / Proposal No.    | Assistance Agreement ID No. (if known) | Point of Contact       |  |
| Address               |  |                        |  |
| Telephone No.         |  | Email Address          |  |
| Prime Contractor Name |  | Issuing/Funding Entity |  |

| Contract Item Number | Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies | Amount Received by Prime Contractor |
|----------------------|--|-------------------------------------|
|                      |  |                                     |

<sup>1</sup> A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup> Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

**FORM 4500-2 (DBE Subcontractor Participation Form)**

Please use the space below to report any concerns regarding the above funded project:

|                         |            |
|-------------------------|------------|
| Subcontractor Signature | Print Name |
|                         |            |
| Title                   | Date       |
|                         |            |

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

**Send completed Form 4500-2 to:**  
Mr. Joe Ochab, DBE Coordinator  
US EPA, Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

**FORM 4500-2 (DBE Subcontractor Participation Form)**

**Disadvantaged Business Enterprise (DBE) Program**  
**DBE Subcontractor Performance Form**

This form is intended to capture the DBE<sup>1</sup> subcontractor's<sup>2</sup> description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

|                       |  |                        |  |
|-----------------------|--|------------------------|--|
| Subcontractor Name    |  | Project Name           |  |
| Bid / Proposal No.    | Assistance Agreement ID No. (if known) | Point of Contact       |  |
| Address               |  |                        |  |
| Telephone No.         |  | Email Address          |  |
| Prime Contractor Name |  | Issuing/Funding Entity |  |

| Contract Item Number                                  | Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies | Price of Work Submitted to the Prime Contractor                                |
|---|---|--|
|   |   |  |
| DBE Certified By:     DOT     SBA<br>___ Other: _____ |   | Meets/exceeds EPA certification standards?<br>___ YES    ___ NO    ___ Unknown |

<sup>1</sup> A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup> Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

**FORM 4500-3 (DBE Subcontractor Performance Form)**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

| Prime Contractor Signature | Print Name |
|----------------------------|------------|
|                            |            |
| Title                      | Date       |
|                            |            |

| Subcontractor Signature | Print Name |
|-------------------------|------------|
|                         |            |
| Title                   | Date       |
|                         |            |

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

**FORM 4500-3 (DBE Subcontractor Performance Form)**

Well 7 Replacement Project – Phase IV  
City of Hughson

April 20, 2020  
DBE REQUIREMENTS  
PAGE 0860-8

***Disadvantaged Business Enterprise (DBE) Program  
DBE Subcontractor Utilization Form***

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE<sup>1</sup> subcontractor's<sup>2</sup> and the estimated dollar amount of each subcontract. A Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

|                        |  |                  |  |
|------------------------|--|------------------|--|
| Prime Contractor Name  |  | Project Name     |  |
| Bid / Proposal No.     | Assistance Agreement ID No. (if known) | Point of Contact |  |
| Address                |  |                  |  |
| Telephone No.          |  | Email Address    |  |
| Issuing/Funding Entity |  |                  |  |

| <p>I have identified potential DBE certified subcontractors. ____ YES    ____ NO</p> <p>If yes, please complete the table below. If no, please explain:</p> |                                 |                            |                                |
|---|---------------------------------|----------------------------|--------------------------------|
|   |                                 |                            |                                |
| Subcontractor Name/<br>Company Name   | Company Address / Phone / Email | Estimated<br>Dollar Amount | Currently<br>DBE<br>Certified? |
|   |                                 |                            |                                |
|   |                                 |                            |                                |
|   |                                 |                            |                                |

--Continue on back if needed--

<sup>1</sup> A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup> Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

**FORM 4500-4 (DBE Subcontractor Utilization Form)**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

| Prime Contractor Signature | Print Name |
|----------------------------|------------|
|                            |            |
| Title                      | Date       |
|                            |            |

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

**FORM 4500-4 (DBE Subcontractor Utilization Form)**

**STATE WATER RESOURCES CONTROL BOARD – DIVISION OF FINANCIAL ASSISTANCE  
DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION  
CALIFORNIA STATE REVOLVING FUNDS (CASRF)  
FORM UR-334**

| 1. Grant/Finance Agreement Number:  |   | 2. Annual Reporting Period<br><br>10/1/____through 09/30/ |   | 3. Purchase Period of Financing Agreement: |  |
|---|---|---|---|--|--|
| 4. Total Payments Paid to Prime Contractor or Sub-Contractors During Current Reporting Period: \$ |   |   |   |  |  |
| 5. Recipient's Name and Address:  |   |   | 6. Recipient's Contact Person and Phone Number: |  |  |
| 7. List All DBE Payments Paid by Recipient or Prime Contractor During Current Reporting Period:   |   |   |   |  |  |
| Payment or Purchase Paid by Recipient or Prime Contractor   | Amount Paid to Any DBE Contractor or Sub-Contractor For Service Provided to Recipient |   | Date of Payment (MM/DD/YY)                      | Procurement Type Code** (see below)        | Name and Address of DBE Contractor of Sub-Contractor or Vendor |
|   | MBE   | WBE   |   |  |  |
|   |   |   |   |  |  |
|   |   |   |   |  |  |
|   |   |   |   |  |  |
|   |   |   |   |  |  |
|   |   |   |   |  |  |
|   |   |   |   |  |  |
|   |   |   |   |  |  |
| 8. Initial here if no DBE contractors or sub-contractors paid during current reporting period:    |   |   |   |  |  |
| 9. Initial here if all procurements for this contract are completed:                              |   |   |   |  |  |
| 10. Comments:   |   |   |   |  |  |
| 11. Signature and Title of Recipient's Authorized Representative                                  |   |   | 12. Date  |  |  |

**Email Form UR-334 to:**

[DrinkingWaterSRF@waterboards.ca.gov](mailto:DrinkingWaterSRF@waterboards.ca.gov) OR [CleanWaterSRF@waterboards.ca.gov](mailto:CleanWaterSRF@waterboards.ca.gov)

**Questions may be directed to:**

Barbara August, SWRCB  
[Barbara.August@waterboards.ca.gov](mailto:Barbara.August@waterboards.ca.gov)  
 Phone: (916) 341-6952  
 Fax: (916) 327-7469

**\*\*Procurement Type:**

1. Construction
2. Supplies
3. Services (includes business services; professional services; repair services and personnel services)
4. Equipment



**STATE WATER RESOURCES CONTROL BOARD - DIVISION OF FINANCIAL ASSISTANCE  
DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION  
CALIFORNIA STATE REVOLVING FUNDS**

**INSTRUCTIONS FOR COMPLETING FORM UR-334**

- Box 1** Grant or Financing Agreement Number.
- Box 2** Annual reporting period.
- Box 3** Enter the dates between which you made procurements under this financing agreement or grant.
- Box 4** Enter the total amount of payments paid to the contractor or sub-contractors during this reporting period.
- Box 5** Enter Recipient's Name and Address.
- Box 6** Enter Recipient's Contact Name and Phone Number.
- Box 7** Enter details for the **DBE purchases only** and be sure to limit them to the current period.  
1) Use either an "R" or a "C" to represent "Recipient" or "Contractor." 2) Enter a dollar total for DBE and total the two columns at the bottom of the section. 3) Provide the payment date. 4) Enter a product type choice from those at the bottom of the page. 5) List the vendor name and address in the right-hand column
- Box 8** Initial here if no DBE contractors or sub-contractors were paid during this reporting period.
- Box 9** Initial this box only if all purchases under this financing agreement or grant have been completed during this reporting period or a previous period. If you initial this box, we will no longer send you a survey.
- Box 10** This box is for explanatory information or questions.
- Box 11** Provide an authorized representative signature.
- Box 12** Enter the date form completed.

## SECTION 0850 – DAVIS BACON REQUIREMENTS

The Recipient shall have the primary responsibility to maintain payroll records as described in Section 3(ii)(A), below and for compliance as described in Section 5.

Requirements under the Consolidated Appropriations Act, 2014 (P.L. 113-76)

For Recipients That Are Governmental Entities:

If a Recipient has questions regarding when Davis Bacon (DB) applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State Water Board.

The Recipient may also obtain additional guidance from DOL's web site at <http://www.dol.gov/whd/>

### 1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the FY 2014 Consolidated Appropriation Act, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If the Recipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the Recipient must discuss the situation with the State Water Board State before authorizing work on that site.

### 2. Obtaining Wage Determinations.

- (a) Recipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.
  - (i) While the solicitation remains open, the Recipient shall monitor [www.wdol.gov](http://www.wdol.gov) weekly to ensure that the wage determination contained in the solicitation remains current. The Recipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the Recipients may request a finding from the State Water Board that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State Water Board will provide a report of its findings to the Recipient.
  - (ii) If the Recipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State Water Board, at the request of the Recipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The Recipient shall monitor [www.wdol.gov](http://www.wdol.gov) on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.
- (b) If the Recipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the Recipient shall insert the appropriate DOL wage determination from [www.wdol.gov](http://www.wdol.gov) into the ordering instrument.

- (c) Recipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.
- (d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a Recipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the Recipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the Recipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The Recipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

### 3. Contract and Subcontract provisions.

- (a) The Recipient shall insure that the Recipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal Agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the FY 2014 Consolidated Appropriations Act, the following clauses:

#### (1) Minimum wages.

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b) (2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a) (1) (iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. Recipients may obtain wage determinations from the U.S. Department of Labor's web site, [www.dol.gov](http://www.dol.gov).

- (ii)(A) The Recipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  - (2) The classification is utilized in the area by the construction industry; and
  - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Recipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the Recipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Recipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of

Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

- (2) Withholding. The Recipient(s), shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
- (3) Payrolls and basic records.
- (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b) (2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- (ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the Recipient, that is, the entity that receives the subgrant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the Recipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the

Recipient(s) for transmission to the State or EPA

if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the Recipient(s).

- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
    - (1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a) (3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
    - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
    - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
  - (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.
  - (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
  - (iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.
- (4) Apprentices and trainees--
- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice

in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen

under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

- (5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- (6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- (7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Recipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.
- (10) Certification of eligibility.
  - (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
  - (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
  - (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

- (a) Contract Work Hours and Safety Standards Act. The Recipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.
  - (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such



laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.
  - (3) Withholding for unpaid wages and liquidated damages. The Recipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
  - (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.
- (b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Recipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Recipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the USEPA, the Department of Labor, and the State Water Board, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

## 5. Compliance Verification

- (a) The Recipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The Recipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

- (b) The Recipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Recipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Recipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.
- (c) The Recipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The Recipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the Recipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Recipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the Recipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.
- (d) The Recipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.
- (e) Recipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/contacts/whd/america2.htm>.

## SECTION 01010 - SUMMARY OF WORK

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The WORK to be performed under this Contract shall consist of furnishing plant, tools, equipment, materials, supplies, and manufactured articles, and furnishing all labor, transportation, and services, including fuel, power, water, and essential communications, and performing all work or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The WORK shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the WORK in good faith shall be provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the OWNER.

#### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The WORK of this Contract comprises the final construction phase of a water treatment facility and associated components, including but not limited to, equipping existing well mechanical components, booster pumps and motors, yard piping, electrical power and controls, chemical disinfection systems, instrumentation, control building, emergency power system, testing, start-up, training, and other items as defined in the contract documents. Previous construction phases included well construction and erection of a concrete water storage tank. Work will incorporate these existing improvements to provide a complete and functioning water treatment, storage, and pumping facility.
- B. The WORK sites are located approximately ½ mile south of the intersection of Whitmore Road and Tully Road in the City of Hughson, California.
- C. CONTRACTOR will take responsibility of the sites where other phases of work have been performed. CONTRACTOR shall have inspected the site conditions as part of the bid, and understands his responsibility to maintain and modify existing temporary facilities (i.e. erosion control, security, etc.) as part of the contract. CONTRACTOR is responsible for integrating all project phases, including but not limited to, disinfecting and equipping wells, receiving and installing OWNER supplied equipment and materials, disposing of water in the concrete storage tank, connecting to pipes from the street and concrete storage tank (providing a disinfection and testing program for pipe installed with new work prior to connecting), and other work as necessary to provide a complete and functioning water treatment, storage, and pumping facility for the OWNER.

#### 1.3 CONTRACT METHOD

- A. The WORK hereunder will be constructed under a single unit-price contract.

#### 1.4 WORK BY OTHERS

- A. Where 2 or more contracts are being performed at one time on the same Site or adjacent land in such manner that work under one contract may interfere with work under another, the OWNER will determine the sequence and order of the Work in either or both contracts. When the Site of one contract is the necessary or convenient means of access for

performance of work under another, the OWNER may grant privilege of access or other reasonable privilege to the contractor so desiring, to the extent, amount, and in manner and at time that the OWNER may determine. No OWNER determination of method or time or sequence or order of the work or access privilege shall be the basis for a claim for delay or damage except under provisions of the General Conditions for temporary suspensions of the work. The CONTRACTOR shall conduct its operations so as to cause a minimum of interference with the work of such other contractors, and shall cooperate fully with such contractors to allow continued safe access to their respective portions of the Site, as required to perform work under their respective contracts.

- B. **Interference With Work On Utilities:** The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize interference with said relocation, altering, or other rearranging of facilities.

## 1.5 WORK SEQUENCE

- A. Not Used

## 1.6 CONTRACTOR USE OF SITE

- A. The CONTRACTOR's use of the Sites shall be limited to its construction operations, including on-Site storage of materials, on-Site fabrication facilities, and field offices.

## 1.7 OUTAGE PLAN AND REQUESTS

- A. Unless the Contract Documents indicate otherwise, the CONTRACTOR shall not remove from service, de-energize, or modify settings for any existing operating tank, pipeline, valve, channel, equipment, structure, road, or any other facility without written permission from the ENGINEER.
- B. Where the WORK requires modifications to existing facilities or construction of new facilities and connection of new facilities to existing facilities, the CONTRACTOR shall submit a detailed outage plan and schedule for the ENGINEER'S approval a minimum of 2 weeks in advance of the time that such outage is planned. The outage plan shall be coordinated with the construction schedule and shall meet the restrictions and conditions of the Contract Documents. The outage plan shall describe the CONTRACTOR's method for preventing bypassing of other treatment units; the length of time required to complete said operation; any necessary temporary power, controls, instrumentation or alarms required to maintain control, monitoring, and alarms for the treatment plant processes; and the manpower, plant, and equipment which the CONTRACTOR will furnish for proper operation of associated treatment units. All costs for preparing and implementing the outage plans shall be at no increase in cost to the OWNER.
- C. The ENGINEER shall be notified in writing at least one week in advance of the required outage if the schedule for performing the work has changed or if revisions to the outage plan are required.
- D. The CONTRACTOR shall provide written confirmation of the shutdown date and time two working days prior to the actual shutdown.

## 1.8 OWNER USE OF THE SITE

- A. The OWNER may utilize all or part of the existing site and/or existing facilities during the entire period of construction. The CONTRACTOR shall cooperate and coordinate with the ENGINEER to facilitate the OWNER's operations and to minimize interference with the CONTRACTOR's operations at the same time. In any event, the OWNER shall be allowed access to the Site during the period of construction.

## 1.9 PARTIAL UTILIZATION OF THE WORK BY OWNER

- A. The OWNER will take partial utilization of the WORK upon completion of the start-up testing and commissioning. Partial utilization will involve the placing into service of the booster facility during the period when CONTRACTOR finishes minor work, such as punch-list items, painting, clean-up, training, etc.

## 1.10 PROJECT MEETINGS

### A. **Preconstruction Conference:**

1. Prior to the commencement of WORK at the Site, a preconstruction conference will be held at a mutually agreed time and place. The conference shall be attended by the CONTRACTOR'S Project Manager, its superintendent, and its Subcontractors as the CONTRACTOR deems appropriate. Other attendees will be:
  - a. ENGINEER and the Resident Project Representative.
  - b. Representatives of OWNER.
  - c. Others as requested by CONTRACTOR, OWNER, or ENGINEER.
2. The CONTRACTOR shall bring the preconstruction conference submittals in accordance with Section 01300 - Contractor Submittals.
3. The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The complete agenda will be furnished to the CONTRACTOR prior to the meeting date. However, the CONTRACTOR should be prepared to discuss all of the items listed below.
  - a. Status of CONTRACTOR's insurance and bonds.
  - b. CONTRACTOR's tentative schedules.
  - c. Transmittal, review, and distribution of CONTRACTOR's submittals.
  - d. Processing applications for payment.
  - e. Maintaining record documents.
  - f. Critical work sequencing.
  - g. Field decisions and Change Orders.

- h. Use of Site, office and storage areas, security, housekeeping, and OWNER's needs.
  - i. Major equipment deliveries and priorities.
  - j. CONTRACTOR's assignments for safety and first aid.
  - k. Daily Report Form which the ENGINEER will furnish.
  - l. Submittal Transmittal Form which the ENGINEER will furnish.
- 4. The ENGINEER will preside at the preconstruction conference and will arrange for keeping and distributing the minutes to all persons in attendance.
  - 5. The CONTRACTOR and its Subcontractors should plan on the conference taking no less than **4 hours**.

**B. Progress Meetings:**

- 1. The CONTRACTOR shall schedule and hold regular on-Site progress meetings at least weekly and at other times as requested by ENGINEER or as required by progress of the WORK. The CONTRACTOR, ENGINEER, and all Subcontractors active on the Site shall attend each meeting. CONTRACTOR may at its discretion request attendance by representatives of its Suppliers, manufacturers, and other Subcontractors.
- 2. The ENGINEER will preside at the progress meetings and will arrange for keeping and distributing the minutes. The purpose of the meetings is to review the progress of the WORK, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop. During each meeting, the CONTRACTOR shall present any issues which may impact its progress with a view to resolve these issues expeditiously.

**PART 2 -- PRODUCTS (Not Used)**

**PART 3 -- EXECUTION (Not Used)**

- END OF SECTION -

## SECTION 01025 - MEASUREMENT AND PAYMENT

### PART 1 -- GENERAL

#### 1.1 SCOPE

- A. Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefore shall be included in the prices named in the Bid Schedule for the various appurtenant items of work.

Some of the products and materials for the Work do not have performance specifications, as they are specifically identified on the plans or in the List of Vendors, as provided by the Owner as part of the contract documents. CONTRACTOR shall contact the vendors on the list to obtain the price and products to be supplied, and incorporate the cost into the bid price. Said price shall include purchase and installation of the items. CONTRACTOR shall provide ancillary items as needed to complete installation of said equipment as part of the Work.

#### 1.2 SHEETING, SHORING, AND BRACING

- A. No measurement or specific cost shall be provided for this item.
- B. Payment for temporary sheeting, shoring, and bracing or equivalent method will be included in the price for underground and/or excavation work, and shall constitute full compensation for completion of all planning, design, engineering fees, furnishing and constructing, and removal and disposal of such temporary sheeting, shoring, and bracing, complete, as required under the provisions of any permits, and in accordance with the requirements of OSHA and the Construction Safety Orders of the State of California, pursuant to the provisions of Section 6707 of the California Labor Code.

#### 1.3 MOBILIZATION (Bid Item No. 1)

Measurement and payment for mobilization shall be based on a Lump Sum (L.S.) price and shall include all work incidental to mobilization and demobilization that is required for said work including but not limited to mobilization, bonds, insurances, scheduling, submittals, coordination, permits, progress meetings, submittals, surveys, potholing, testing and disinfection, record drawings, traffic control, erosion control, clean-up, temporary facilities, start up and commissioning, training, etc. OWNER shall pay up to 50% of mobilization costs with first payment, but shall pay no more than 75% before project completion. Unbalanced mobilization prices may result in the rejection of bid.

#### 1.4 YARD PIPE (Bid Item No. 2)

Measurement and payment for Yard Pipe shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with fabrication and installation of above and below grade steel, ductile iron, and PVC water pipe and appurtenances, including but not limited to, pipe, fittings, isolation valves, restraints, supports, control valves, concrete vaults and lids, valve risers, connections to existing pipe, vault pipe penetrations, isolation joints, pipe linings and coatings, trenching, backfill, etc., for pipe located on the water treatment plant site, as identified in the contract documents.

#### 1.5 MECHANICAL (Bid Item No. 3)

Measurement and payment for Mechanical work shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with water pumps and appurtenances, including but not limited to, pumps, pump motors, discharge heads, steel booster pump barrels, pump barrel linings/coatings, concrete pump pedestals, concrete pipe supports, backwash setting pumps and motors, check valves, control valves, couplings, air and vacuum valves, flow meters, testing and balancing pumps, mechanical seals and lubrication systems, bearing isolation systems, all in accordance with the contract documents.

#### 1.6 INSTRUMENTATION (Bid Item No. 4)

Measurement and payment for Instrumentation shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with instrumentation, including but not limited to, pressure transducers/transmitters, level indicators, flow meter, chemical detection/monitoring instruments and appurtenances, leak detection, gauges, connections, testing, programming, calibration, training, etc.

#### 1.7 SITE ELECTRICAL (Bid Item No. 5)

Measurement and payment for Site Electrical shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with providing and installing electrical systems, including but not limited to, high and low voltage conduit and conductors, power and control systems for mechanical devices, instrument signal and power conductors/conduits, motor disconnects, interior and exterior lighting and supports, switches, outlets, grounding systems, ground fault protection devices, conduit/pull lines for future work, etc.

#### 1.8 SWITCHGEAR, MCC, PLC (Bid Item No. 6)

Measurement and payment for Switchgear, MCC, and PLC shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with fabrication, installation, programming, and testing of said electrical supply and control equipment, including but not limited to, cabinets, internal wiring and components, PLC, PLC programming and testing, panel switches, breakers, fuses, surge protection, overload



devices, secondary transformer and subpanel, power meter, fans, grounding, phase failure devices, relays, running lights, testing, training, and other as defined in the contract documents.

#### 1.9 SCADA and TELEMETRY (Bid Item No. 7)

Measurement and payment for SCADA and Telemetry shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with integration of the facility controls with Owner's existing SCADA system, including but not limited to, programming, screen development, operating report development, alarm report development, radio/receiver, antenna, mast, connections to facility PLC, PC and monitor with SCADA connection, testing, training, etc.

#### 1.10 CONTROL BUILDING (Bid Item No. 8)

Measurement and payment for Control Building shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with the facility masonry building, including but not limited to, foundation, floor, CMU walls, vents, roof, equipment hatches, blowers and fans, interior and exterior doors and jambs, windows, insulation, ceilings, floor drains and trenches, drain grates, air condition unit, wall pipe penetrations, roof penetrations, copper water pipe, backflow device, water closet, sinks, counters, floor finishes, wall finishes, etc.

#### 1.11 CHEMICAL DISINFECTION SYSTEMS (Bid Item No. 9)

Measurement and payment for Chemical Disinfection Systems shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with the facility chemical systems, including but not limited to, chemical dosing pumps, chemical storage containers, storage fill/drain/vent connections and piping, storage seismic restraints, injection conduits and tubing, pressure relief valves, shut off valves, camlock connectors, injection quill assemblies, eyewash/shower assemblies, handrails, connecting and testing of chemical systems and components, training, etc.

#### 1.12 SITE WORK (Bid Item No. 10)

Measurement and payment for Site Work shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with general site work, including but not limited to, finish grading and compaction, A.C. and gravel surfaces, concrete pad and curbs, minor underground work (i.e. sewer, drains, storm drains, water services, etc.), manholes, traps, valves, valve risers or boxes, sample lines, domestic water supply pipe and connections, fencing and gates, etc.

#### 1.13 STANDBY GENERATOR (Bid Item No. 11)

Measurement and payment for Standby Generator shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with the facility on-site emergency power system, including but not limited to, generator, generator controls,

fuel storage, structural concrete support, seismic mitigation and supports, exterior housing, exhaust mufflers, installation, start up, testing, training, etc.

**1.14 BACKWASH TANK (Bid Item No. 12)**

Measurement and payment for Backwash Tank shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with the filter backwash settling tank and appurtenances, including but not limited to, steel fabricated tank and appurtenances, tank foundation and pump supports, interior solids processing system, tank outlet/overflow pipes, control valves, linings/coatings, electrical connections, all in accordance with the tank fabricator's design recommendations, shop drawings, and contract documents.

**1.15 16" TRANSMISSION PIPING (Bid Item No. 13)**

Measurement and payment for 16" Transmission Piping shall be based on a lineal foot (L.F.) price and shall include all labor, materials, and equipment associated with purchase and installation of 16" piping located outside of the treatment site, including but not limited to, trenching, backfill, pipe, pipe installation, restraints, fittings, valves, testing, disinfection, etc. Cutting and replacing of a.c. under a separate bid item.

**1.16 12" TRANSMISSION PIPING (Bid Item No. 14)**

Measurement and payment for 12" Transmission Piping shall be based on a lineal foot (L.F.) price and shall include all labor, materials, and equipment associated with purchase and installation of 16" piping located outside of the treatment site, including but not limited to, trenching, backfill, pipe, pipe installation, restraints, fittings, valves, testing, disinfection, etc. Cutting and replacing of a.c. under a separate bid item.

**1.17 INSTALLATION OF OWNER'S FILTERS (Bid Item 15)**

Measurement and payment for Installation of Owner's Filters shall be based on a Lump Sum (L.S.) price and shall include all labor, materials, and equipment associated with assembling and installing Owner supplied water treatment equipment and appurtenances, including but not limited to, Owner supplied filter vessels, filter media, contact chambers, piping, control valves, isolation valves, air valves, instruments, etc., and providing concrete pad, coatings, pipe supports, connecting piping, connecting electrical, testing, start up, and any related services to allow full operation of the filters, all in accordance with the filter manufacturer and contract documents.

**PART 2 -- PRODUCTS (Not Used)**

**PART 3 -- EXECUTION (Not Used)**

- END OF SECTION -

## **SECTION 01300 - CONTRACTOR SUBMITTALS**

### **PART 1 -- GENERAL**

#### **1.1 GENERAL**

- A. Wherever submittals are required in the Contract Documents, submit them to the ENGINEER.
- B. Within 14 days after the date of commencement as stated in the Notice to Proceed, the CONTRACTOR shall submit the following items to the ENGINEER for review:
  - 1. A preliminary schedule of Shop Drawings, Samples, and equipment submittals.
  - 2. Full submittals that require an immediate review to meet project completion timelines.
  - 3. A list of all agency permits and licenses the CONTRACTOR required to perform WORK, and dates the permit(s) will be obtained.

#### **1.2 PRECONSTRUCTION CONFERENCE SUBMITTALS**

- A. At the preconstruction conference referred to in Section 01010 - Summary of Work, the CONTRACTOR shall submit the following items to the ENGINEER for review:
  - 1. A preliminary schedule of Shop Drawings, Samples, and submittals.
  - 2. A list of all permits and licenses the CONTRACTOR shall obtain indicating the agency required to grant the permit, the expected date of submittal for the permit, and required date for receipt of the permit.
  - 3. A preliminary schedule of values in accordance with Section 01301 - Schedule of Values.
  - 4. A 60-day plan of operation in accordance with Section 01311 – CMP Construction Schedule.
  - 5. A project overview bar chart in accordance with Section 01311.
  - 6. Not Used

#### **1.3 SHOP DRAWINGS**

- A. Wherever called for in the Contract Documents, or where required by the ENGINEER, the CONTRACTOR shall furnish to the ENGINEER for review, one (1) PDF electronic copy of each Shop Drawing submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop-prepared drawings, fabrication, and installation drawings, erection drawings, lists, graphs, catalog sheets, data sheets, and similar items. Whenever the CONTRACTOR is required to submit design calculations as part of a submittal, such calculations shall bear the signature and seal of an engineer registered in the appropriate branch and in the state wherein the project is to be built, unless otherwise indicated.

- B. Shop Drawing submittals shall be accompanied by the ENGINEER's/OWNER's standard submittal transmittal form (a reproducible copy of which is available from the ENGINEER), or the CONTRACTOR's submittal form if approved by ENGINEER. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal.
- C. Organization
1. A single submittal transmittal form shall be used for each technical specification section or item or class of material or equipment for which a submittal is required. A single submittal covering multiple sections will not be acceptable, unless the primary specification references other sections for components. Example: if a pump section references other section for the motor, protective coating, anchor bolts, local control panel, and variable frequency drive, a single submittal would be accepted; a single submittal covering vertical turbine pumps and horizontal split case pumps would not be acceptable.
  2. On the transmittal form, index the components of the submittal and insert tabs in the submittal to match the components. Relate the submittal components to Specification paragraph and subparagraph, Drawing number, detail number, schedule title, or room number, or building name, as applicable.
  3. Unless indicated otherwise, terminology and equipment names and numbers used in submittals shall match the Contract Documents.
- D. Format
1. Minimum sheet size shall be 8.5 inches by 11 inches. Maximum sheet size shall be 24 inches by 36 inches. Every page in a submittal shall be numbered in sequence.
  2. Where product data from a manufacturer is submitted, clearly mark which model is proposed, with all pertinent data capacities, dimensions, clearances, diagrams, controls, connections, anchorage, and supports. Sufficient level of detail shall be presented for assessment of compliance with the Contract Documents.
  3. Each submittal shall be assigned a unique number. Submittals shall be numbered sequentially. The submittal numbers shall be clearly noted on the transmittal. Original submittals shall be assigned a numeric submittal number. Resubmittals shall bear an alpha-numeric system which consists of the number assigned to the original submittal for that item followed by a letter of the alphabet to represent that it is a subsequent submittal of the original. For example, if submittal 25 requires a resubmittal, the first resubmittal will bear the designation 25-A and the second resubmittal will bear the designation 25-B and so on.
- E. Disorganized submittals which do not meet the requirements above will be returned without review.
- F. Except as may otherwise be indicated herein, the ENGINEER will return prints of each submittal to the CONTRACTOR with its comments noted thereon, within 30 calendar days following receipt by the ENGINEER. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the ENGINEER by the second submission of a submittal item. The OWNER reserves the right to withhold monies due to the CONTRACTOR to cover additional costs of the ENGINEER's review beyond the

second submittal. The ENGINEER'S maximum review period for each submittal, including all resubmittals, will be 30 days per submittal. Thus, for a submittal that requires two resubmittals before it is complete, the maximum review period for that submittal could be 90 days.

- G. If a submittal is returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision and resubmission of said submittal will not be required.
- H. If a submittal is returned marked "MAKE CORRECTIONS NOTED," CONTRACTOR shall make the corrections on the submittal, but formal revision and resubmission of said submittal will not be required.
- I. If a submittal is returned marked "AMEND-RESUBMIT," the CONTRACTOR shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the ENGINEER for review.
- J. If a submittal is returned marked "REJECTED-RESUBMIT," it shall mean that the submitted material or product does not satisfy the specification, the submittal is so incomplete that it cannot be reviewed, or is a substitution request which will not be reviewed because it is submitted after award of the Contract. The CONTRACTOR shall prepare a new submittal and shall resubmit said revised submittal to the ENGINEER for review.
- K. Fabrication of an item shall be commenced only after the ENGINEER has reviewed the pertinent submittals and returned copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN" or MAKE CORRECTIONS NOTED." Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as changes to the contract requirements.
- L. All submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR, prior to submission to the ENGINEER. Each submittal shall be dated, signed, and certified by the CONTRACTOR, as being correct and in strict conformance with the Contract Documents. In the case of Shop Drawings, each sheet shall be so dated, signed, and certified. The ENGINEER will only review submittals which have been so certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the ENGINEER, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.
- M. The ENGINEER's review of submittals shall not relieve the CONTRACTOR of the entire responsibility for the correctness of details and dimensions. The CONTRACTOR shall assume all responsibility and risk for any misfits due to any errors in submittals. The CONTRACTOR shall be responsible for the dimensions and the design of adequate connections and details.

#### 1.4 CONTRACTOR'S SCHEDULE

- A. The CONTRACTOR's construction schedules and reports shall be prepared and submitted to the ENGINEER in accordance with of Section 01311.

#### 1.5 SAMPLES

- A. Whenever in the Specifications samples are required, the CONTRACTOR shall submit not less than 3 samples of each item or material to the ENGINEER for acceptance.

- B. Unless otherwise indicated, samples, shall be submitted a minimum of 21 days prior to ordering such material.
- C. Samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and Manufacturer's name. Upon receiving acceptance of the ENGINEER, one set of the samples will be stamped and dated by the ENGINEER and returned to the CONTRACTOR, and one set of samples will be retained by the ENGINEER, and one set of samples shall remain at the Site until completion of the WORK.
- D. Unless indicated otherwise, all colors and textures of items presented in sample submittals shall be from the manufacturer's standard colors and standard materials, products, or equipment lines. If the samples represent non-standard colors, materials, products, or equipment lines and their selection will require an increase in Contract Times or Price, the CONTRACTOR shall clearly indicate same on the transmittal page of the submittal.
- E. The CONTRACTOR shall schedule sample submittals such that:
  - 1. Samples are submitted in an orderly sequence which allows the ENGINEER 45 Days to assemble color panels and select color and texture dependent products and materials without delay to the construction schedule.
  - 2. The CONTRACTOR has sufficient time after approval or selection of color or texture to provide the products or materials without delay to the construction schedule. The Contract Times will not be extended for the CONTRACTOR's failure to allow enough review and approval or selection time, failure to submit all samples requiring color or texture selection, or failure to submit complete or approvable samples.

## 1.6 TECHNICAL MANUALS

- A. The CONTRACTOR shall submit technical operation and maintenance information for each item of mechanical, electrical and instrumentation equipment in an organized manner in the Technical Manual. It shall be written so that it can be used and understood by the OWNER'S operation and maintenance staff.
- B. The Technical Manual shall be subdivided first by specification section number; second, by equipment item; and last, by "Category." "Categories" shall conform to the following (as applicable):
  - 1. Category 1 - Equipment Summary:
    - a. Summary: A summary table shall indicate the equipment name, equipment number, and process area in which the equipment is installed.
    - b. Form: The ENGINEER will supply an Equipment Summary Form for each item of mechanical, electrical and instrumentation equipment in the WORK. The CONTRACTOR shall fill in the relevant information on the form and include it in Part 1.
  - 2. Category 2 - Operational Procedures:
    - a. Procedures: Manufacturer-recommended procedures on the following shall be

included in Part 2:

- Installation
- Adjustment
- Startup
- Location of controls, special tools, equipment required, or related instrumentation needed for operation
- Operation procedures
- Load changes
- Calibration
- Shutdown
- Troubleshooting
- Disassembly
- Reassembly
- Realignment
- Testing to determine performance efficiency
- Tabulation of proper settings for all pressure relief valves, low and high pressure switches, and other protection devices
- List of all electrical relay settings including alarm and contact settings

**Note: Manufacturer's installation manuals shall be submitted to ENGINEER at least 1 week prior to installation of said equipment.**

3. Category 3 - Preventive Maintenance Procedures:

- a. Procedures: Preventive maintenance procedures shall include all manufacturer-recommended procedures to be performed on a periodic basis, both by removing and replacing the equipment or component, and by leaving the equipment in place.
- b. Schedules: Recommended frequency of preventive maintenance procedures shall be included. Lubrication schedules, including lubricant SAE grade, type, and temperature ranges, shall be covered.

4. Category 4 - Parts List:

- a. Parts List: A complete parts list shall be furnished, including a generic description and manufacturer's identification number for each part. Addresses and telephone numbers of the nearest supplier and parts warehouse shall be included.
- b. Drawings: Cross-sectional or exploded view drawings shall accompany the parts list.

5. Category 5 - Wiring Diagrams:

- a. Diagrams: Part 5 shall include complete internal and connection wiring diagrams for electrical equipment items.

6. Category 6 - Shop Drawings:

- a. Drawings: This part shall include approved shop or fabrication drawings, complete with dimensions.

7. Category 7 - Safety:

- a. Procedures: This part describes the safety precautions to be taken when operating and maintaining the equipment or working near it.

8. Category 8 - Documentation:

- a. All equipment warranties, affidavits, and certifications required by the Technical Specifications shall be placed in this part.

9. Category 9 – Equipment Representative and Service

- a. Provide the names and contact information for the manufacturer and distributor of each item.

C. Technical Manuals shall be submitted electronically in PDF format for use and review by the ENGINEER.

D. Following review of the Technical Manuals and prior to start-up, the CONTRACTOR shall furnish to the ENGINEER Two (2) identical hard copies of the Technical Manuals for use by OWNER's operations and engineering staff. Each set shall consist of one or more volumes, each of which shall be bound in a standard size, 3-ring, looseleaf, vinyl plastic hard cover binder suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches. A table of contents indicating all equipment in the manuals shall be prepared.

D. Manuals shall be submitted in final form to the ENGINEER not later than two (2) weeks prior training of said equipment. Any discrepancies found by the ENGINEER or OWENR's staff shall be corrected within 30 days from the date of written notification by the ENGINEER and prior to final payment.

E. Incomplete or unacceptable manuals at the substantial completion point shall constitute sufficient justification to retain the amount in paragraph "Technical Manual Submittals" of Section 01700 - Project Closeout, from any monies due the CONTRACTOR.

1.7 SPARE PARTS LIST

A. The CONTRACTOR shall furnish to the ENGINEER 5 identical sets of spare parts information for all mechanical, electrical, and instrumentation equipment. The spare parts list shall include the current list price of each spare part. The spare parts list shall include those spare parts which each manufacturer recommends be maintained by the OWNER in inventory at the plant site. Each manufacturer or supplier shall indicate the name, address, and telephone number of its nearest outlet of spare parts to assist the OWNER in ordering. The CONTRACTOR shall cross-reference all spare parts lists to the equipment numbers designated in the Contract Documents. The spare parts lists shall be bound in standard size, 3-ring, looseleaf, vinyl plastic hard cover binders suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches.

1.8 RECORD DRAWINGS

A. The CONTRACTOR shall maintain one record set of Drawings at the Site. On these, it shall mark all project conditions, locations, configurations, and any other changes or deviations which may vary from the information represented on the original Contract



Drawings, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Drawings. Said record drawings shall be supplemented by any detailed sketches as necessary or directed to fully indicate the WORK as actually constructed. These master record drawings of the CONTRACTOR's representation of as-built conditions, including all revisions made necessary by addenda and change orders shall be maintained up-to-date during the progress of the WORK. Red ink shall be used for alterations and notes. Notes shall identify relevant Change Orders by number and date.

- B. Record drawings shall be reviewed on a regular basis by CONTRACTOR and ENGINEER. If requested by ENGINEER, copies of the record drawings shall be submitted on the 20th working day of every month. Failure to submit complete record drawings on or before the 20th working day will enact the liquidated damages clause for interim record drawings submittals described in Article 3 of the Agreement.
- C. In the case of those drawings which depict the detail requirement for equipment to be assembled and wired in the factory, such as motor control centers and the like, the record drawings shall be updated by indicating those portions which are superseded by change order drawings or final Shop Drawings, and by including appropriate reference information describing the change orders by number and the Shop Drawings by manufacturer, drawing, and revision numbers.
- D. Record drawings shall be accessible to the ENGINEER at all times during the construction period.
- E. Within seven (7) days of Substantial Completion of the WORK, the CONTRACTOR shall finalize and deliver a complete set of record drawings to the ENGINEER for transmittal to the OWNER, conforming to the construction records of the CONTRACTOR. This set of drawings shall consist of corrected Drawings showing the reported location of the WORK. The information submitted by the CONTRACTOR and incorporated by the ENGINEER into the record drawings will be assumed to be correct, and the CONTRACTOR shall be responsible for the accuracy of such information, and for any errors or omissions which may appear on the record drawings as a result. Final payment will not be acted upon until a complete and accurate set of record drawings have been delivered to the ENGINEER.

## **PART 2 -- PRODUCTS (Not Used)**

## **PART 3 -- EXECUTION (Not Used)**

- END OF SECTION -

## SECTION 01301 - SCHEDULE OF VALUES

### PART 1 -- GENERAL

#### 1.1 GENERAL

- A. This Section defines the process whereby the Schedule of Values shall be developed and incorporated into the cost loading function of the CPM Schedule as specified in Section 01311 - Scheduling and Reporting. Monthly progress payment amounts shall be determined from the monthly progress updates of the CPM Schedule activities.
- B. The Schedule of Values shall be developed independent but simultaneous with the development of the CPM Schedule activities and logic.

#### 1.2 PRELIMINARY SCHEDULE OF VALUES

- A. Not Used.
- B. Not Used.

#### 1.3 DETAILED SCHEDULE OF VALUES

- A. The CONTRACTOR shall prepare and submit a detailed Schedule of Values to the ENGINEER within 30 days from the date of Notice to Proceed. The detailed Schedule of Values shall be based on the accepted preliminary Schedule of Values for major WORK components. Because the ultimate requirement is to develop a detailed Schedule of Values sufficient to determine appropriate monthly progress payment amounts through cost loading of the CPM Schedule activities, sufficient detailed breakdown shall be provided to meet this requirement. The ENGINEER shall be the sole judge of acceptable numbers, details and description of values established. If, in the opinion of the ENGINEER, a greater number of Schedule of Values items than proposed by the CONTRACTOR is necessary, the CONTRACTOR shall add the additional items so identified by the ENGINEER.
  - 1. The minimum detail of breakdown of the major WORK components (Bid Items per Section 1025) is as follows. Each sub-item price includes materials, labor, installation, programming, calibration, testing, and other incidentals. Greater detail shall be provided as directed by the ENGINEER.
    - a. Mobilization – Mobilization, permits, submittals, meetings, training, testing/start-up/commissioning, record drawings, insurances, and temporary utilities.
    - b. Yard and Control Building Water Pipe – Ductile iron pipe of various diameters, steel pipe of various diameters, valves, control valves, valve vaults, connections, restraint devices, cathodic bonding and test stations.
    - c. Pumps, Motors, and Drives – Pumps, motors, drives, installation and balancing, pump barrels.
    - c. Instrumentation – transducers, transmitters, level indicators, flow meters, chemical detection/monitoring, intrusion systems.

- d. Site Electrical – Conduits and conductors, lights, power connections.
  - e. Switchgear/MCC/PLC – Electrical cabinets and components (testing, programming, etc.).
  - f. SCADA and Telemetry – Integration with City existing SCADA system, radio telemetry system.
  - g. Control Building – Foundation, CMU walls, roof and hatches, blowers/venting/HVAC, doors/windows, sinks, grating.
  - h. Chemical Disinfection Systems – Dosing pumps, storage containers, piping and appurtenances, eyewash/shower assemblies.
  - i. Site WORK – Drainage piping, drainage structures, site concrete, A.C. paving, finish grading, fencing, sewer piping, sewer structures, transformer pad.
  - k. Generator – Concrete pad, genset unit/housing/controls/fuel storage.
  - l. All other WORK not specifically included in the above items shall be broken down as necessary for establishment of pay and Schedule activity items.
2. The CONTRACTOR and ENGINEER shall meet and jointly review the detailed Schedule of Values within 35 days from the date of Notice to Proceed. The value allocations and extent of detail shall be reviewed to determine any necessary adjustments to the values and to determine if sufficient detail has been proposed to allow acceptable cost loading of the CPM Schedule activities. Any adjustments deemed necessary to the value allocation or level of detail shall be made by the CONTRACTOR and a revised detailed Schedule of Values shall be submitted within 40 days from the date of Notice to Proceed.
  3. Following acceptance of the detailed Schedule of Values, the CONTRACTOR shall incorporate the values into the cost loading portion of the CPM Schedule. The CPM activities and logic shall have been developed concurrent with development of the detailed Schedule of Values; however, it shall be necessary to adjust the detailed Schedule of Values to correlate to individual Schedule activities. It is anticipated that instances will occur, due to the independent but simultaneous development of the Schedule of Values and the CPM Schedule activities, where interfacing these two documents will require changes to each document. Schedule activities may need to be added to accommodate the detail of the Schedule of Values. Schedule of Value items may need to be added to accommodate the detail of the CPM Schedule activities. Where such instances arise, the CONTRACTOR shall propose changes to the Schedule of Values and to the CPM Schedule activities to satisfy the CPM Schedule cost loading requirements.

#### 1.4 CROSS REFERENCE LISTING

- A. To assist in the correlation of the Schedule of Values and the CPM Schedule, the CONTRACTOR shall provide a Cross Reference Listing which shall be furnished in two parts. The first part shall list each Scheduled Activity with the breakdown of the respective valued items making up the total cost of the activity. The second part shall list the valued item with the respective Scheduled Activity or Activities that make up the total cost

indicated. In the case where a number of schedule items make up the total cost for a valued item (shown in the Schedule of Values) the total cost for each scheduled item should be indicated.

- B. These listings shall be updated and submitted in conjunction with the CPM monthly submittals as stated in Specification Section 01311.
- C. Approved change orders reflected in the CPM Schedule shall be incorporated into the Schedule of Values as a single unit identified by the change order number.

#### 1.5 CHANGES TO SCHEDULE OF VALUES

- A. Changes to the CPM Schedule which add activities not included in the original schedule but included in the original WORK (schedule omissions) shall have values assigned as approved by the ENGINEER. Other activity values shall be reduced to provide equal value adjustment increases for added activities as approved by the ENGINEER.
- B. In the event that the CONTRACTOR and ENGINEER agree to make adjustments to the original Schedule of Values because of inequities discovered in the original accepted detailed Schedule of Values, increases and equal decreases to values for activities may be made.

#### 1.6 LIQUIDATED DAMAGES

- A. The Schedule of Values information is an integral part of the scheduling and reporting under Section 01311 and the progress payment information. As such, it is critical information to evaluating the project's progress and the proper planning of the OWNER's and ENGINEER's work effort as well as their financial obligations associated with this project. Accordingly, if any submittal required by this Section is found to be incomplete or is submitted later than required, the OWNER will suffer financial loss and, accordingly, liquidated damages will be assessed against the CONTRACTOR in accordance with the contract documents.

### **PART 2 -- PRODUCTS (Not Used)**

### **PART 3 -- EXECUTION (Not Used)**

- END OF SECTION -

## **SECTION 01400 - QUALITY CONTROL**

### **PART 1 -- GENERAL**

#### **1.1 DEFINITION**

- A. Specific quality control requirements for the WORK are indicated throughout the Contract Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

#### **1.2 INSPECTION AT PLACE OF MANUFACTURE**

- A. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the ENGINEER at the place of manufacture.
- B. The presence of the ENGINEER at the place of manufacturer, however, shall not relieve the CONTRACTOR of the responsibility for providing products, materials, and equipment which comply with all requirements of the Contract Documents. Compliance is a duty of the CONTRACTOR, and said duty shall not be avoided by any act or omission on the part of the ENGINEER.

#### **1.3 SAMPLING AND TESTING**

- A. Unless otherwise indicated, all sampling and testing will be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered; however, the OWNER reserves the right to use any generally-accepted system of sampling and testing which, in the opinion of the ENGINEER will assure the OWNER that the quality of the workmanship is in full accord with the Contract Documents.
- B. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the testing or other quality assurance requirements originally indicated, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial WORK, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the ENGINEER reserves the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such WORK in accordance with the General Conditions.

#### **1.4 INSPECTION AND TESTING SERVICE**

- A. Inspection and testing laboratory service shall comply with the following:
  - 1. Unless indicated otherwise by the Contract Documents, the OWNER will appoint, employ, and pay for services of an independent firm to perform inspection and testing or will perform inspection and testing itself.
  - 2. The OWNER or independent firm will perform inspections, testings, and other

services as required by the ENGINEER under Paragraph 1.3C above.

3. Reports of testing performed by CONTRACTOR shall be submitted to the ENGINEER, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
4. The CONTRACTOR shall cooperate with the OWNER or independent firm and furnish samples of materials, design mix, equipment, tools, storage, and assistance as requested.
5. The CONTRACTOR shall notify ENGINEER 72 hours prior to the expected time for operations requiring inspection and laboratory testing services.
6. Retesting required because of non-conformance to requirements shall be performed by the same independent firm on instructions by the ENGINEER. The CONTRACTOR shall bear all costs from such retesting.
7. For samples and tests required for CONTRACTOR'S use, the CONTRACTOR shall make arrangements with an independent firm for payment and scheduling of testing. The cost of sampling and testing for the CONTRACTOR'S use shall be the CONTRACTOR'S responsibility.

#### 1.5 CONTROL AND LAYOUT

Initial layout of the work will be the responsibility of the Owner and the Contractor. Owner shall set vertical control at a location acceptable to Contractor, and locate the center of the tank. Contractor shall use these control points and property lines/corners for further layout. Any additional staking or staking due to lost or destroyed stakes will be paid for by the Contractor and the associated costs will be deducted from the Contractor's payments. Contractor shall notify Owner or Owner's representative a minimum of 5 working days prior to requiring staking.

#### **PART 2 -- PRODUCTS** (Not Used)

#### **PART 3 -- EXECUTION**

##### 3.1 INSTALLATION

- A. **Inspection:** The CONTRACTOR shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation, and reject damaged and defective items.
- B. **Measurements:** The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. **Manufacturer's Instructions:** Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

- END OF SECTION -

## SECTION 01510 - TEMPORARY UTILITIES

### PART 1 -- GENERAL

#### 1.1 GENERAL REQUIREMENTS

- A. **Types:** The types of utility services required for general temporary use at the Site include the following:

- Water service (potable for certain uses)
- Storm sewer
- Sanitary sewer
- Electric power service

#### 1.2 JOB CONDITIONS

- A. **Scheduled Uses:** The CONTRACTOR shall, in conjunction with establishment of job progress schedule, establish a schedule for implementation and termination of service for each temporary utility at the earliest feasible time, and when acceptable to OWNER and ENGINEER, change over from use of temporary utility service to permanent service.

### PART 2 -- PRODUCTS

#### 2.1 MATERIALS

- A. The CONTRACTOR shall provide either new or used materials and equipment, which are in substantially undamaged condition and without significant deterioration and which are recognized in the construction industry, by compliance with appropriate standards, as being suitable for intended use in each case. Where a portion of temporary utility is provided by utility company, the CONTRACTOR shall provide the remaining portion with matching and compatible materials and equipment and shall comply with recommendations of utility company.

### PART 3 -- EXECUTION

#### 3.1 INSTALLATION OF TEMPORARY UTILITY SERVICES

- A. **General:** Wherever feasible, the CONTRACTOR shall engage the utility company to install temporary service to project, or as a minimum, to make connection to existing utility service; locate services where they will not interfere with total project construction WORK, including installation of permanent utility services; and maintain temporary services as installed for required period of use; and relocate, modify or extend as necessary from time to time during that period as required to accommodate total project construction WORK.
- B. **Approval of Electrical Connections:** Temporary connections for electricity shall be subject to approval of the ENGINEER and the power company representative, and shall be removed in like manner at the CONTRACTOR's expense prior to final acceptance of the WORK.
- C. **Separation of Circuits:** Unless otherwise permitted by the ENGINEER, circuits used for power purposes shall be separate from lighting circuits.

- D. **Construction Wiring:** Wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. Electrical facilities shall conform to the requirements of Title 8, Industrial Relations, Subchapter 5, Electrical Safety Orders, California Administrative Code; and Subpart K of the OSHA Safety and Health Standards for Construction.

### 3.2 INSTALLATION OF POWER DISTRIBUTION SYSTEM

- A. **Power:** The CONTRACTOR shall provide power required for its operations under the Contract, and shall provide and maintain all temporary power lines required to perform the WORK in a safe and satisfactory manner.
- B. **Temporary Power Distribution:** The CONTRACTOR shall provide a weatherproof, grounded, temporary power distribution system sufficient for performance of entire WORK of project, including temporary electrical heating where indicated, operation of test equipment and test operation of building equipment and systems which cannot be delayed until permanent power connections are operable, temporary operation of other temporary facilities, including permanent equipment and systems which must be placed in operation prior to use of permanent power connections (pumps, HVAC equipment, and similar equipment), and power for temporary operation of existing facilities (if any) at the Site during change-over to new permanent power system. Provide circuits of adequate size and proper power characteristics for each use; run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations and will result in minimal interference with performance of the WORK; provide rigid steel conduit or equivalent raceways for wiring which must be exposed on grade, floors, decks, or other exposures to damage or abuse.

### 3.3 INSTALLATION OF LIGHTING

- A. **Construction Lighting:** WORK conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper WORK and to afford adequate facilities for inspection and safe working conditions.
- B. **Temporary Lighting:** The CONTRACTOR shall provide a general, weatherproof, grounded temporary lighting system in every area of construction work, as soon as overhead floor/roof deck structure has been installed to provide sufficient illumination for safe work and traffic conditions. Run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations on grade, floors, decks, or other areas of possible damage or abuse.

### 3.4 WATER SUPPLY

- A. **General:** The CONTRACTOR shall coordinate with the **City of Hughson** for obtaining construction water. The CONTRACTOR shall provide all facilities necessary to convey the water from the source to the points of use in accordance with the requirements of the Contract Documents. The CONTRACTOR shall pay the fee for water meter and all other charges for water use.

### 3.5 INSTALLATION OF SANITARY FACILITIES

- A. **Toilet Facilities:** Fixed or portable chemical toilets shall be provided wherever needed for the use of CONTRACTOR's employees. Toilets at construction job sites shall conform to



the requirements of Subpart D, Section 1926.51 of the OSHA Standards for Construction.

### 3.6 INSTALLATION OF FIRE PROTECTION

- A. **Not Used.**

### 3.7 INSTALLATION OF GAS SERVICE

- A. **Not Used.**

### 3.8 INSTALLATION OF COMMUNICATIONS

- A. **Not Used.**

### 3.9 OPERATIONS AND TERMINATIONS

- A. **Inspections:** Prior to placing temporary utility services into use, the CONTRACTOR shall inspect and test each service and arrange for governing authorities' required inspection and tests, and obtain required certifications and permits for use thereof.
- B. **Protection:** The CONTRACTOR shall maintain distinct markers for underground lines, and protect from damage during excavating operations.
- C. **Termination and Removal:** When need for a temporary utility service or a substantial portion thereof has ended, or when its service has been replaced by use of permanent services, or not later than time of substantial completion, the CONTRACTOR shall promptly remove installation unless requested by ENGINEER to retain it for a longer period. The CONTRACTOR shall complete and restore WORK which may have been delayed or affected by installation and use of temporary utility, including repairs to construction and grades and restoration and cleaning of exposed surfaces.
- D. **Removal of Temporary Connections:** Before final acceptance of the WORK on the project, all temporary connections and piping installed by the CONTRACTOR shall be entirely removed, and all affected improvements shall be restored to original condition or better, to the satisfaction of the ENGINEER and to the agency owning the affected utility.

- END OF SECTION -

## **SECTION 01520 - SECURITY**

### **PART 1 -- GENERAL**

#### **1.1 SECURITY PROGRAM**

##### **A. The CONTRACTOR shall:**

1. Protect WORK, existing premises, and OWNER'S operations from theft, vandalism, and unauthorized entry.
2. Maintain program throughout construction period until work is finalized.

#### **1.2 ENTRY CONTROL**

##### **A. The CONTRACTOR shall:**

1. Restrict entry of persons and vehicles into Site.
2. Allow entry only to authorized persons with proper identification.

#### **1.3 Not Used**

#### **1.4 PERIMETER FENCING**

- ##### **A. CONTRACTOR shall provide temporary fencing for the site and work areas. Fencing shall be maintained throughout the work. Fencing shall have signs indicating no unauthorized entry, and be locked whenever no work is being conducted at the site. Coordinate with Owner for access by others. Fencing shall be maintained in such a condition as to prevent access by unauthorized personnel.**

### **PART 2 -- PRODUCTS (Not Used)**

### **PART 3 -- EXECUTION (Not Used)**

**- END OF SECTION -**

## SECTION 01530 - PROTECTION OF EXISTING FACILITIES

### PART 1 -- GENERAL

#### 1.1 GENERAL

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than prior to such damage or temporary relocation, all in accordance with the Contract Documents.
- B. The WORK represents a continuation of improvements at the site. Completion of previous improvements at the site require CONTRACTOR to connect to, complete further improvements on, and incorporate said improvements into the WORK. CONTRACTOR shall also take full responsibility for the protection and security of existing improvements as part of the WORK. *CONTRACTOR shall provide adequate barriers, fencing, safety devices, or other means to ensure existing improvements are not damaged or blighted.* Any damage or blight to existing improvements shall be the sole responsibility of CONTRACTOR. In the event existing improvements are damaged or blighted, OWNER shall determine how and what party shall correct the damage, including retention of a third party for inspection and repair or replacement. All such costs shall be the sole responsibility of CONTRACTOR.

#### 1.2 RIGHTS-OF-WAY

- A. The CONTRACTOR shall not do any WORK that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the CONTRACTOR enter upon the rights-of-way involved until notified that the OWNER has secured authority therefor from the proper party.
- B. After authority has been obtained, the CONTRACTOR shall give said party due notice of its intention to begin work, if required by said party, and shall remove, shore, support, or otherwise protect such pipeline, transmission line, ditch, fence, or structure, or replace the same.

#### 1.3 PROTECTION OF STREET OR ROADWAY MARKERS

- A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. Survey markers or points disturbed by the CONTRACTOR shall be accurately restored after street or roadway resurfacing has been completed.

#### 1.4 RESTORATION OF PAVEMENT

- A. **General:** All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit. The pavement restoration requirement to match existing sections shall apply to all components of existing sections, including sub-base, base, and pavement. Temporary and permanent pavement shall conform to the requirements of the affected pavement owner. Pavements which are subject to partial removal shall be neatly saw cut in straight lines.
- B. **Temporary Resurfacing:** Wherever required by the public authorities having jurisdiction, the CONTRACTOR shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.
- C. **Permanent Resurfacing:** In order to obtain a satisfactory junction with adjacent surfaces, the CONTRACTOR shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.
- D. **Restoration of Sidewalks or Private Driveways:** Wherever sidewalks or private roads have been removed for purposes of construction, the CONTRACTOR shall place suitable temporary sidewalks or roadways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions. If no such period of time is so fixed, the CONTRACTOR shall maintain said temporary sidewalks or roadways until the final restoration thereof has been made.

#### 1.5 EXISTING UTILITIES AND IMPROVEMENTS

- A. **General:** The CONTRACTOR shall protect underground Utilities and other improvements which may be impaired during construction operations, regardless of whether or not the Utilities are indicated on the Drawings. The CONTRACTOR shall take all possible precautions for the protection of unforeseen Utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Except where the Drawings indicate Utilities have been field located during design or certain Utility locations shall be exposed as part of the WORK, the CONTRACTOR shall be responsible for exploratory excavations as it deems necessary to determine the exact locations and depths of Utilities which may interfere with its work. All such exploratory excavations shall be performed as soon as practicable after Notice to Proceed and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's progress. When such exploratory excavations show the Utility location as shown on the Drawings to be in error, the CONTRACTOR shall so notify the ENGINEER.
- C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the Utility.

- D. **Utilities to be Moved:** In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the OWNER to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ENGINEER a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- E. **Utilities to be Removed:** Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing Utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such Utility or improvement in a manner satisfactory to the ENGINEER and the owner of the facility. In all cases of such temporary removal or relocation, restoration to the former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the Utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.
- F. **OWNER's Right of Access:** The right is reserved to the OWNER and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.
- G. **Underground Utilities Indicated:** Existing Utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all Utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the CONTRACTOR, unless otherwise repaired by the owner of the damaged Utility. If the owner of the damaged facility performs its own repairs, the CONTRACTOR shall reimburse said owner for the costs of repair.
- H. **Underground Utilities Not Indicated:** In the event that the CONTRACTOR damages existing Utility lines that are not indicated or the locations of which are not made known to the CONTRACTOR prior to excavation, a verbal report of such damage shall be made immediately to the ENGINEER and a written report thereof shall be made promptly thereafter. The ENGINEER will immediately notify the owner of the damaged Utility. If the ENGINEER is not immediately available, the CONTRACTOR shall notify the Utility owner of the damage. If directed by the ENGINEER, repairs shall be made by the CONTRACTOR under the provisions for changes and extra work contained in Articles 10, 11, and 12 of the General Conditions.
- I. Costs of locating and repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such Utility facilities not indicated in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the WORK which was interrupted or idled by removal or relocation of such Utility facilities, and which was necessarily idled during such work will be paid for as extra work in accordance with the provisions of Articles 10, 11, and 12 of the General Conditions.
- J. **Approval of Repairs:** All repairs to a damaged Utility or improvement are subject to inspection and approval by an authorized representative of the Utility or improvement owner before being concealed by backfill or other work.

- K. **Maintaining in Service:** Unless indicated otherwise, oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ENGINEER are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

#### 1.6 TREES OR SHRUBS WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS

- A. **General:** Except where trees or shrubs are indicated to be removed, the CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency or OWNER. Existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the CONTRACTOR or a certified tree company under permit from the jurisdictional agency and/or the OWNER. Tree trimming and replacement shall be accomplished in accordance with the following paragraphs.
- B. **Trimming:** Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to the trunk or large branch. Spikes shall not be used for climbing live trees. Cuts over 1-1/2 inches in diameter shall be coated with a tree paint product that is waterproof, adhesive, and elastic, and free from kerosenes, coal tar, creosote, or other material injurious to the life of the tree.
- C. **Replacement:** The CONTRACTOR shall immediately notify the jurisdictional agency and/or the OWNER if any tree or shrub is damaged by the CONTRACTOR's operations. If, in the opinion of said agency or the OWNER, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree or shrub at its own expense. The tree or shrub shall be of a like size and variety as the one damaged, or, if of a smaller size, the CONTRACTOR shall pay to the owner of said tree a compensatory payment acceptable to the tree or shrub owner, subject to the approval of the jurisdictional agency or OWNER. The size of the tree or shrub shall be not less than 1-inch diameter nor less than 6 feet in height. Planting of replacement trees and shrubs shall be in accordance with City Standard Specifications. Unless otherwise indicated, the CONTRACTOR shall water and maintain the replacement trees and shrubs for 4 months after planting.

#### 1.7 LANDSCAPING AREAS

- A. Landscaped areas damaged during construction shall be repaired to match the pre-construction condition to the satisfaction of the land owner and the OWNER.

#### 1.8 NOTIFICATION BY THE CONTRACTOR

- A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way, the CONTRACTOR shall notify the respective authorities representing the owners or agencies responsible for such facilities

not less than 3 days nor more than 7 days prior to excavation so that a representative of said owners or agencies can be present during such work if they so desire.

**PART 2 -- PRODUCTS** (Not Used)

**PART 3 -- EXECUTION** (Not Used)

- END OF SECTION -

## SECTION 01550 - SITE ACCESS AND STORAGE

### PART 1 -- GENERAL

#### 1.1 HIGHWAY LIMITATIONS

- A. The CONTRACTOR shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the WORK. It shall be the CONTRACTOR's responsibility to construct and maintain any haul roads required for its construction operations.

#### 1.2 TEMPORARY CROSSINGS

- A. **General:** Continuous, unobstructed, safe, and adequate pedestrian and vehicular access shall be provided to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, service stations, motels, fire and police stations, and hospitals. Safe and adequate public transportation stops and pedestrian crossings at intervals not exceeding 300 feet shall be provided. The CONTRACTOR shall cooperate with parties involved in the delivery of mail and removal of trash and garbage so as to maintain existing schedules for such services. Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access for reasonable periods of time.
- B. **Temporary Bridges:** Wherever necessary, the CONTRACTOR shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the CONTRACTOR shall secure the written consent of the responsible individuals or authorities to omit such temporary bridges or steel plates, which written consent shall be delivered to the ENGINEER prior to excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges or steel plates for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the CONTRACTOR shall adopt designs furnished by said authority for such bridges or steel plates, or shall submit designs to said authority for approval, as may be required.
- C. **Street Use:** Nothing herein shall be construed to entitle the CONTRACTOR to the exclusive use of any public street, alleyway, or parking area during the performance of the WORK hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleyways, or parking areas. No street shall be closed to the public without first obtaining permission of the ENGINEER and proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise indicated. Toe boards shall be provided to retain excavated material if required by the ENGINEER or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the WORK shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the CONTRACTOR to assure the use of sidewalks and the proper functioning of all gutters, storm drain inlets, and other drainage facilities.
- D. **Traffic Control:** For the protection of vehicular and pedestrian traffic in public or private streets, alleys, and ways, the CONTRACTOR shall provide, place, and maintain all



necessary barricades, traffic cones, warning signs, lights, and other safety devices as necessary.

1. Provide traffic plates during pavement cutting, The CONTRACTOR shall remove traffic control devices when no longer needed, repair all damage caused by installation of the devices, and shall remove post settings and backfill the resulting holes to match grade.

### 1.3 CONTRACTOR'S WORK AND STORAGE AREA

- A. The OWNER will designate and arrange for the CONTRACTOR's use, an area for its exclusive use during the term of the Contract as a storage and shop area for its construction operations relative to this Contract. At completion of WORK, the CONTRACTOR shall return this area to its original condition or better, including grading, re-surfacing, and landscaping.
- B. The CONTRACTOR shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the WORK.
- C. The CONTRACTOR shall provide and use a separate storage area for hazardous materials used in constructing the WORK.
  1. For the purpose of this paragraph, hazardous materials to be stored in the separate area are all products labeled with any of the following terms: Warning, Caution, Poisonous, Toxic, Flammable, Corrosive, Reactive, or Explosive. In addition, whether or not so labeled, the following materials shall be stored in the separate area: diesel fuel, gasoline, new and used motor oil, hydraulic fluid, cement, paints and paint thinners, two-part epoxy coatings, sealants, asphaltic products, glues, solvents, wood preservatives, sand blast materials, and spill absorbent.
  2. Hazardous materials shall be stored in groupings according to the Material Safety Data Sheets.
  3. The CONTRACTOR shall develop and submit to the ENGINEER a plan for storing and disposing of the materials above.
  4. The CONTRACTOR shall obtain and submit to the ENGINEER a single EPA number for wastes generated at the Site.
  5. The separate storage area shall meet all the requirements of all authorities having jurisdiction over the storage of hazardous materials. Such authorities are: Cal-OSHA, **Stanislaus County Environmental Health, Regional Water Quality Control Board, and City of Hughson.**

### **PART 2 -- PRODUCTS** (Not Used)

### **PART 3 -- EXECUTION** (Not Used)

- END OF SECTION -

## SECTION 01560 - TEMPORARY ENVIRONMENTAL CONTROLS

### PART 1 -- GENERAL

#### 1.1 EXPLOSIVES AND BLASTING

- A. The use of explosives on the WORK will not be permitted.

#### 1.2 DUST ABATEMENT

- A. The CONTRACTOR shall prevent its operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity. The CONTRACTOR shall be responsible for any damage resulting from dust originating from its operations. The dust abatement measures shall be continued until the CONTRACTOR is relieved of further responsibility by the ENGINEER.

#### 1.3 RUBBISH CONTROL

- A. During the progress of the WORK, the CONTRACTOR shall keep the Site and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The CONTRACTOR shall dispose of all rubbish and waste materials of any nature occurring at the Site, and shall establish regular intervals of collection and disposal of such materials and waste. The CONTRACTOR shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the Site in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction.

#### 1.4 NOISE

- A. CONTRACTOR shall adhere to City noise restrictions. All work shall be conducted between the hours of 8 a.m. and 6 p.m., unless authorized by City personnel for special circumstances. All equipment shall have noise attenuation devices, including trucks, heavy equipment, and generators.

#### 1.4 SANITATION

- A. **Toilet Facilities:** Fixed or portable chemical toilets shall be provided wherever needed for the use of employees. Toilets at construction job sites shall conform to the requirements of Part 1926 of the OSHA Standards for Construction.
- B. **Sanitary and Other Organic Wastes:** The CONTRACTOR shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wastes from any other source related to the CONTRACTOR's operations shall be disposed of away from the Site in a manner satisfactory to the ENGINEER and in accordance with all laws and regulations pertaining thereto.

## 1.5 CHEMICALS

- A. All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer. In addition, see the requirements set forth in paragraph 6.11 of the General Conditions.

## 1.6 CULTURAL RESOURCES

- A. The CONTRACTOR's attention is directed to the National Historic Preservation Act of 1966 (16 U.S.C. 470) and 36 CFR 800 which provides for the preservation of potential historical architectural, archaeological, or cultural resources (hereinafter called "cultural resources").
- B. The CONTRACTOR shall conform to the applicable requirements of the National Historic Preservation Act of 1966 as it relates to the preservation of cultural resources.
- C. In the event potential cultural resources are discovered during subsurface excavations at the site of construction, the following procedures shall be instituted:
  - 1. The ENGINEER will issue a Field Order directing the CONTRACTOR to cease all construction operations at the location of such potential cultural resources find.
  - 2. Such Field Order shall be effective until such time as a qualified archaeologist can be called to assess the value of these potential cultural resources and make recommendations to the State Historic Preservation Office.
- D. If the archaeologist determines that the potential find is a bona fide cultural resource, at the direction of the State Historic Preservation Office, the CONTRACTOR shall suspend work at the location of the find under the provisions for changes contained in Articles 10, 11, and 12 of the General Conditions.

## **PART 2 -- PRODUCTS (Not Used)**

## **PART 3 -- EXECUTION (Not Used)**

- END OF SECTION -

## SECTION 01700 - PROJECT CLOSEOUT

### PART 1 -- GENERAL

#### 1.1 FINAL CLEANUP

- A. The CONTRACTOR shall promptly remove from the vicinity of the completed WORK, all rubbish, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the WORK by the OWNER will be withheld until the CONTRACTOR has satisfactorily performed the final cleanup of the Site.

#### 1.2 CLOSEOUT TIMETABLE

- A. The CONTRACTOR shall establish dates for equipment testing, acceptance periods, and on-site instructional periods (as required under the Contract). Such dates shall be established not less than one week prior to beginning any of the foregoing items, to allow the OWNER, the ENGINEER, and their authorized representatives sufficient time to schedule attendance at such activities.

#### 1.3 CONDITION OF SITE

CONTRACTOR shall leave site in a satisfactory condition, as approve by the ENGINEER. Return all work areas to its original condition. Grade areas that have been disturbed, replace gravel surfaces as necessary. Remove all debris, waste concrete, etc. Remove earth that has oil or grease that leaked from equipment.

#### 1.4 FINAL SUBMITTALS

- A. The CONTRACTOR, prior to requesting final payment, shall obtain and submit the following items to the ENGINEER for transmittal to the OWNER:
  - 1. Written guarantees, where required.
  - 2. Technical Manuals and instructions.
  - 3. Maintenance stock items; spare parts; special tools.
  - 4. Completed record drawings.
  - 5. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.

#### 1.5 MAINTENANCE AND GUARANTEE

- A. The CONTRACTOR shall comply with the maintenance and guarantee requirements contained in the Contract Documents.
- B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair or resurfacing constructed by the CONTRACTOR which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless

the CONTRACTOR shall have obtained a statement in writing from the affected private owner or public agency releasing the OWNER from further responsibility in connection with such repair or resurfacing.

- C. The CONTRACTOR shall make all repairs and replacements promptly upon receipt of written order from the OWNER. If the CONTRACTOR fails to make such repairs or replacements promptly, the OWNER reserves the right to do the WORK and the CONTRACTOR and its surety shall be liable to the OWNER for the cost thereof.

#### 1.6 BOND

- A. The CONTRACTOR shall provide a bond to guarantee performance of the provisions contained in Paragraph "Maintenance and Guarantee" above, and the General Conditions.

#### **PART 2 -- PRODUCTS (Not Used)**

#### **PART 3 -- EXECUTION (Not Used)**

- END OF SECTION -

## SECTION 02200 - EARTHWORK

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall perform all earthwork indicated and required for construction of the WORK, complete and in place, in accordance with the Contract Documents.

**NOTE:** Geotechnical investigations and recommendations were completed for the site, and are incorporated into the contract documents. The project Geotechnical Services Report and Supplemental Recommendations Letter, dated January 19, 2019, and March 7, 2019, respectively, provide information regarding site soil conditions. The CONTRACTOR shall refer to recommendations of the geotechnical report for earthwork requirements. In the case of conflict, requirements of the geotechnical report shall supersede the requirements herein.

#### 1.2 CONTRACTOR SUBMITTALS

- A. The CONTRACTOR's attention is directed to the provisions for "Shoring and Bracing Drawings" in Section 6705 of the California Labor Code. The CONTRACTOR, prior to beginning any trench or structure excavation 5 feet deep or over shall submit to the OWNER and shall be in receipt of the OWNER's written acceptance of the CONTRACTOR's detailed plan showing design of all shoring, bracing, sloping of the sides of excavation, or other provisions for worker protection against the hazard of caving ground during the excavation of such trenches or structure excavation. If such plan varies from the shoring system standards established in the Construction Safety Orders of the State of California, such alternative systems plans shall be prepared by a civil or structural engineer licensed in the State of California.
- B. The CONTRACTOR shall submit samples of all materials proposed to be used in the work in accordance with the requirements in Section 01300 - Contractor Submittals. Sample sizes shall be as determined by the testing laboratory.

### PART 2 -- PRODUCTS

#### 2.1 SUITABLE FILL AND BACKFILL MATERIAL REQUIREMENTS

- A. **General:** Fill, backfill, and embankment materials shall be suitable selected or processed clean, fine earth, rock, or sand, free from grass, roots, brush, or other vegetation.
- B. Fill and backfill materials to be placed within 12 inches of any structure or pipe shall be free of rocks or unbroken masses of earth materials having a maximum dimension larger than 3 inches.
- C. **Suitable Materials:** Materials not defined as unsuitable below are defined as suitable materials and may be used in fills, backfilling, and embankment construction subject to the indicated limitations. In addition, when acceptable to the ENGINEER, some of the material listed as unsuitable may be used when thoroughly mixed with suitable material to form a stable composite.
- D. Suitable materials may be obtained from on-site excavations, may be processed on-site

materials, or may be imported. If imported materials are required by this Section or to meet the quantity requirements of the project the CONTRACTOR shall provide the imported materials at no additional expense to the OWNER, unless a unit price item is included for imported materials in the bidding schedule.

E. The following types of suitable materials are defined:

1. Type A (three-quarters inch minus granular backfill): Crushed rock or gravel, and sand with the gradation requirements below. The material shall have a minimum sand equivalent value of 28 and a minimum R-value of 78. If the sand equivalent value exceeds 35 the R-value requirement is waived.

| <u>Sieve Size</u> | <u>Percentage Passing</u> |
|-------------------|---------------------------|
| 3/4-inch          | 100                       |
| No. 4             | 30 - 50                   |
| No. 200           | 0 - 12                    |

2. Type B (Class I crushed stone): Manufactured angular, crushed stone, crushed rock, or crushed slag with the following gradation requirements. The material shall have a minimum sand equivalent value of 75.

| <u>Sieve Size</u> | <u>Percentage Passing</u> |
|-------------------|---------------------------|
| 3/4-inch          | 100                       |
| No. 4             | 30 - 50                   |
| No. 200           | 0 - 5                     |

3. Type C (sand backfill): Sand with 100 percent passing a 3/8-inch sieve, at least 90 percent passing a Number 4 sieve, and a sand equivalent value not less than 30.

4. Type D: Not used

5. Type E (pea gravel backfill): Crushed rock or gravel the size gradation for Size Number 8 in ASTM C 33 – Concrete Aggregates.

6. Type F (coarse drainrock): Crushed rock or gravel with the size gradation for Size Number 4 in ASTM C 33

7. Type G (aggregate base): Crushed rock aggregate base material of such nature that it can be compacted readily by watering and rolling to form a firm, stable base for pavements. At the option of the CONTRACTOR, the grading for either the 1-1/2-inch maximum size or 3/4-inch maximum size gradation shall be used. The sand equivalent value shall be not less than 22, and the material shall meet the following gradation requirements:

| <u>Sieve Size</u> | <u>Percentage Passing</u>            |                                    |
|-------------------|--------------------------------------|------------------------------------|
|                   | <u>1-1/2-inch Max.<br/>Gradation</u> | <u>3/4-inch Max.<br/>Gradation</u> |
| 2-inch            | 100                                  | -                                  |
| 1-1/2-inch        | 90 - 100                             | -                                  |

|          |         |          |
|----------|---------|----------|
| 1-inch   | -       | 100      |
| 3/4-inch | 50 - 85 | 90 - 100 |
| No. 4    | 25 - 45 | 35 - 55  |
| No. 30   | 10 - 25 | 10 - 30  |
| No. 200  | 2 - 9   | 2 - 9    |

8. Type H (graded drainrock): Drainrock shall be crushed rock or gravel, durable and free from slaking or decomposition under the action of alternate wetting or drying. The material shall be uniformly graded and shall meet the gradation requirements for Size Number 57 in ASTM C 33:

The drainrock shall have a sand equivalent value not less than 75. The finish graded surface of the drainrock immediately beneath hydraulic structures shall be stabilized to provide a firm, smooth surface upon which to construct reinforced concrete floor slabs. The CONTRACTOR shall use, at its option, one of the asphalt types listed below:

|                        | <u>Type 1</u> | <u>Type 2</u> | <u>Type 3</u> |
|------------------------|---------------|---------------|---------------|
| Designation            | SC-800        | SC-250        | RS-1          |
| Spray Temperature (°F) | 175-255       | 165-200       | 70-120        |
| Coverage (gal/sq yd)   | 0.50          | 0.50          | 0.50          |

If the surface remains tacky, sufficient sand shall be applied to absorb the excess asphalt.

9. Type I: Any other suitable material as defined herein.
10. Type J (cement-treated backfill): Material which consists of Type H material, or any mixture of Types B, C, G, and H materials which has been cement-treated so that the cement content of the material is not less than 5 percent by weight when tested in accordance with ASTM D 2901 - Standard Test Method for Cement Content of Freshly Mixed Soil Cement. The ultimate compressive strength at 28 days shall be not less than 400 psi when tested in accordance with ASTM D 1633 - Standard Test Method for Compressive Strength of Molded Soil - Cement Cylinders.
11. Type K (topsoil): Stockpiled topsoil material which has been obtained at the site by removing soil to a depth not exceeding 2 feet. Removal of the topsoil shall be done after the area has been stripped of vegetation and debris.
12. Not Used.
13. Type M (No. 2 aggregate subbase): Crushed rock aggregate subbase material that can be compacted readily by watering and rolling to form a firm stable base. The sand equivalent value shall be not less than 18 and the material shall meet the following gradation requirements:

| <u>Sieve Size</u> | <u>Percentage Passing</u> |
|-------------------|---------------------------|
| 3-inch            | 100                       |
| 2-1/2 inch        | 87 - 100                  |
| No. 4             | 35 - 95                   |
| No. 200           | 0 - 29                    |



14. Type N (trench plug): Low permeable fill material, a non-dispersible clay material having a minimum plasticity index of 10.

## 2.2 UNSUITABLE MATERIAL

### A. Unsuitable materials include the materials listed below.

1. Soils which, when classified under ASTM D 2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System), fall in the classifications of Pt, OH, CH, MH, or OL.
2. Soils which cannot be compacted sufficiently to achieve the density specified for the intended use.
3. Materials that contain hazardous or designated waste materials including petroleum hydrocarbons, pesticides, heavy metals, and any material which may be classified as hazardous or toxic according to applicable regulations.
4. Soils that contain greater concentrations of chloride or sulfate ions, or have a soil resistivity or pH less than the existing on-site soils.
5. Topsoil, except as allowed below.

## 2.3 USE OF FILL, BACKFILL, AND EMBANKMENT MATERIAL TYPES

- A. The CONTRACTOR shall use the types of materials as designated herein for all required fill, backfill, and embankment construction hereunder.
- B. Where these Specifications conflict with the requirements of any local agency having jurisdiction or with the requirements of a pipe material manufacturer, the ENGINEER shall be immediately notified. In case of conflict between types of pipe embedment backfills, the CONTRACTOR shall use the agency-specified backfill material if that material provides a greater degree of structural support to the pipe, as determined by the ENGINEER. In case of conflict between types of trench or final backfill types, the CONTRACTOR shall use the agency-specified backfill material if that material provides the greater in-place density after compaction.
- C. Fill and backfill types shall be used in accordance with the following provisions:
  1. Embankment fills shall be constructed of Type I material, as defined herein, or any mixture of Type I and Type A through Type H materials.
  2. Pipe zone backfill, as defined under "Pipe and Utility Trench Backfill" below, shall consist of the following materials for each pipe material listed below.
    - a. Mortar coated pipe, concrete pipe, and un-coated ductile iron pipe shall be provided Type A or B pipe bedding and embedment backfill material.
    - b. Coal tar enamel coated pipe, polyethylene encased pipe, tape wrapped pipe, epoxy coated pipe, and other non-mortar coated pipe shall be backfilled with Type C bedding and embedment zone backfill material.
    - c. Plastic pipe and vitrified clay pipe shall be backfilled with Type B bedding and

embedment zone backfill material. Vitrified clay pipe shall be backfilled with Type B material to the top of the pipe zone.

- d. Where pipelines are installed on grades exceeding 4 percent, and where backfill materials are graded such that there is less than 10 percent passing a Number 4 sieve, trench plugs of Type J, L, or N material shall be provided at maximum intervals of 200 feet unless indicated otherwise.
3. Trench zone backfill for pipelines as defined under "Pipe and Utility Trench Backfill" shall be Type I backfill material or any of Types A through H backfill materials or any mixture thereof, except:
  - a. Type K material may be used for trench zone backfill in agricultural areas unless otherwise shown or specified.
4. Final backfill material for pipelines under paved areas, as defined under "Pipe and Utility Trench Backfill" shall be Type G backfill material. Final backfill under areas not paved shall be the same material as that used for trench backfill, except that Type K material shall be used for final backfill in agricultural areas unless otherwise indicated.
5. Trench backfill and final backfill for pipelines under structures shall be the same material as used in the pipe zone, except where concrete encasement is required by the Contract Documents.
6. Aggregate base materials under pavements shall be Type G material constructed to the thicknesses indicated. Aggregate subbase shall be Type M material.
7. Backfill around structures shall be Type I material, or Types A through Type H materials, or any mixture thereof, except as shown.
8. Backfill materials beneath structures shall be as follows:
  - a. Drainrock materials under hydraulic structures or other water retaining structures with underdrain systems shall be Type H material.
  - b. Under concrete hydraulic structures or other water retaining structures without underdrain systems, Types G or H materials shall be used.
  - c. Under structures where groundwater must be removed to allow placement of concrete, Type F material shall be used. Before the Type F material is placed, filter fabric shall be placed over the exposed foundation.
  - d. Under all other structures, Type G or H material shall be used.
9. Backfill used to replace pipeline trench over-excavation shall be a layer of Type F material with a 6-inch top filter layer of Type E material or filter fabric to prevent migration of fines for wet trench conditions or the same material as used for the pipe zone backfill if the trench conditions are not wet.
10. The top 6 inches of fill on reservoir roofs, embankment fills around hydraulic structures, and all other embankment fills shall consist of Type K material, topsoil.

11. Filter fabric shall be **Mirafi 140 N, Mirafi 700X**, or equal.

## 2.4 MATERIALS TESTING

- A. All soils testing of samples submitted by the CONTRACTOR will be done by a testing laboratory of the OWNER'S choice and at the OWNER'S expense. At its discretion, the ENGINEER may request that the CONTRACTOR supply samples for testing of any material used in the work.
- B. Particle size analysis of soils and aggregates will be performed using ASTM D 422 - Standard Test Method for Particle-Size Analysis of Soils.
- C. Determination of sand equivalent value will be performed using ASTM D 2419 - Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
- D. **Unified Soil Classification System:** References in this Section to soil classification types and standards shall have the meanings and definitions indicated in ASTM D 2487. The CONTRACTOR shall be bound by all applicable provisions of said ASTM D 2487 in the interpretation of soil classifications.

## PART 3 -- EXECUTION

### 3.1 EXCAVATION - GENERAL

- A. **General:** Except when specifically provided to the contrary, excavation shall include the removal of all materials of whatever nature encountered, including all obstructions of any nature that would interfere with the proper execution and completion of the WORK. The removal of said materials shall conform to the lines and grades indicated or ordered. Unless otherwise indicated, the entire construction site shall be stripped of all vegetation and debris, and such material shall be removed from the site prior to performing any excavation or placing any fill. The CONTRACTOR shall furnish, place, and maintain all supports and shoring that may be required for the sides of the excavations. Excavations shall be sloped or otherwise supported in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA Safety and Health Standards for Construction (29CFR1926).
- B. **Removal and Exclusion of Water:** The CONTRACTOR shall remove and exclude water, including stormwater, groundwater, irrigation water, and wastewater, from all excavations. Dewatering wells, wellpoints, sump pumps, or other means shall be used to remove water and continuously maintain groundwater at a level at least two feet below the bottom of excavations before the excavation work begins at each location. Water shall be removed and excluded until backfilling is complete and all field soils testing has been completed.

### 3.2 STRUCTURE, ROADWAY, AND EMBANKMENT EXCAVATION

- A. **Excavation Beneath Structures and Embankments:** Except where otherwise indicated for a particular structure or ordered by the ENGINEER, excavation shall be carried to the grade of the bottom of the footing or slab. Where indicated or ordered, areas beneath structures or fills shall be over-excavated. The subgrade areas beneath embankments shall be excavated to remove not less than the top 6 inches of native material and where such subgrade is sloped, the native material shall be benched. When such over-excavation is indicated, both over-excavation and subsequent backfill to the required

grade shall be performed by the CONTRACTOR. When such over-excavation is not indicated but is ordered by the ENGINEER, such over-excavation and any resulting backfill will be paid for under a separate unit price bid item if such bid item has been established; otherwise payment will be made in accordance with a negotiated price. After the required excavation or over-excavation has been completed, the exposed surface shall be scarified to a depth of 6 inches, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 95 percent of maximum density.

- B. **Excavation Beneath Concrete Reservoirs:** Excavation under reservoirs shall extend to the bottom of the drainrock layer. After such excavation has been completed, the exposed surface shall be rolled with heavy compaction equipment to 95 percent of maximum density and then graded to provide a reasonably smooth surface for placement of the drainrock. Areas under the reservoir upon which fill is to be placed shall be scarified to a depth of 6 inches, brought to optimum moisture content, and compacted to obtain 95 percent of maximum density.
- C. **Excavation Beneath Paved Areas:** Excavation under areas to be paved shall extend to the bottom of the aggregate base or subbase, if such base is called for; otherwise it shall extend to the paving thickness. After the required excavation has been completed, the top 12 inches of exposed surface shall be scarified, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 95 percent of maximum density. The finished subgrade shall be even, self-draining, and in conformance with the slope of the finished pavement. Areas that could accumulate standing water shall be regraded to provide a self-draining subgrade.
- D. **Notification of ENGINEER:** The CONTRACTOR shall notify the ENGINEER at least 3 days in advance of completion of any structure excavation and shall allow the ENGINEER a review period of at least one day before the exposed foundation is scarified and compacted or is covered with backfill or with any construction materials.

### 3.3 PIPELINE AND UTILITY TRENCH EXCAVATION

- A. **Exploratory Excavation**
  - 1. The CONTRACTOR shall excavate and expose buried points of connection to existing utilities and all known potential conflicts. Excavation shall be performed prior to any work and preparation of Shop Drawings for connections and before fabrication of pipe, and the data obtained shall be used in preparing Shop Drawings. No payments for mobilization will be made to CONTRACTOR without completion of potholing activities.
  - 2. Data, including dates, locations excavated, and sketches, shall be submitted to the ENGINEER within one week of excavation.
  - 3. Damage to utilities from excavation activities shall be repaired by the CONTRACTOR.
- B. **General:** Unless otherwise indicated or ordered, excavation for pipelines and utilities shall be open-cut trenches with widths as indicated in the Owner's standard construction specifications.
- C. **Trench Bottom:** Except when pipe bedding is required, the bottom of the trench shall be excavated uniformly to the grade of the bottom of the pipe bedding. Excavations for pipe

bells and welding shall be made as required.

- D. **Open Trench:** The maximum amount of open trench permitted in any one location shall be 300 feet, or the length necessary to accommodate the amount of pipe installed in a single day, whichever is greater. All trenches shall be fully backfilled at the end of each day or, in lieu thereof, shall be covered by heavy steel plates adequately braced and capable of supporting vehicular traffic in those locations where it is impractical to backfill at the end of each day. The above requirements for backfilling or use of steel plate will be waived in cases where the trench is located further than 100 feet from any traveled roadway or occupied structure. In such cases, however, barricades and warning lights meeting safety requirements shall be provided and maintained.
- E. **Trench Over-Excavation:** Where trenches are indicated to be over-excavated, excavation shall be to the depth indicated, and backfill shall be installed to the grade of the bottom of the pipe bedding.
- F. **Over-Excavation:** When ordered by the ENGINEER, whether indicated on the Drawings or not, trenches shall be over-excavated beyond the depth and/or width shown. Such over-excavation shall be to the dimensions ordered. The trench shall then be backfilled to the grade of the bottom of the pipe bedding. Over-excavation less than 6 inches below the limits on the Drawings shall be done at no increase in cost to the OWNER. When the over-excavation ordered by the ENGINEER is 6 inches or greater below the limits shown, or wider, additional payment will be made to the CONTRACTOR. Said additional payment will be made under separate unit price bid items for over-excavation if such bid items have been established; otherwise payment will be made in accordance with a negotiated price.
- G. Where pipelines are to be installed in embankments, fills, or structure backfills, the fill shall be constructed to a level at least one foot above the top of the pipe before the trench is excavated.
- H. If a moveable trench shield is used during excavation operations, the trench width shall be wider than the shield so that the shield is free to be lifted and then moved horizontally without binding against the trench sidewalls. If the trench walls cave in or slough, the trench shall be excavated as an open excavation with sloped sidewalls or with trench shoring, as indicated and as required by the pipe structural design.

### 3.4 OVER-EXCAVATION NOT ORDERED OR INDICATED

- A. Any over-excavation carried below the grade ordered or indicated, shall be backfilled and compacted to the required grade with the indicated material.

### 3.5 EXCAVATION IN LAWN AREAS

- A. Where excavation occurs in lawn areas, the sod shall be carefully removed, dampened, and stockpiled to preserve it for replacement. Excavated material may be placed on the lawn; provided, that a drop cloth or other suitable method is employed to protect the lawn from damage. The lawn shall not remain covered for more than 72 hours. Immediately after completion of backfilling [and testing of the pipeline], the sod shall be replaced and lightly rolled in a manner so as to restore the lawn as near as possible to its original condition. CONTRACTOR shall provide new sod if stockpiled sod has not been replaced within 72 hours.

### 3.6 EXCAVATION IN VICINITY OF TREES

- A. Except where trees are indicated to be removed, trees shall be protected from injury during construction operations. No tree roots over 2 inches in diameter shall be cut without express permission of the ENGINEER. Trees shall be supported during excavation by any means previously reviewed by the ENGINEER.

3.7 Not Used

3.8 DISPOSAL OF EXCESS EXCAVATED MATERIAL

- A. The CONTRACTOR shall remove and dispose of all excess excavated material at a site selected by the CONTRACTOR and reviewed by the ENGINEER.

3.9 BACKFILL – GENERAL

- A. All backfill shall be installed in accordance with the requirements herein, or as defined in the geotechnical report for the project site, as referenced elsewhere in the contract documents. The site geotechnical report recommendations shall be used if and when conflicts occur between this section and the report regarding material, compaction, or placement requirements.
- B. Backfill shall not be dropped directly upon any structure or pipe. Backfill shall not be placed around or upon any structure until the concrete has attained sufficient strength to withstand the loads imposed. Backfill around water retaining structures shall not be placed until the structures have been tested, and the structures shall be full of water while backfill is being placed.
- C. Except for drainrock materials being placed in over-excavated areas or trenches, backfill shall be placed after all water is removed from the excavation, and the trench sidewalls and bottom have been dried to a moisture content suitable for compaction.
- D. If a moveable trench shield is used during excavation, pipe installation, and backfill operations, the shield shall be moved by lifting the shield free of the trench bottom or backfill and then moving the shield horizontally. The CONTRACTOR shall not drag trench shields along the trench causing damage or displacement to the trench sidewalls, the pipe, or the bedding and backfill.
- E. Immediately prior to placement of backfill materials, the bottoms and sidewalls of trenches and structure excavations shall have all loose sloughing, or caving soil and rock materials removed. Trench sidewalls shall consist of excavated surfaces that are in a relatively undisturbed condition before placement of backfill materials.

3.10 PLACING AND SPREADING OF BACKFILL MATERIALS

- A. Backfill materials shall be placed and spread evenly in layers. When compaction is achieved using mechanical equipment, the layers shall be evenly spread so that when compacted each layer shall not exceed 6 inches in thickness.
- B. No flooding or jetting is allowed.
- C. During spreading, each layer shall be thoroughly mixed as necessary to promote uniformity of material in each layer. Pipe zone backfill materials shall be manually spread

around the pipe so that when compacted the pipe zone backfill will provide uniform bearing and side support.

- D. Where the backfill material moisture content is below the optimum moisture content, water shall be added before or during spreading until the proper moisture content is achieved.
- E. Where the backfill material moisture content is too high to permit the specified degree of compaction the material shall be dried until the moisture content is satisfactory.

### 3.11 COMPACTION OF FILL, BACKFILL, AND EMBANKMENT MATERIALS

- A. Each layer of Types A, B, C, G, H, I, and K backfill materials as defined herein, where the material is graded such that 10 percent or more passes a No. 4 sieve, shall be mechanically compacted to the indicated percentage of density. Equipment that is consistently capable of achieving the required degree of compaction shall be used and each layer shall be compacted over its entire area while the material is at the required moisture content.
- B. Each layer of Type E, F, and J backfill materials shall be compacted by means of at least 2 passes from a flat plate vibratory compactor. When such materials are used for pipe zone backfill, vibratory compaction shall be used at the top of the pipe zone or at vertical intervals of 24 inches, whichever is the least distance from the subgrade.
- C. Fill on reservoir and structure roofs shall be deposited at least 30 days after the concrete roof slab has been placed. Equipment weighing more than 10,000 pounds when loaded shall not be used on a roof. A roller weighing not more than 8,000 pounds shall be used to compact fill on a roof.
- D. Flooding, ponding, or jetting shall not be used.
- E. Pipe zone backfill materials that are granular, may be compacted by a combination of manual compaction, vibration, rolling, and pressure plates.
- F. Equipment weighing more than 10,000 pounds shall not be used closer to walls than a horizontal distance equal to the depth of the fill at that time. Hand operated power compaction equipment shall be used where use of heavier equipment is impractical or restricted due to weight limitations.
- G. Backfill around and over pipelines that is mechanically compacted shall be compacted using light, hand operated, vibratory compactors and rollers. After completion of at least two feet of compacted backfill over the top of pipeline, compaction equipment weighing no more than 8,000 pounds may be used to complete the trench backfill.
- G. **Compaction Requirements:** The following compaction test requirements shall be in accordance with ASTM D 1557 - Test Method for Laboratory Compaction Characteristics of Soils Using Modified Effort (56,000 ft - lbf/ft<sup>3</sup>) (2,700 kN-m/m<sup>3</sup>) for Type A, B, C, G, H, I, K, M, and N materials and in accordance with ASTM D 4253 - Standard Test Method for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table, and D 4254 - Standard Test Method for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density, for Type B, E, F, and J materials. Where agency or utility company requirements govern, the highest compaction standards shall apply.

Percentage of

| <u>Location or Use of Fill</u>   | <u>Percentage of<br/>Maximum Density</u> | <u>Relative Density</u> |
|--|--|-------------------------|
| Pipe embedment backfill for flexible pipe.   | 95                                       | 70                      |
| Pipe bedding and over-excavated<br>zones under bedding for flexible<br>pipe, including trench plugs. | 90                                       | 70                      |
| Pipe embedment backfill for Steel Yard Piping  | 90                                       | 70                      |
| Pipe embedment backfill for rigid pipe   | 90                                       | 55                      |
| Pipe zone backfill portion above<br>embedment for rigid pipe.  | 95                                       | 70                      |
| Pipe bedding and over-excavated<br>zones under bedding<br>for rigid pipe.                            | 90                                       | 70                      |
| Final backfill, beneath paved areas or<br>structures.  | 95                                       | 70                      |
| Final backfill, not beneath paved areas<br>or structures.  | 90                                       | 55                      |
| Trench zone backfill, beneath paved<br>areas and structures, including trench<br>plugs.              | 95                                       | 70                      |
| Trench zone backfill, not beneath paved<br>areas or structures, including trench<br>plugs.           | 95                                       | 70                      |
| Embankments and fills.   | 90                                       | 55                      |
| Embankments and fills beneath paved areas<br>or structures.  | 95                                       | 70                      |
| Backfill beneath structures and hydraulic<br>structures.   | 95                                       | 70                      |
| Backfill and fill around structures on<br>reservoir or structure roof.                               | 90                                       | 55                      |
| Topsoil (Type K material)  | 80                                       | N.A.                    |
| Aggregate base or subbase<br>(Type G or M material)  | 95                                       | N.A.                    |

### 3.12 PIPE AND UTILITY TRENCH BACKFILL

#### A. Pipe Zone Backfill



1. The pipe zone is defined as that portion of the vertical trench cross-section lying between a plane below the bottom surface of the pipe and a plane at a point above the top surface of the pipe as indicated. The bedding is defined as that portion of pipe zone backfill material between the trench subgrade and the bottom of the pipe. The embedment is defined as that portion of the pipe zone backfill material between the bedding and a level line as indicated.
2. After compacting the bedding the CONTRACTOR shall perform a final trim using a stringline for establishing grade, such that each pipe section when first laid will be continually in contact with the bedding along the extreme bottom of the pipe. Excavation for pipe bells and welding shall be made as required.
3. The pipe zone shall be backfilled with the indicated backfill material. The CONTRACTOR shall exercise care to prevent damage to the pipeline coating, cathodic bonds, and the pipe itself during the installation and backfill operations.
4. If a moveable trench shield is used during backfill operations the shield shall be lifted to a location above each layer of backfill material prior to compaction of the layer. The CONTRACTOR shall not displace the pipe or backfill while the shield is being moved.

B. **Trench Zone Backfill:** After the pipe zone backfills have been placed, backfilling of the trench zone may proceed. The trench zone is defined as that portion of the vertical trench cross-section lying as indicated between a plane above the top surface of the pipe and a plane at a point 18 inches below the finished surface grade, or if the trench is under pavement, 18 inches below the roadway subgrade.

C. **Final Backfill:** Final backfill is all backfill in the trench cross-sectional area within 18 inches of finished grade, or if the trench is under pavement, all backfill within 18 inches of the roadway subgrade.

### 3.13 FILL AND EMBANKMENT CONSTRUCTION

- A. The area where a fill or embankment is to be constructed shall be cleared of all vegetation, roots and foreign material. Following this, the surface shall be moistened, scarified to a depth of 6 inches, and rolled or otherwise mechanically compacted. Embankment and fill material shall be placed and spread evenly in approximately horizontal layers. Each layer shall be moistened or aerated, as necessary. Unless otherwise approved by the ENGINEER, each layer shall not exceed 6 inches of compacted thickness. The embankment, fill, and the scarified layer of underlying ground shall be compacted to 95 percent of maximum density under structures and paved areas, and 90 percent of maximum density elsewhere.
- B. When an embankment or fill is to be made and compacted against hillsides or fill slopes steeper than 4:1, the slopes of hillsides or fills shall be horizontally benched to key the embankment or fill to the underlying ground. A minimum of 12 inches normal to the slope of the hillside or fill shall be removed and re-compacted as the embankment or fill is brought up in layers. Material thus cut shall be re-compacted along with the new material. Hillside or fill slopes 4:1 or flatter shall be prepared in accordance with Paragraph A, above.
- C. Where embankment or structure fills are constructed over pipelines, the first 4 feet of fill

over the pipe shall be constructed using light placement and compaction equipment that does not damage the pipe. Heavy construction equipment shall maintain a minimum distance from the edge of the trench equal to the depth of the trench until at least 4 feet of fill over the pipe has been completed.

### 3.14 FIELD TESTING

- A. **General:** All field soils testing will be done by a testing laboratory of the OWNER's choice at the OWNER's expense except as indicated below.
- B. Where soil material is required to be compacted to a percentage of maximum density, the maximum density at optimum moisture content will be determined in accordance with Method C of ASTM D 1557. Where cohesionless, free draining soil material is required to be compacted to a percentage of relative density, the calculation of relative density will be determined in accordance with ASTM D 4253 and D 4254. Field density in-place tests will be performed in accordance with ASTM D 1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method, ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place By Nuclear Methods (Shallow Depth), or by such other means acceptable to the ENGINEER.
- C. In case the test of the fill or backfill show non-compliance with the required density, the CONTRACTOR shall accomplish such remedy as may be required to insure compliance. Subsequent testing to show compliance shall be by a testing laboratory selected by the OWNER and paid by the CONTRACTOR.
- D. The CONTRACTOR shall provide test trenches and excavations including excavation, trench support, and groundwater removal for the OWNER'S field soils testing operations. The trenches and excavations shall be provided at the locations and to the depths required by the OWNER.

- END OF SECTION -

## **SECTION 2550**

### **CHAIN LINK FENCE PVC COLOR COATED CHAIN LINK FABRIC ON GALVANIZED FRAMEWORK**

#### **PART 1 – GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Poly Vinyl Chloride (PVC) coated chain link fabric with galvanized steel framework and accessories for commercial or industrial applications.

##### **1.02 RELATED SECTIONS**

01300 Contractor Submittals  
01301 Schedule of Values  
03300 Cast-in-Place Concrete

##### **1.03 REFERENCES**

- A. ASTM A36 Standard Specification for Carbon Structural Steel
- B. ASTM B221 Standard Specification for Aluminum and Aluminum Alloy Bars, Rods, Wire Profiles and Tubes
- C. ASTM F552 Standard Terminology Relating to Chain Link Fencing
- D. ASTM F567 Standard Practice for Installation of Chain Link Fence
- E. ASTM F626 Standard Specification for Fence Fittings
- F. ASTM F668 Standard Specification for Polyvinyl Chloride (PVC) and Other Organic Polymer-Coated Steel Chain Link Fence Fabric
- G. ASTM F900 Standard Specification for Industrial and Commercial Swing Gates
- H. ASTM F934 Standard Specification for Standard Colors for Polymer-Coated Chain Link Fence Materials
- I. ASTM F1043 Standard Specification for Strength and Protective Coatings on Steel Industrial Chain Link Fence Framework
- J. ASTM F1083 Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
- K. ASTM F1664 Standard Specification for Polyvinyl Chloride (PVC) and Other Conforming Organic Polymer-Coated Steel Tension Wire Used With Chain Link Fence
- L. ASTM F1665 Standard Specification for Polyvinyl Chloride (PVC) and Other Conforming Organic Polymer-Coated Steel Barbed Wire Used With Chain Link Fence

M. WLG2445 Chain Link Fence Manufacturers Institute, Chain Link Fence Wind Load Guide for the Selection of Line Posts and Line Post Spacing

**1.04 SUBMITTALS**

- A. Shop drawings: Layout of fences and gates with dimensions, details, and finishes of components, accessories, and post foundations.
- B. Product data: Manufacturer's catalog cuts indicating material compliance and specified options.
- C. Samples: If requested, samples of materials (e.g., fabric, wires, color, and accessories).
- D. Windload Calculations: 120 mph for post and fabric calculations.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer: Company having manufacturing facilities in the United States with 5 years experience specializing in manufacturing of chain link fence products.
- B. Fence contractor: Contractor having 5 years experience installing similar projects in accordance with ASTM F567.
- C. Tolerances: ASTM current specification and tolerances apply and supersede any conflicting tolerance.
- D. Single source: To ensure system integrity obtain the chain link system, framework, fabric, fittings, gates and accessories from a single source.

**PART 2 - PRODUCTS**

**2.01 CHAIN LINK FENCE FABRIC**

- A. Poly Vinyl Chloride (PVC) color coated steel chain link fabric per ASTM F668 Class 2a
- B. Size and Gauge: Chain link fabric 1 ¼ mesh, 11 gauge.
- C. Color of chain link fabric per ASTM F934 Black

**2.03 STEEL FENCE FRAMEWORK**

- A. Steel pipe Type I: ASTM F1043 Group IA, ASTM F1083 standard weight schedule 40 hot-dip galvanized pipe having a zinc coating of 1.8 oz/ft<sup>2</sup> (550 g/m<sup>2</sup>) on the outside and 1.8 oz/ft<sup>2</sup> (550 g/m<sup>2</sup>) on the inside surface. Intermediate Strength Grade: Minimum steel yield strength of 50,000 psi.

**2.04 FITTINGS**

- A. Post caps: ASTM F626 galvanized pressed steel, malleable iron, or aluminum alloy weather tight closure cap for tubular posts. Provide one cap for each post. "C" shaped line post without top rail do not require post caps. When top rail is specified provide line post loop tops to secure top rail.
- B. Rail ends: Galvanized pressed steel per ASTM F626, for connection of rails to post using a brace band.
- C. Top rail sleeves: 7" (178 mm) galvanized steel sleeve per ASTM F626.
- D. Wire ties: 9 gauge (0.148") (3.76 mm) galvanized steel wire for attachment of fabric to line posts and rails. Pre-formed hog ring ties to be 9 gauge (0.148") (3.76 mm) galvanized steel or aluminum for attachment of fabric to

tension wire. Tie wire and hog rings PVC coated and in compliance with ASTM F626. Color to match fabric color.

- E. Brace and tension (stretcher bar) bands: ASTM F626 galvanized 12 gauge (0.105") (2.67mm) pressed steel by 3/4" (19mm) formed to a minimum 300 degree profile curvature for post attachment. Secure bands using minimum 5/16" (7.94 mm) galvanized carriage bolt and nut.
- F. Tension (stretcher) galvanized steel bars: One piece lengths equal to 2 inches (50 mm) less than full height of fabric with a minimum cross-section of 3/16" x 3/4" (4.76 mm x 19 mm) per ASTM F626. Provide tension (stretcher) bars where chain link fabric is secured to the terminal post.
- G. Truss rod assembly: Galvanized steel minimum 5/16" (7.9mm) diameter truss rod with pressed steel tightener, in accordance with ASTM F626
- H. Barbed wire supporting arms: Galvanized pressed steel barb arm per ASTM F626 with provisions for attaching barbed wire. Provide arms with loop hole for applications using top rail. Arms shall withstand 250 lb. (113.5 kg) downward pull at outermost end of arm without failure. Arms add an additional of 13 in (330 mm) in height. Provide Type I, 45° 3 strand single arm.
- I. Carriage bolts and nuts: Galvanized of commercial quality

## **2.05 TENSION WIRE**

- A. Tension wire: Poly Vinyl Chloride (PVC) coated metallic coated steel tension wire per ASTM F 9 gauge steel core wire, 0.148" (3.76 mm). PVC coating class and color to match chain link fabric

## **2.06 BARBED WIRE AND BARBED TAPE**

- A. Barbed wire: PVC coated barbed wire in compliance with ASTM F1665, coating class and color to match chain link fabric. Double strand twisted 14 gauge 0.80" (2.03 mm) PVC coated strand wire, 14 gauge 0.80" (2.03 mm) zinc coated or aluminum alloy 4 point barbs spaced. Provide Type I standard 5" (127 mm) on center.
- B. Barbed tape: Stainless steel barbed tape shall comply with ASTM F1910.

## **2.07 CHAIN LINK SWING GATES**

- A. Swing gates. Fabricate chain link swing gates in accordance with ASTM F900. Gate frame to be of welded construction. Weld areas to be protected with zinc-rich paint per ASTM A780. The gate frame members are to be spaced no greater than 8' 0" (2.44 m) apart horizontally or vertically. Exterior members to be 1.900" (48.3 mm) OD pipe, interior members when required shall be 1.660" (42.2 mm) OD pipe. Pipe to be Grade 1 ASTM F1083 per section 2.03. Chain link fabric to match specification of fence system. Fabric to be stretched tightly and secured to vertical outer frame members using tension bar and tension bands spaced 12" (304.8 mm) on center and tied to the horizontal and interior members 12" (304.8 mm) on center using 9 gauge galvanized steel ties per section 2.04.
- B. Hinges, hot dip galvanized pressed steel or malleable iron, structurally capable of supporting gate leaf and allow opening and closing without binding. Non-lift-off type hinge design shall permit gate to swing 180° (3.14 rad)
- C. Latch: Galvanized forked type capable of retaining gate in closed position and have provision for padlock. Latch shall permit operation from either side of gate.
- D. Double gates: Provide galvanized drop rod with center gate stop pipe or receiver to secure inactive leaf in the closed position. Provide galvanized pressed steel locking latch, requiring one padlock for locking both gate leaves, accessible from either side.

- E. Keeper to secure open leafs: Provide galvanized gate hold back keeper for each gate leaf over 5' (1524 mm) wide. Gate keeper shall consist of mechanical device for securing free end of gate when in full open position.
- F. Gate posts: Grade 1 pipe ASTM F1083 per section 2.03, 6.625 OD.

**2.08** Not Used.

## **2.09 POST SETTING MATERIALS**

- A. Concrete: Minimum 28 day compressive strength of 3,000 psi (20 MPa).

## **PART 3 EXECUTION**

### **3.01 SITE EXAMINATION**

- A. Ensure property lines and legal boundaries of work are clearly established.
- B. Survey of fence location to be provided by Owner.
- C. Verify areas to receive fencing are completed to final grade.

### **3.02 CHAIN LINK FRAMEWORK INSTALLATION**

- A. Install chain link fence system in accordance with ASTM F567 and manufacturer's instructions.
- B. Locate terminal post at each fence termination and change in horizontal or vertical direction of 30° or more.
- C. Space line posts uniformly maximum 10' ft. on center, as determined by wind load post selection calculations. Assume 120 mph windload.
- D. Concrete set posts: Dig holes in firm, undisturbed or compacted soil. Holes shall have diameter 4 times greater than outside dimension of post, and depths approximately 6" (152 mm) deeper than post bottom. Excavate deeper as required for adequate support in soft and loose soils, and for posts with heavy lateral loads. Set post bottom 36" (914 mm) below surface when in firm, undisturbed soil. Place concrete around posts in a continuous pour. Trowel finish around post and slope to direct water away from posts.  
Drive Anchor set line posts: With protective cap, drive post 36" (914 mm) into ground. Excavate a 6" (152.4 mm) diameter by 6" (152.4 mm) deep section around post to accommodate the drive anchor shoe clamp. Drive the 2 diagonal drive anchor angle blades into the soil and securely tighten the angle blades to post using the shoe clamp, bury shoe clamp.
- E. Check each post for vertical and top alignment, and maintain in position during placement and finishing operations.
- F. Bracing: Install horizontal brace and truss assembly at mid-height or above for fences 6' (1829 mm) and over at each fabric connection to the terminal post. The diagonal truss rod is installed at the point where the brace rail is attached to the terminal post and diagonally down to the bottom of the adjacent line post. Place the truss rod in tension by adjusting the turnbuckle.

- G. Tension wire: Install tension wires so that it will be located 4" (101.6 mm) up from bottom the fabric. If top rail is not specified, install the tension wire so that it will be located 4" (101.6 mm) down from the top of the fabric. Stretch and Install tension wire before installing the chain link fabric and attach it to each post using wire ties.
- H. Top rail: Install in lengths of 21' (6.4 m). Connect ends with sleeves forming a rigid connection, allow for expansion and contraction.
- I. Bottom Rails: Install bottom rails between posts and attach to post using rail end or line rail clamps.

### **3.03 BARBED WIRE AND BARBED TAPE INSTALLATION**

- A. Uniformly space and stretch barbed wire between terminal posts. Attach barbed wire to the terminal posts using brace bands and snap and secure barbed wire into each line post barb arm slot.
- B. Install barbed tape in accordance with ASTM F1911.

### **3.04 CHAIN LINK FABRIC INSTALLATION**

- A. Fabric: Install fabric on security side, pull fabric taut; thread the tension bar through fabric and attach to terminal posts with tension bands spaced maximum of 15" (381 mm) on center and attach so that fabric remains in tension after pulling force is released. Install fabric so that it is 2" (50 mm) +/- 1" (25 mm) above finish grade.
- B. Secure fabric using wire ties to line posts at 15" (381 mm) on center and to rails and braces 24" (610 mm) on center, and to the tension wire using hog rings 24" (610 mm) on center. Tie wire shall be secured to the fabric by wrapping it two 360 degree turns around the chain link wire pickets. Cut off any excess wire and bend back so as not to protrude so as to avoid injury if a pedestrian may come in contact with the fence.

### **3.05 CHAIN LINK GATE INSTALLATION**

- A. Swing gates: Installation of swing gates and gate posts shall be per ASTM F567. Gates shall be hung plumb in the closed position with minimal space from grade to bottom of gate leaf. Double gate drop bar receiver shall be set in a minimum concrete footing 6" (152 mm) diameter by 24" (610 mm) deep. Gate leaf holdbacks shall be installed on all double gates and all gate leafs greater than 5' (1524 mm) in width.

END OF SECTION

## SECTION 02565 - DUCTILE IRON PIPE (AWWA C151, MODIFIED)

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide ductile iron pipe and all appurtenant work, complete in place, in accordance with the Contract Documents.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. **Commercial Standards:**

|                       |  |
|-----------------------|--|
| ANSI/AWWA C104/A21.4  | Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water  |
| ANSI/AWWA C105/A21.5  | Polyethylene Encasement for Ductile-Iron Piping for Water and Other Liquids  |
| ANSI/AWWA C110/A21.10 | Ductile-Iron and Gray-Iron Fittings, 3 in Through 48 in for Water and Other Liquids                                  |
| ANSI/AWWA C111/A21.11 | Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings                                       |
| ANSI/AWWA C115/A21.15 | Flanged Ductile-Iron and Gray-Iron Pipe with Threaded Flanges  |
| ANSI/AWWA C150/A21.50 | Thickness Design of Ductile-Iron Pipe  |
| ANSI/AWWA C151/A21.51 | Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water or Other Liquids                 |
| ANSI/AWWA C153/A21.53 | Ductile-Iron Compact Fittings, 3 in. Through 12 in. for Water and Other Liquids                                      |
| AWWA C209             | Cold-Applied Tape Coatings for the Exterior of Special Sections, Connections, and Fittings for Steel Water Pipelines |
| AWWA C214             | Tape Coating Systems for the Exterior of Steel Water Pipelines   |
| AWWA C600             | Installation of Ductile Iron Water Mains and Their Appurtenances   |
| ASTM C 150            | Specification for Portland Cement  |

#### 1.3 CONTRACTOR SUBMITTALS

- A. **Shop Drawings:** The CONTRACTOR shall submit shop drawings of pipe and fittings in



accordance with the requirements in Section 01300 - Contractor Submittals, the requirements of the referenced standards and the following supplemental requirements as applicable:

1. Certified dimensional drawings of all valves, fittings, and appurtenances.
  2. For pipe 24 inches in diameter and larger, line layout and marking diagrams which indicate the specific number of each fitting and the location and the direction of each fitting in the completed line. In addition, the line layouts shall include: the pipe station and invert elevation at all changes in grade or horizontal alignment; all elements of curves and bends, both in horizontal and vertical alignment; and the limits of each reach of restrained joints, or of concrete encasement.
- B. **Certifications:** The CONTRACTOR shall furnish a certified affidavit of compliance for all pipe and other products or materials furnished under this Section of the Specifications, as specified in the referenced standards and the following supplemental requirements:
1. Physical and chemical properties.
  2. Hydrostatic test reports.
- C. The CONTRACTOR shall be responsible for performing and paying for sampling and testing as necessary for the certifications.

#### 1.4 QUALITY ASSURANCE

- A. **Inspection:** All pipe shall be subject to inspection at the place of manufacture in accordance with the provisions of the referenced standards, as supplemented by the requirements herein. The CONTRACTOR shall notify the ENGINEER in writing of the manufacturing starting date not less than 14 calendar days prior to the start of any phase of the pipe manufacture.
- B. During the manufacture of the pipe, the ENGINEER shall be given access to all areas where manufacturing is in process and shall be permitted to make all inspections necessary to confirm compliance with the Specifications.
- C. **Tests:** Except as modified herein, all materials used in the manufacture of the pipe shall be tested in accordance with the requirements of the referenced standards as applicable.
- D. The CONTRACTOR shall perform said material tests at no additional cost to the OWNER. The ENGINEER shall have the right to witness all testing conducted by the CONTRACTOR; provided, that the CONTRACTOR's schedule is not delayed for the convenience of the ENGINEER.
- E. In addition to those tests specifically required, the ENGINEER may request additional samples of any material including lining and coating samples for testing by the OWNER. The additional samples shall be furnished as a part of the WORK.

## PART 2 -- PRODUCTS

### 2.1 GENERAL

- A. Mortar-lined and polyethylene-wrapped or tape-coated ductile iron pipe shall conform to ANSI/AWWA C151, C104, and C105, or C151 and C214, subject to the following supplemental requirements. The pipe shall be of the diameter and class shown, shall be furnished complete with rubber gaskets as indicated in the Contract Documents, and all specials and fittings shall be provided as required under the Contract Documents.
- B. **Markings:** The CONTRACTOR shall legibly mark specials 24 inches in diameter and larger in accordance with the laying schedule and marking diagram. All fittings shall be marked at each end with top field centerline.
- C. **Handling and Storage:** The pipe shall be handled by devices acceptable to the ENGINEER, designed and constructed to prevent damage to the pipe coating/exterior. The use of equipment which might injure the pipe coating/exterior will not be permitted. Stockpiled pipe shall be suitably supported and shall be secured to prevent accidental rolling. All other pipe handling equipment and methods shall be acceptable to the ENGINEER.
- D. Tape-coated pipe shall have the following additional requirements:
  - 1. It shall be the responsibility of the manufacturer of tape-coated ductile iron pipe to prevent damage of the coating which might be caused by handling and/or storage of the completed pipe at low temperature.
- E. **Laying Lengths:** Maximum pipe laying lengths shall be 20 ft with shorter lengths provided as required by the Drawings.
- F. **Finish:** The pipe shall have smooth dense interior surfaces and shall be free from fractures, excessive interior surface crazing and roughness.
- G. **Bonding and Electrical Conductivity:** All pipe joints shall be prepared for bonding for electrical conductivity in accordance with the details shown. The CONTRACTOR shall furnish all materials required for joint bonding and electrolysis test station installations.
- H. **Closures and Correction Pieces:** Closures and correction pieces shall be provided as required so that closures may be made due to different headings in the pipe laying operation and so that correction may be made to adjust the pipe laying to conform to pipe stationing shown on the Drawings. The locations of correction pieces and closure assemblies are shown on the Drawings. Any change in location or number of said items shall be acceptable to the ENGINEER.

## 2.2 PIPE DESIGN CRITERIA

- A. **General:** Ductile iron pipe shall be designed in accordance with the requirements of ANSI/AWWA C150 as applicable and as modified in this Section.
- B. **Pipe Wall Thickness for Internal Pressure:** The pipe shall be designed with a net thickness to withstand the design pressure in accordance with the hoop stress formula.
- C. **Pipe Wall Thickness for External Load:** The pipe shall also be designed with a net thickness to withstand external loads using ANSI/AWWA C150 Design Equation (2) with the appropriate bending moment and deflection coefficients for Laying Condition Types 4

and 5 as applicable.

- D. The pipe deflection shall be checked using ANSI/AWWA C150 Design Equation (3) and the coefficients stated above. The allowable deflection shall not exceed 0.0225 times the nominal diameter.
- E. In lieu of ANSI/AWWA C150 Design Equation (4), the earth loads will be computed using the following 2 equations for trench or embankment loading as applicable:

1. Trench Condition:

$$W_d = C_d w B_d^2$$

Where:

|       |   |                                      |
|-------|---|--------------------------------------|
| $W_d$ | = | Earth Load in pounds per linear foot |
| $C_d$ | = | Calculation Coefficient              |
| $Ku'$ | = | [0.13]                               |
| $w$   | = | [120] lb/ft <sup>3</sup>             |
| $B_d$ | = | Trench width at top of pipe, feet    |

2. Positive Projecting Embankment Condition:

$$W_c = C_c w B_c^2$$

Where:

|       |   |  |
|-------|---|--|
| $W_c$ | = | Earth Load in pounds per linear foot                 |
| $C_c$ | = | Calculation Coefficient (based on $r_{sd}P$ of 0.25) |
| $Ku$  | = | [0.19]   |
| $w$   | = | [120] lb/ft <sup>3</sup>                             |
| $B_c$ | = | Outside diameter of pipe, feet                       |

- F. The above 2 formulas are based on a depth of cover of 10 feet or greater. For depths of cover of less than 10 feet, HS-20 live load shall be included. For depths of cover of 3 feet or less, HS-20 live load plus impact shall be included. The determination of live load and impact factors shall be as recommended by AASHTO in "Standard Specifications for Highway Bridges."
- G. If the calculated deflection,  $Defl_x$ , exceeds 0.0225 times the nominal diameter, the pipe class shall be increased.
- H. **Minimum Pipe Wall Thickness:** In addition to the requirements of this Section, the minimum wall thickness shall be in accordance with Table 50.5 of ANSI/AWWA C150.

## 2.3 MATERIALS

- A. **Ductile Iron Pipe:** Pipe materials shall conform to the requirements of ANSI/AWWA C151.
- B. **Cement:** Cement for mortar lining shall conform to the requirements of ANSI/AWWA C104; provided, that cement for mortar lining shall be Type II or V. Cement shall not originate from kilns which burn metal-rich hazardous waste fuel, nor shall a fly ash or pozzolan be used as a cement replacement.
- C. **Polyethylene Sleeve:** Material for the polyethylene sleeve shall conform to the

requirements of ANSI/AWWA C105.

- D. **Prefabricated Multi-layer Cold-Applied Tape Coating:** Except as described below, the coating system for straight line pipe shall be in accordance with AWWA C214. The system shall consist of at least four layers consisting of the following:

1. primer layer
2. inner layer tape - corrosion protective tape (20 mils)
3. outer layer tape - mechanical protective tape (30 mils) with white exterior
4. outer layer tape - mechanical protective tape (30 mils) with white exterior

The total thickness of the tape coating shall be at least 80 mils.

## 2.4 SPECIALS AND FITTINGS

- A. Fittings for ductile iron pipe shall conform to the requirements of ANSI/AWWA C153/A21.53 or ANSI/AWWA C110/A21.10 for diameters 3-inch through 48-inch and shall have a minimum pressure rating of 250 psi. Ductile iron fittings larger than 48-inch shall conform to the above referenced standard with the necessary modifications for the larger size.

## 2.5 DESIGN OF PIPE

- A. **General:** The pipe furnished shall be ductile iron pipe, mortar-lined and polyethylene-wrapped with rubber-gasketed joints as shown, unless otherwise stated.
- B. The pipe shall be designed, manufactured, tested, inspected, and marked according to applicable requirements previously stated and except as hereinafter modified, shall conform to ANSI/AWWA C151.
- C. **Pipe Dimensions:** The pipe shall be of the diameter and class shown. The minimum wall thickness for each pipe size shall be as specified or shown.
- D. **Fitting Dimensions:** The fittings shall be of the diameter and class shown.
- E. **Joint Design:** Ductile iron pipe and fittings shall be furnished with mechanical joints, push-on joints, flanged joints, and restrained joints as required.
1. Mechanical and push-on joints shall conform to ANSI/AWWA C111/A21.11.
  2. Flanged joints shall conform to ANSI/AWWA C115/A21.15.
  3. Restrained joints shall be mechanically restrained. Thrust blocks are not allowed.
- F. For bell-and-spigot ends with rubber gaskets, the clearance between the bells and spigots shall be such that when combined with the gasket groove configuration and the gasket itself, will provide watertight joints under all operating conditions when properly installed. The CONTRACTOR shall require the pipe manufacturer to submit details complete with significant dimensions and tolerances and also to submit performance data indicating that

the proposed joint has performed satisfactorily under similar conditions. In the absence of a history of field performance, the results of a test program shall be submitted.

- G. Shop-applied interior linings and exterior coatings shall be held back from the ends of the pipe as shown or as otherwise acceptable to the ENGINEER.

## 2.6 CEMENT-MORTAR LINING

- A. **Cement-Mortar Lining for Shop Application:** Except as otherwise provided herein, interior surfaces of all ductile iron pipe, fittings, and specials shall be cleaned and lined in the shop with cement-mortar lining applied centrifugally in conformity with ANSI/AWWA C104. During the lining operation and thereafter, the pipe shall be maintained in a round condition by suitable bracing or strutting. The lining machines shall be of a type that has been used successfully for similar work. Every precaution shall be taken to prevent damage to the lining. If lining is damaged or found faulty at delivery site, the damaged or unsatisfactory portions shall be replaced with lining conforming to these Specifications.
- B. The minimum lining thickness shall be as follows:

| <u>Nominal Pipe<br/>Diameter (in)</u> | <u>Minimum Lining<br/>Thickness (in)</u> |
|---------------------------------------|--|
| 3-12                                  | 1/8                                      |
| 14-24                                 | 3/16                                     |
| 30-54                                 | 1/4                                      |

- C. **Protection of Pipe Lining/Interior:** All shop-applied cement mortar lining shall be given a seal coat of asphaltic material in conformance with ANSI/AWWA C104.

## 2.7 EXTERIOR COATING OF PIPE

- A. **Exterior Coating of Exposed Piping:** The exterior surfaces of pipe which will be exposed to the atmosphere inside structures or above ground shall conform to the requirements of Section 09800, "Protective Coating."
- B. **Exterior Coating of Buried Piping:** The exterior coating shall be an asphaltic coating approximately 1 mil thick. All buried pipe shall be polywrap encased, per section 3.3.
- C. **Exterior/Interior Transition:** Pipe sections transitioning from buried to exposed (i.e. at concrete wall penetrations) shall be cold-applied tape coated, per section 3.4, within 3 feet of wall on buried side, and extend 6" past penetration on interior side.

## PART 3 -- EXECUTION

### 3.1 INSTALLATION OF PIPE

- A. **Handling and Storage:** All pipe, fittings, etc., shall be carefully handled and protected against damage, impact shocks, and free fall. All pipe handling equipment shall be acceptable to the ENGINEER. Pipe shall not be placed directly on rough ground but shall be supported in a manner which will protect the pipe against injury whenever stored at the trench site or elsewhere. No pipe shall be installed where the lining or coating show

defects that may be harmful as determined by the ENGINEER. Such damaged lining or coating shall be repaired, or a new undamaged pipe shall be furnished and installed.

- B. All pipe damaged prior to Substantial Completion shall be repaired or replaced by the CONTRACTOR.
- C. The CONTRACTOR shall inspect each pipe and fitting prior to installation to insure that there are no damaged portions of the pipe.
- D. Before placement of pipe in the trench, each pipe or fitting shall be thoroughly cleaned of any foreign substance, which may have collected thereon and shall be kept clean at all times thereafter. For this purpose, the openings of all pipes and fittings in the trench shall be closed during any interruption to the WORK.
- E. **Pipe Laying:** The pipe shall be installed in accordance with ANSI/AWWA C600.
- F. Pipe shall be laid directly on the [imported] bedding material. No blocking will be permitted, and the bedding shall be such that it forms a continuous, solid bearing for the full length of the pipe. Excavations shall be made as needed to facilitate removal of handling devices after the pipe is laid. Bell holes shall be formed at the ends of the pipe to prevent point loading at the bells or couplings. Excavation shall be made as needed outside the normal trench section at field joints to permit adequate access to the joints for field connection operations and for application of coating on field joints.
- G. Each section of pipe 24 inches in diameter and larger shall be laid in the order and position shown on the laying schedule. In laying pipe, it shall be laid to the set line and grade, within approximately one inch plus or minus. On grades of zero slope, the intent is to lay to grade.
- H. Where necessary to raise or lower the pipe due to unforeseen obstructions or other causes, the ENGINEER may change the alignment and/or the grades. Such change shall be made by the deflection of joints, by the use of bevel adapters, or by the use of additional fittings. However, in no case shall the deflection in the joint exceed the maximum deflection recommended by the pipe manufacturer. No joint shall be misfit any amount which will be detrimental to the strength and water tightness of the finished joint.
- I. Except for short runs which may be permitted by the ENGINEER, pipes shall be laid uphill on grades exceeding 10 percent. Pipe which is laid on a downhill grade shall be blocked and held in place until sufficient support is furnished by the following pipe to prevent movement. All bends shall be properly installed as shown.
- J. **Cold Weather Protection:** No pipe shall be installed upon a foundation into which frost has penetrated or at any time that there is a danger of the formation of ice or penetration of frost at the bottom of the excavation. No pipe shall be laid unless it can be established that the trench will be backfilled before the formation of ice and frost occurs.
- K. **Pipe and Specials Protection:** The openings of all pipe and specials shall be protected with suitable bulkheads to prevent unauthorized access by persons, animals, water or any undesirable substance. At all times, means shall be provided to prevent the pipe from floating.
- L. **Pipe Cleanup:** As pipe laying progresses, the CONTRACTOR shall keep the pipe interior

free of all debris. The CONTRACTOR shall completely clean the interior of the pipe of all sand, dirt, mortar splatter and any other debris following completion of pipe laying, pointing of joints and any necessary interior repairs prior to testing and disinfecting the completed pipeline.

### 3.2 RUBBER GASKETED JOINTS

- A. **Rubber Gasketed Joints:** Immediately before jointing pipe, the bell end of the pipe shall be thoroughly cleaned, and a clean rubber gasket lubricated with an approved vegetable-based lubricant shall be placed in the bell groove. The spigot end of the pipe shall be carefully cleaned and lubricated with a vegetable-based lubricant. The spigot end of the pipe section shall then be inserted into the bell of the previously laid joint and telescoped into its proper position. Tilting of the pipe to insert the spigot into the bell will not be permitted.

### 3.3 POLYETHYLENE SLEEVE UNBONDED COATING

- A. Buried ductile iron pipe shall be polyethylene encased in accordance with the requirements of ANSI/AWWA C105/A21.5.

### 3.4 BONDED TAPE COATING

- A. **General:** The exterior joint recesses shall be thoroughly wiped clean and all water, loose scale, dirt, and other foreign material shall be removed from the surface of the pipe.
- B. **Joint Coating of Tape-Coated Pipe:** Joints for tape-coated pipe shall be primed and wrapped with 2 thicknesses of 6-inch wide elastomeric joint tape, Type II per ANSI/AWWA C209. The total thickness of the tape wrap shall be at least 70 mils and shall be installed free of wrinkles with all laps bonded. All primer and joint tape shall be compatible with the line pipe coating.
- C. All tape-coated joints will be tested by the ENGINEER with an electrical flaw detector capable of at least a 12,000 volt output, furnished by the CONTRACTOR. The tests shall be made using a voltage of 6,000 to 7,000 volts. Any holidays found shall be repaired by the CONTRACTOR at no expense to the OWNER.
- D. **Coating Repair:** Coating repair shall be made using tape and primer conforming to ANSI/AWWA C209. When visual inspection shows a portion of the tape-wrap system has sustained physical damage, the damaged area shall be subjected to an electrical holiday test of 6,000 to 7,000 volts.
- E. Following repair of the damaged area if the holiday test indicates a holiday still exists, the inner wrap shall be exposed and the exposed area shall be wiped clean with xylol solvent, or equal, and the area coated with tape primer. A patch of 35-mil thick cold-applied tape of sufficient size to cover the damaged area, plus a minimum lap of 2 inches in all directions, shall then be applied. The patched area shall again be tested for holidays. If none are detected, a second layer of 35-mil thick tape shall then be applied over the first patch. The second layer of tape shall overlap the first layer a minimum of 2 inches in all directions.
- F. When the area tests showing no holiday, a notation shall be applied to the area indicating the test is satisfactory.

- G. **Coating of Fittings and Specials:** Fittings and specials shall be coated in accordance with ANSI/AWWA C209. Prefabricated tape shall be Type II and shall be completely compatible with the tape system used for straight line pipe. The system shall consist of three layers consisting of the following:

1. primer layer
2. inner layer tape - corrosion protective tape (35 mils)
3. outer layer tape - corrosion protective tape (35 mils)

The total thickness of the tape coating shall be at least 70 mils.

### 3.5 INSTALLATION OF PIPE APPURTENANCES

- A. **Protection of Appurtenances:** Where the joining pipe is tape-coated, buried appurtenances shall be coated with cold-applied tape in accordance with ANSI/AWWA C209, Type II. Where pipe is encased in polyethylene sleeves, buried appurtenances shall also be encased in polyethylene.
- B. **Installation of Valves:** All valves shall be handled in a manner to prevent any injury or damage to any part of the valve. All joints shall be thoroughly cleaned and prepared prior to installation. The CONTRACTOR shall adjust all stem packing and operate each valve prior to installation to insure proper operation.
- C. All valves shall be installed so that the valve stems are plumb and in the location shown.

### 3.6 CORROSION CONTROL

- A. **Joint Bonding/Electrolysis Test Stations:** Except where otherwise specified, all joints shall be bonded in accordance with the details shown. The pipe shall be cleaned to bare bright metal at the point where the bond is installed. In addition, electrolysis test stations shall be installed where shown.

- END OF SECTION -



**SECTION 02589 - ABS AND PVC COMPOSITE PIPE  
(ASTM D 2680, MODIFIED)**

**PART 1 -- GENERAL**

**1.1 THE REQUIREMENT**

- A. The CONTRACTOR shall provide all acrylonitrile-butadiene-styrene (ABS) and polyvinyl chloride (PVC) composite pipe gravity sewers, and all appurtenant work, complete, all in accordance with the Contract Documents.
- B. The pipe shall consist of two concentric extruded thermoplastic tubes integrally braced across the annulus. The resultant annular space shall be filled with inert material such as light-weight Portland cement concrete to provide continuous support between the inner and outer tubes.

**1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS**

**A. Commercial Standards:**

|             |  |
|-------------|--|
| ASTM D 2564 | Solvent Cement for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings                     |
| ASTM D 2680 | Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping |

**1.3 CONTRACTOR SUBMITTALS**

- A. **Shop Drawings:** The CONTRACTOR shall submit shop drawings of pipe, fittings, and appurtenances in accordance with the requirements of Section 01300, "Contractor Submittals."
- B. **Certificates:** The CONTRACTOR shall provide manufacturer's certification that pipe has been tested for stiffness and deflection in accordance with ASTM D 2680, and that the test results comply with the Specification requirements.

**1.4 QUALITY ASSURANCE**

- A. **Mandrel Test:** All ABS and PVC composite gravity sewer pipe shall be tested for deflection and obstructions. The mandrel test shall be performed after backfilling and compacting but prior to final paving and prior to leakage testing.
- B. A rigid mandrel, with a circular cross section having a diameter at least 95 percent of the specified average inside diameter, shall be pulled through the pipe by hand. The minimum length of the circular portion of the mandrel shall be equal to the nominal diameter of the pipe. If the mandrel sticks in the pipe at any point the pipe shall be repaired and retested.

## **PART 2 -- PRODUCTS**

### **2.1 GENERAL**

- A. All ABS and PVC composite pipe shall be continuously and permanently marked with the manufacturer's name, pipe size, ASTM Specification Number, type of plastic, and extrusion code, including date and location of manufacture.

### **2.2 PIPE AND FITTINGS**

- A. All ABS and PVC composite pipe and fittings shall conform to the requirements of ASTM Designation D 2680, and shall have either solvent cement joints or elastomeric gasket joints.

### **2.3 SOLVENT CEMENT JOINTS**

- A. Primer for ABS and PVC solvent cement joints shall be MEK (methyl ethyl ketone).
- B. Cement for ABS joints shall be MEK containing a minimum of 20 percent by weight of dissolved ABS and shall comply with ASTM D 2680.
- C. Cement for PVC joints shall comply with ASTM D 2564 except that the minimum resin content shall be 16 percent and minimum viscosity shall be 3500 cP.

### **2.4 ELASTOMERIC GASKET JOINTS**

- A. Pipe with gasketed joints shall be manufactured with a socket configuration which will prevent improper installation of the gasket and will ensure that the gasket remains in place during the joining operation. The gasket shall be manufactured from a synthetic elastomer containing not less than 50 percent by volume of first-grade synthetic rubber.

## **PART 3 -- EXECUTION**

### **3.1 GENERAL**

- A. All laying, jointing, testing for defects and for leakage shall be performed in the presence of the ENGINEER, and shall be subject to its approval before acceptance. All material found during the progress to have defects will be rejected and the CONTRACTOR shall promptly remove such defective material from the site of the WORK.

### **3.2 BEDDING**

- A. Pipe bedding shall conform to the requirements of Section 02200, "Earthwork;" except, that where the depth of trench is such that the cover over the top of the pipe is 2 feet or less, "Concrete Encasement" Bedding shall be used.

### 3.3 LAYING PIPE

- A. ABS and PVC composite pipe shall be installed in conformance with the requirements of the pipe manufacturer's written recommendations and the provisions of this Section.
- B. Handling of the pipe shall be done with care to insure that the pipe is not damaged in any manner during storage, loading, transit, unloading, and installation.
- C. The pipe shall be laid to the lines and grades shown on the drawings and the sections shall be closely jointed to form a smooth flow line. Immediately before placing each section of pipe in final position for jointing, the bedding for the pipe shall be checked for firmness and uniformity of surface.
- D. The radius of curvature of the trench shall determine the maximum length of pipe section that can be used without exceeding the allowable deflection at a coupling. The deflection at any joint shall not exceed that prescribed by the manufacturer of the pipe. The manufacturer's printed installation guide showing the radii of curvature that can be attained with pipe sections of various lengths shall be followed.
- E. Proper implements, tools, and facilities as recommended by the pipe manufacturer's standard printed installation instructions shall be provided and used by the CONTRACTOR for safe and efficient execution of the WORK. All pipe and accessories shall be carefully lowered into the trench by means of derrick, ropes, or other suitable equipment in such a manner as to prevent damage to pipe and fittings. Under no circumstances shall pipe or accessories be dropped or dumped into the trench.
- F. Cutting and machining of the pipe shall be accomplished in accordance with the pipe manufacturer's standard procedures for this operation. Pipe shall not be cut with a cold chisel, standard iron pipe cutter, nor any other method that may fracture the pipe or will produce ragged, uneven edges.
- G. The pipe and accessories shall be inspected for defects prior to lowering into the trench. Any defective, damaged or unsound pipe shall be repaired or replaced. All foreign matter or dirt shall be removed from the interior of the pipe before lowering into position in the trench. Pipe shall be kept clean during and after laying. All openings in the pipe line shall be closed with water tight expandable type sewer plugs or test plugs at the end of each day's operation or whenever the pipe openings are left unattended. The use of burlap, wood, or other similar plugs will not be permitted.
- H. Adequate protection and maintenance of all underground and surface utility structures, drains, sewers, and other obstructions encountered in the progress of the WORK shall be furnished by the CONTRACTOR at its own expense.
- I. Where the grade or alignment of the pipe is obstructed by existing utility structures such as conduits, ducts, pipes, branch connections to main sewers, or main drains, the obstruction shall be permanently supported, relocated, removed, or reconstructed by the CONTRACTOR in cooperation with owners of such utility structures. Unless otherwise

indicated, such work shall be performed at the CONTRACTOR's expense.

### 3.4 FIELD JOINTING

- A. **General:** The pipe shall not be deflected either vertically or horizontally in excess of the printed recommendations of the manufacturer of the coupling.
- B. When pipe laying is not in progress, the open ends of the pipe shall be closed by approved means to prevent trench water from entering pipe. Adequate backfill shall be deposited on pipe to prevent floating of pipe. Any pipe which has floated shall be removed from the trench, cleaned, and relaid in an acceptable manner. No pipe shall be laid when, in the opinion of the ENGINEER, the trench conditions or weather are unsuitable for such work.
- C. **Solvent-Weld Joints:** Each solvent-weld pipe joint shall be sealed with solvent cement in conformance with the requirements of ASTM D 2680 and the manufacturer's printed recommendations. The spigot and socket shall be wiped clean before the solvent cement is applied.
- D. **Gasketed Joints:** Each gasketed pipe joint shall be joined with a lock-in elastomeric gasket. The gasket and the gasket seal inside the bell shall be wiped clean before the gasket is inserted. At this time a liberal amount of lubricant shall be applied to the gasket and to the outside of the clean pipe end. Lubricant other than that furnished with the pipe shall not be used. The end of the pipe shall then be forced into the bell to complete the joint. On field cut spigot ends, the outer pipe wall shall be chamfered with a file to remove all burrs and rough spots.

- END OF SECTION -

## SECTION 03100 - CONCRETE FORMWORK

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall furnish concrete formwork, bracing, shoring, and supports and shall design and construct falsework in accordance with the Contract Documents.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

##### A. **Government Standards:**

|       |                                     |
|-------|-------------------------------------|
| PS 1  | Construction and Industrial Plywood |
| PS 20 | American Softwood Lumber Standard   |

##### B. **Commercial Standards:**

|         |   |
|---------|---|
| ACI 117 | Standard Tolerances for Concrete Construction and Materials |
|---------|---|

#### 1.3 CONTRACTOR SUBMITTALS

- A. Furnish submittals in accordance with Section 01300 - Contractor Submittals.
- B. Manufacturer's information demonstrating compliance with requirements.
  - 1. Form ties and related accessories, including taper tie plugs, if taper ties are used.
  - 2. Form gaskets.
  - 3. Form release agent, including NSF certification.
  - 4. List of form materials and locations for use.
- C. **Shop Drawings:** Detailed plans of the falsework proposed to be used. Such plans shall be in sufficient detail to indicate the general layout, sizes of members, anticipated stresses, grade of materials to be used in the falsework, means of protecting existing construction which supports falsework, and typical soil conditions. Include a list of form materials and locations for use.

#### 1.4 QUALITY ASSURANCE

- A. **Tolerances:** The variation from required lines or grade shall not exceed 1/4-inch in 10 feet and there shall be no offsets or visible waviness in the finished surface. All other tolerances shall be within the tolerances of ACI 117.

## **PART 2 -- PRODUCTS**

### **2.1 GENERAL**

- A. Except as otherwise expressly accepted by the ENGINEER, lumber brought on the Site for use as forms, shoring, or bracing shall be new material. Forms shall be smooth surface forms and shall be of the following materials:
- B. Form materials which may remain or leave residues on or in the concrete shall be certified as compliant with NSF Standard 61.

### **2.2 FORM AND FALSEWORK MATERIALS**

- A. Materials for concrete forms, formwork, and falsework shall conform to the following requirements:
  - 1. Lumber shall be Douglas Fir or Southern Yellow Pine, construction grade or better, in conformance with U.S. Product Standard PS 20.
  - 2. Plywood for concrete formwork shall be new, waterproof, synthetic resin bonded, exterior type Douglas Fir or Southern Yellow Pine plywood manufactured especially for concrete formwork, shall conform to the requirements of PS 1 for Concrete Forms, Class I, and shall be edge sealed.
  - 3. Form materials shall be metal, wood, plywood, or other material that will not adversely affect the concrete and will facilitate placement of concrete to the shape, form, line, and grade indicated. Metal forms shall accomplish such results. Wood forms for surfaces to be painted shall be Medium Density Overlaid plywood, MDO Ext. Grade.
- B. Unless otherwise indicated, exterior corners in concrete members shall be provided with 3/4-inch chamfers or be tooled to 1/2-inch radius. Re-entrant corners in concrete members shall not have fillets unless otherwise indicated.
- C. Forms and falsework to support the roof and floor slabs shall be designed for the total dead load, plus a live load of 50 psf minimum. The minimum design load for combined dead and live loads shall be 100 psf.

### **2.3 FORM TIES**

- A. Form ties shall be provided with a plastic cone or other suitable means for forming a conical hole to insure that the form tie may be broken off back of the face of the concrete. The maximum diameter of removable cones for rod ties, or of other removable form-tie fasteners having a circular cross-section, shall not exceed 1-1/2 inches; and all such fasteners shall be such as to leave holes of regular shape for reaming. Form ties for water-retaining structures shall have integral waterstops that tightly fit the form tie so that they cannot be moved from mid-point of the tie.
- B. Removable taper ties may be used when approved by the ENGINEER. A preformed neoprene or polyurethane tapered plug sized to seat at the center of the wall shall be inserted in the hole left by the removal of the taper tie.

## **PART 3 -- EXECUTION**

### **3.1 GENERAL**

- A. Forms to confine the concrete and shape it to the required lines shall be used wherever necessary. The CONTRACTOR shall assume full responsibility for the adequate design of all forms, and any forms which are unsafe or inadequate in any respect shall promptly be removed from the WORK and replaced. Provide worker protection from protruding reinforcement bars in accordance with applicable safety codes. A sufficient number of forms of each kind shall be available to permit the required rate of progress to be maintained. The design and inspection of concrete forms, falsework, and shoring shall comply with applicable local, state and Federal regulations. Plumb and string lines shall be installed before concrete placement and shall be maintained during placement. Such lines shall be used by CONTRACTOR's personnel and by the ENGINEER and shall be in sufficient number and properly installed. During concrete placement, the CONTRACTOR shall continually monitor plumb and string line form positions and immediately correct deficiencies.
- B. Concrete forms shall conform to the shape, lines, and dimensions of members required, and shall be substantial, free from surface defects, and sufficiently tight to prevent leakage. Forms shall be properly braced or tied together to maintain their position and shape under a load of freshly-placed concrete. If adequate foundation for shores cannot be secured, trussed supports shall be provided.

### **3.2 FORM DESIGN**

- A. Forms shall be true in every respect to the required shape and size, shall conform to the established alignment and grade, and shall be of sufficient strength and rigidity to maintain their position and shape under the loads and operations incident to placing and vibrating the concrete. Suitable and effective means shall be provided on all forms for holding adjacent edges and ends of panels and sections tightly together and in accurate alignment so as to prevent the formation of ridges, fins, offsets, or similar surface defects in the finished concrete. Plywood, 5/8-inch and greater in thickness, may be fastened directly to studding if the studs are spaced close enough to prevent visible deflection marks in the concrete. The forms shall be tight so as to prevent the loss of water, cement and fines during placing and vibrating of the concrete. Specifically, the bottom of wall forms that rest on concrete footings or slabs shall be provided with a gasket to prevent loss of fines and paste during placement and vibration of concrete. Such gasket may be a 1- to 1-1/2-inch diameter polyethylene rod held in position to the underside of the wall form. Adequate clean-out holes shall be provided at the bottom of each lift of forms. The size, number, and location of such clean-outs shall be as acceptable to the ENGINEER. Whenever concrete cannot be placed from the top of a wall form in a manner that meets the requirements of the Contract Documents, form windows shall be provided in the size and spacing needed to allow placement of concrete to the requirements of Section 03300 - Cast-in-Place Concrete. The size, number, and location of such form windows shall be as acceptable to the ENGINEER.

### **3.3 CONSTRUCTION**

- A. **Vertical Surfaces:** All vertical surfaces of concrete members shall be formed, except where placement of the concrete against the ground is indicated. Not less than 1-inch of concrete shall be added to the indicated thickness of a concrete member where concrete is permitted to be placed against trimmed ground in lieu of forms. Permission to do this on other concrete members will be granted only for members of comparatively limited height and where the character of the ground is such that it can be trimmed to the required lines and will stand securely without caving or sloughing until the concrete has been placed.
- B. **Construction Joints:** Concrete construction joints will not be permitted at locations other than those indicated, except as may be acceptable to the ENGINEER. When a second lift is placed on hardened concrete, special precautions shall be taken in the way of the number, location, and tightening of ties at the top of the old lift and bottom of the new to prevent any unsatisfactory effect whatsoever on the concrete. Pipe stubs and anchor bolts shall be set in the forms where required.
- C. **Form Ties:**
1. **Embedded Ties:** Holes left by the removal of form tie cones shall be reamed with suitable toothed reamers so as to leave the surface of the holes clean and rough before being filled with mortar. Wire ties for holding forms will not be permitted. No form-tying device or part thereof, other than metal, shall be left embedded in the concrete. Ties shall not be removed in such manner as to leave a hole extending through the interior of the concrete members. The use of snap-ties which cause spalling of the concrete upon form stripping or tie removal will not be permitted. If steel panel forms are used, rubber grommets shall be provided where the ties pass through the form in order to prevent loss of cement paste. Where metal rods extending through the concrete are used to support or to strengthen forms, the rods shall remain embedded and shall terminate not less than 1-inch back from the formed face or faces of the concrete.
  2. **Removable Ties:** Where taper ties are approved for use, the larger end of the taper tie shall be on the wet side of walls in water retaining structures. After the taper tie is removed, the hole shall be thoroughly cleaned and roughened for bond. A precast neoprene or polyurethane tapered plug shall be located at the wall centerline. The hole shall be completely filled with non-shrink grout for water bearing and below-grade walls. The hole shall be completely filled with non-shrink or regular cement grout for above-grade walls which are dry on both sides. Exposed faces of walls shall have the outer 2 inches of the exposed face filled with a cement grout which shall match the color and texture of the surrounding wall surface.

### 3.4 REUSE OF FORMS

- A. Forms may be reused only if in good condition and only if acceptable to the ENGINEER. Light sanding between uses will be required wherever necessary to obtain uniform surface texture on all exposed concrete surfaces. Exposed



concrete surfaces are defined as surfaces which are permanently exposed to view. In the case of forms for the inside wall surfaces of hydraulic/water retaining structures, unused tie rod holes in forms shall be covered with metal caps or shall be filled by other methods acceptable to the ENGINEER.

### 3.5 REMOVAL OF FORMS

- A. Careful procedures for the removal of forms shall be strictly followed, and this work shall be done with care so as to avoid injury to the concrete. No heavy loading on green concrete will be permitted. In the case of roof slabs and above-ground floor slabs, forms shall remain in place until test cylinders for the roof concrete attain a minimum compressive strength of 75 percent of the 28-day strength in Section 03300 - Cast-in-Place Concrete. No forms shall be disturbed or removed under an individual panel or unit before the concrete in the adjacent panel or unit has attained 75 percent of the 28-day strength and has been in place for a minimum of 7 days. The time required to establish said strength shall be as determined by the ENGINEER who will make several test cylinders for this purpose from concrete used in the first group of roof panels placed. If the time so determined is more than the 7-day minimum, then that time shall be used as the minimum length of time. Forms for vertical walls of waterholding structures shall remain in place at least 36 hours after the concrete has been placed. Forms for parts of the WORK not specifically mentioned herein shall remain in place for periods of time as recommended in ACI 347.

### 3.6 MAINTENANCE OF FORMS

- A. Forms shall be maintained at all times in good condition, particularly as to size, shape, strength, rigidity, tightness, and smoothness of surface. Before concrete is placed, the forms shall be thoroughly cleaned. The form surfaces shall be treated with a nonstaining mineral oil or other lubricant acceptable to the ENGINEER. Any excess lubricant shall be satisfactorily removed before placing the concrete. Where field oiling of forms is required, the CONTRACTOR shall perform the oiling at least two weeks in advance of their use. Care shall be exercised to keep oil off the surfaces of steel reinforcement and other metal items to be embedded in concrete.

### 3.7 FALSEWORK

- A. The CONTRACTOR shall be responsible for the design, engineering, construction, maintenance, and safety of all falsework, including staging, walkways, forms, ladders, and similar appurtenances, which shall equal or exceed the applicable requirements of the provisions of the OSHA Safety and Health Standards for Construction, the requirements of the Construction Safety Orders of the California Division of Industrial Safety, and the requirements herein.
- B. Falsework shall be designed and constructed to provide the necessary rigidity and to support the loads. Falsework for the support of a superstructure shall be designed to support the loads that would be imposed if the entire superstructure were placed at one time.
- C. Falsework shall be placed upon a solid footing, safe against undermining, and protected from softening. When the falsework is supported on timber piles, the

maximum calculated pile loading shall not exceed 20 tons. When falsework is supported on any portion of the structure which is already constructed, the load imposed by the falsework shall be spread, distributed, and braced in such a way as to avoid any possibility of damage to the structure.

**END OF SECTION**

## SECTION 03200 - REINFORCEMENT STEEL

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall furnish, fabricate, and place all concrete reinforcement steel, welded wire fabric, couplers, and concrete inserts for use in reinforced concrete and masonry construction and shall perform all appurtenant work, including all the wires, clips, supports, chairs, spacers, and other accessories, all in accordance with the Contract Documents.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

##### A. Commercial Standards

|            |   |
|------------|---|
| ACI 315    | Details and Detailing of Concrete Reinforcement                                   |
| ACI 318    | Building Code Requirements for Reinforced Concrete                                |
| CRSI MSP-1 | Concrete Reinforcing Steel Institute Manual of Standard Practice                  |
| WRI        | Manual of Standard Practice for Welded Wire Fabric                                |
| AWS D1.4   | Structural Welding Code - Reinforcing Steel                                       |
| ASTM A 82  | Specification for Steel Wire, Plain, for Concrete Reinforcement                   |
| ASTM A 185 | Specification for Welded Steel Wire Fabric, Plain, for Concrete Reinforcement     |
| ASTM A 615 | Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement |
| ASTM A 775 | Specification for Epoxy-Coated Reinforcing Steel Bars                             |

#### 1.3 CONTRACTOR SUBMITTALS

- A. The CONTRACTOR shall furnish shop bending diagrams, placing lists, and drawings of all reinforcement steel prior to fabrication in accordance with the requirements of Section 01300, "Contractor Submittals."
- B. Details of the concrete reinforcement steel and concrete inserts shall be submitted by the CONTRACTOR at the earliest possible date after receipt by the CONTRACTOR of the Notice to Proceed. Said details of reinforcement steel for

fabrication and erection shall conform to ACI 315 and the requirements specified and shown. The shop bending diagrams shall show the actual lengths of bars, to the nearest inch measured to the intersection of the extensions (tangents for bars of circular cross section) of the outside surface. The shop drawings shall include bar placement diagrams which clearly indicate the dimensions of each bar splice.

- C. Where mechanical couplers are required or permitted to be used to splice reinforcement steel, the CONTRACTOR shall submit manufacturer's literature which contains instructions and recommendations for installation for each type of coupler used; certified test reports which verify the load capacity of each type and size of coupler used; and shop drawings which show the location of each coupler with details of how they are to be installed in the formwork.
- D. If reinforcement steel is spliced by welding at any location, the CONTRACTOR shall submit mill test reports which shall contain the information necessary for the determination of the carbon equivalent as specified in AWS D1.4. The CONTRACTOR shall submit a written welding procedure for each type of weld for each size of bar which is to be spliced by welding; merely a statement that AWS procedures will be followed is not acceptable.

#### 1.4 QUALITY ASSURANCE

- A. If requested by the ENGINEER, the CONTRACTOR shall provide samples from each heat of reinforcement steel delivered in a quantity adequate for testing. Costs of initial tests will be paid by the OWNER. Costs of additional tests due to material failing initial tests shall be paid by the CONTRACTOR.
- B. If reinforcement steel is spliced by welding at any location, the CONTRACTOR shall submit certifications of procedure qualifications for each welding procedure used and certification of welder qualifications, for each welding procedure, and for each welder performing the work. Such qualifications shall be as specified in AWS D1.4.
- C. If requested by the ENGINEER, the CONTRACTOR shall provide samples of each type of welded splice used in the work in a quantity and of dimensions adequate for testing. At the discretion of the ENGINEER, radiographic testing of direct butt welded splices will be performed. The CONTRACTOR shall provide assistance necessary to facilitate testing. The CONTRACTOR shall repair any weld which fails to meet the requirements of AWS D1.4. The costs of testing will be paid by the OWNER; except, the costs of all tests which fail to meet specified requirements shall be paid by the CONTRACTOR.

### PART 2 -- PRODUCTS

#### 2.1 MATERIAL REQUIREMENTS

- A. Materials specified in this Section which may remain or leave residues on or within the concrete shall be classified as acceptable for potable water use by the Environmental Protection Agency within 30 days of application or use.

#### 2.2 REINFORCEMENT STEEL

A. Reinforcement Steel for all cast-in-place reinforced concrete construction shall conform to the following requirements:

1. Bar reinforcement shall conform to the requirements of ASTM A 615 for Grade 60 Billet Steel Reinforcement or as otherwise shown.
2. Welded wire fabric reinforcement shall conform to the requirements of ASTM A 185 and the details shown; provided, that welded wire fabric with longitudinal wire of W4 size wire and smaller shall be either furnished in flat sheets or in rolls with a core diameter of not less than 10 inches; and provided further, that welded wire fabric with longitudinal wires larger than W4 size shall be furnished in flat sheets only.
3. Spiral reinforcement shall be cold-drawn steel wire conforming to the requirements of ASTM A 82.

B. Accessories

1. Accessories shall include all necessary chairs, slab bolsters, concrete blocks, tie wires, dips, supports, spacers, and other devices to position reinforcement during concrete placement. All bar supports shall meet the requirements of the CRSI Manual of Standard Practice including special requirements for supporting epoxy coated reinforcing bars. Wire bar supports shall be CRSI Class 1 for maximum protection with a 1/8-inch minimum thickness of plastic coating which extends at least 1/2-inch from the concrete surface. Plastic shall be gray in color.
2. Concrete blocks (dobies), used to support and position reinforcement steel, shall have the same or higher compressive strength as specified for the concrete in which it is located. Wire ties shall be embedded in concrete block bar supports.

C. Epoxy coating for reinforcing and accessories, where specified or shown, shall conform to ASTM A 775.

## 2.3 MECHANICAL COUPLERS

- A. Mechanical couplers shall be provided where shown and where approved by the ENGINEER. The couplers shall develop a tensile strength which exceeds 125 percent of the yield strength of the reinforcement bars being spliced at each splice.
- B. Where the type of coupler used is composed of more than one component, all components required for a complete splice shall be supplied. This shall apply to all mechanical splices, including those splices intended for future connections.
- C. The reinforcement steel and coupler used shall be compatible for obtaining the required strength of the connection. Straight threaded type couplers shall require the use of the next larger size reinforcing bar or shall be used with reinforcing bars with specially forged ends which provide upset threads which do not decrease the basic cross section of the bar.

## 2.4 WELDED SPLICES

- A. Welded splices shall be provided where shown and where approved by the ENGINEER. All welded splices of reinforcement steel shall develop a tensile strength which exceeds 125 percent of the yield strength of the reinforcement bars which are connected.
- B. All materials required to conform the welded splices to the requirements of AWS D1.4 shall be provided.

## 2.5 EPOXY GROUT

- A. Epoxy for grouting reinforcing bars shall be specifically formulated for such application, for the moisture condition, application temperature, and orientation of the hole to be filled. Epoxy grout shall meet the requirements found in Section 03315, "Grout."

# PART 3 -- EXECUTION

## 3.1 GENERAL

- A. All reinforcement steel, welded wire fabric, couplers, and other appurtenances shall be fabricated, and placed in accordance with the requirements of the Building Code and the supplementary requirements specified herein.

## 3.2 FABRICATION

### A. General

- 1. Reinforcement steel shall be accurately formed to the dimensions and shapes shown, and the fabricating details shall be prepared in accordance with ACI 315 and ACI 318, except as modified by the Drawings. Stirrups and tie bars shall be bent around a pin having a diameter not less than 1-1/2-inch for No. 3 bars, 2-inch for No. 4 bars, and 2-1/2-inch for No. 5 bars. Bends for other bars shall be made around a pin having a diameter not less than 6 times the bar diameter, except for bars larger than 1 inch, in which case the bends shall be made around a pin of 8 bar diameters. Bars shall be bent cold.
- 2. The CONTRACTOR shall fabricate reinforcement bars for structures in accordance with bending diagrams, placing lists, and placing drawings. Said drawings, diagrams, and lists shall be prepared by the CONTRACTOR as specified under Section 01300, "Contractor Submittals."

- B. **Fabricating Tolerances:** Bars used for concrete reinforcement shall meet the following requirements for fabricating tolerances:

- 1. Sheared length:  $\pm 1$  inch
- 2. Depth of truss bars: + 0, - 1/2 inch

3. Stirrups, ties, and spirals:  $\pm 1/2$  inch
4. All other bends:  $\pm 1$  inch

### 3.3 PLACING

- A. Reinforcement steel shall be accurately positioned as shown, and shall be supported and wired together to prevent displacement, using annealed iron wire ties or suitable clips at intersections. All reinforcement steel shall be supported by concrete, plastic or metal supports, spacers or metal hangers which are strong and rigid enough to prevent any displacement of the reinforcement steel. Where concrete is to be placed on the ground, supporting concrete blocks (or dobies) shall be used, in sufficient numbers to support the bars without settlement, but in no case shall such support be continuous. All concrete blocks used to support reinforcement steel shall be tied to the steel with wire ties which are embedded in the blocks. For concrete over formwork, the CONTRACTOR shall furnish concrete, metal, plastic, or other acceptable bar chairs and spacers.
- B. Limitations on the use of bar support materials shall be as follows.
  1. Concrete Dobies: permitted at all locations except where architectural finish is required.
  2. Wire Bar Supports: permitted only at slabs over dry areas, interior dry wall surfaces, and exterior wall surfaces.
  3. Plastic Bar Supports: permitted at all locations except on grade.
- C. Tie wires shall be bent away from the forms in order to provide the specified concrete coverage.
- D. Bars additional to those shown which may be found necessary or desirable by the CONTRACTOR for the purpose of securing reinforcement in position shall be provided by the CONTRACTOR at its own expense.
- E. Unless otherwise specified, reinforcement placing tolerances shall be within the limits specified in Section 7.5 of ACI 318 except where in conflict with the requirements of the Building Code.
- F. Bars may be moved as necessary to avoid interference with other reinforcement steel, conduits, or embedded items. If bars are moved more than one bar diameter, or enough to exceed the above tolerances, the resulting arrangement of bars shall be as acceptable to the ENGINEER.
- G. Welded wire fabric reinforcement placed over horizontal forms shall be supported on slab bolsters. Slab bolsters shall be spaced not more than 30 inches on centers, shall extend continuously across the entire width of the reinforcement mat, and shall support the reinforcement mat in the plane shown.
- H. Welded wire fabric placed over the ground shall be supported on wired concrete blocks (dobies) spaced not more than 3 feet on centers in any direction. The construction practice of placing welded wire fabric on the ground and hooking into

place in the freshly placed concrete shall not be used.

- I. Epoxy coated reinforcing bars shall be stored, transported, and placed in such a manner as to avoid chipping of the epoxy coating. Non-abrasive slings made of nylon and similar materials shall be used. Specially coated bar supports shall be used. All chips or cracks in the epoxy coating shall be repaired with a compatible epoxy repair material prior to placing concrete.
- J. Accessories supporting reinforcing bars shall be spaced such that there is no deflection of the accessory from the weight of the supported bars. When used to space the reinforcing bars from wall forms, the forms and bars shall be located so that there is no deflection of the accessory when the forms are tightened into position.

### 3.4 SPACING OF BARS

- A. The clear distance between parallel bars (except in columns and between multiple layers of bars in beams) shall be not less than the nominal diameter of the bars nor less than 1-1/3 times the maximum size of the coarse aggregate, nor less than one inch.
- B. Where reinforcement in beams or girders is placed in 2 or more layers, the clear distance between layers shall be not less than one inch.
- C. In columns, the clear distance between longitudinal bars shall be not less than 1-1/2 times the bar diameter, nor less than 1-1/2 times the maximum size of the coarse aggregate, nor less than 1-1/2 inches.
- D. The clear distance between bars shall also apply to the distance between a contact splice and adjacent splices or bars.

### 3.5 SPLICING

#### A. General

- 1. Reinforcement bar splices shall only be used at locations shown. When it is necessary to splice reinforcement at points other than where shown, the character of the splice shall be as acceptable to the ENGINEER.
- 2. Unless otherwise indicated, dowels shall match the size and spacing of the spliced bar.

#### B. Splices of Reinforcement

- 1. The length of lap for reinforcement bars, unless otherwise shown shall be in accordance with ACI 318-89, Section 12.15.1 for a Class B splice.
- 2. Laps of welded wire fabric shall be in accordance with the ACI 318. Adjoining sheets shall be securely tied together with No. 14 tie wire, one tie for each 2 running feet. Wires shall be staggered and tied in such a manner that they cannot slip.



3. Splices in column spiral reinforcement, when necessary, shall be made by welding or by a lap of 1-1/2 turns.
- C. Bending or Straightening
1. Reinforcement shall not be straightened or rebent in a manner which will injure the material. Bars with kinks or bends not shown shall not be used. All bars shall be bent cold, unless otherwise permitted by the ENGINEER. No bars partially embedded in concrete shall be field-bent except as shown or specifically permitted by the ENGINEER.
- D. Couplers which are located at a joint face shall be a type which can be set either flush or recessed from the face as shown. The couplers shall be sealed during concrete placement to completely eliminate concrete or cement paste from entering. Couplers intended for future connections shall be recessed a minimum of 1/2 inch from the concrete surface. After the concrete is placed, the coupler shall be plugged with plastic plugs which have an O-ring seal and the recess filled with sealant to prevent any contact with water or other corrosive materials. Threaded couplers shall be plugged .
- E. Unless noted otherwise, mechanical coupler spacing and capacity shall match the spacing and capacity of the reinforcing shown for the adjacent section.

### 3.6 CLEANING AND PROTECTION

- A. Reinforcement steel shall at all times be protected from conditions conducive to corrosion until concrete is placed around it.
- B. The surfaces of all reinforcement steel and other metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar and other foreign substances immediately before the concrete is placed. Where there is delay in depositing concrete, reinforcement shall be reinspected and, if necessary recleaned.

### 3.7 EMBEDMENT OF DRILLED REINFORCING STEEL DOWELS

- A. Hole Preparation
1. The hole diameter shall be as recommended by the epoxy manufacturer but shall be no larger than 0.25 inch greater than the diameter of the outer surface of the reinforcing bar deformations.
  2. The depth of the hole shall be as recommended by the epoxy manufacturer to fully develop the bar but shall not be less than 12 bar diameters, unless noted otherwise.
  3. The hole shall be drilled by methods which do not interfere with the proper bonding of epoxy.
  4. Existing reinforcing steel in the vicinity of proposed holes shall be located prior to drilling. The location of holes to be drilled shall be adjusted to avoid drilling through or nicking any existing reinforcing bars.

5. The hole shall be blown clean with clean, dry compressed air to remove all dust and loose particles.
6. Epoxy shall be injected into the hole through a tube placed to the bottom of the hole. The tube shall be withdrawn as epoxy is placed but kept immersed to prevent formation of air pockets. The hole shall be filled to a depth that insures that excess material will be expelled from the hole during dowel placement.
7. Dowels shall be twisted during insertion into the partially filled hole so as to guarantee full wetting of the bar surface with epoxy. The bar shall be inserted slowly enough to avoid developing air pockets.

- END OF SECTION -

## SECTION 03290 - JOINTS IN CONCRETE

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide joints in concrete, complete and in place, in accordance with the Contract Documents.
- B. Joints in concrete structures shall be the types defined below and will be permitted only where indicated, unless specifically accepted by the ENGINEER.

#### 1.2 TYPES OF JOINTS

- A. **Construction Joints:** When fresh concrete is placed against a hardened concrete surface, the joint between the two pours is called a construction joint. Unless otherwise indicated, joints in water bearing members shall be provided with a waterstop and/or sealant groove of the shape indicated. The surface of the first pour may also be required to receive a coating of bond breaker as indicated.
- B. **Contraction Joints:** Contraction joints are similar to construction joints except that the fresh concrete shall not bond to the hardened surface of the earlier pour, which shall be coated with a bond breaker. The slab reinforcement shall be stopped 4-1/2 inches from the joint; which is provided with a sleeve-type dowel, to allow shrinkage of the concrete of the later pour. Waterstop and/or sealant groove shall also be provided when indicated.
- C. **Expansion Joints:** To allow the concrete to expand freely, a space is provided between the two pours, and the joint shall be formed as indicated. The space is obtained by placing a filler joint material against the earlier pour, to act as a form for the later pour. Unless otherwise indicated, expansion joints in water bearing members shall be provided with a center-bulb type waterstop as indicated.
  - 1. Premolded expansion joint material shall be installed with the edge at the indicated distance below or back from finished concrete surface, and shall have a slightly tapered, dressed, and oiled wood strip secured to or placed at the edge thereof during concrete placement, which shall later be removed to form space for sealing material.
  - 2. The space so formed shall be filled with a joint sealant material as indicated below. In order to keep the two wall or slab elements in line the joint shall also be provided with a sleeve-type dowel as indicated.
- D. **Control Joints:** The function of the control joint is to provide a weaker plane in the concrete, where shrinkage cracks will probably occur. A groove, of the shape and dimensions indicated, is formed or saw-cut in the concrete. This groove is afterward filled with a joint sealant material.

#### 1.3 CONTRACTOR SUBMITTALS

- A. Furnish submittals in accordance with Section 01300 - Contractor Submittals.
- B. Shop Drawings
  - 1. Placement drawings showing the location and type of all joints for each structure.
  - 2. Certified test reports from the sealant manufacturer on the actual batch of material being supplied indicating compliance with requirements shall be furnished before the sealant is used on the job.
  - 3. Copies of Waterstop Welding Certification to be provided by manufacturer or authorized agent of manufacturer. Every person who is to be involved with waterstop installation is required to have individual Certification on file with ENGINEER, which states said individuals are certified and trained to install waterstop per manufacturer's recommendations and specifications.
  - 4. Manufacturer's information demonstrating compliance of the following with indicated requirements:
    - a. Bearing Pad
    - b. Neoprene Sponge
    - c. Preformed Joint Filler
    - d. Backing Rod
    - e. Bond Breaker
    - f. Waterstop
    - g. Slip Dowels
    - h. PVC Tubing

C. Samples

- 1. Prior to production of the material required under this contract, qualification samples of waterstops shall be submitted which represent in all respects the material proposed. Such samples shall consist of extruded or molded sections of each size or shape to be used. The balance of the material to be used under this contract shall not be produced until after the ENGINEER has reviewed the qualification samples.

- D. **Certificates:** Written certification from the manufacturer as an integral part of the shipping form, to show that all of the material shipped to this project meets or exceeds the physical property requirements of the Contract Documents. Supplier certificates are not acceptable.

1.4 QUALITY ASSURANCE

- A. **Waterstop Inspection:** It is required that all waterstop field joints shall be subject to rigid inspection, and no such WORK shall be scheduled or started without having made prior arrangements with the ENGINEER for the required inspections. Not less than 24 hours notice shall be given for scheduling such

inspections.

- B. Field joints in waterstops shall be subject to rigid inspection for misalignment, bubbles, inadequate bond, porosity, cracks, offsets, and other defects which would reduce the potential resistance of the material to water pressure at any point. Defective joints shall be replaced with material which passes inspection; faulty material shall be removed from the Site and disposed of at no increase in cost to the OWNER.
- C. The following waterstop defects represent a partial list of defects which shall be grounds for rejection:
  - 1. Offsets at joints greater than 1/16-inch or 15 percent of material thickness, at any point, whichever is less.
  - 2. Exterior crack at joint, due to incomplete bond, which is deeper than 1/16-inch or 15 percent of material thickness, at any point, whichever is less.
  - 3. Any combination of offset or exterior crack which will result in a net reduction in the cross section of the waterstop in excess of 1/16-inch or 15 percent of material thickness at any point, whichever is less.
  - 4. Misalignment of joint which results in misalignment of the waterstop in excess of 1/2-inch in 10 feet.
  - 5. Porosity in the welded joint as evidenced by visual inspection.
  - 6. Bubbles or inadequate bonding which can be detected with a penknife test. (If, while prodding the entire joint with the point of a pen knife, the knife breaks through the outer portion of the weld into a bubble, the joint shall be considered defective.)
  - 7. Visible signs of separation when the cooled splice is bent by hand at any sharp angle.
  - 8. Any evidence of burned material.
- D. **PVC Waterstop Samples:** Prior to use of the waterstop material in the field, a sample of a prefabricated (shop made fitting) mitered cross and a tee constructed of each size or shape of material to be used shall be submitted. These samples shall be prefabricated (shop made fitting) so that the material and workmanship represent in all respects the fittings to be provided. Field samples of prefabricated (shop made fitting) fittings (crosses, tees, etc.) will also be selected at random by the ENGINEER for testing by a laboratory at the OWNER's expense. When tested, tensile strength across the joints shall be at least 1120 psi.
- E. **Construction Joint Sealant:** The CONTRACTOR shall prepare adhesion and cohesion test specimens as required herein, at intervals of 5 working days while sealants are being installed.

- F. The sealant material shall show no signs of adhesive or cohesive failure when tested in accordance with the following procedure in laboratory and field tests:
1. Sealant specimen shall be prepared between 2 concrete blocks (1-inch by 2-inch by 3-inch). Spacing between the blocks shall be 1-inch. Coated spacers (2-inch by 1-1/2-inch by 1/2-inch) shall be used to insure sealant cross-sections of 1/2-inch by 2 inches with a width of 1-inch.
  2. Sealant shall be cast and cured according to manufacturer's recommendations except that curing period shall be not less than 24 hours.
  3. Following curing period, the gap between blocks shall be widened to 1-1/2-inch. Spacers shall be used to maintain this gap for 24 hours prior to inspection for failure.

#### 1.5 SPECIAL WARRANTY REQUIREMENTS

- A. The CONTRACTOR shall furnish a 5-year written warranty of the entire sealant installation against faulty and/or incompatible materials and workmanship, together with a statement that it agrees to repair or replace, to the satisfaction of the OWNER, any such defective areas which become evident within said 5-year guarantee period.

## PART 2 -- PRODUCTS

### 2.1 GENERAL

- A. Joint materials shall be listed as compliant with NSF Standard 61.

### 2.2 WATERSTOPS

- A. **PVC Waterstops:** Waterstops shall be extruded from an elastomeric polyvinyl chloride compound containing the plasticizers, resins, stabilizers, and other materials necessary to meet the requirements of this Section. No reclaimed or scrap material shall be used. The CONTRACTOR shall obtain from the waterstop manufacturer and shall furnish to the ENGINEER for review, current test reports and a written certification of the manufacturer that the material to be shipped to the job meets the physical requirements as outlined in the U.S. Army Corps of Engineers Specification CRD-C572-PVC. At no place shall the thickness of flat strip waterstops, including the center bulb type, be less than 3/8-inch. Waterstop shall be provided with factory installed hog rings at 12 inches on centers along the waterstop.
- B. **Waterstop Testing Requirements:** When tested in accordance with the test standards, the waterstop material shall meet or exceed the following requirements:

| <u>Physical Property, Sheet Material</u> | <u>Value</u> | <u>ASTM Std.</u> |
|--|--------------|------------------|
| Tensile Strength-min (psi)               | 2000         | D638, Type IV    |
| Ultimate Elongation-min (percent)        | 350          | D638, Type IV    |
| Low Temp Brittleness-max (degrees F)     | -35          | D746             |
| Stiffness in Flexure-min (psi)           | 600          | D747             |

#### **Accelerated Extraction (CRD-C572)**

|                                   |      |               |
|-----------------------------------|------|---------------|
| Tensile Strength-min (psi)        | 1500 | D638, Type IV |
| Ultimate Elongation-min (percent) | 300  | D638, Type IV |

#### **Effect of Alkalies (CRD-C572)**

|                              |                      |       |
|------------------------------|----------------------|-------|
| Change in Weight (percent)   | plus 0.25/minus 0.10 | ----- |
| Change in Durometer, Shore A | plus and minus 5     | D2240 |

#### **Finish Waterstop**

|                                   |      |               |
|-----------------------------------|------|---------------|
| Tensile Strength-min (psi)        | 1400 | D638, Type IV |
| Ultimate Elongation-min (percent) | 280  | D638, Type IV |

### **2.3 JOINT SEALANT FOR WATER BEARING JOINTS**

- A. Joint sealant shall be polyurethane polymer designed for bonding to concrete which is continuously submerged in water. No material will be acceptable which has an unsatisfactory history as to bond or durability when used in the joints of water retaining structures.
- B. Joint sealant material shall meet the following requirements (73 degrees F and 5percent R.H.):

|   |   |
|---|---|
| Work Life   | 45 - 180 minutes                            |
| Time to Reach 20 Shore "A" Hardness<br>(at 77 degrees F, 200 gr quantity) | 24 hours, maximum                           |
| Ultimate Hardness (ASTM D 2240)   | 20 - 45 Shore "A"                           |
| Tensile Strength (ASTM D 412)   | 175 psi, minimum                            |
| Ultimate Elongation (ASTM D 412)  | 400 percent, minimum                        |
| Tear Resistance (Die C, ASTM D 624)                                       | 75 pounds per inch of thickness,<br>minimum |
| Color   | Light Gray                                  |

- C. Polyurethane sealants for waterstop joints in concrete shall conform to the following requirements:
1. Sealant shall be 2-part polyurethane with the physical properties of the cured sealant conforming to or exceeding the requirements of ANSI/ASTM C 920 or Federal Specification TT-S-0227 E(3) - Sealing Compound, Elastomeric Type, Multicomponent, for Caulking, Sealing, and Glazing Buildings and Other Structures, for 2-part material, as applicable.
  2. For vertical joints and overhead horizontal joints, only "non-sag" compounds shall be used; all such compounds shall conform to the requirements of ANSI/ASTM C 920 Class 25, Grade NS, or Federal Specification TT-S-0227 E(3), Type II, Class A.
  3. For plane horizontal joints, the self-leveling compounds which meet the requirements of ANSI/ASTM C 920 Class 25, Grade P, or Federal Specification TT-S-0227 E(3), Type I shall be used. For joints subject to either pedestrian or vehicular traffic, a compound providing non-tracking characteristics, and having a Shore "A" hardness range of 35 to 45, shall be used.
  4. Primer materials, if recommended by the sealant manufacturer, shall conform to the printed recommendations of the manufacturer.
- D. Sealants for non-waterstop joints in concrete shall conform to Section 07920 - Sealants and Caulking.

## 2.4 JOINT MATERIALS

- A. **Bearing Pad:** Bearing pad shall be neoprene conforming to ASTM D 2000 - Standard Classification System for Rubber Products in Automotive Applications, BC 420, 40 durometer hardness unless otherwise indicated.
- B. **Neoprene Sponge:** Sponge shall be neoprene, closed-cell, expanded, conforming to ASTM D 1056 - Flexible Cellular Materials - Sponge or Expanded Rubber, type 2C5-E1.
- C. Joint Filler
1. Joint filler for expansion joints in waterholding structures shall be neoprene conforming to ASTM D1056, type 2C5-E1.
  2. Joint filler material in other locations shall be of the preformed non-extruding type joint filler constructed of cellular neoprene sponge rubber or polyurethane of firm texture. Bituminous fiber type will not be permitted. All non-extruding and resilient-type preformed expansion joint fillers shall conform to the requirements and tests set forth in ASTM D 1752 - Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction, for Type I, except as otherwise indicated.



## 2.5 BACKING ROD

- A. Backing rod shall be an extruded closed-cell, polyethylene foam rod. The material shall be compatible with the joint sealant material and shall have a tensile strength of not less than 40 psi and a compression deflection of approximately 25 percent at 8 psi. The rod shall be 1/8-inch larger in diameter than the joint width except that a one-inch diameter rod shall be used for a 3/4-inch wide joint.

## 2.6 Not Used.

## 2.7 HYDROPHILIC WATERSTOP

- A. Hydrophilic waterstop shall be the type which expands in the presence of water to form a watertight joint seal without damaging the concrete in which it is cast.
- B. Waterstop shall be manufactured from chloroprene rubber and modified chloroprene rubber with hydrophilic properties. Waterstop shall have a delay coating to inhibit initial expansion due to moisture present in fresh concrete. The minimum expansion ratio of modified chloroprene shall be not less than 2 to 1 volumetric change in distilled water at 70 degrees F (21 degrees C).

| <u>Physical Property, Chloroprene</u> | <u>Value</u>        | <u>ASTM Std.</u> |
|---------------------------------------|---------------------|------------------|
| Tensile Strength-min (psi)            | 1275                | D 412            |
| Ultimate Elongation-min (percent)     | 350                 | D 412            |
| Hardness, Shore A                     | 55 plus and minus 5 | D 2240           |

| <u>Physical Property, Modified Chloroprene</u> | <u>Value</u>        | <u>ASTM Std.</u> |
|--|---------------------|------------------|
| Tensile Strength-min (psi)                     | 300                 | D 412            |
| Ultimate Elongation-min (percent)              | 600                 | D 412            |
| Hardness, Shore A                              | 55 plus and minus 5 | D 2240           |

- C. Bonding agent for hydrophilic waterstop shall be the manufacturer's recommended adhesive for wet, rough concrete.

## 2.8 SLIP DOWELS

- A. Slip dowels in joints shall be smooth epoxy-coated bars, conforming to ASTM A 775 - Epoxy Coated Reinforcing Steel Bars.

## 2.9 PVC TUBING

- A. PVC tubing in joints shall be Sch. SDR 13.5, conforming to ASTM D 2241 - Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).

## **PART 3 -- EXECUTION**

### **3.1 GENERAL**

- A. Waterstops shall be embedded in the concrete across joints as indicated. Waterstops shall be fully continuous for the extent of the joint. Splices necessary to provide such continuity shall be accomplished in conformance to printed instructions of manufacturer of the waterstops. The CONTRACTOR shall take suitable precautions and means to support and protect the waterstops during the progress of the work and shall repair or replace at its own expense any waterstops damaged during the progress of the work. All waterstops shall be stored so as to permit free circulation of air around the waterstop material.
- B. When any waterstop is installed in the concrete on one side of a joint, while the other half or portion of the waterstop remains exposed to the atmosphere for more than 2 days, suitable precautions shall be taken to shade and protect the exposed waterstop from direct rays of the sun during the entire exposure and until the exposed portion of the waterstop is embedded in concrete.

### **3.2 SPLICES IN PVC WATERSTOPS**

- A. Splices in PVC waterstops shall be performed by heat sealing the adjacent waterstop sections in accordance with the manufacturer's printed recommendations. It is essential that:
  - 1. The material not be damaged by heat sealing.
  - 2. The splices have a tensile strength of not less than 80 percent of the unspliced material tensile strength.
  - 3. The continuity of the waterstop ribs and of its tubular center axis be maintained. No edge welding is allowed.
- B. Butt joints of the ends of 2 identical waterstop sections may be made while the material is in the forms.
- C. All joints with waterstops involving more than 2 ends to be jointed together, and all joints which involve an angle cut, alignment change, or the joining of 2 dissimilar waterstop sections shall be prefabricated (shop made fitting) prior to placement in the forms, allowing not less than 24-inch long strips of waterstop material beyond the joint. Upon being inspected and approved, such prefabricated (shop made fitting) waterstop joint assemblies shall be installed in the forms and the ends of the 24-inch strips shall be butt welded to the straight run portions of waterstop in place in the forms.
- D. Where a centerbulb waterstop intersects and is jointed with a non-centerbulb waterstop, care shall be taken to seal the end of the centerbulb, using additional PVC material if needed.

### 3.3 JOINT CONSTRUCTION

- A. **Setting Waterstops:** In order to eliminate faulty installation that may result in joint leakage, particular care shall be taken of the correct positioning of the waterstops during installation. Adequate provisions must be made to support and anchor the waterstops during the progress of the WORK and to insure the proper embedment in the concrete. The symmetrical halves of the waterstops shall be equally divided between the concrete pours at the joints. The center axis of the waterstops shall be coincident with the joint openings. Maximum density and imperviousness of the concrete shall be insured by thoroughly working it in the vicinity of all joints.
- B. In placing PVC waterstops in the forms, means shall be provided to prevent them from being folded over by the concrete as it is placed. Waterstops shall be held in place with light wire ties on 12-inch centers which shall be passed through hog rings at the edge of the waterstop and tied to the curtain of reinforcing steel. Horizontal waterstops, with their flat face in a vertical plane, shall be held in place with continuous supports to which the top edge of the waterstop shall be tacked. In placing concrete around horizontal waterstops, with their flat face in a horizontal plane, concrete shall be worked under the waterstops by hand so as to avoid the formation of air and rock pockets.
- C. In placing centerbulb waterstops in expansion joints, the centerbulb shall be centered on the joint filler material.
- D. Waterstop in vertical wall joints shall stop 6 inches from the top of the wall where such waterstop does not connect with any other waterstop and is not to be connected to a future concrete placement.
- E. **Joint Location:** Construction joints and other types of joints shall be provided where indicated. When not indicated, construction joints shall be provided at 25-foot maximum spacing for all concrete construction. Where joints are indicated spaced greater than 40 feet apart, additional joints shall be provided to maintain the 25-foot maximum spacing. The location of all joints, of any type, shall be submitted for acceptance by the ENGINEER.
- F. **Joint Preparation:** Special care shall be used in preparing concrete surfaces at joints where bonding between 2 sections of concrete is required. Unless otherwise indicated, such bonding will be required at all horizontal joints in walls. Surfaces shall be prepared in accordance with the requirements of Section 03300 - Cast-in-Place Concrete. Except on horizontal wall construction joints, wall to slab joints, or where otherwise indicated, at all joints where waterstops are required, the joint face of the first pour shall be coated with a bond breaker as indicated herein.
- G. **Retrofit Joint Preparation:** Existing surfaces to receive a retrofit waterstop shall be clean and free from any loose or foreign material. Surface shall be given a light sandblast or hydroblast finish to 1/8-inch amplitude prior to application of epoxy and waterstop.

- H. **Construction Joint Sealant:** Construction joints in water-bearing floor slabs, and elsewhere as indicated, shall be provided with tapered grooves which shall be filled with a construction joint sealant. The material used for forming the tapered grooves shall be left in the grooves until just before the grooves are cleaned and filled with joint sealant. After removing the forms from the grooves, all laitance and fins shall be removed, and the grooves shall be sand-blasted. The grooves shall be allowed to become thoroughly dry, after which they shall be blown out; immediately thereafter, they shall be primed, bond breaker tape placed in the bottom of the groove, and filled with the construction joint sealant. The primer shall be furnished by the sealant manufacturer. No sealant will be permitted to be used without a primer. Care shall be used to completely fill the sealant grooves. Areas designated to receive a sealant fillet shall be thoroughly cleaned, as outlined for the tapered grooves, prior to application of the sealant.
- I. The primer and sealant shall be placed strictly in accordance with the printed recommendations of the manufacturer, taking special care to properly mix the sealant prior to application. The sides of the sealant groove shall not be coated with bond breaker, curing compound, or any other substance which would interfere with proper bonding of the sealant. Sealant shall achieve final cure at least 7 days before the structure is filled with water.
- J. Sealant shall be installed by a competent waterproofing specialty contractor who has a successful record of performance in similar installations. Before work is commenced, the crew doing the WORK shall be instructed on the proper method of application by a representative of the sealant manufacturer.
- K. Thorough, uniform mixing of 2-part, catalyst-cured materials is essential; special care shall be taken to properly mix the sealer before its application. Before any sealer is placed, the CONTRACTOR shall arrange to have the crew doing the WORK carefully instructed on the proper method of mixing and application by a representative of the sealant manufacturer.
- L. Any joint sealant which fails to fully and properly cure after the manufacturer's recommended curing time for the conditions of the WORK hereunder, shall be completely removed; the groove shall be thoroughly sandblasted to remove all traces of the uncured or partially cured sealant and primer, and shall be re-sealed with the indicated joint sealant. Costs of such removal, joint treatment, re-sealing, and appurtenant work shall be paid by the CONTRACTOR.
- M. **Hydrophilic Waterstop**
1. Where a hydrophilic waterstop is called for in the Contract Documents, it shall be installed with the manufacturer's instructions and recommendations except as modified herein.
  2. When requested by the ENGINEER, the CONTRACTOR shall arrange for the manufacturer to furnish technical assistance in the field.
  3. Hydrophilic waterstop shall only be used where complete confinement by

concrete is provided. Hydrophilic waterstop shall not be used in expansion or contraction joints nor in the first 6 inches of any non-intersecting joint.

4. The hydrophilic waterstop shall be located as near as possible to the center of the joint and it shall be continuous around the entire joint. The minimum distance from the edge of the waterstop to the face of the member shall be 5 inches.
  5. Where the thickness of the concrete member to be placed on the hydrophilic waterstop is less than 12 inches, the waterstop shall be placed in grooves formed or ground into the concrete. The groove shall be at least 3/4 inch deep and 1-1/4 inches wide. When placed in the groove, the minimum distance from the edge of the waterstop to the face of the member shall be 2.5 inches.
  6. Where a hydrophilic waterstop is used in combination with PVC waterstop, the hydrophilic waterstop shall overlap the PVC waterstop for a minimum of 6 inches and shall be adhered to PVC waterstop with single component water-swelling sealant as recommended by manufacturer.
  7. The hydrophilic waterstop shall not be installed where the air temperature falls outside the manufacturer's recommended range.
  8. The concrete surface under the hydrophilic waterstop shall be smooth and uniform. The concrete shall be ground smooth if needed. Alternately, the hydrophilic waterstop shall be bonded to the surface using an epoxy grout which completely fills all voids and irregularities beneath the waterstop material. Prior to installation, the concrete surface shall be wire brushed to remove any laitance or other materials that may interfere with the bonding of epoxy.
  9. The hydrophilic waterstop shall be secured in place with concrete nails and washers at 12-inch maximum spacing. This shall be in addition to the adhesive recommended by the manufacturer.
- N. **Retrofit Waterstop:** Retrofit waterstops shall be set in a bed of epoxy over a sandblasted surface with stainless steel batten bars and 1/4-inch diameter stainless steel anchors at 6 inches on center, staggered, and in accordance with the manufacturer's written recommendations.

- END OF SECTION -

## SECTION 03300 - CAST-IN-PLACE CONCRETE

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials for concrete in accordance with the provisions of this Section and shall form, mix, place, cure, repair, finish, and do all other work as required to produce finished concrete, in accordance with the requirements of the Contract Documents.
- B. The following types of concrete are covered in this Section:
  - 1. Structural Concrete: Concrete to be used in all cases except where indicated otherwise in the Contract Documents.
  - 2. Sitework Concrete: Concrete to be used for curbs, gutters, catch basins, sidewalks, pavements, fence and guard post embedment, underground duct bank encasement and all other concrete appurtenant to electrical facilities unless otherwise indicated.
  - 3. Lean Concrete: Concrete to be used for thrust blocks, pipe trench cut-off blocks and cradles that are detailed on the Drawings as unreinforced. Lean concrete shall be used as protective cover for dowels intended for future connection.
- C. The term "hydraulic structure" used in these specifications means environmental engineering concrete structures for the containment, treatment, or transmission of water, wastewater, or other fluids.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

##### A. Federal Specifications:

UU-B-790A (1) (2) Building Paper, Vegetable Fiber  
(Kraft, Waterproofed, Water Repellant and Fire Resistant)

##### B. Commercial Standards:

|           |  |
|-----------|--|
| ACI 117   | Standard Tolerances for Concrete Construction and Materials              |
| ACI 214   | Recommended Practice for Evaluation of Strength Test Results of Concrete |
| ACI 301   | Structural Concrete for Buildings  |
| ACI 306.1 | Cold Weather Concreting  |
| ACI 309   | Consolidation of Concrete  |
| ACI 315   | Details and Detailing of Concrete Reinforcement                          |
| ACI 318   | Building Code Requirements for Reinforced Concrete                       |
| ASTM C 31 | Practices for Making and Curing Concrete Test                            |
| ASTM C 33 | Concrete Aggregates  |
| ASTM C 39 | Test Method for Compressive Strength of Cylindrical                      |

|             |   |
|-------------|---|
|             | Concrete Specimens  |
| ASTM C 94   | Ready-Mixed Concrete  |
| ASTM C 136  | Method for Sieve Analysis of Fine and Coarse Aggregates   |
| ASTM C 143  | Test Method for Slump of Hydraulic Cement Concrete  |
| ASTM C 150  | Portland Cement   |
| ASTM C 156  | Test Methods for Water Retention by Concrete Curing Materials   |
| ASTM C 157  | Test Method for Length Change of Hardened Hydraulic Cement Mortar and Concrete  |
| ASTM C 192  | Practice for Making and Curing Concrete Test Specimens in the Laboratory  |
| ASTM C 260  | Air-Entraining Admixtures for Concrete  |
| ASTM C 309  | Liquid Membrane-Forming Compounds for Curing Concrete   |
| ASTM C 494  | Chemical Admixtures for Concrete  |
| ASTM C 1077 | Practice for Laboratories Testing Concrete and Concrete Aggregates for use in Construction & Criteria for Laboratory Evaluation |
| ASTM D 448  | Classification for Sizes of Aggregate for Road and Bridge Construction  |
| ASTM D 2419 | Test Method for Sand Equivalent Value of Soils and Fine Aggregate   |
| ASTM E 119  | Method for Fire Tests of Building Construction and Materials  |
| ASTM E 1643 | Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs    |
| ASTM E 1745 | Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs                                   |

### 1.3 CONTRACTOR SUBMITTALS

- A. Mix Designs: Prior to beginning the WORK and within 14 days of the notice to proceed, the CONTRACTOR shall submit to the ENGINEER, for review, preliminary concrete mix designs which shall show the proportions and gradations of all materials proposed for each class and type of concrete specified herein in accordance with Section 01300 - Contractor Submittals. The mix designs shall be checked by an independent testing laboratory acceptable to the ENGINEER. All costs related to such checking shall be borne by the CONTRACTOR. Since laboratory trial batches require 35 calendar days to complete, the CONTRACTOR may consider testing more than one mix design for each class of concrete.
- B. Delivery Tickets: Where ready-mix concrete is used, the CONTRACTOR shall furnish delivery tickets at the time of delivery of each load of concrete. Each ticket shall show the state certified equipment used for measuring and the total quantities, by weight, of cement, sand, each class of aggregate, admixtures, and the amounts of water in the aggregate added at the batching plant, and the amount allowed to be added at the site for the specific design mix. In addition, each ticket shall state the mix number, total yield in cubic yards, and the time of day, to the nearest minute, corresponding to the times when the batch was dispatched, when it left the plant, when it arrived at the site, when unloading began, and when unloading was finished.

- C. Furnish the following submittals in accordance with ACI 301:
  - 1. Mill tests for cement.
  - 2. Admixture certification. Chloride ion content must be included.
  - 3. Aggregate gradation test results and certification.
  - 4. Materials and methods for curing.

#### 1.4 CONCRETE CONFERENCE

- A. A meeting to review the detailed requirements of the CONTRACTOR's proposed concrete design mixes and to determine the procedures for producing proper concrete construction shall be held no later than 14 days after the notice to proceed.
- B. All parties involved in the concrete work shall attend the conference, including the following at a minimum:

- CONTRACTOR's representative
  - Testing laboratory representative
  - Concrete subcontractor
  - Reinforcing steel subcontractor and detailer
  - Concrete supplier
  - Admixture manufacturer's representative

- C. The conference shall be held at a mutually agreed upon time and place. The ENGINEER shall be notified no less than 5 days prior to the date of the conference.

#### 1.5 QUALITY ASSURANCE

##### A. General

- 1. Tests on component materials and for compressive strength and shrinkage of concrete shall be performed as indicated herein. Test for determining slump will be in accordance with the requirements of ASTM C 143.
- 2. Testing for aggregate shall include sand equivalence, reactivity, organic impurities, abrasion resistance, and soundness, according to ASTM C 33.
- 3. The cost of all laboratory tests on cement, aggregates, and concrete, will be borne by the OWNER. However, the CONTRACTOR shall pay the cost of any additional tests and investigation on WORK performed which does not meet the specifications. The laboratory will meet or exceed the requirements of ASTM C 1077.
- 4. Concrete for testing shall be supplied by the CONTRACTOR, and the CONTRACTOR shall assist the ENGINEER in obtaining samples, and



disposal and cleanup of excess material.

B. Field Compression Tests:

1. Compression test specimens will be taken during construction from the first placement of each class of concrete specified herein and at intervals thereafter as selected by the ENGINEER to insure continued compliance with these specifications. Each set of test specimens will be a minimum of 5 cylinders.
2. Compression test specimens for concrete shall be made in accordance with section 9.2 of ASTM C 31. Specimens shall be 6-inch diameter by 12-inch high cylinders.
3. Compression tests shall be performed in accordance with ASTM C 39. One test cylinder will be tested at 7 days and 2 at 28 days. The remaining cylinders will be held to verify test results, if needed.

C. Evaluation and Acceptance of Concrete:

1. Evaluation and acceptance of the compressive strength of concrete will be according to the requirements of ACI 318, Chapter 5 "Concrete Quality," and as indicated herein.
2. A statistical analysis of compression test results will be performed according to the requirements of ACI 214. The standard deviation of the test results shall not exceed 640 psi, when ordered at equivalent water content as estimated by slump.
3. If any concrete fails to meet these requirements, immediate corrective action shall be taken to increase the compressive strength for all subsequent batches of the type of concrete affected.
4. When the standard deviation of the test results exceeds 640 psi, the average strength for which the mix is designed shall be increased by an amount necessary to satisfy the statistical requirement that the probability of any test being more than 500 psi below or the average of any 3 consecutive tests being below the required compressive strength is 1 in 100. The required average strength shall be calculated by Criterion No. 3 of ACI 214 using the actual standard of deviation.
5. All concrete which fails to meet the ACI requirements and these specifications, is subject to removal and replacement.

D. Shrinkage Tests:

1. Drying shrinkage tests shall be performed for the trial batch indicated in the Paragraph in Part 2 entitled "Trial Batch and Laboratory Tests," the first placement of each class of concrete, and during construction to insure continued compliance with these Specifications.

2. Drying shrinkage specimens shall be 4-inch by 4-inch by 11-inch prisms with an effective gage length of 10 inches; fabricated, cured, dried, and measured in accordance with ASTM C 157 modified as follows: specimens shall be removed from molds at an age of 23 plus or minus 1 hours after trial batching, shall be placed immediately in water at 70 degrees F plus or minus 3 degrees F for at least 30 minutes, and shall be measured within 30 minutes thereafter to determine original length and then submerged in saturated lime water at 73 degrees F plus or minus 3 degrees F. Measurement to determine expansion expressed as a percentage of original length shall be made at age 7 days. This length at age 7 days shall be the base length for drying shrinkage calculations ("0" days drying age). Specimens then shall be stored immediately in a humidity control room maintained at 73 degrees F plus or minus 3 degrees F and 50 percent plus or minus 4 percent relative humidity for the remainder of the test. Measurements to determine shrinkage expressed as percentage of base length shall be made and reported separately for 7, 14, 21, and 28 days of drying after 7 days of moist curing.
  3. The drying shrinkage deformation of each specimen shall be computed as the difference between the base length (at "0" days drying age) and the length after drying at each test age. The average drying shrinkage deformation of the specimens shall be computed to the nearest 0.0001 inch at each test age. If the drying shrinkage of any specimen departs from the average of that test age by more than 0.0004-inch, the results obtained from that specimen shall be disregarded. Results of the shrinkage test shall be reported to the nearest 0.001 percent of shrinkage. Compression test specimens shall be taken in each case from the same concrete used for preparing drying shrinkage specimens. These tests shall be considered a part of the normal compression tests for the project. Allowable shrinkage limitations shall be as indicated in Part 2 below.
- E. Construction Tolerances: The CONTRACTOR shall set and maintain concrete forms and perform finishing operations to ensure that the completed WORK is within tolerances. Surface defects and irregularities are defined as finishes and are to be distinguished from tolerances. Tolerance is the permissible variation from lines, grades, or dimensions indicated on the Drawings. Where tolerances are not stated in the specifications, permissible deviations will be in accordance with ACI 117.
1. The following construction tolerances apply to finished walls and slab unless otherwise indicated:

| Item   | Tolerance   |
|--|---|
| Variation of the constructed linear outline from the established position in plan. | In 10 feet: 1/4-inch;<br>In 20 feet or more: 1/2 inch |
| Variation from the level or from the grades shown.                                 | In 10 feet: 1/4-inch;<br>In 20 feet or more: 1/2 inch |

|   |   |
|---|---|
| Variation from the plumb  | In 10 feet: 1/4-inch;<br>In 20 feet or more: ½ inch |
| Variation in the thickness of slabs and walls.                  | Minus 1/2-inch;<br>Plus ½ - inch                    |
| Variation in the locations and sizes of slabs and wall openings | Plus or minus 1/4-inch                              |

## **PART 2 – PRODUCTS**

### **2.1 CONCRETE MATERIALS**

#### **A. General:**

1. All materials shall be classified as acceptable for potable water use according to ASTM C 1602.
2. Cement for concrete which will contact potable water shall not be obtained from kilns which burn metal rich hazardous waste fuel.
3. Materials shall be delivered, stored, and handled so as to prevent damage by water or breakage. Cement reclaimed from cleaning bags or leaking containers shall not be used. All cement shall be used in the sequence of receipt of shipments.

#### **B. All materials shall comply with the requirements of Sections 201, 203, and 204 of ACI 301, as applicable.**

#### **C. Storage of materials shall conform to the requirements of Section 205 of ACI 301.**

#### **D. Materials for concrete shall conform to the following requirements:**

1. Cement shall be standard brand Portland cement conforming to ASTM C 150 for Type II or Type V, including Table 2 optional requirements. A minimum of 85 percent of cement by weight shall pass a 325 screen. A single brand of cement shall be used throughout the work, and prior to its use, the brand shall be acceptable to the ENGINEER. The cement shall be suitably protected from exposure to moisture until used. Cement that has become lumpy shall not be used. Sacked cement shall be stored in such a manner so as to permit access for inspection and sampling. Certified mill test reports, including fineness, for each shipment of cement to be used shall be submitted to the ENGINEER, if requested, regarding compliance with these Specifications.
2. Water for mixing and curing shall be potable, clean, and free from objectionable quantities of silty organic matter, alkali, salts, and other impurities. The water shall be considered potable, for the purposes of this Section only, if it meets the requirements of the local governmental agencies. Agricultural water with high total dissolved solids (over 1000 mg/l TDS) shall

not be used.

3. Aggregates shall be obtained from pits acceptable to the ENGINEER, shall be non-reactive, and shall conform to ASTM C 33. Maximum size of coarse aggregate shall be as indicated herein. Lightweight sand for fine aggregate will not be permitted.
  - a. Coarse aggregates shall consist of clean, hard, durable gravel, crushed gravel, crushed rock, or a combination thereof. The coarse aggregates shall be prepared and handled in two or more size groups for combined aggregates with a maximum size greater than 3/4-inch. When the aggregates are proportioned for each batch of concrete, the two size groups shall be combined. See the Paragraph in Part 2 entitled "Trial Batch and Laboratory Tests" for the use of the size groups.
  - b. Fine aggregates shall be natural sand or a combination of natural and manufactured sand that are hard and durable. When tested in accordance with ASTM D 2419, the sand equivalency shall not be less than 75 percent for an average of three samples, nor less than 70 percent for an individual test. Gradation of fine aggregate shall conform to ASTM C 33. The fineness modulus of sand used shall not be over 3.00.
  - c. Combined aggregates shall be well graded from coarse to fine sizes and shall be uniformly graded between screen sizes to produce a concrete that has optimum workability and consolidation characteristics. Where a trial batch is required for a mix design, the final combined aggregate gradations will be established during the trial batch process.
  - d. When tested in accordance with ASTM C 33, the ratio of silica released to reduction in alkalinity shall not exceed 1.0.
  - e. When tested in accordance with ASTM C 33, the fine aggregate shall produce a color in the supernatant liquid no darker than the reference standard color solution.
  - f. When tested in accordance with ASTM C 33, the coarse aggregate shall show a loss not exceeding 42 percent after 500 revolutions, or 10.5 percent after 100 revolutions.
  - g. When tested in accordance with ASTM C 33, the loss resulting after five cycles shall not exceed 10 percent for fine or coarse aggregate when using sodium sulfate.
4. Ready-mix concrete shall conform to the requirements of ASTM C 94.
5. Admixtures: All admixtures shall be compatible and be furnished by a single manufacturer capable of providing qualified field service representation. Admixtures shall be used in accordance with manufacturer's recommendations. If the use of an admixture is producing an inferior end

result, the CONTRACTOR shall discontinue use of the admixture. Admixtures shall not contain thiocyanates nor more than 0.05 percent chloride ion, and shall be non-toxic after 30 days. Liquid admixtures requiring dosages greater than one-half gallon per cubic yard shall be considered to be water when determining the total amount of free water as specified in Section 2.6, "Consistency."

- a. Air-entraining agent meeting the requirements of ASTM C 260 shall be used. Sufficient air-entraining agent shall be used to provide a total air content of 3 to 5 percent. The OWNER reserves the right, at any time, to sample and test the air-entraining agent. The air-entraining agent shall be added to the batch in a portion of the mixing water. The solution shall be batched by means of a mechanical batcher capable of accurate measurement. Air content shall be tested at the point of placement. Air entraining agent shall be on the approved list of chemical admixtures by the California Department of Transportation. Other admixtures will be considered when accompanied by a certificate of compliance that verifies the product complies with the appropriate ASTM designations and local environmental requirements..
- b. Set controlling and water reducing admixtures: Admixtures may be added at the CONTRACTOR's option, subject to the ENGINEER's approval, to control the set, effect water reduction, and increase workability. The addition of an admixture shall be at the CONTRACTOR's expense. Concrete containing an admixture shall be first placed at a location determined by the ENGINEER. Admixtures shall conform to the requirements of ASTM C 494. The required quantity of cement shall be used in the mix regardless of whether or not an admixture is used.

(1) Concrete shall not contain more than one water reducing admixture.

(2) Set controlling admixture may be either with or without water-reducing properties. Where the air temperature at the time of placement is expected to be consistently greater than 80 degrees F, shall be used. Where the air temperature at the time of placement is expected to be consistently less than 40 degrees F, a non-corrosive set accelerating admixture such as products listed on the California Department of Transportation's approved list of chemical admixtures or products that are accompanied by a certificate of compliance that verifies product compliance with ASTM designations.; or equal shall be used.

(3) Normal range water reducer shall conform to ASTM C 494, Type A. Products listed on the California Department of Transportation's approved list of chemical admixtures or products that are accompanied by a certificate of compliance that verifies product compliance with ASTM designations shall be used. . The quantity of admixture used and the method of mixing shall be in accordance with the

Manufacturer's instructions and recommendations.

(4) High range water reducer shall conform to ASTM C 494, Type F or G. Products listed on the California Department of Transportation's approved list of chemical admixtures or products that are accompanied by a certificate of compliance that verifies product compliance with ASTM designations shall be used. . High range water reducer shall be measured and dispensed as recommended by the manufacturer. Water reducer shall be considered as part of the mixing water when calculating water cement ratio.

(5) If the high range water reducer is added to the concrete at the job site, it may be used in conjunction with the same water reducer added at the batch plant. Concrete shall have a slump of 3 inches plus or minus 1/2-inch prior to adding the high range water reducing admixture at the job site. The high range water reducing admixture shall be accurately measured and pressure injected into the mixer as a single dose by an experienced technician. A standby system shall be provided and tested prior to each day's operation of the job site system.

(6) Concrete shall be mixed at mixing speed for a minimum of 30 mixer revolutions after the addition of the high range water reducer.

(7) Flyash: Flyash shall not be used.

## 2.2 CURING MATERIALS

A. Materials for curing concrete as indicated herein shall conform to the following requirements and ASTM C 309:

1. All curing compounds shall be white pigmented and resin based. Sodium silicate compounds shall not be allowed. Water based resin curing compounds shall be used only where local air quality regulations prohibit the use of a solvent based compound.
2. Polyethylene sheet for use as concrete curing blanket shall be white and shall have a nominal thickness of 6 mils. The loss of moisture when determined in accordance with the requirements of ASTM C 156 shall not exceed 0.055 grams per square centimeter of surface.
3. Polyethylene-coated waterproof paper sheeting for use as concrete curing blanket shall consist of white polyethylene sheeting free of visible defects, uniform in appearance, have a nominal thickness of 2 mils, and be permanently bonded to waterproof paper conforming to the requirements of Federal Specification UU-B-790A (1) (2). The loss of moisture, when determined in accordance with the requirements of ASTM C 156, shall not exceed 0.055 gram per square centimeter of surface.
4. Polyethylene-coated burlap for use as concrete curing blanket shall be 4-mil thick, white opaque polyethylene film impregnated or extruded into one side

of the burlap. Burlap shall weigh not less than 9 ounces per square yard. The loss of moisture, when determined in accordance with the requirements of ASTM C 156, shall not exceed 0.055 grams per square centimeter of surface.

5. Curing mats for use in Curing Method 6 as indicated below, shall be heavy shag rugs or carpets or cotton mats quilted at 4 inches on center. Curing mats shall weigh a minimum of 12 ounces per square yard when dry.
6. Evaporation retardant shall be a material such as Confilm as manufactured by Master Builders; Eucobar as manufactured by Euclid Chemical Company; E-CON as manufactured by L & M Construction Chemicals, Inc. or equal.

## 2.3 NON-WATERSTOP JOINT MATERIALS

- A. Materials for non-waterstop joints in concrete shall conform to the following requirements:
  1. Preformed joint filler shall be a non-extruding, neoprene sponge or polyurethane type conforming to Section 03290 - Joints in Concrete.
  2. Elastomeric joint sealer shall conform to the requirements of Section 07920 - Sealants and Caulking.
  3. Mastic joint sealer shall be a material that does not contain evaporating solvents; that will tenaciously adhere to concrete surfaces; that will remain permanently resilient and pliable; that will not be affected by continuous presence of water and will not in any way contaminate potable water; and that will effectively seal the joints against moisture infiltration even when the joints are subject to movement due to expansion and contraction. The sealer shall be composed of special asphalts or similar materials blended with lubricating and plasticizing agents to form a tough, durable mastic substance containing no volatile oils or lubricants and shall be capable of meeting the test requirements set forth below, if testing is required by the ENGINEER.

## 2.4 MISCELLANEOUS MATERIALS

- A. Dampproofing agent shall be an asphalt emulsion.
- B. Bonding agents shall be epoxy adhesives conforming to the following:
  1. For bonding freshly-mixed, plastic concrete to hardened concrete.
  2. For bonding hardened concrete or masonry to steel.
- C. Vapor Retarder: Vapor retarder shall be 30 mil thick, Class A, 3 ply, nylon or polyester cord reinforced high density polyethylene sheet laminated to a non-woven geotextile fabric, in accordance with ASTM E 1745.
- D. Granular Material Above Vapor Retarder: Crushed stone, gravel, or sand with the

following size distribution and meeting the deleterious substance limits of ASTM C 33 for fine aggregates.

| <u>Sieve Size</u> | <u>Percentage Passing</u> |
|-------------------|---------------------------|
| 3/8-inch          | 100                       |
| 4.75 mm           | 85-100                    |
| No. 100           | 10 – 30                   |

- E. Seams in vapor retarder sheet shall be sealed with tape, adhesive, or other material as recommended by sheet manufacturer for the areas to be sealed and sheet material.

## 2.5 CONCRETE DESIGN REQUIREMENTS

- A. General: Concrete shall be composed of cement, admixtures, aggregates, and water of the qualities indicated. The exact proportions in which these materials are to be used for different parts of the work will be determined during the trial batch. In general, the mix shall be designed to produce a concrete capable of being deposited so as to obtain maximum density and minimum shrinkage, and, where deposited in forms, to have good consolidation properties and maximum smoothness of surface. The aggregate gradations shall be formulated to provide fresh concrete that will not promote rock pockets around reinforcing steel or embedded items. The proportions shall be changed whenever necessary or desirable to meet the required results. All changes shall be subject to review by the ENGINEER.
- B. Fine Aggregate Composition: In mix designs for structural concrete, the percentage of fine aggregate in total aggregate by weight, shall be as indicated in the following table.

| Fine Aggregate   |                 |
|------------------|-----------------|
| Fineness Modulus | Maximum Percent |
| 2.7 or less      | 41              |
| 2.7 to 2.8       | 42              |
| 2.8 to 2.9       | 43              |
| 2.9 to 3.0       | 44              |

For other concrete, the maximum percentage of fine aggregate of total aggregate, by weight, shall not exceed 50.

- C. Water-Cement Ratio and Compressive Strength: Concrete shall have the following minimum properties:



| <u>Type of Work</u>  | <u>Min 28-Day<br/>Compr.<br/>Strength<br/>(psi)</u> | <u>Max<br/>Size<br/>Aggregate<br/>(in)</u> | <u>Minimum<br/>Cement<br/>per cu yd<br/>(lbs)</u> | <u>Max W/C<br/>Ratio<br/>(by weight)</u> |
|--|---|--|---|--|
| <b>Structural Concrete:</b>  |   |  |   |  |
| Roof, floor slabs, columns,<br>walls and all other<br>concrete items not<br>specified elsewhere. | 4,000   | 1  | 564   | 0.45                                     |
| 12-inch and thicker walls,<br>slabs on grade and<br>footings. (optional)                         | 4,000   | 1-1/2                                      | 564   | 0.45                                     |
| Pea Gravel Mix.  | 4,000   | 3/8  | 752   | 0.40                                     |
| <b>Other Concretes:</b>  |   |  |   |  |
| Sitework concrete  | 3,000   | 1  | 470   | 0.50                                     |
| Lean concrete  | 2,000   | 1  | 376   | 0.60                                     |

- D. Adjustments to Mix Design: The mixes shall be changed whenever such change is necessary or desirable to secure the required strength, density, workability, and surface finish, and the CONTRACTOR shall be entitled to no additional compensation because of such changes.

## 2.6 CONSISTENCY

- A. The quantity of water in a batch of concrete shall be just sufficient, with a normal mixing period, to produce a concrete which can be worked properly into place without segregation and which can be compacted by vibratory methods to give the desired density, impermeability, and smoothness of surface. The quantity of water shall be changed as necessary, with variations in the nature or moisture content of the aggregates, to maintain uniform production of a desired consistency. The consistency of the concrete in successive batches shall be determined by slump tests in accordance with ASTM C 143. The slumps shall be as follows:

| <u>Part of Work</u>                      | <u>Slump (in)</u>               |
|--|---------------------------------|
| All concrete, unless indicated otherwise | 3 inches plus or minus 1 inch   |
| With high range water reducer added      | 7 inches plus or minus 2 inches |
| Pea gravel mix                           | 7 inches plus or minus 2 inches |
| Ductbanks                                | 5 inches plus or minus 1 inch   |

## 2.7 TRIAL BATCH AND LABORATORY TESTS

- A. Before placing any concrete, a testing laboratory selected by the ENGINEER shall prepare a trial batch of each class of structural concrete, based on the preliminary concrete mixes submitted by the CONTRACTOR. During the trial batch the aggregate proportions may be adjusted by the testing laboratory using the two coarse aggregate size ranges to obtain the required properties. If one size range produces an acceptable mix, a second size range need not be used. Such adjustments will be considered refinements to the mix design and will not be the basis for extra compensation to the CONTRACTOR. All concrete shall conform to the requirements of this Section, whether the aggregate proportions are from the CONTRACTOR's preliminary mix design, or whether the proportions have been adjusted during the trial batch process. The trial batch shall be prepared using the aggregates, cement and admixture proposed for the project. The trial batch materials shall be of a quantity such that the testing laboratory can obtain 3 drying shrinkage, and 6 compression test specimens from each batch.
- B. The determination of compressive strength will be made by testing 6-inch diameter by 12-inch high cylinders; made, cured and tested in accordance with ASTM C 192 and ASTM C 39. Three compression test cylinders will be tested at 7 days and 3 at 28 days. The average compressive strength for the 3 cylinders tested at 28 days for any given trial batch shall not be less than 125 percent of the specified compressive strength.
- C. A sieve analysis of the combined aggregate for each trial batch shall be performed according to the requirements of ASTM C 136. Values shall be given for percent passing each sieve.

## 2.8 SHRINKAGE LIMITATION

- A. The maximum concrete shrinkage for specimens cast in the laboratory from the trial batch, as measured at 21-day drying age or at 28-day drying age shall be 0.036 percent or 0.042 percent, respectively. Standard deviation will not be considered. The CONTRACTOR shall only use a mix design for construction that has first met the trial batch shrinkage requirements. Shrinkage limitations apply only to structural concrete.
- B. The maximum concrete shrinkage for specimens cast in the field shall not exceed the trial batch maximum shrinkage requirement by more than 25 percent.

- C. If the required shrinkage limitation is not met during construction, the CONTRACTOR shall take any or all of the following actions for securing the specified shrinkage requirements. These actions may include changing the source or aggregates, cement and/or admixtures; reducing water content; washing of aggregate to reduce fines; increasing the number of construction joints; modifying the curing requirements; or other actions designed to minimize shrinkage or the effects of shrinkage.

## 2.9 MEASUREMENT OF CEMENT AND AGGREGATE

- A. The amount of cement and of each separate size of aggregate entering into each batch of concrete shall be determined by direct weighing equipment furnished by the CONTRACTOR and acceptable to the ENGINEER.
- B. Weighing tolerances:

| <b>Material</b> | <b>Percent of Total Weight</b> |
|-----------------|--------------------------------|
| Cement          | 1                              |
| Aggregates      | 3                              |
| Admixtures      | 3                              |

## 2.10 MEASUREMENT OF WATER

- A. The quantity of water entering the mixer shall be measured by a suitable water meter or other measuring device of a type acceptable to the ENGINEER and capable of measuring the water in variable amounts within a tolerance of one percent. The water feed control mechanism shall be capable of being locked in position so as to deliver constantly any specified amount of water to each batch of concrete. A positive quick-acting valve shall be used for a cut-off in the water line to the mixer. The operating mechanism shall prevent leakage when the valves are closed.

## 2.11 READY-MIXED CONCRETE

- A. At the CONTRACTOR'S option, ready-mixed concrete may be used if it meets the requirements as to materials, batching, mixing, transporting, and placing as indicated herein and is in accordance with ASTM C 94, including the following supplementary requirements.
- B. Ready-mixed concrete shall be delivered to the site of the work, and discharge shall be completed within one hour after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first.
- C. Truck mixers shall be equipped with electrically-actuated counters by which the number of revolutions of the drum or blades may be readily verified. The counter shall be of the resettable, recording type, and shall be mounted in the driver's cab. The counters shall be actuated at the time of starting mixers at mixing speeds.
- D. Each batch of concrete shall be mixed in a truck mixer for not less than 70

revolutions of the drum or blades at the rate of rotation designated by the manufacturer of equipment. Additional mixing, if any, shall be at the speed designated by the manufacturer of the equipment as agitating speed. All materials including mixing water shall be in the mixer drum before actuating the revolution counter for determining the number of revolution of mixing.

- E. Truck mixers and their operation shall be such that the concrete throughout the mixed batch as discharged is within acceptable limits of uniformity with respect to consistency, mix, and grading. If slump tests taken at approximately the 1/4 and 3/4 points of the load during discharge give slumps differing by more than one inch when the required slump is 3 inches or less, or if they differ by more than 2 inches when the required slump is more than 3 inches, the mixer shall not be used on the work unless the causing condition is corrected and satisfactory performance is verified by additional slump tests. All mechanical details of the mixer, such as water measuring and discharge apparatus, condition of the blades, speed of rotation, general mechanical condition of the unit, and clearance of the drum, shall be checked before a further attempt to use the unit will be permitted.
- F. Each batch of ready-mixed concrete delivered at the job site shall be accompanied by a delivery ticket furnished to the ENGINEER in accordance with the Paragraph in Part 1 entitled "Delivery Tickets."
- G. The use of non-agitating equipment for transporting ready-mixed concrete will not be permitted. Combination truck and trailer equipment for transporting ready-mixed concrete will not be permitted. The quality and quantity of materials used in ready-mixed concrete and in batch aggregates shall be subject to continuous inspection at the batching plant by the ENGINEER.

### **PART 3 – EXECUTION**

#### **3.1 PROPORTIONING AND MIXING**

- A. Proportioning: Proportioning of the mix shall conform to the requirements of Chapter 3 "Proportioning" of ACI 301.
- B. Mixing: Mixing shall conform to the requirements of Chapter 7 of said ACI 301 Specifications.
- C. Slump: Slumps shall be as indicated herein.
- D. Retempering: Retempering of concrete or mortar which has partially hardened shall not be permitted.

#### **3.2 PREPARATION OF SURFACES FOR CONCRETING**

- A. General: Earth surfaces shall be thoroughly wetted by sprinkling prior to the placing of any concrete, and these surfaces shall be kept moist by frequent sprinkling up to the time of placing concrete thereon. The surface shall be free from standing water, mud, and debris at the time of placing concrete.

B. Vapor Retarder Sheet

1. Sheet shall be installed under all on-grade building floor slabs of occupiable (non-hydraulic) structures and at other locations indicated.
2. Sand base shall be at least 2 inches thick within the foundation line after moistening and compaction by mechanical means. Sand surface shall be flat and level within a tolerance of plus 0 inches to minus 3/4-inch.
3. Place, protect, and repair defects in sheet according to ASTM E 1643 and the manufacturer's written instructions. Seams shall be lapped and sealed in accordance with ASTM E 1643.
4. Granular material above the sheet shall be moistened and compacted to 2 inches thickness within the same flatness criteria as the sand base.

- C. Joints in Concrete: Concrete surfaces upon or against which concrete is to be placed, where the placement of the concrete has been stopped or interrupted so that, as determined by the ENGINEER, the new concrete cannot be incorporated integrally with that previously placed, are defined as construction joints. The surfaces of horizontal joints shall be given a compacted, roughened surface for good bonding. Except where the Drawings call for joint surfaces to be coated, the joint surfaces shall be cleaned of all laitance, loose or defective concrete, foreign material, and be roughened to a minimum 1/4-inch amplitude. Such cleaning and roughening shall be accomplished by hydroblasting or sandblasting (exposing aggregate) followed by thorough washing. All pools of water shall be removed from the surface of construction joints before the new concrete is placed.
- D. After the surfaces have been prepared, all approximately horizontal construction joints shall be covered with a 6-inch lift of a pea gravel mix. The mix shall be placed and spread uniformly. Wall concrete shall follow immediately and shall be placed upon the fresh pea gravel mix.
- E. Placing Interruptions: When placing of concrete is to be interrupted long enough for the concrete to take a set, the working face shall be given a shape by the use of forms or other means, that will secure proper union with subsequent work; provided that construction joints shall be made only where acceptable to the ENGINEER.
- F. Embedded Items: No concrete shall be placed until all formwork, installation of parts to be embedded, reinforcement steel, and preparation of surfaces involved in the placing have been completed and accepted by the ENGINEER at least 4 hours before placement of concrete. All surfaces of forms and embedded items that have become encrusted with dried grout from previous work shall be cleaned before the surrounding or adjacent concrete is placed.
- G. All inserts or other embedded items shall conform to the requirements herein.
- H. All reinforcement, anchor bolts, sleeves, inserts, and similar items shall be set and secured in the forms at locations indicated on the Drawings or shown by shop

drawings and shall be acceptable to the ENGINEER before any concrete is placed. Accuracy of placement is the responsibility of the CONTRACTOR.

- I. Casting New Concrete Against Old: Where concrete is to be cast against old concrete (any concrete which is greater than 60 days of age), the surface of the old concrete shall be thoroughly cleaned and roughened by hydro-blasting or sandblasting (exposing aggregate). The joint surface shall be coated with an epoxy bonding agent unless indicated otherwise by the ENGINEER.
- J. No concrete shall be placed in any structure until all water entering the space to be filled with concrete has been properly cut off or has been diverted by pipes, or other means, and carried out of the forms, clear of the WORK. No concrete shall be deposited underwater nor shall the CONTRACTOR allow still water to rise on any concrete until the concrete has attained its initial set. Water shall not be permitted to flow over the surface of any concrete in such manner and at such velocity as will injure the surface finish of the concrete. Pumping or other necessary dewatering operations for removing ground water, if required, shall be subject to the review of the ENGINEER.
- K. Corrosion Protection: Pipe, conduit, dowels, and other ferrous items required to be embedded in concrete construction shall be so positioned and supported prior to placement of concrete that there will be a minimum of 2 inches clearance between said items and any part of the concrete reinforcement. Securing such items in position by wiring or welding them to the reinforcement will not be permitted.
- L. Openings for pipes, inserts for pipe hangers and brackets, and anchors shall, where practicable, be provided during the placing of concrete.
- M. Anchor bolts shall be accurately set and shall be maintained in position by templates while being embedded in concrete.
- N. Cleaning: The surfaces of all metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar, and other foreign substances immediately before the concrete is placed.

### 3.3 HANDLING, TRANSPORTING, AND PLACING

- A. General: Placing of concrete shall conform to the applicable requirements of Chapter 8 of ACI 301 and the requirements of this Section. No aluminum materials shall be used in conveying any concrete.
- B. Non-Conforming Work or Materials: Concrete which during or before placing is found not to conform to the requirements indicated herein shall be rejected and immediately removed from the work. Concrete which is not placed in accordance with these Specifications or which is of inferior quality shall be removed and replaced.
- C. Unauthorized Placement: No concrete shall be placed except in the presence of a duly authorized representative of the ENGINEER. The CONTRACTOR shall notify the ENGINEER in writing at least 24 hours in advance of placement of any

concrete.

- D. **Placement in Wall and Column Forms:** Concrete shall not be dropped through reinforcement steel or into any deep form, nor shall concrete be placed in any form in such a manner as to leave accumulation of mortar on the form surfaces above the placed concrete. In such cases, means such as hoppers and, if necessary, vertical ducts of canvas, rubber, or metal shall be used for placing concrete in the forms in a manner that it may reach the place of final deposit without separation. In no case shall the free fall of concrete exceed 4 feet in walls and 8 feet in columns below the ends of ducts, chutes, or buggies. Concrete shall be uniformly distributed during the process of depositing and in no case after depositing shall any portion be displaced in the forms more than 6 feet in horizontal direction. Concrete in wall forms shall be deposited in uniform horizontal layers not deeper than 2 feet; and care shall be taken to avoid inclined layers or inclined construction joints except where such are required for sloping members. Each layer shall be placed while the previous layer is still soft. The rate of placing concrete in wall forms shall not exceed 5 feet of vertical rise per hour. Sufficient illumination shall be provided in the interior of all forms so that the concrete at the places of deposit is visible from the deck or runway.
- E. **Casting New Concrete Against Old:** Epoxy adhesive bonding agent shall be applied to the old surfaces according to the manufacturer's written recommendations. This provision shall not apply to joints where waterstop is provided. See Section 03290 - Joints in Concrete.
- F. **Conveyor Belts and Chutes:** All ends of chutes, hopper gates, and all other points of concrete discharge throughout the CONTRACTOR'S conveying, hoisting, and placing system shall be designed and arranged so that concrete passing from them will not fall separated into whatever receptacle immediately receives it. Conveyor belts, if used, shall be of a type acceptable to the ENGINEER. Chutes longer than 50 feet will not be permitted. Minimum slopes of chutes shall be such that concrete of the indicated consistency will readily flow in them. If a conveyor belt is used, it shall be wiped clean by a device operated in such a manner that none of the mortar adhering to the belt will be wasted. All conveyor belts and chutes shall be covered.
- G. **Placement in Slabs:** Concrete placed in sloping slabs shall proceed uniformly from the bottom of the slab to the top, for the full width of the placement. As the work progresses, the concrete shall be vibrated and carefully worked around the slab reinforcement, and the surface of the slab shall be screeded in an up-slope direction.
- H. **Temperature of Concrete:** The temperature of concrete when it is being placed shall be not more than 90 degrees F nor less than 55 degrees F for sections less than 12 inches thick nor less than 50 degrees for all other sections. Concrete ingredients shall not be heated to a temperature higher than that necessary to keep the temperature of the mixed concrete, as placed, from falling below the minimum temperature. When the temperature of the concrete is 85 degrees F or above, the time between the introduction of the cement to the aggregates and discharge shall not exceed 45 minutes. If concrete is placed when the weather is

such that the temperature of the concrete would exceed 90 degrees F, the CONTRACTOR shall employ effective means, such as precooling of aggregates and mixing water using ice or placing at night, as necessary to maintain the temperature of the concrete, as it is placed, below 90 degrees F. The CONTRACTOR shall be entitled to no additional compensation on account of the foregoing requirements.

I. Cold Weather Placement:

1. Placement of concrete shall conform to ACI 306.1 - Cold Weather Concreting, and the following.
2. Remove all snow, ice, and frost from the surfaces, including reinforcement, against which concrete is to be placed. Before beginning concrete placement, thaw the subgrade to a minimum depth of 6 inches. All reinforcement and embedded items shall be warmed to above 32 degrees F prior to concrete placement.
3. Maintain the concrete temperature above 50 degrees F for at least 3 days after placement.

3.4 PUMPING OF CONCRETE

- A. General: If the pumped concrete does not produce satisfactory end results, the CONTRACTOR shall discontinue the pumping operation and proceed with the placing of concrete using conventional methods.
- B. Pumping Equipment: The pumping equipment shall have 2 cylinders and be designed to operate with one cylinder in case the other one is not functioning. In lieu of this requirement, the CONTRACTOR may have a standby pump on the site during pumping.
- C. The minimum diameter of the hose conduits shall be in accordance with ACI 304.2R.
- D. Pumping equipment and hose conduits that are not functioning properly shall be replaced.
- E. Aluminum conduits for conveying the concrete shall not be permitted.
- F. Field Control: Concrete samples for slump, air content, and test cylinders will be taken at the placement end of the hose.

3.5 ORDER OF PLACING CONCRETE

- A. The order of placing concrete in all parts of the WORK shall be acceptable to the ENGINEER. In order to minimize the effects of shrinkage, the concrete shall be placed in units as bounded by construction joints at the indicated locations. The placing of units shall be done by placing alternate units in a manner such that each unit placed shall have cured at least 5 days for hydraulic structures and 2 days for



all other structures before the contiguous unit or units are placed, except that the corner sections of vertical walls shall not be placed until the 2 adjacent wall panels have cured at least 10 days for hydraulic structures and 4 days for all other structures.

- B. The surface of the concrete shall be level whenever a run of concrete is stopped. To insure a level, straight joint on the exposed surface of walls, a wood strip at least 3/4-inch thick shall be tacked to the forms on these surfaces. The concrete shall be carried about 1/2-inch above the underside of the strip. About one hour after the concrete is placed, the strip shall be removed and any irregularities in the edge formed by the strip shall be leveled with a trowel and all laitance shall be removed.

### 3.6 TAMPING AND VIBRATING

- A. As concrete is placed in the forms or in excavations, it shall be thoroughly settled and compacted, throughout the entire depth of the layer which is being consolidated, into a dense, homogeneous mass, filling all corners and angles, thoroughly embedding the reinforcement, eliminating rock pockets, and bringing only a slight excess of water to the exposed surface of concrete. Vibrators shall be Group 3 per ACI 309, high speed power vibrators (8000 to 12,000 rpm) of an immersion type in sufficient number and with at least one standby unit as required. Group 2 vibrators may be used only at specific locations when accepted by the ENGINEER.
- B. Care shall be used in placing concrete around waterstops. The concrete shall be carefully worked by rodding and vibrating to make sure that all air and rock pockets have been eliminated. Where flat-strip type waterstops are placed horizontally, the concrete shall be worked under the waterstops by hand, making sure that all air and rock pockets have been eliminated. Concrete surrounding the waterstops shall be given additional vibration over and above that used for adjacent concrete placement to assure complete embedment of the waterstops in the concrete.
- C. Concrete in walls shall be internally vibrated and at the same time rammed, stirred, or worked with suitable appliances, tamping bars, shovels, or forked tools until it completely fills the forms or excavations and closes snugly against all surfaces. Subsequent layers of concrete shall not be placed until the layers previously placed have been worked thoroughly. Vibrators shall be provided in sufficient numbers, with standby units as required, to accomplish the required results within 15 minutes after concrete of the prescribed consistency is placed in the forms. The vibrating head shall not contact the surfaces of the forms. Care shall be taken not to vibrate concrete excessively or to work it in any manner that causes segregation of its constituents.

### 3.7 FINISHING CONCRETE SURFACES

- A. General: Surfaces shall be free from fins, bulges, ridges, offsets, honeycombing, or roughness of any kind, and shall present a finished, smooth, continuous hard surface. Allowable deviations from plumb or level and from the alignment, profiles, and dimensions shown are defined as tolerances and are indicated in Part 1,

above. These tolerances are to be distinguished from irregularities in finish as described herein. Aluminum finishing tools shall not be used.

- B. Formed Surfaces: No treatment is required after form removal except for curing, repair of defective concrete, and treatment of surface defects. Where architectural finish is required, it shall be as indicated. Surface holes larger than 1/2-inch in diameter or deeper than 1/4-inch are defined as surface defects in basins and exposed walls.
- C. Unformed Surfaces: After proper and adequate vibration and tamping, all unformed top surfaces of slabs, floors, walls, and curbs shall be brought to a uniform surface with suitable tools. Immediately after the concrete has been screeded, it shall be treated with a liquid evaporation retardant. The retardant shall be used again after each work operation as necessary to prevent drying shrinkage cracks. The classes of finish specified for unformed concrete surfaces are designated and defined as follows:
1. Finish U1 - Sufficient leveling and screeding to produce an even, uniform surface with surface irregularities not to exceed 3/8-inch. No further special finish is required.
  2. Finish U2 - After sufficient stiffening of the screeded concrete, surfaces shall be float finished with wood or metal floats or with a finishing machine using float blades. Excessive floating of surfaces while the concrete is plastic and dusting of dry cement and sand on the concrete surface to absorb excess moisture will not be permitted. Floating shall be the minimum necessary to produce a surface that is free from screed marks and is uniform in texture. Surface irregularities shall not exceed 1/4-inch. Joints and edges shall be tooled where indicated or as determined by the ENGINEER.
  3. Finish U3 - After the finish U2 surface has hardened sufficiently to prevent excess of fine material from being drawn to the surface, steel troweling shall be performed with firm pressure such as will flatten the sandy texture of the floated surface and produce a dense, uniform surface free from blemishes, ripples, and trowel marks. The finish shall be smooth and free of all irregularities.
  4. Finish U4 - Trowel the Finish U3 surface to remove local depressions or high points. In addition, the surface shall be given a light hairbroom finish with brooming perpendicular to drainage unless otherwise indicated. The resulting surface shall be rough enough to provide a nonskid finish.
- D. Unformed surfaces shall be finished according to the following schedule:

#### UNFORMED SURFACE FINISH SCHEDULE

| Area   | Finish |
|--|--------|
| Grade slabs and foundations to be covered with concrete or fill material | U1     |

|   |    |
|---|----|
| Floors to be covered with grouted tile or topping grout   | U2 |
| Water bearing slabs with slopes 10 percent and less       | U3 |
| Water bearing slabs with slopes greater than 10 percent   | U4 |
| Slabs not water bearing                                   | U4 |
| Slabs to be covered with built-up roofing                 | U2 |
| Interior slabs and floors to receive architectural finish | U3 |
| Top surface of walls                                      | U3 |

### 3.8 ARCHITECTURAL FINISH

- A. General: Architectural finishes shall be provided only where specifically indicated on the Drawings. In all other locations, the paragraph entitled Finishing Concrete Surfaces, shall apply.
1. Immediately after the forms have been stripped, the concrete surface shall be inspected and any poor joints, voids, rock pockets, or other defective areas shall be repaired and all form-tie holes filled as indicated herein.
  2. Architectural finishes shall not be applied until the concrete surface has been repaired as required and the concrete has cured at least 14 days.
  3. All architecturally treated concrete surfaces shall conform to the accepted sample in texture, color, and quality. It shall be the CONTRACTOR's responsibility to maintain and protect the concrete finish.
- B. Smooth Concrete Finish
1. The concrete surface shall be wetted, and a grout shall be applied with a brush. The grout shall be made by mixing one part portland cement and one part of fine sand that will pass a No. 16 sieve with sufficient water to give it the consistency of thick paint. The cement used in said grout shall be 1/2 gray and 1/2 white portland cement, or other proportion as determined by the ENGINEER. White portland cement shall be Atlas white, or equal. Calcium chloride at 5 percent by volume of the cement shall be used in the brush coat. The freshly applied grout shall be vigorously rubbed into the concrete surface with a wood float filling all small air holes. After all the surface grout had been removed with a steel trowel, the surface shall be allowed to dry and, when dry, shall be vigorously rubbed with burlap to remove completely all surface grout so that there is no visible paint-like film of grout on the concrete. The entire cleaning operation for any area shall be completed the day it is started, and no grout shall be left on the surface overnight.

2. Cleaning operations for any given day shall be terminated at panel joints. It is required that the various operations be carefully timed to secure the desired effect which is a light-colored concrete surface of uniform color and texture without any appearance of a paint or grout film.
3. In the event that improper manipulation results in an inferior finish, the CONTRACTOR shall rub such inferior areas with carborundum bricks.
4. Before beginning any of the final treatment on exposed surfaces, the CONTRACTOR shall treat in a satisfactory manner a trial area of at least 200 square feet in some inconspicuous place selected by the ENGINEER and shall preserve said trial area undisturbed until the completion of the job.

### 3.9 CURING AND DAMPPROOFING

- A. General: All concrete shall be cured for not less than 7 days after placing, in accordance with the methods indicated below for the different parts of the WORK.

| <u>Surface to be Cured or Dampproofed</u>  | <u>Method</u> |
|--|---------------|
| Unstripped forms   | 1             |
| Wall sections with forms removed   | 6             |
| Construction joints between footings and walls, and between floor slab and columns | 2             |
| Encasement concrete and thrust blocks  | 3             |
| All concrete surfaces not specifically indicated in this Paragraph                 | 4             |
| Floor slabs on grade in hydraulic structures                                       | 5             |
| Slabs not on grade   | 6             |

- B. Method 1: Wooden forms shall be wetted immediately after concrete has been placed and shall be kept wet with water until removal. If steel forms are used the exposed concrete surfaces shall be kept continuously wet until the forms are removed. If forms are removed within 7 days of placing the concrete, curing shall be continued in accordance with Method 6 below.
- C. Method 2: The surface shall be covered with burlap mats which shall be kept wet with water for the duration of the curing period, until the concrete in the walls has been placed. No curing compound shall be applied to surfaces cured under Method 2.
- D. Method 3: The surface shall be covered with moist earth not less than 4 hours nor

more than 24 hours after the concrete is placed. Earthwork operations that may damage the concrete shall not begin until at least 7 days after placement of concrete.

E. Method 4: The surface shall be sprayed with a liquid curing compound.

1. It shall be applied in accordance with the manufacturer's printed instructions at a maximum coverage rate of 200 square feet per gallon and in such a manner as to cover the surface with a uniform film which will seal thoroughly.
2. Where the curing compound method is used, care shall be exercised to avoid damage to the seal during the 7-day curing period. If the seal is damaged or broken before the expiration of the curing period, the break shall be repaired immediately by the application of additional curing compound over the damaged portion.
3. Wherever curing compound has been applied by mistake to surfaces against which concrete subsequently is to be placed and to which it is to adhere, compound shall be entirely removed by wet sandblasting just prior to the placing of new concrete.
4. Curing compound shall be applied as soon as the concrete has hardened enough to prevent marring on unformed surfaces and within 2 hours after removal of forms. Repairs to formed surfaces shall be made within the 2-hour period; provided, however, that any such repairs which cannot be made within the said 2-hour period shall be delayed until after the curing compound has been applied. When repairs are to be made to an area on which curing compound has been applied, the area involved shall first be wet-sandblasted to remove the curing compound.
5. At all locations where concrete is placed adjacent to a panel which has been coated with curing compound, the panel shall have curing compound reapplied to an area within 6 feet of the joint and to any other location where the curing membrane has been disturbed.
6. Prior to final acceptance of the WORK, all visible traces of curing compound shall be removed from all surfaces in such a manner that does not damage the surface finish.

F. Method 5:

1. Until the concrete surface is covered with curing compound, the entire surface shall be kept damp by applying water using nozzles that atomize the flow so that the surface is not marred or washed. The concrete shall be given a coat of curing compound in accordance with Method 4 above. Not less than one hour nor more than 4 hours after the curing compound has been applied, the surface shall be wetted with water delivered through a fog nozzle, and concrete-curing blankets shall be placed on the slabs. The curing blankets shall be polyethylene sheet, polyethylene-coated waterproof paper sheeting, or polyethylene-coated burlap. The blankets shall be laid with the

edges butted together and with the joints between strips sealed with 2-inch wide strips of sealing tape or with edges lapped not less than 3 inches and fastened together with a waterproof cement to form a continuous watertight joint.

2. The curing blankets shall be left in place during the 7-day curing period and shall not be removed until after concrete for adjacent work has been placed. If the curing blankets become torn or otherwise ineffective, the CONTRACTOR shall replace damaged sections. During the first 3 days of the curing period, no traffic of any nature and no depositing, temporary or otherwise, of any materials shall be permitted on the curing blankets. During the remainder of the curing period, foot traffic and temporary depositing of materials that impose light pressure will be permitted only on top of plywood sheets 5/8-inch minimum thickness, laid over the curing blanket. The CONTRACTOR shall add water under the curing blanket as often as necessary to maintain damp concrete surfaces at all times.

G. Method 6: This method applies to both walls and slabs.

1. The concrete shall be kept continuously wet by the application of water for a minimum period of at least 7 consecutive days beginning immediately after the concrete has reached final set or forms have been removed.
2. Until the concrete surface is covered with the curing medium, the entire surface shall be kept damp by applying water using nozzles that atomize the flow so that the surface is not marred or washed.
3. Heavy curing mats shall be used as a curing medium to retain the moisture during the curing period. The curing medium shall be weighted or otherwise held substantially in contact with the concrete surface to prevent being dislodged by wind or any other causes. All edges shall be continuously held in place.
4. The curing blankets and concrete shall be kept continuously wet by the use of sprinklers or other means both during and after normal working hours.
5. Immediately after the application of water has terminated at the end of the curing period, the curing medium shall be removed, any dry spots shall be rewetted, and curing compound shall be immediately applied in accordance with Method 4 above.
6. The CONTRACTOR shall dispose of excess water from the curing operation to avoid damage to the work.

H. Dampproofing

1. The exterior surface of all buried roof slabs shall be dampproofed as follows.
2. Immediately after completion of curing the surface shall be sprayed with a dampproofing agent consisting of an asphalt emulsion. Application shall be in

2 coats. The first coat shall be diluted to □ strength by the addition of water and shall be sprayed on so as to provide a maximum coverage rate of 100 square feet per gallon of dilute solution. The second coat shall consist of an application of the undiluted material, and shall be sprayed on so as to provide a maximum coverage rate of 100 square feet per gallon. Dampproofing material shall be as indicated above.

3. As soon as the material has taken an initial set, the entire area thus coated shall be coated with whitewash. Any formula for mixing the whitewash may be used if it produces a uniformly coated white surface and remains until placing of the backfill. If the whitewash fails to remain on the surface until the backfill is placed, the CONTRACTOR shall apply additional whitewash.

### 3.10 PROTECTION

- A. The CONTRACTOR shall protect all concrete against injury until final acceptance.
- B. Fresh concrete shall be protected from damage due to rain, hail, sleet, or snow. The CONTRACTOR shall provide such protection while the concrete is still plastic and whenever precipitation is imminent or occurring.

### 3.11 CURING IN COLD WEATHER

- A. Water curing of concrete may be reduced to 6 days during periods when the mean daily temperature in the vicinity of the Site is less than 40 degrees F; provided that, during the prescribed period of water curing, when temperatures are such that concrete surfaces may freeze, water curing shall be temporarily discontinued.
- B. Concrete cured by an application of curing compound will require no additional protection from freezing if the protection at 50 degrees F for 72 hours is obtained by means of approved insulation in contact with the forms or concrete surfaces; otherwise the concrete shall be protected against freezing temperatures for 72 hours immediately following 72 hours protection at 50 degrees F. Concrete cured by water shall be protected against freezing temperatures for 3 days immediately following the 72 hours of protection at 50 degrees F.
- C. Discontinuance of protection against freezing temperatures shall be such that the drop in temperature of any portion of the concrete will be gradual and will not exceed 40 degrees F in 24 hours. In the spring, when the mean daily temperature rises above 40 degrees F for more than 3 successive days, the specified 72-hour protection at a temperature not lower than 50 degrees F may be discontinued for as long as the mean daily temperature remains above 40 degrees F; provided, that the concrete shall be protected against freezing temperatures for not less than 48 hours after placement.
- D. Where artificial heat is employed, special care shall be taken to prevent the concrete from drying. Use of unvented heaters will be permitted only when unformed surfaces of concrete adjacent to the heaters are protected for the first 24 hours from an excessive carbon dioxide atmosphere by application of curing compound; provided, that the use of curing compound for such surfaces is

otherwise permitted by these Specifications.

### 3.12 TREATMENT OF SURFACE DEFECTS

- A. As soon as forms are removed, all exposed surfaces shall be carefully examined and any irregularities shall be immediately rubbed or ground in a satisfactory manner in order to secure a smooth, uniform, and continuous surface. Plastering or coating of surfaces to be smoothed will not be permitted. No repairs shall be made until after inspection by the ENGINEER. In no case will extensive patching of honeycombed concrete be permitted. Concrete containing minor voids, holes, honeycombing, or similar depression defects shall be repaired as indicated below. Concrete containing extensive voids, holes, honeycombing, or similar depression defects shall be completely removed and replaced. Repairs and replacements shall be performed promptly.
- B. Defective surfaces to be repaired shall be cut back from trueline a minimum depth of 1/2-inch over the entire area. Feathered edges will not be permitted. Where chipping or cutting tools are not required in order to deepen the area properly, the surface shall be prepared for bonding by the removal of all laitance or soft material, plus not less than 1/32-inch depth of the surface film from all hard portions by means of an efficient sandblast. After cutting and sandblasting, the surface shall be wetted sufficiently in advance of shooting with shotcrete or with cement mortar so that while the repair material is being applied, the surfaces underneath will remain moist but not so wet as to overcome the suction upon which a good bond depends. The material used for repair proposed shall consist of a mixture of one sack of cement to 3 cubic feet of sand. For exposed walls, the cement shall contain such a proportion of Atlas white portland cement as is required to make the color of the patch match the color of the surrounding concrete.
- C. Holes left by tie-rod cones shall be reamed with suitable toothed reamers so as to leave the surfaces of the holes clean and rough. Holes then shall be repaired in an approved manner with dry-packed cement grout. Holes left by form-tying devices having a rectangular cross-section and other imperfections having a depth greater than their least surface dimension shall not be reamed but shall be repaired in an approved manner with dry-packed cement grout.
- D. All repairs shall be built up and shaped in such a manner that the completed work will conform to the requirements of this Section, as applicable, using approved methods which will not disturb the bond, cause sagging, or cause horizontal fractures. Surfaces of repairs shall receive the same kind and amount of curing treatment as required for the concrete in the repaired section.

### 3.13 PATCHING HOLES IN CONCRETE

- A. Patching Small Holes:
  - 1. Holes which are less than 12 inches in the least dimension and extend completely through concrete members shall be filled.
  - 2. Small holes in members which are water-bearing or in contact with soil or



other fill material shall be filled with non-shrink grout. Where a face of the member is exposed to view, the non-shrink grout shall be held back 2 inches from the finished surface. The remaining 2 inches shall then be patched according to the Paragraph entitled "Treatment of Surface Defects."

3. Small holes through all other concrete members shall be filled with non-shrink grout, with exposed faces treated as above.

B. Patching Large Holes:

1. Holes which are larger than 12 inches in the least dimension shall have a keyway chipped into the edge of the opening all around, unless a formed keyway exists. The holes shall then be filled with concrete as indicated herein.
2. Holes which are larger than 24 inches in the least dimension and which do not have reinforcing steel extending from the existing concrete, shall have reinforcing steel set in grout in drilled holes. The reinforcing added shall match the reinforcing in the existing wall unless indicated otherwise.
3. Large holes in members which are water bearing or in contact with soil or other fill shall have a bentonite type waterstop material placed around the perimeter of the hole in accordance with Section 03290 - Joints in Concrete, unless there is an existing waterstop in place.

3.14 CARE AND REPAIR OF CONCRETE

- A. The CONTRACTOR shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective at any time prior to the final acceptance of the completed WORK, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired or removed and replaced with acceptable concrete.

3.15 Not Used.

- END OF SECTION -

## SECTION 03315 - GROUT

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide grout, complete and in place, in accordance with the Contract Documents.
- B. The following types of grout are covered in this Section:
  - 1. Non-Shrink Grout: This type of grout shall be used wherever grout is indicated, unless another type is specifically referenced.
  - 2. Cement Grout
  - 3. Epoxy Grout
  - 4. Topping Grout and Concrete Fill

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Specifications, codes, and standards shall be as listed in Section 03300 Cast-in-Place Concrete, and as indicated herein.

#### 1.3 CONTRACTOR SUBMITTALS

- A. Furnish submittals in accordance with Section 01300 - Contractor Submittals
- B. **Shop Drawings:** Include certified test results verifying compliance with the compressive strength, shrinkage, and expansion requirements; and manufacturer's literature containing instructions and recommendations on the mixing, handling, placement, and appropriate uses for each proposed type of non-shrink and epoxy grout.
- C. Provide manufacturer's independent certification of ASTM C 1107 - Packaged Dry, Hydraulic-Cement Grout (Nonshrink), compliance without modification of the standard methods certifying that the Class B or C grout post hardening non-shrink properties are not based on gas expansion, grouts have strengths of 3500 psi at 1 day, 6500 psi at 3 days and 7500 psi at 28 days when cured at 72 degrees F as well as meeting the 3,7, and 28 day strengths when tested and cured at the 45 degree and 95 degree limits and all other requirements of ASTM C 1107.
- D. The CONTRACTOR shall engage an independent testing laboratory to run a 24 hour grout evaluation in accordance with ASTM C 1107 of each grout submitted for approval showing compliance to all aspects of the evaluation and submit results to the ENGINEER for review.

#### 1.4 QUALITY ASSURANCE

- A. Field Tests:
  - 1. Compression test specimens will be taken during construction from the first

placement of each type of grout and at intervals thereafter selected by the ENGINEER to insure continued compliance with these specifications. The specimens will be made by the ENGINEER or its representative.

2. Compression tests and fabrication of specimens for cement grout and non-shrink grout will be performed in accordance with ASTM C 109 - Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in or 50-mm Cube Specimens) at intervals during construction selected by the ENGINEER. A set of three specimens will be made for testing at 7 days, 28 days, and each additional time period as appropriate.
3. Compression tests and fabrication of specimens for epoxy grout will be performed in accordance with ASTM C 579 - Test Methods for Compressive Strength of Chemical-Resistant Mortars and Monolithic Surfacing, Method B, at intervals during construction selected by the ENGINEER. A set of three specimens will be made for testing at 7 days, and each earlier time period as appropriate.
4. All grout which fails to meet requirements is subject to removal and replacement.
5. The cost of laboratory tests on grout will be paid by the OWNER except where test results show the grout to be defective. In such case, the CONTRACTOR shall pay for the tests, removal and replacement of Defective Work, and retesting, all at no increased cost to the OWNER.
6. The CONTRACTOR shall assist the ENGINEER in obtaining specimens for testing and shall furnish all materials necessary for fabricating the test specimens.

- B. **Construction Tolerances:** Construction tolerances shall be in accordance with Section 03300, unless indicated otherwise.

## **PART 2 -- PRODUCTS**

### **2.1 CEMENT GROUT**

- A. **Cement Grout:** Cement grout shall be composed of one part cement, three parts sand, and the minimum amount of water necessary to obtain the desired consistency. Where needed to match the color of adjacent concrete, white portland cement shall be blended with regular cement as needed. The minimum compressive strength at 28 days shall be 4000 psi.
- B. Cement grout materials shall be as indicated in Section 03300 except that no cement from kilns burning metal-rich hazardous waste fuel shall be used.

### **2.2 PREPACKAGED GROUTS**

A. **Non-Shrink Grout:**

1. Non-shrink grout shall be a prepackaged, inorganic, non-gas-liberating, non-metallic, cement-based grout requiring only the addition of water. Cement from kilns burning metal-rich hazardous waste fuel shall not be used. Manufacturer's instructions shall be printed on each bag or other container in which the materials are packaged. The specific formulation for each class of non-shrink grout herein shall be that recommended by the manufacturer for the particular application. All grouts (Grade A,

B, C) shall be tested for height change of the hardened grout at 1, 3, 14, and 28 days in accordance with ASTM C 1090 - Test Method for Measuring Change in Height of Cylindrical Specimens for Hydraulic-Cement Grout, and shall be tested for compression at 1, 3, 7, and 28 days in accordance with the modified ASTM C 109 testing procedure.

2. Class A non-shrink grouts shall have a minimum 28 day compressive strength of 5000 psi and shall meet the requirements of ASTM C 1107 when mixed to a flowable, plastic, or stiff consistency. When tested in accordance with ASTM C 1090, grout shall have a maximum of 4.0 percent expansion in the pre-hardened state.
3. Class B or C high precision, fluid, extended working time, non-shrink grouts shall have a minimum 28 day compressive strength of 7500 psi; shall have no shrinkage (0.0 percent) and a maximum 4.0 percent expansion in the plastic state when tested in accordance with ASTM C 827 - Test Method for Early Volume Change of Cementitious Mixtures; and shall have no shrinkage (0.0 percent) and a maximum of 0.2 percent expansion in the hardened state; and when mixed to a fluid consistency of 20 to 30 seconds per ASTM C 939 at temperature extremes of 45 to 90 degrees F shall have an extended working time of 30 minutes when tested in accordance with ASTM C 1107. Class B or C non-shrink grout shall be **Master Builders Masterflow 555** by **Master Builders**; **Sika Grout 212** by **Sika Corporation**.
4. Application:
  - a. Class A non-shrink grout shall be used for the repair of holes and defects in concrete members which are not water-bearing and not in contact with soil or other fill material, and grouting railing posts in place.
  - b. Class B or C non-shrink grout shall be used for the repair of holes and defects in concrete members which are water bearing or in contact with soil or other fill material, grouting under all base plates for structural steel members, grouting under all equipment base plates, and at all locations where grout is required by the Contract Documents except where epoxy grout is specifically required. Class B or C non-shrink grout may be used in place of Class A non-shrink grout for all applications. Class B or C non-shrink grout shall not be used for dry packing applications.

#### B. Epoxy Grout:

1. Epoxy grout shall be a pourable, non-shrink, 100 percent solids system. The epoxy grout system shall have three components: resin, hardener, and specially blended aggregate, all premeasured and prepackaged. The resin component shall not contain any non-reactive diluents. Variation of component ratios is not permitted unless specifically recommended by the manufacturer. Manufacturer's instructions shall be printed on each container in which the materials are packaged. Epoxy grout shall be **Master Builders Ceilcote 648 CP+** by **Master Builders**; **Sikadur 42, Grout-Pak** by **Sika Corporation**.
2. The chemical formulation of the epoxy grout shall be that recommended by the manufacturer for the particular application.
3. The mixed epoxy grout system shall have a minimum working life of 90 to 120 minutes at 70 degrees F.

4. The epoxy grout shall develop a compressive strength of 9000 psi in 24 hours and 13,000 psi in seven days when tested in accordance with ASTM C 579, Method B. There shall be no shrinkage (0.0 percent) and a maximum 4.0 percent expansion when tested in accordance with ASTM C 827.
5. The epoxy grout shall exhibit a minimum effective bearing area of 90 percent. This shall be determined by testing in accordance with ASTM C 1339 - Standard Test Method for Flowability and Bearing Area of Chemical-Resistant Polymer Machinery Grouts, for bearing area and flow.
6. Application: Epoxy grout shall be used to embed all anchor bolts and reinforcing steel required to be set in grout, and for other applications specifically required in the Contract Documents. Epoxy grout shall not be used in place of high-strength epoxy adhesives.

### 2.3 TOPPING GROUT AND CONCRETE FILL

- A. Grout for topping of slabs and concrete fill for built-up surfaces of tank, channel, and basin bottoms shall be composed of cement, fine aggregate, coarse aggregate, water, and admixtures. All materials and procedures for concrete in Section 03300 shall apply except as noted otherwise herein.
- B. Topping grout and concrete fill shall contain a minimum of 564 pound of cement per cubic yard with a maximum water cement ratio of 0.45. Where concrete fill is thicker than 3 inches, sitework concrete in accordance with Section 03300 - Cast-in-Place-Concrete may be used if accepted by the ENGINEER.
- C. Coarse aggregate shall be graded as follows:

| <u>U.S. STANDARD<br/>SIEVE SIZE</u> | <u>PERCENT BY<br/>WEIGHT PASSING</u> |
|-------------------------------------|--------------------------------------|
| 1/2"                                | 100                                  |
| 3/8"                                | 90-100                               |
| No. 4                               | 20-55                                |
| No. 8                               | 5-30                                 |
| No. 16                              | 0-10                                 |
| No. 30                              | 0                                    |

- D. Final mix design shall be determined by trial mix design under supervision of the approved testing laboratory.
- E. **Strength:** Minimum compressive strength of topping grout and concrete fill at the end of 28 days shall be 3000 psi.

### 2.4 CURING MATERIALS

- A. Curing materials shall be in accordance with Section 03300 for cement grout and be as recommended by the manufacturer of prepackaged grouts.

### 2.5 CONSISTENCY

- A. The consistency of grout shall be as necessary to completely fill the space to be grouted for the particular application. Dry pack consistency is such that the grout is plastic and moldable but will not flow. Where "dry pack" is required by the Contract Documents, it shall mean a grout of that consistency; the type of grout to be used shall be as indicated herein for the particular application.
- B. The slump for topping grout and concrete fill shall be adjusted to match placement and finishing conditions but shall not exceed 4 inches.

## 2.6 MEASUREMENT OF INGREDIENTS

- A. Measurements for cement grout shall be made accurately by volume using containers. Shovel measurement shall not be allowed.
- B. Prepackaged grouts shall have ingredients measured by means recommended by the manufacturer.

## PART 3 -- EXECUTION

### 3.1 GENERAL

- A. Surface preparation, curing, and protection of cement grout shall be in accordance with Section 03300. The finish of the grout surface shall match that of the adjacent concrete unless otherwise indicated.
- B. The manufacturer of Class B or C non-shrink grout and epoxy grout shall provide on-Site technical assistance upon request at no cost to the OWNER.
- C. Base concrete or masonry shall have attained its design strength before grout is placed, unless authorized by the ENGINEER.

### 3.2 GROUTING PROCEDURES

- A. **Prepackage Grouts:** Mixing, surface preparation, handling, placing, consolidation, curing, and other means of execution for prepackaged grouts shall be done according to the instructions and recommendations of the manufacturer.
- B. **Base Plate Grouting:**
  - 1. For base plates, the original concrete shall be blocked out or finished off a sufficient distance below the plate to provide for a one-inch thickness of grout or a thickness as indicated on the Drawings.
  - 2. After the base plate has been set in position at the proper elevation by steel wedges or double nuts on the anchor bolts, the space between the bottom of the plate and the original pour of concrete shall be filled with non-shrink-type grout. The mixture shall be of a trowelable consistency and be tamped or rodded solidly into the space between the plate and the base concrete. A backing board or stop shall be provided at the back side of the space to be filled with grout. Where this method of placement is not practical or where required by the ENGINEER, alternate grouting methods shall be submitted for acceptance.

### C. Topping Grout

1. All mechanical, electrical, and finish work shall be completed prior to placement of topping or concrete fill. The base slab shall be given a roughened textured surface by sandblasting or hydroblasting, exposing the aggregates to ensure bonding to the base slab.
2. The minimum thickness of grout topping and concrete fill shall be one inch. Where the finished surface of concrete fill is to form an intersecting angle of less than 45 degrees with the concrete surface it is to be placed against, a key shall be formed in the concrete surface at the intersection point. The key shall be a minimum of 3-1/2-inches wide by 1-1/2-inches deep.
3. The base slab shall be thoroughly cleaned, at saturated surface dry (SSD) condition per ICRI standards for surface preparation, and free from standing pools or ponds of water prior to placing topping and fill. A thin coat of neat cement grout shall be broomed into the surface of the slab just before topping of fill placement. The topping and fill shall be compacted by rolling or tamping, brought to established grade, and floated. Grouted fill for tank and basin bottoms where scraping mechanisms are to be installed shall be screened by blades attached to the revolving mechanism of the equipment in accordance with the procedures outlined by the equipment manufacturer after the grout is brought to the established grade.
4. Topping grout placed on sloping slabs shall proceed uniformly from the bottom of the slab to the top, for the full width of the placement.
5. The surface shall be tested with a straight edge to detect high and low spots which shall be immediately eliminated. When the topping and fill has hardened sufficiently, it shall be steel troweled to a smooth surface free from pinholes and other imperfections. An approved type of mechanical trowel may be used as an assist in this operation, but the last pass over the surface shall be by hand-troweling. During finishing, no water, dry cement, or mixture of dry cement and sand shall be applied to the surface.

### 3.3 CONSOLIDATION

- A. Grout shall be placed in such a manner, for the consistency necessary for each application, so as to assure that the space to be grouted is completely filled.

- END OF SECTION -

## SECTION 03410 -- PRECAST CONCRETE VAULTS

### PART 1 - GENERAL

#### 1.1. THE REQUIREMENT

- A. The CONTRACTOR shall provide the precast concrete work in accordance with the Contract Documents.
- B. This Section covers the design, fabrication, delivery and installation of all precast concrete units, including connections.

#### 1.2. CODES AND STANDARDS

##### A. Commercial Standards

|               |   |
|---------------|---|
| ANSI/ACI 315  | Concrete Reinforcement  |
| ANSI/ACI 318  | Concrete Construction   |
| ANSI/AWS A5.4 | Welding Rods and Electrodes   |
| AWS B2.1      |   |
| ANSI/AWS D1.1 | Welding and Cutting   |
| ANSI/AWS D1.4 | Welding and Cutting   |
| ASTM A 184    | Fabricated Deformed Steel Bar Mats for Concrete Reinforcement                             |
| ASTM A 185    | Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement                              |
| ASTM A 193    | Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service            |
| ASTM A 194    | Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service      |
| ASTM A 351    | Steel Castings, Austenitic, for High-Temperature Service                                  |
| ASTM A 497    | Welded Deformed Steel Wire Fabric for Concrete Reinforcement                              |
| ASTM A 580    | Stainless and Heat-Resisting Steel Wire   |
| ASTM A 615    | Plain Billet-Steel Bars for Concrete Reinforcement  |
| ASTM A 666    | Austenitic Stainless Steel, Sheet, Strip, Plate, and Flat Bar for Structural Applications |
| ASTM A 775    | Epoxy-Coated Reinforcing Steel Bars   |
| ASTM C 33     | Concrete Aggregates   |



|             |   |
|-------------|---|
| ASTM C 67   | Method for Sampling and Testing Brick and Structural Clay Tile  |
| ASTM C 127  | Test Method for Specific Gravity and Absorption of Coarse Aggregate   |
| ASTM C 128  | Test Method for Specific Gravity and Absorption of Fine Aggregate   |
| ASTM C 150  | Portland Cement   |
| ASTM C 173  | Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method  |
| ASTM C 204  | Test Method for Fineness of Portland Cement by Air Permeability Apparatus   |
| ASTM C 231  | Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method  |
| ASTM C 260  | Air-Entraining Admixtures for Concrete  |
| ASTM C 311  | Method for Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland Cement Concrete |
| ASTM C 494  | Test Method for Shear Fatigue of Sandwich Core Materials  |
| ASTM D 2240 | Test Method for Rubber Property --Durometer Hardness  |
| AWS D12.1   |   |
| PCI MNL-116 |   |
| PCI MNL-117 |   |
| PCI MNL-121 |   |

### 1.3. CONTRACTOR SUBMITTALS

- A. The CONTRACTOR shall submit Shop Drawings for all precast concrete items in accordance with Section 01300 - Contractor Submittals. Drawings shall show all dimensions, location and type of lifting inserts, and details of reinforcement and joints.
- B. For all precast items that are manufactured, the CONTRACTOR shall also submit a list of the design criteria used by the manufacturer.
- B. The CONTRACTOR shall submit approved ICBO reports for all lifting inserts, showing allowable design loads on the inserts.
- C. **Mix Design:** Prior to beginning the WORK, the CONTRACTOR shall submit to the ENGINEER, for review, preliminary concrete mix designs which shall show the proportions and gradations of all materials proposed for each class and type of concrete specified herein in accordance with Division 1. The mix designs shall be designed by an

independent testing laboratory acceptable to the ENGINEER. All costs related to such mix design shall be the CONTRACTOR's responsibility.

- E Verification of compressive strength shall be submitted in accordance with Division 1. Such verification may be laboratory trial batch test results with a minimum of three test cylinders or a series of production compression tests with a minimum of 20 sets of test data which fall within the evaluation and acceptance criteria specified herein. Such tests must have been made within the previous two years on the identical concrete mix submitted.

#### 1.4 QUALITY ASSURANCE

- A. Tests on component materials and for compressive strength of concrete will be performed as specified herein. Test for determining slump will be in accordance with the requirements of ASTM C 143. The cost of all laboratory tests on cement, aggregates, and concrete, will be borne by the OWNER. However, the CONTRACTOR shall be charged for the cost of any additional tests and investigation on work performed which does not meet the specifications.
- B. Evaluation and Acceptance of Concrete
  - 1. Evaluation and acceptance of the compressive strength of concrete shall be according to the requirements of ACI 318, Chapter 4 "Concrete Quality," and as specified herein.
  - 2. A statistical analysis of compression test results will be performed according to the requirements ACI 214. The standard deviation of the test results shall not exceed 640 psi.
  - 3. When the standard deviation of the test results exceed 640 psi, the average strength for which the mix is designed shall be increased by an amount necessary to satisfy the statistical requirement that the probability of any test being more than 500 psi below or the average of any 3 consecutive tests being below the specified compressive strength is 1 in 100. The required average strength shall be calculated by Criterion No.3 of ACI 214 using the actual standard of deviation.
  - 4. All concrete that fails to meet the ACI requirements and these specifications shall not be used and removal and replacement shall be at the cost of the CONTRACTOR.
- C. **Compression Tests:** Compression tests shall be made in accordance with Section 03300 - Cast-In-Place Concrete.

#### 1.5. DEFINITIONS

- A. In these Specifications, where the terms "Precast Concrete" and "Precast Concrete Specialties" are used, they shall have equivalent meaning.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURED ITEMS

- A. Miscellaneous precast vaults (including electrical manholes, pull boxes, and meter boxes)

1. Size: Vault dimensions shall be as required by Drawings.
2. Material: Concrete used for manufactured vaults shall have a minimum 3000 psi compressive strength.
3. Covers: Unless indicated otherwise, vaults shall have concrete covers with minimum 30-inch diameter galvanized steel lids, which are bolted to galvanized steel frames with stainless steel bolts. The frames and lids shall be provided by the vault manufacturer. Covers shall have lifting handles. When leveling bolts are used to set the vault top sections, the CONTRACTOR shall ensure that the load on the vault will be transferred through the mortar to the vault, and will not be carried by the leveling bolts.
4. Loading: Where vaults are in areas that may be subjected to vehicular traffic; they shall be designed for H-20 traffic loading. In other areas, they shall be designed for a vertical live load of 300 psf. Lateral loads on all vault walls shall be as follows;

h = depth of fill:

Lateral surcharge soil pressures (triangular):  $90 \times h$  (psf)

Lateral surcharge soil pressure: 200 psf

Increase in soil pressure due to seismic: 25 psf (uniform)

Seismic acceleration applied to vault dead loads:  $0.27 \times \text{gravity}$

The worst load case of static plus seismic or static plus surcharge shall be used for design.

5. Mechanical Details: Piping, electrical, and other details shall be as required by the Contract Documents.

## 2.2. PREFORMED JOINT SEALANT

- A. The joint sealing compound shall be in accordance with Section 7920.

## 2.3. MORTAR

- A. Mortar used between the sections of precast concrete manholes and vaults shall be as recommended by the precast manufacturer.
- B. Non-shrink grout shall be as specified in the Section 03315 - Grout.

# PART 3 - EXECUTION

## 3.1 MANUFACTURED ITEMS

- A. **Pull Boxes, Electrical Manholes, Vaults, and Meter Boxes:** The above mentioned precast items shall be installed in accordance with the manufacturer's recommendations, unless otherwise required by the Drawings.

- B. **Connections:** Connections to manufactured precast items shall be made by casting sections of pipe into the items, using non-shrink grout as shown on the Drawings, and/or using an approved resilient connector.

-END OF SECTION-

## SECTION 04232 - REINFORCED CONCRETE BLOCK MASONRY

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide concrete masonry and other appurtenant work, complete and in place, in accordance with the Contract Documents.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Commercial Standards

|               |   |
|---------------|---|
| ANSI/ASTM C 5 | Quicklime for Structural Purposes                               |
| ASTM A 615    | Deformed and Plain Billet-Steel Bars for Concrete Reinforcement |
| ASTM C 90     | Load-Bearing Concrete Masonry Units                             |
| ASTM C 129    | Non load bearing Concrete Masonry Units                         |
| ASTM C 140    | Test Methods of Sampling and Testing Concrete Masonry Units     |
| ASTM C 144    | Aggregate for Masonry Mortar                                    |
| ASTM C 150    | Portland Cement   |
| ASTM C 207    | Hydrated Lime for Masonry Purposes                              |
| ASTM C 270    | Mortar for Masonry Purposes                                     |
| ASTM C 404    | Aggregates for Masonry Grout                                    |
| ASTM E 447    | Test Methods for Compressive Strength of Masonry Prisms         |
| ASTM C 476    | Grout for Masonry Structures                                    |
| CT 551        | Field Test Specimens for Mortar                                 |

#### 1.3 CONTRACTOR SUBMITTALS

- A. Furnish submittals in accordance with Section 01300 - Contractor Submittals.
- B. Samples

- 1. Samples of concrete masonry unit colors with texture ranges indicated for

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selection of color. Full size samples of the blocks selected shall be submitted for final approval by the ENGINEER after color selection, if requested. If the specified product is a colored and textured unit, the samples shall be colored and textured units.

2. Samples of mortar colors for color selection.
3. A 4-ft minimum square free-standing sample panel shall be prepared for approval before starting masonry work. The panel shall remain at the Site for reference until all masonry work is completed.

C. Documentation

1. Reports from testing masonry units
2. Reports from mortar and grout testing.
3. Reports from prism testing.

D. Grout and mortar mix design

1. Proportions for all components
2. Mill tests for cement
3. Admixture certification. Include chloride ion content.
4. Aggregate graduation and certification
5. Lime certification

1.4 QUALITY ASSURANCE

- A. **Applicable Standards:** Concrete masonry shall conform to the Building Code, the Masonry Design Manual published by the Masonry Industry Advancement Committee, and other applicable codes and standards of governing authorities.
- B. All work shall conform to the standard of quality established by the approved free-standing sample panel.
- C. Concrete block masonry units shall be sampled and tested in accordance with ASTM C 140.
- D. **Testing of Mortar and Grout:** The CONTRACTOR shall have the mortar and grout tested to assure compliance with the Specifications and the governing codes by a recognized testing laboratory approved by the ENGINEER. Test reports shall be submitted to the ENGINEER.
  1. Tests shall be taken at the following times:

- a. At commencement of masonry work, at least 2 test samples each of mortar and grout shall be taken on 3 successive working days.
  - b. At any change in materials or job conditions, at least 2 samples of each modified material, grout, and mortar shall be tested.
  - c. Four random tests each of mortar and grout shall be made. The random test samples shall be taken when requested by the ENGINEER.
  - d. Additional samples and tests may be required whenever, in the judgment of the ENGINEER, additional tests (beyond the random tests) are necessary to determine the quality of the materials.
  - e. The costs of tests and test reports, except for any additional tests requested by the ENGINEER, shall be paid by the CONTRACTOR. The costs of the additional tests and reports, when reports verify compliance with the Contract Documents, will be paid by the OWNER. When tests or reports do not verify compliance, the cost of all additional tests and reports shall be paid by the CONTRACTOR.
2. Test samples shall be stored in a moist environment until tested, unless directed otherwise by the ENGINEER or the testing laboratory. Tests shall be in accordance with ASTM C 476.
- E. Test of Masonry Prisms: the OWNER will test masonry prisms to assure compliance with the Specifications and the governing codes by a recognized testing laboratory.
1. Tests will be made of the following items:
    - a. At the time of the construction of the sample panel above, at least 5 masonry prisms shall be made for each type of block herein, except separate prisms are not required for block which only varies by texture.
    - b. At any change in materials during construction, at least 5 masonry prisms will be made for each type of block affected.
    - c. One set of at least 5 masonry prisms will be made for each masonry structure, besides the structure that the sample is part of, or for each week in which block is laid, for each type of block involved; whichever occurs first.
    - d. Additional sets of at least 5 masonry prisms may be required whenever, in the judgement of the ENGINEER, additional tests are necessary to determine the quality of the materials.
  2. The prisms shall be constructed by the CONTRACTOR in the presence of the ENGINEER. The same personnel who are laying the block in the structure shall construct the masonry prism.

3. The masonry prism shall be constructed and will be tested in accordance with ASTM E 447, method B, except as modified herein. The prisms shall be composed of one complete cell using full-size blocks which are saw-cut. The minimum ratio of height to smaller width dimension shall be 1.5. The prism shall be at least 15 inches high. A minimum of two horizontal bed joints shall be used to form the prism. The prism shall be grouted, after the required 24-hour minimum cure period, using the same grout used in the walls.
  4. Compression tests made on sets of specimens made during construction shall include 2 prisms tested at 7 days after grouting and 3 prisms tested at 28 days after grouting.
  5. The average compressive strength of prisms tested at 28 days after grouting, multiplied by the appropriate correction factor as given in the UBC, shall not be less than the indicated masonry compressive strength.
  6. If the compressive strength of the prisms fails to meet or exceed that required, adjustments shall be made to the mix designs for the mortar, or grout, or both, as needed to produce the required strength. The masonry units shall also be retested to verify compliance to the requirements of ASTM C 90, Grade N-1.
  7. If the compressive strength of the prism fails to meet or exceed that required, prisms or cores shall be cut from the walls in sufficient numbers and in sufficient locations to adequately determine the strength of the walls. Those portions of the walls represented by specimens failing to meet the required compressive strength are subject to being removed and replaced.
- F. **Inspection:** Whenever required under the provisions of the Building Code, work hereunder will be subject to continuous inspection by a Special Inspector selected by the ENGINEER and approved by the local Building Official having jurisdiction. Costs of such inspection will be paid by the OWNER. The Special Inspector will work under the supervision of the ENGINEER.
- G. **Weather Conditions:** Concrete masonry units shall not be placed when air temperature is below 40 degrees F (4 degrees C) and shall be protected against direct exposure to the wind and sun when erected when the ambient air temperature exceeds 99 degrees F (37 degrees C) in the shade with relative humidity less than 50 percent. Cold weather installation shall be per code and Reference Standards and as approved by the ENGINEER.
- H. **Product Storage:** Cement, lime, and other cementitious materials shall be delivered and stored in dry, weather-tight sheds or enclosures, in unbroken bags, barrels, or other approved containers, plainly marked and labeled with the manufacturers' names and brands. Mortar and grout shall be stored and handled in a manner which will prevent the inclusion of foreign materials and damage by water or dampness. Masonry units shall be handled with care to avoid chipping and breakage, and shall be stored as directed in the Masonry Design Manual. Materials stored on newly constructed floors shall be stacked in such manner that



the uniformly-distributed loading does not exceed 30 psf. Masonry materials shall be protected from contact with the earth and exposure to the weather and shall be kept dry and clean until used.

## **PART 2 -- PRODUCTS**

### **2.1 CONCRETE MASONRY UNITS**

- A. Concrete masonry units shall conform to ASTM C 90, Type I, with maximum linear shrinkage of 0.6 percent from standard to oven-dried condition. Units shall be light weight units unless indicated otherwise.
- B. Concrete masonry units shall be 8-inch by 8-inch by 16-inch modular size, with smooth faces.
- C. **Color, texture, and layout of the block shall be by as directed by Owner.**
- D. All bond beam, corner, lintel, sill, and other specially shaped blocks shall be provided where required or necessary. Specially shaped non-structural blocks may be constructed by saw cutting. Color and texture shall match that of adjacent units.
- E. Concrete masonry units hidden from view entirely may be natural color units the same size as other adjacent masonry units.

### **2.2 MATERIALS**

- A. Portland cement shall be Type I or II, low alkali, conforming to ASTM C 150.
- B. Lime paste shall be made with pulverized quicklime or with hydrated lime which shall be allowed to soak not less than 72 hrs before use except that hydrated lime processed by the steam method shall be allowed to soak not less than 24 hrs and shall be made by adding the lime to the water. In lieu of hydrated lime paste for use in mortar, the hydrated lime may be added in the dry form. Hydrated lime shall be Type S, conforming to ASTM C 207. Pulverized quicklime shall conform to ANSI/ASTM C 5, shall pass a No. 20 sieve, and 90 percent shall pass a No. 50 sieve.
- C. Sand shall conform to ASTM C 144. Coarse aggregate shall conform to ASTM C 404.
- D. Water for mixing shall be clear potable water.
- E. Reinforcing steel shall be deformed bars conforming to ASTM A 615, Grade 60.
- F. The admixture shall not be detrimental to the bonding or help the process of efflorescence.

## 2.3 MORTAR

- A. Mortar for concrete block masonry shall be Type S, with a minimum 28-day compressive strength of 1800 psi. Proportions shall be one part portland cement, 1/4- to 1/2-part lime paste or hydrated lime, and damp, loose sand in an amount (by volume) of not less than 2-1/4 nor more than 3 times the sum of the volumes of cement and lime used, with the precise amount of water required to produce the required workability and strength.
- B. Mortar color shall match block color.

## 2.4 GROUT

- A. Grout shall have a minimum 28-day compressive strength of 2000 psi. Proportions shall be one part portland cement, not more than 1/10-part lime paste or hydrated lime, 2-1/4 to 3 parts damp, loose sand, not more than 2 parts pea gravel, and water in the amount necessary to produce a consistency for pouring without segregation of components. Where the grout space is less than 4 inches, pea gravel shall be omitted.
- B. Admixtures may only be used when approved by the ENGINEER. When it has been approved for use, it shall be used in accordance with the manufacturer's published recommendations for the grout.

## 2.5 BRICK VENTS

- A. Brick vents shall be installed as shown on plans, and integral to the masonry work. Brick vents shall be constructed of 0.125 extruded aluminum with color anodized finish per Owner. Brick vents shall be nominal 8" x 16", with free open area of no less than 0.279 sq. ft., and 1,500 fpm @ 0.2" w.g. Brick vents shall be Nystorm, model EX.

# PART 3 -- EXECUTION

## 3.1 GENERAL

- A. Measurements for mortar and grout shall be accurately made. Shovel measurements are not acceptable. Mortar proportions shall be accurately controlled and maintained.
- B. Work shall be performed in accordance with the provisions of the applicable code for reinforced concrete hollow-unit masonry.
- C. The CONTRACTOR shall set or embed all anchors, bolts, reglets, sleeves, conduits, and other items as required.
- D. All block cutting shall be by machine.

- E. Masonry units shall be supported off the ground and shall be covered to protect them from rain. Only clean, dry, uncracked units shall be incorporated.
- F. Reinforcing steel shall be cleaned of all loose rust and scale, and all oil, dirt, paint, laitance, or other substances which may be detrimental to or reduce bonding of the steel and concrete.
- G. Immediately before starting work, the concrete upon which the masonry will be laid shall be cleaned with water under pressure.
- H. Full mortar joint for first course shall be provided.
- I. Units shall be shoved tightly against adjacent units to assure good mortar bond.
- J. All equipment for mixing and transporting the mortar and grout shall be clean and free from set mortar, dirt, or other foreign matter.

### 3.2 MIXING

- A. Mortar shall be mixed by placing 1/2 of the water and sand in the operating mixer, following which the cement, lime, and remainder of the sand and water shall be added. After all ingredients are in the mixer, they shall be mechanically mixed for not less than 5 minutes. Retempering shall be done on the mortar board by adding water within a basin formed within the mortar, and the mortar reworked into the water. Mortar which is not used within one hour shall be discarded.

### 3.3 ERECTION OF CONCRETE BLOCK MASONRY

- A. Masonry work shall be erected in-plane, plumb, level, straight, and true to dimensions and executed in accordance with acceptable practices of the trade
- B. Unless indicated otherwise, masonry shall be laid up in straight uniform courses with running bond.
- C. All masonry shall be erected to preserve the unobstructed vertical continuity of the cells measuring not less than 3-inch by 3-inch in cross-section. Walls and cross webs shall be full bedded in mortar. All head (or end) joints shall be solidly filled with mortar for a distance in from the face of the wall or unit not less than the thickness of the longitudinal face shells.
- D. When fresh masonry joins masonry that is partially or totally set, the contact surface shall be cleaned, roughened, and lightly wetted.
- E. Surfaces of concrete on which the masonry walls are to be constructed shall be roughened and cleaned, exposing aggregate, and shall be flushed with water and allowed to dry to a surface dry condition immediately before laying the masonry units.
- F. Where cutting of masonry units is necessary, all cuts shall be made with a masonry saw to neat and true lines. Masonry units with cracking or chipping of the

finished exposed surfaces will not be acceptable.

- G. During erection, all cells shall be kept dry in inclement weather by covering partially completed walls. The covering shall be waterproof fabric, plastic or paper sheeting, or other approved material. Wooden boards and plans shall not be used as covering materials. The covering shall extend down each side of masonry walls approximately 2 feet.
- H. Walls shall be constructed in 4-foot maximum height lifts. Grouting of each lift shall be completed before beginning masonry unit construction for the next lift. The top course of each lift shall consist of a bond beam.

### 3.4 JOINTS

- A. Vertical and horizontal joints shall be uniform and approximately 3/8-inch wide. Exterior joints and interior exposed block joints shall be concave-tooled to a dense surface. Special care shall be used in tooling joints so as to match existing construction. Interior or exterior non-exposed masonry and masonry behind plaster shall have flush joints.

### 3.5 CLEANOUTS

- A. Cleanout openings shall be provided at the bottoms of all cells to be filled at each lift or pour of grout, where such lift or pour is over 4 ft in height. Any overhanging mortar or other obstructions or debris shall be removed from the insides of such cell walls. The cleanouts shall be sealed before grouting and after inspection. Cleanout openings shall match the finished wall in exposed masonry.

### 3.6 REINFORCEMENT

- A. Deep cut bond beam blocks shall be used where horizontal reinforcing steel is embedded. H-block bond beams may be used at locations other than openings.
- B. Knock-out openings shall have no steel or joint reinforcing running through the opening. Head, jams, and sill blocks shall be used to provide an even finish surface to install window when blocks are removed. Joints at head, jams, and sills shall be stacked and continuous.
- C. Vertical reinforcement shall be held in position at top and bottom and at intervals not exceeding 192 diameters of the reinforcement.

### 3.7 GROUTING

- A. All cells shall be filled solidly with grout unless indicated otherwise. Grouting shall not be started until the wall has cured for 24 hours.
- B. All grout shall be consolidated at time of pouring by vibrating and reconsolidated after excess moisture has been absorbed but before plasticity is lost. Grout shall not be sliced with a trowel. Where the grouting operation has been stopped for one hour or longer, horizontal construction joints shall be formed by stopping the

grout pour 1-1/2 inches below the top of the uppermost unit.

### 3.8 PROTECTION

- A. Wall surfaces shall be protected from droppings of mortar or grout during construction.

### 3.9 FINISHING AND CLEANING

- A. Masonry shall not be wet-finished unless exposed to extreme hot weather or hot wind and then only by using a nozzle-regulated fog spray sufficient only to dampen the face but not of such quantity to cause water to flow down over the masonry.
- B. Finish masonry shall be cleaned and pointed in a manner satisfactory to the ENGINEER, based upon the standards established by the approved sample panel.
- C. All interior and exterior colored masonry work exposed to view shall be cleaned by whip light sandblasting to remove all stains and other imperfections.
- D. All exposed masonry surfaces of openings and window and door openings such as sills, heads, and jambs shall be finish block surfaces, not formed surfaces, unless indicated otherwise. Closed bottom bond beam blocks shall be used at heads and sills. Pour holes may be used at the sill under window frame and where approved by the ENGINEER.

**END OF SECTION**

## SECTION 05500- MISCELLANEOUS METALWORK

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide miscellaneous metalwork and appurtenances, complete and in place, in accordance with the Contract Documents.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Federal Specifications
- B. Commercial Standards

|               |   |
|---------------|---|
| AISC          | Manual of Steel Construction  |
| ASTM A 36     | Carbon Structural Steel   |
| ASTM A 123    | Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products                       |
| ASTM A 153    | Zinc Coating (Hot-Dip) on Iron and Steel Hardware                                   |
| ASTM A 307    | Carbon Steel Bolts and Studs, 636000 psi Tensile Strength                           |
| ASTM A 325    | Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength         |
| ASTM A 500    | Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes |
| ANSI/AWS D1.1 | Structural Welding Code - Steel   |
| ANSI/AWS D1.2 | Structural Welding Code - Aluminum  |
| ANSI/AWS QC1  | Qualification and Certification of Welding Inspectors                               |

#### 1.3 CONTRACTOR SUBMITTALS

- A. **Shop Drawings:** Shop Drawings of all miscellaneous metalwork shall be submitted in accordance with Section 01300 - Contractor Submittals.
- B. Layout drawings for grating shall be submitted showing the direction of span, type and depth of grating, size and shape of grating panels, seat angle details, and details of grating hold down fasteners. Load and deflection tables shall be submitted for each style and depth of grating used.
- C. An ICBO report listing the ultimate load capacity in tension and shear for each size and type of concrete anchor shall be submitted. CONTRACTOR shall submit manufacturer's recommended installation instructions and procedures for adhesive anchors. Upon

review, by ENGINEER, these instructions shall be followed specifically.

- D. No substitution for the indicated adhesive anchors will be considered unless accompanied with ICBO report verifying strength and material equivalency, including temperature at which load capacity is reduced to 90 percent of that determined at 75 degrees F.

#### 1.4 QUALITY ASSURANCE

- A. All weld procedures and welder qualifications shall be available in the CONTRACTOR's field office for review.
- B. All welding shall be inspected by the Owners representative.

### PART 2 -- PRODUCTS

#### 2.1 GENERAL REQUIREMENTS

##### A. Steel

- 1. Shapes, Plates, Bars                      ASTM A 36
- 2. Pipe, Pipe Columns, Bollards            ASTM A 53, Type E or S, Grade B standard weight unless noted otherwise
- 3. Tubes    ASTM A 500 Grade B

- B. **Corrosion Protection:** Unless otherwise indicated, fabricated steel metalwork which will be used in a corrosive environment and/or will be submerged in water/wastewater shall be coated in accordance with Section 09800 -Protective Coating and shall not be galvanized prior to coating. All other miscellaneous steel metalwork shall be hot-dip galvanized after fabrication.

- C. **Stainless Steel:** Unless otherwise indicated, stainless steel metalwork and bolts shall be of Type 316 stainless steel.

- D. **Aluminum:** Unless otherwise indicated, aluminum metalwork shall be of Alloy 6061-T6. Aluminum in contact with concrete, masonry, wood, porous materials, or dissimilar metals shall have contact surfaces coated in accordance with Section 09800.

- E. **Cast Iron:** Unless otherwise indicated, iron castings shall conform to the requirements of ASTM A 48, Class 50B or better.

#### 2.2 BOLTS AND ANCHORS

- A. **Standard Service (Non-Corrosive Application):** Unless otherwise indicated, bolts, anchor bolts, washers, and nuts shall be steel as indicated herein. Threads on galvanized bolts and nuts shall be formed with suitable taps and dies such that they retain their normal clearance after hot-dip galvanizing. Except as otherwise indicated, steel for bolt material, anchor bolts and cap screws shall be in accordance with the following:

- 1. Structural connections: ASTM A 307, Grade A or B, hot-dip galvanized.

2. Anchor Bolts: ASTM A 307, Grade A or B, or ASTM A 36, hot-dip galvanized.
3. High strength bolts where indicated: ASTM A 325
4. Pipe and equipment flange bolts: ASTM A 193, Grade B-7

B. **Corrosive Service:** All bolts, nuts, and washers in the locations listed below shall be stainless steel as indicated below.

1. All buried locations.
2. All submerged locations.
3. All locations subject to seasonal or occasional flooding.
4. Inside hydraulic structures below the top of the structure.
5. Inside buried vaults, manholes, and structures which do not drain through a gravity sewer or to a sump with a pump.
6. All chemical handling areas.
7. Inside trenches, containment walls, and curbed areas.
8. Locations indicated by the Contract Documents or designated by the ENGINEER to be provided with stainless steel bolts.

C. Unless otherwise indicated, stainless steel bolts, anchor bolts, nuts, and washers shall be Type 316 stainless steel, class 2, conforming to ASTM A 193 for bolts and to ASTM A 194 for nuts. All threads on buried stainless steel bolts shall be protected with an antiseize lubricant suitable for submerged stainless steel bolts, to meet government specification MIL-A-907E. Buried bolts in poorly drained soil shall be coated the same as the buried pipe.

1. Antiseize lubricant shall be classified as acceptable for potable water use by the NSF.
2. Provide Teflon washers between all steel washers and coatings on fittings, mechanical devices and supports, etc.
3. Do not coat above grade pipe bolts, nuts, or washers.

D. Bolt Requirements

1. The bolt and nut material shall be free-cutting steel.
2. The nuts shall be capable of developing the full strength of the bolts. Threads shall be Coarse Thread Series conforming to the requirements of the American Standard for Screw Threads. All bolts and cap screws shall have hexagon heads and nuts shall be Heavy Hexagon Series.
3. Bolts and nuts shall be installed with washers fabricated of material matching the



base material of bolts, except that hardened washers for high strength bolts shall conform to the requirements of the AISC Specification. Lock washers fabricated of material matching the bolts shall be installed where indicated.

4. The length of each bolt shall be such that after the joint is made up, the bolt extends through the entire nut, but in no case more than 1/2-inch beyond the nut.

E. **Adhesive Anchors:** Unless otherwise indicated, all drilled, concrete or masonry anchors shall be adhesive anchors. No substitutions will be considered unless accompanied with ICBO report verifying strength and material equivalency.

1. Epoxy adhesive anchors are required for drilled anchors where exposed to weather, in submerged, wet, splash, overhead, and corrosive conditions, and for anchoring handrails, pumps, mechanical equipment, and reinforcing bars. Epoxy anchor grout shall comply with Section 03315 - Grout. Threaded rod shall be stainless steel Type 316.

2. Threaded rod shall be galvanized steel.

F. **Expanding-Type Anchors:** Expansion type anchors which are to be embedded in grout may be steel. Non-embedded buried or submerged anchors shall be stainless steel.

## 2.3 POWDER-DRIVEN PINS

- A. **Materials:** Powder-driven pins for installation in concrete or steel shall be heat-treated steel alloy. If the pins are not inherently sufficiently corrosion-resistant for the conditions to which they are to be exposed, they shall be protected in an acceptable manner. Pins shall have capped or threaded heads capable of transmitting the loads the shanks are required to support. Pins that are connected to steel shall have longitudinal serrations around the circumference of the shank.

## 2.4 IMPACT ANCHOR

- A. Impact anchors shall be an expansion type anchor in which a nail type pin is driven to produce the expansive force. The pin shall have a zinc sleeve with a mushroom style head and stainless steel nail pin.

# PART 3 – EXECUTION

## 3.1 FABRICATION AND INSTALLATION REQUIREMENTS

- A. **Fabrication and Erection:** Except as otherwise indicated, the fabrication and erection of structural steel shall conform to the requirements of the American Institute of Steel Construction "Manual of Steel Construction."

- B. **Powder-Driven Pins:** Powder-driven pins shall be installed by a craftsperson certified by the manufacturer as being qualified to install the manufacturer's pins. Pins shall be driven in one initial movement by an instantaneous force that has been carefully selected to attain the required penetration. Driven pins shall conform to the following requirements where "D" = pin's shank diameter:

| Pin Shank | Minimum Space |
|-----------|---------------|
|-----------|---------------|

| <u>Material Penetrated by Pin</u> | <u>Material Minimum Thickness</u> | <u>Penetration in Supporting Material</u> | <u>From Pin's CL to Edge of Penetrated Material</u> | <u>Minimum Pin Spacing</u> |
|-----------------------------------|-----------------------------------|---|---|----------------------------|
| Concrete                          | 16D                               | 6D minimum                                | 14D   | 20D                        |
| Steel                             | 1/4-inch                          | Steel thickness                           | 4D  | 7D                         |

### 3.2 WELDING

- A. **Method:** Welding shall be by the metal-arc method or gas-shielded arc method as described in the American Welding Society's "Welding Handbook" as supplemented by other pertinent standards of the AWS. Qualification of welders shall be in accordance with the AWS Standards governing same.
- B. **Quality:** In assembly and during welding, the component parts shall be adequately clamped, supported and restrained to minimize distortion and for control of dimensions. Weld reinforcement shall be as indicated by the AWS Code. Upon completion of welding, weld splatter, flux, slag, and burrs left by attachments shall be removed. Welds shall be repaired to produce a workmanlike appearance, with uniform weld contours and dimensions. All sharp corners of material which is to be painted or coated shall be ground to a minimum of 1/32-inch on the flat.

### 3.3 GALVANIZING

- A. Structural steel plates shapes, bars, and fabricated assemblies required to be galvanized shall, after the steel has been thoroughly cleaned of rust and scale, be galvanized in accordance with the requirements of ASTM A 123. Any galvanized part that becomes warped during the galvanizing operation shall be straightened. Bolts, anchor bolts, nuts and similar threaded fasteners, after being properly cleaned, shall be galvanized in accordance with the requirements of ASTM A 153.

### 3.4 DRILLED ANCHORS

- A. Drilled anchors and reinforcing bars shall be installed in strict accordance with the manufacturer's instructions. Holes shall be roughened with a brush on a power drill, cleaned and dry. Drilled anchors shall not be installed until the concrete has reached the required 28-day compressive strength. Adhesive anchors shall not be loaded until the adhesive has reached its indicated strength in accordance with the manufacturer's instructions.

- END OF SECTION -

## SECTION 06172 - WOOD TRUSSES

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide wood trusses, 2X joists, bridging, bracing, and appurtances, complete in place, in accordance with the Contract Documents.
- B. Single-Source Engineering Responsibility: Provide trusses engineered by the truss fabricator to support superimposed dead and live loads indicated. Design shall be approved and certified by a qualified professional engineer.
- C. Single-Source Responsibility for Connector Plates: Provide metal connector plates from one manufacturer.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

##### A. Commercial Standards:

|              |   |
|--------------|---|
| AFPA NDS     | National Design Specification for Wood Construction and Supplement  |
| AITC         | Timber Construction Manual  |
| ANSI A58.1   | Minimum Design Loads for Buildings and Other Structures   |
| ANSI/TPI 1   | National Design Standard for Metal-Plate-Connected Wood Truss Construction.                                   |
| ASME B18.6.1 | Wood Screws (Inch Series)   |
| ASME B18.2.1 | Square and Hex Bolts and Screws (Inch Series)   |
| ASTM A 307   | Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength   |
| ASTM A 563   | Carbon and Alloy Steel Nuts   |
| ASTM A 653   | Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process         |
| AWPA C1      | Manual of Recommended Practice, Standard for Preservative Treatment by Pressure Process - All Timber Products |
| CABO NER-272 | Power Driven Staples and Nails for Use in all Types of Building Construction                                  |
| FF-N-107     | Federal Specification for Nails, Brads, and Spikes: Wire Cut  |

|                   |   |
|-------------------|---|
| FPL Bulletin 1069 | Effect of Pretreatment of Wood on the Lignin Determination: Distribution of Methoxyls in Wood       |
| SPIB              | Grading Rules for Southern Pine Lumber  |
| TPI DSB           | Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses        |
| TPI DST           | Design Specification for Light Metal Plate Connected Wood Trusses                                   |
| TPI HIB           | Commentary and Recommendations for Handling Installing & Bracing Metal Plate Connected Wood Trusses |
| WCLIB Standard 17 | Grading Rules for West Coast Lumber   |
| WWPA              | Standard Grading Rules for Western Lumber   |

### 1.3 CONTRACTOR SUBMITTALS

- A. **General:** Submittals shall be in accordance with Section 01300-Contractor Submittals. Also submit design drawings and calculations of the proposed roof system to the Building Department.
- B. Calculations and drawings shall be stamped by a Professional Engineer licensed in the State of California.
- C. Submit
  1. Shop Drawings detailing location, pitch, span, camber, configuration, dimensions, and spacing for each type of truss required; species, sizes, and stress grades of lumber to be used; splice details; type, size, material, finish, design values, and orientation and location of metal connector plates; bearing details; camber; permanent lateral bracing as required by design to reduce the buckling length of individual truss members; and handling and erection recommendations.
  2. Approved ICBO reports for all truss connector plates to be used, which show allowable design loads on the plates.
  3. Product certificates signed by officer of truss fabricating firm, certifying that metal-plate-connected wood trusses comply with indicated requirements and Shop Drawings.
  4. Qualification data for firms and persons to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information indicated.
  5. Not Used.
  6. Material certificates for dimension lumber required to comply with minimum allowable unit

stresses. Indicate species and grade selected for each use and design values approved by the American Lumber Standards Committee (ALSC) Board of Review

#### 1.4 QUALITY ASSURANCE

- A. **Materials:** Materials and assembly shall be inspected to determine compliance with the Building Code. Every material shall be graded, marked, or labeled.
- B. **Certificate:** A certificate of approval from an agency approved in accordance with the Building Code shall be furnished with every prefabricated assembly. The certificate shall certify that the assembly in question has been inspected and meets all the requirements of the Building Code.
- C. Not Used.
- D. Qualifications
  - 1. General: The items in this Section shall be furnished by firms having at least five years experience with similar products and having a record of successful installations
  - 2. Metal-Plate Connector Manufacturer: A manufacturer that is a member of Truss Plate Institute (TPI) and that complies with TPI quality-control procedures for manufacture of connector plates published in ANSI/TPI 1.
  - 3. Fabricator: Engage a firm that:
    - a. Complies with the following requirements for quality control and is experienced in fabricating metal-plate-connected wood trusses similar to those indicated and with a record of successful in-service performance:
    - b. Participates in a recognized quality-assurance program that involves inspection by SPIB; Timber Products Inspection, Inc.; TPI; or other independent inspecting and testing agency acceptable to ENGINEER and authorities having jurisdiction.
  - 4. Professional Engineer Qualifications: A professional engineer who is legally authorized to practice in the jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated that have resulted in installing metal-plate-connected wood trusses similar to those indicated for this Project and with a record of successful in-service performance.
  - 5. Installer: An experienced Installer who has completed wood truss installation similar in material, design, and extent to that indicated and with a record of successful in-service performance.

## PART 2 -- PRODUCTS

#### 2.1 GENERAL

- A. **Design and Fabrication:** The design and fabrication of metal plate connected wood trusses shall be in accordance with ANSI/TPI 1, applicable portions of TPI DSB and the AFPA NDS.

- B. Not Used.
- C. Not Used.
- D. Not Used.
- E. As a minimum, the following load conditions with appropriate building code prescribed load duration factors shall be considered in the roof design:
  - 1. Dead Load + Live Load
  - 2. Dead Load + Seismic
  - 3. Dead Load + Wind Load (Up or Down)
- F. Not Used.
- G. Joist hangers, anchors, and other connectors to connect the wood trusses to the walls or other structural systems shall be designed by the connection manufacturer.
- H. The truss manufacturer shall coordinate the design with the HVAC Drawings and Shop Drawings to provide space and support for HVAC equipment to be supported on or from the bottom or top truss chords.

## 2.2 TRUSSES

- A. Lumber shall conform to the species and fully recognized nominal sizes according to the manufacturer's design. Members shall be cut from lumber bearing the proper grade mark stamps of a recognized grading association or licensed lumber inspection agency. No lumber shall be used which does not appear to conform to the proper dimensions and/or grades.
- B. **Grading:** Lumber shall be graded in accordance with the rules of one of the following associations: "Grading Rules for Southern Pine Lumber" of the SPIB; "Standard No.17" of the WCLIB; or "Grading Rules for Western Lumber" published by WWPA.
- C. **Grade Marking:** Each piece of lumber shall bear the official grade mark of one of the above-mentioned grading rules.
- D. **Size Dressing:** Lumber, except as otherwise indicated, shall be dressed to size in accordance with the standards of the association under which the lumber is graded. Lumber shall be S4S unless otherwise indicated.
- E. **Marking:** Each truss shall be legibly branded, marked, or otherwise have permanently affixed thereto the following information located within 2 feet of the center of the span on the face of the bottom chord:
  - 1. Identity of the company manufacturing the trusses and the address

2. The design load
3. The spacing of the trusses

F. **Moisture Content:** At the time of fabrication, the moisture content of lumber shall be within the proper limits as stated in the referenced specifications and the appropriate load duration factors shall account for any variations in this moisture content.

G. Not Used.

H. Connector Plates

1. Connector plates shall be designed by the manufacturer.
2. Connector plates shall be structural-quality steel sheet, zinc coated by hot-dip process complying with ASTM A 653, G60 coating designation; Grade 33, and not less than 0.0359 inch thick.
3. Connector plates shall be clearly marked with the manufacturer's name.
4. Connector plates shall be provided on both sides of the truss (2 plates per joint), and all connector plated truss joints shall be designed in accordance with the methods in the TPI Standards.

I. **Bracing:** All permanent lateral bracing shall be 2x4 lumber minimum and be as shown on the truss manufacturer's drawings.

J. **Painting and Tagging:** Prior to shipment, similar ends of trusses shall be painted to show erection orientation. Florescent red and green Truss Joist Institute safety and specialty tags cautioning against cutting trusses or altering trusses and indicating bearing locations, orientation, permanent lateral bracing, and field splices shall be affixed to trusses.

## 2.3 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with the manufacturer's requirements
- B. Nails, Wire, Brads, and Staples: FS FF-N-105
- C. Power-Driven Fasteners: CABO NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts and Screws: ASME B18.2.1.
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

## 2.4 METAL FRAMING ANCHORS

- A. **General:** Provide metal framing anchors of structural capacity, type, size, metal, and finish that comply with requirements, including the following:
  - 1. Research or Evaluation Reports: Provide products for which model code research or evaluation reports exist that are acceptable to authorities having jurisdiction and that demonstrate compliance with IBC.
  - 2. Allowable Design Loads: Provide products with published allowable design loads that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis, and be demonstrated by comprehensive testing performed by a qualified independent testing agency.
- B. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653, G60 coating designation; structural, commercial, or lock-forming quality, as standard with manufacturer for type of anchor indicated.

## 2.5 OTHER FRAMING MEMBERS

- A. Simple framing members shall be designed in accordance with Section 06100 - Rough Carpentry.
- B. Joist hangers, anchors, and other connection hardware shall be of standard manufacture, approved by a recognized agency for the intended applications. Specially fabricated hardware shall be provided in accordance with Section 05500-Miscellaneous Metalwork, hot-dip galvanized after fabrication.

## PART 3 -- EXECUTION

### 3.1 TRUSS FABRICATION

- A. The top and bottom chords shall have a minimum size of 2 x 6 with a top chord extension as indicated.
- B. Trusses and other roof structural components shall be fabricated in a properly equipped manufacturing facility of a permanent nature. They shall be manufactured by experienced workmen, using precision cutting and truss fabricating equipment and meeting the requirements of ANSI/TPI 1, under the direct supervision of a qualified foreman. Trusses shall be fabricated under strict rules of inspection and quality control as required by the IBC and be open to the ENGINEER or its representative at all times.
- C. Truss members shall be accurately cut to length and angle, and shall be true to line to assure tight joints for the finished truss. Tolerances shall be per ANSI/TPI 1.
- D. Truss members and connector plates shall be properly placed in special jigs, and the members tightly clamped in place, remaining in that position until the connector plates have been installed.
- E. Camber shall be built into the trusses as noted on manufacturer's designs.

### 3.2 HANDLING, ERECTION, AND BRACING



- A. Handle and store trusses with care and comply with manufacturer's written instructions and TPI recommendations to avoid damage and lateral bending.
- B. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.
- C. The CONTRACTOR shall be responsible for field erection of the trusses and other roof framing components, including items such as proper handling, safety precautions, temporary bracing to prevent toppling like dominoes of the trusses during erection, and any other safeguards or procedures which are consistent with good workmanship and building erection practices.
- D. The CONTRACTOR shall comply with applicable requirements and recommendations of TPI HIB.
- E. The CONTRACTOR shall comply with all engineered drawings, truss layout plans, and TPI HIB when erecting the truss. Fabricated trusses and sub-components shall be handled and stored so that they are not subject to damage. If the trusses are to be stockpiled prior to erection, sufficient bearing points and/or bracing shall be provided to prevent excessive lateral bending or tipping over or other damage.
- F. Framing anchors and/or truss hangers shall be provided by the CONTRACTOR in accordance with the manufacturer's recommendations and the Contract Documents.
- G. During the construction period, the CONTRACTOR shall provide means for adequate distribution of any concentrated loads, so the carrying capacity of any one truss and/or other component is not exceeded.
- H. The CONTRACTOR shall install proper erection bracing to hold the trusses true and plumb and in safe condition until the permanent truss bracing and bridging is solidly nailed in place, forming a structurally sound roof framing system. Erection and permanent bracing shall be installed and all components firmly fastened before any loads are applied to the roof.
  - 1. The CONTRACTOR shall install erection bracing in accordance with TPI HIB. Brace trusses as they are erected by forming 2x4 triangles within each of the three planes in a truss system. Attach bracing with 2-16D double-headed nails at each crossing truss minimum. Short cleats or spacer pieces of lumber between adjacent trusses shall not be used.
- I. The plywood sheathing shall be installed in accordance with the Drawings. Full bundles of plywood sheathing shall not be stacked on trusses.
- J. The CONTRACTOR shall not attempt to field repair, cut, or otherwise alter trusses without consulting the truss manufacturer.

- END OF SECTION -

## SECTION 07720 - ROOF ACCESSORIES

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide all roof accessories and appurtenant work as needed to construct a built-up roof, complete and in place, in accordance with the Contract Documents.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. **Trade Standards:** National Roofing Contractors Association (NRCA).
- B. **Manufacturer's Standards:** In addition to the standards listed above, roof accessories and installation shall be in accordance with the manufacturer's published recommendations and specifications.

#### 1.3 CONTRACTOR SUBMITTALS

- A. Furnish submittals shall be in accordance with Section 01300 - Contractor Submittals.
- B. **Shop Drawings:** Submit for all roof hatches prior to fabrication. Include fabricated flashing and dissimilar metal systems. Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected Work.
  - a. **Hatch Units:** Show types, elevations, thickness of metals, and full size profiles.
  - b. **Hardware:** Show materials, finishes, locations of fasteners, types of fasteners, locations and types of operating hardware, and details of installation.
  - c. **General:** Show connections of units and hardware to other Work. Include schedules showing location of each type and size of unit.
- C. **Product Data:** Manufacturer's technical data for each type of hatch assembly, including setting drawings, templates, finish requirements, and details of anchorage devices. Include complete schedule, types, locations, construction details, finishes, latching or locking provisions, and other pertinent data.
- D. **Manufacturer's Installation Instructions:** Indicate installation requirements and rough-in dimensions.
- E. **Quality Control Submittals:** Statement of Qualifications.
- F. **Contract Closeout Submittals:** Comply with Section 01700 including operating and maintenance manuals.

#### 1.4 QUALITY ASSURANCE

- A. **Qualifications:** Manufacturer/Installer: Company specializing in manufacturing and installation of components specified in this Section with minimum of 15 years documented experience.
- B. **Single Source Responsibility:** Obtain roof hatch units and frames for entire project from 1 source and 1 single manufacturer.

#### 1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. **Delivery of Materials:** Manufactured materials shall be delivered in original, unbroken, packages, containers, or bundles bearing the name of the manufacturer.
- B. **Storage:** All materials shall be carefully stored on wood blocking in an area that is protected from the elements. Storage shall be in a manner that will prevent damage or marring of finish.

### PART 2 -- PRODUCTS

#### 2.1 ROOF PENETRATIONS

- A. Roof penetrations shall be fabricated for locations as shown on the plans. Provide curbs and flashing as necessary to match roof type and prevent leakage. Roof penetration materials shall isolated from dissimilar roofing materials to prevent corrosion. Provide steel curbs to correct for roof pitch.

#### 2.2 ROOF HATCHES

- A. **Design:** Roof hatches (scuttles, equipment hatches) shall be constructed of aluminum, unless otherwise indicated, and shall be provided with stainless steel hardware, including padlocking hardware inside and neoprene gaskets and seals. Roof hatches shall be provided with stainless steel hardware. Roof hatches shall be of the type and size indicated.
  - 1. Roof hatch, double leaf: 5-ft by 5-ft, equipment hatch, complete with heavy duty compression spring hinges in telescoping tubes, integral double-curb and flange, insulated and weatherstripped metal cover, inside-outside handles, lockable from inside with removable cross bracing which will hold doors open and act as railing when hatch is open. Hinges: Type 316 stainless steel, tamper-proof hinge contained within hatch as part of spring assembly. Latch: Type 316 stainless steel slam latch with turn handle and inside/outside padlock hasps and heavy duty interior dead-bolt lock. Hatch shall be Nystrom, Model RHE. Provide factory installed safety netting, Nystrom SNA60x60-N, in accordance with OSHA standards.

### PART 3 -- EXECUTION

#### 3.1 GENERAL

- A. The installation shall conform to applicable codes and the manufacturer's published or written recommendations, specifications, and published installation instructions for the

type of work being performed. The construction shall be coordinated with the work of other trades.

- B. Unless otherwise indicated, roof openings, roof-mounted equipment, duct openings, and skylights shall be provided with a prefabricated curb unless the equipment above the roof opening is supplied with its own curb which extends to 8 inches or higher beyond the top of the roof insulation. The prefabricated curb may be part of the equipment item.

### 3.2 INSTALLATION

- A. Roof hatches, openable fire and smoke hatches and roof ventilators shall be installed over prepared openings with their own curbs or prefabricated curbs, and shall be fastened to roof deck in accordance with the manufacturer's printed directions. Lifting mechanisms and accessories shall be adjusted to insure proper operation. Abraded prime and finish coat surfaces shall be touched-up after completion of installation with the same type finish and the same dry-film thickness. CONTRACTOR to coordinate with roof hatch and roofing manufacturers to ensure proper flashing and water-tight seals around roof hatch, and proper drainage.
- B. **Protective Coating:** All plastic roof accessories shall be coated in accordance with Section 09800 - Protective Coating.

- END OF SECTION -

## SECTION 07920 - SEALANTS AND CAULKING

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide caulking, sealing, and appurtenant work, complete and in place, in accordance with the Contract Documents.

#### 1.2 REFERENCE STANDARDS

- A. **General:** Portions of the following standards are incorporated into this Section by references below. The standards are listed here for convenience.

B. **Federal Specifications:**

|              |   |
|--------------|---|
| TT-S-001543A | Sealing Compound, Silicone Rubber Base, (For Caulking, Sealing and Glazing in Buildings and Other Structures) |
|--------------|---|

|           |   |
|-----------|---|
| SS-S-200D | Sealants, Joint, Two Compound, Jet Blast Resistant, Cold Applied for Portland Cement Concrete Pavement. |
|-----------|---|

|             |   |
|-------------|---|
| TT-S-00227E | Sealing Compound, Elastomeric Type, Multi-Component, (For Caulking, Sealing and Glazing in Buildings and Other Structures). |
|-------------|---|

|             |  |
|-------------|--|
| TT-S-00230C | Sealing Compound, Elastomeric Type, Single Component, (For Caulking, Sealing, and Glazing in Buildings and Other Structures) |
|-------------|--|

C. **Commercial Standards:**

|            |   |
|------------|---|
| ASTM C 557 | Adhesives for Fastening Gypsum Wallboard to Wood Framing. |
|------------|---|

|            |                          |
|------------|--------------------------|
| ASTM C 834 | Latex Sealing Compounds. |
|------------|--------------------------|

|            |  |
|------------|--|
| ASTM C 919 | Practice for Use of Sealants in Acoustical Applications. |
|------------|--|

|            |                             |
|------------|-----------------------------|
| ASTM C 920 | Elastomeric Joint Sealants. |
|------------|-----------------------------|

|             |   |
|-------------|---|
| ASTM C 1056 | Flexible Cellular Material-Sponge or Expanded Rubber. |
|-------------|---|

|             |   |
|-------------|---|
| ASTM D 1752 | Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction. |
|-------------|---|

|           |  |
|-----------|--|
| ASTM E 84 | Surface Burning Characteristics of Building Materials. |
|-----------|--|

|            |   |
|------------|---|
| ASTM E 814 | Methods for Fire Tests of Through Penetrations: |
|------------|---|

Firestops.

UL 1479

Underwriter's Laboratory Standard for Safety Fire Tests of Through Penetrations Firestops.

### 1.3 CONTRACTOR SUBMITTALS

- A. **General:** Submittals shall be in accordance with Section 01300 - Contractor Submittals.
- B. **Technical Data:** A complete materials list along with the manufacturer's technical data and literature, specifications, joint width and depth tables, and installation instructions.
- C. **Samples:** Samples (including color samples) of all the caulking and sealant materials and other materials proposed for use on the WORK. The samples shall be clearly marked with the manufacturer's name and product identification.
- D. **Certificates:** If requested by the ENGINEER, certificates from an independent testing laboratory approved by the ENGINEER, certifying that the submitted materials meet all the requirements of the ASTM and Federal Specifications cited.
- E. **Warranty:** A copy of the manufacturer's warranty covering all sealants, caulking materials, and other materials against defects in materials.

## PART 2 -- PRODUCTS

### 2.1 SEALANTS AND CAULKING MATERIALS

- A. **General:**
  - 1. **Manufacturer's Standards:** In addition to the standards listed below, the sealants and caulking products and application shall be in accordance with the manufacturer's published recommendations and specifications.
  - 2. Wherever manufacturer's names and products are listed in this Section, "or equal" products will be considered in accordance with Section 01300 - Contractor Submittals.
- B. Materials shall conform to the following requirements:
  - 1. **Significant Movement Sealants** (plus or minus 25% movement capability)
    - a. For expansion wall joints; masonry and metal curtainwall joints; precast concrete joints and concrete panels; perimeter sealing (windows, doors, and panels); control joints; interior and non-traffic horizontal joints.
      - (1) Two component, non-sag, polyurethane or polysulfide sealant conforming to Federal Specification TT-S-227E, Class A, Type II, and ASTM C 920, Type M, Class 25, Grade NS.
      - (2) One component, non-sag, low modulus, polyurethane or polysulfide sealant conforming to Federal Specification TT-S230C, Class A, Type II, and ASTM C 920, Type S, Class 25, Grade NS.

- (3) One component, non-sag, medium modulus, neutral cure, silicone sealant conforming to Federal Specification TT-S-1543A, Class A, and ASTM C 920, Type S, Class 25, Grade NS.
- b. For horizontal joints exposed to fuel spillage.
  - (4) Two component, self-leveling, fuel resistant, polyurethane or polysulfide sealant conforming to Federal Specification SS-S-200D, Type H, and ASTM C 920, Type M, Class 25, Grade P.
- c. For horizontal joints not exposed to fuel spillage.
  - (5) Two component, self-leveling, polyurethane or polysulfide sealant conforming to Federal Specification TT-S-227E, Class A, Type I, and ASTM C 920, Type M, Class 25, Grade P.
  - (6) One component, self-leveling, polyurethane or polysulfide sealant conforming to Federal Specification TT-S-230C, Class A, Type I, and ASTM C 920, Type S, Class 25, Grade P.
- 2. Glazing Sealants
  - a. For non-structural applications
    - (1) One component non-sag, medium modulus, neutral cure, silicone sealant conforming to Federal Specification TT-S-1543A, Class A, and ASTM C 920, Type S, Class 25, Grade NS.
    - (2) One component, non-sag, high modulus, acetoxycure, silicone sealant conforming to Federal Specification TT-S-1543A, Class A, and ASTM C 920, Type S, Class 25, Grade NS.
- 3. Interior Sealant and Caulking
  - a. For general applications
    - (1) One component, acrylic latex caulking conforming to ASTM C 834
  - b. For non-exposed acoustical applications
    - (1) One component, non-drying, non-hardening, non-shrinking, acoustical caulking conforming to ASTM C 557 and ASTM C 919.
- 4. Acoustic Sheet Caulking: For use on all outlet boxes including intercoms, telephone or other services that require penetrations in the walls, acoustic sheet caulking shall be resilient synthetic polymer, self-adhesive, 1/8-inch thick, 6-inch x 8-inch, sheet acoustic sealer.

5. Firestop Sealant: Where piping, conduit, wire, or other materials pass through fire rated walls, floors, ceilings or roofs, provide a 3-hour fire rated sealant in accordance with ASTM E 814 and UL 1479. Fire-resistant penetration sealant shall be a medium density fire-resistant foam that retains form and stability at high temperature.
6. Preformed Sealants: Preformed sealant shall be polybutylene or isoprene-butylene based pressure sensitive weather resistant tape or bead sealant capable of sealing out moisture, air, and dust when installed as recommended by the manufacturer. At temperatures from minus 30 to plus 160 degrees F, the sealant shall be non-bleeding and shall have no loss of adhesion.
7. Tape sealant: Dimensions shall be as required for application conditions. Tape sealants shall be type recommended by tape manufacturer for connecting and bonding to surfaces.
8. Filler material shall be resilient, closed-cell polyethylene foam conforming to ASTM D 1752, Type II or III, and/or bond breakers of proper size for joint widths. Filler shall be compatible with sealant manufacturer's product and shall not stain the sealant nor the materials to which applied.
9. Primer: Primers shall be as recommended in the manufacturer's printed instructions for caulking and sealants, and shall not stain the sealant nor the materials to which applied. Manufacturer shall be consulted for all surfaces not specifically covered in submittal application instructions. Primer shall be used in accordance with manufacturer's instructions with all primers being applied prior to the installation of any backer rod or bond breaker tape.
10. Cleaning and cleanup solvents, agents, and accessory materials shall be as recommended in the manufacturer's printed instructions for cleaning up.

## 2.2 COLOR OF SEALANTS

- A. Color of sealants that are visible after installation shall match adjacent building finish. If in doubt of color match, obtain color approval from ENGINEER.

## PART 3 -- EXECUTION

### 3.1 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. **Delivery of Materials:** Manufactured materials shall be delivered in original, unbroken packages or containers bearing the manufacturer's label. Packages or containers shall be delivered to the site with seals unbroken.
- B. **Shelf Life:** Materials whose shelf life dates have expired shall not be used in the WORK. Such materials shall be promptly removed from the project site.
- C. **Storage:** All materials shall be carefully stored in accordance with the manufacturer's instructions, in an area that is protected from deleterious elements, and in a manner that will prevent damage to the product. Materials shall be stored at temperatures between 40 and 90 degrees unless otherwise specified by the manufacturer.



### 3.2 INSTALLATION

- A. **Manufacturer's Recommendations:** All work under this Section and all testing, where applicable, shall be performed in accordance with manufacturer's printed recommendations, specifications, and installation instructions except where more stringent requirements are indicated herein; and, except where project conditions require extra precautions or provisions to assure performance of the waterproofing system.
- B. **Authorized Installers:** Caulking and sealants shall be complete systems and be installed only by installers authorized and approved by the respective manufacturers.
- C. **Surface Preparation**
1. **General:** The surfaces of joints to be sealed shall be dry. Oil, grease, dirt, chalk, particles of mortar, dust, loose rust, loose mill scale, and other foreign substances shall be removed from surfaces of joints which will be in contact with the sealant. Ferrous metal surfaces shall be cleaned of all rust, mill scale, and other coatings by wire brush, grinding, or sandblasting. Oil and grease shall be removed by cleaning in accordance with sealant manufacturer's printed recommendations. Protective coatings shall be removed from all aluminum surfaces against which caulking or sealing compound is to be placed. Bituminous or resinous materials shall be removed from surfaces to receive caulking or sealants.
  2. **Concrete and Masonry Surfaces:** Where surfaces have been treated with curing compounds, oil, or other such materials, the materials shall be removed by sandblasting or wire brushing. Laitance, efflorescence, and loose mortar shall be removed from the joint cavity.
  3. **Steel Surfaces:** Steel surfaces to be in contact with sealant shall be sandblasted or, if sandblasting would not be practical or would damage adjacent finish work, the metal shall be scraped and wire brushed to remove loose mill scale. Protective coatings on steel surfaces shall be removed by sandblasting or by a solvent that leaves no residue.
  4. **Aluminum Surfaces:** Aluminum surfaces to be in contact with sealants shall be cleaned of temporary protective coatings. When masking tape is used for a protective cover, the tape and any residual adhesive shall be removed just prior to applying the sealant. Solvents used to remove protective coating shall be as recommended by the manufacturer of the aluminum work and shall be non-staining.
  5. **Wood Surfaces:** Wood surfaces to be in contact with sealants shall be free of splinters and sawdust or other loose particles.
- D. **Joint Types and Sizes:** Joint shapes and sizes shall be as indicated or as necessary for job conditions where not indicated. Joints to be caulked or sealed include through-bolt holes, door frames, louver and ventilator frames, joints between openings where items pass through exterior walls, concrete masonry, or combination of these surfaces, and as otherwise indicated or required for watertightness, weatherproofing, or airtightness. Use sealing compound at both exterior and interior surfaces of exterior wall penetrations.

### 3.3 SEALANT FILLED JOINTS

- A. **Manufacturer's Representative:** The CONTRACTOR shall furnish the on-site services

of the sealant manufacturer's representative prior to sealant work for inspection of the joints to be sealed and for instructing the installer in the proper use of the materials.

- B. **Sealant:** Sealant shall be used before expiration of shelf life. Multi-component sealants shall be mixed according to manufacturer's printed instructions. Sealant in guns shall be applied with a nozzle of proper size to fit the width of joint. Sealant shall be installed to the required depth without displacing the backing. Unless otherwise indicated or recommended by the manufacturer, the installed sealant shall be tooled so that the surface is uniformly smooth and free of wrinkles and to assure full adhesion to the sides of the joint. Sealants shall be installed free of air pockets, foreign embedded matter, ridges, and sags. Sealer shall be applied over the sealant if recommended by the sealant manufacturer.
- C. **Sealant Depth:** Sealant depth in joints shall be 1/2 the width of joint, but not less than 1/8-inch deep and 1/4-inch wide nor more than 1/2-inch deep and 1-inch wide. All joints shall have a rigid filler material installed to proper depth prior to application of sealant.
- D. **Masking Tape:** Masking tape shall be placed on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Masking tape shall be removed within 10 minutes after joint has been filled and tooled.
- E. **Backing:** Backing shall be installed to provide the indicated sealant depth. The installation tool shall be shaped to avoid puncturing the backing.
- F. **Bond-Breaker:** Bond-breaker shall be applied to fully cover the bottom of the joint without contaminating the sides where sealant adhesion is required.
- G. **Primer:** Primer shall be used on concrete masonry units, wood, or other porous surfaces in accordance with instructions furnished with the sealant. Primer shall be applied to the joint surfaces to be sealed. Surfaces adjacent to joints shall not be primed.
- H. **Applications:** A full bead of sealant shall be applied into the joint under sufficient pressure, with the nozzle drawn across sealant, to completely fill the void space and to ensure complete wetting of contact area to obtain uniform adhesion. During application, the tip of the nozzle shall be kept at the bottom of the joint thereby forcing the sealant to fill from the bottom to the top. Sealants shall be tooled immediately after exposure with a caulking tool or soft bristled brush moistened with solvent. The finished sealant-filled joint shall be slightly concave unless otherwise indicated.
- I. **Acoustic Partition Joints:** Acoustic partition joints shall be made air and sound-tight with acoustic caulking material.
  - 1. Partitions shall be sealed where indicated on the Drawings. Gypsum panels may have joint treatment applied in the normal manner over sealed joints, or panels may be finished with base or trim as required.
  - 2. A 1/4-inch minimum round bead of sealant shall be applied around all cut-outs, such as at electrical boxes and air conditioning ducts, sufficient to seal the openings.

### 3.4 ACOUSTIC CAULKING

- A. **Preparation:** Joints and surfaces to be sealed shall be clean, dry, and free of loose materials.

- B. **Concealed Joints:** Concealed joints in acoustic partitions including perimeters and intersections of walls and penetrations through finish work and at conduit ends with boxes shall be sealed with acoustic caulking compound. Backs of electrical boxes shall be sealed with acoustic sheet caulking, covering all holes and knock-outs.

### 3.5 CLEANING

- A. After application of sealant and caulking materials, adjacent materials which have been soiled shall be cleaned and left in a neat, clean, undamaged, or unstained condition. On porous surfaces, excess sealant shall be removed per sealant or caulking manufacturer's printed instructions.

- END OF SECTION -

## **SECTION 08110**

### **STEEL DOORS AND FRAMES**

#### **PART 1 - GENERAL**

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

##### **1.01 DESCRIPTION**

- A. Work included: Perform all work necessary and required for the construction of the project as indicated. Such work includes but is not limited to the following:
  - 1. Provide pressed metal doors, paneled doors and frames for doors, transoms, sidelights, mullions, interior glazed panels and other openings.
  - 2. Provide hollow metal doors and frames.
  - 3. Provide fire rated doors and frame assemblies as above.
  - 4. Installation of all the above.
  - 5. Coordination with template hardware.
  - 6. Installation of finish hardware.

##### **1.02 SUBMITTALS**

- A. Shop drawings shall be submitted for approval in accordance with section 01300 "Shop Drawings and Submittals", covering each type of door, frame, and frame conditions and showing:
  - 1. Elevations, gauges of metal, hardware reinforcing, locations, markings, quantities and complete anchorage details, supplemented by suitable schedules covering frames.
- B. Schedule: Submit a schedule of doors and frames using same reference numbers for details and openings as those on the Contract Drawings.
- C. Templates will be furnished by hardware supplier for preparing shop drawings and for preparing and reinforcing hollow metal work to receive hardware.

##### **1.03 QUALITY ASSURANCE**

- A. Manufacturer: Hollow metalwork shall be manufactured by a member of the Steel Door Institute. Manufacture in accordance with standards of Hollow Metal Manufacturer's Association (SDI-100).
- B. Test reports and certifications: Certification of labeled construction fire doors and frames. Certification of label construction for doors not requiring labels but requiring labeled construction shall be furnished.

- C. Comply with CBC latest edition, ADA Handicapped, and State Fire Marshal requirements.
- D. Clearances: Door/frame clearances shall conform to ANSI/SDI-100 2.2.1.

#### 1.04 PRODUCT HANDLING

- A. Deliver, store and handle metal doors and frames in a manner to prevent damage and deterioration.
- B. Provide packaging, containers, separators, banding, spreaders, paper wrapping, etc. as required to completely protect units during transportation and storage.
- C. Store doors and frames upright in a protected dry area, off the floor and with a 1/4" minimum air space between units.

#### 1.05 FIRE RATINGS

Where a fire-resistance classification is shown or scheduled, provide fire-rated hollow metal door and frames. Identify each fire door and frame with UL labels, indicating applicable fire rating of frames.

### **PART 2 - PRODUCTS**

#### 2.01 BASIC MATERIAL

- A. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A569 and ASTM A568.
- B. Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A366 and ASTM A568.
- C. Galvanized Steel Sheets: Zinc-coated carbon steel sheets of commercial quality, complying with ASTM A525, G60 zinc coating.
- D. Supports and Anchors: Fabricate of not less than 18 gage galvanized sheet steel.
- E. Inserts, Bolts, and Fasteners: Manufacturer s standard units, except hot-dip galvanized items to be built into exterior walls, complying with ASTM A153, Class C or D as applicable.
- F. Shop Applied Paint:
  - 1. Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints.
  - 2. Finish: Manufacturer's standard baking epoxy or enamel paint.

## 2.02 STANDARD STEEL DOORS

- A. Provide metal doors of types and styles indicated on drawings or schedules.
- B. Doors shall be 7' tall x 1-3/4" thick unless indicated otherwise. Maximum clearance 3/32" at jambs and heads and 1/4" at bottom.
- C. All exterior doors shall be insulated and constructed with galvanized sheet steel.
- D. Glazed openings shall be prepared for sizes as shown with metal stops shaped the same as for wooden doors.
- E. Supports and anchors:
  - 1. Fabricate of not less than 14 gauge galvanized sheet steel.
  - 2. Anchors shall be provided at each jamb for each 2 feet 6 inches of door height or fraction thereof.
  - 3. Anchor types shall be varied to provide positive fastening to adjacent construction.
  - 4. Metal clip angle shall be secured at bottom of each jamb member for anchoring to floor, with a minimum of 2 fasteners.
  - 5. Inserts, bolts and fasteners manufacturer's standard units. Hot dipped galvanized for all exterior wall applications, comply with A153, Class C or D.
  - 6. Reinforce doors and frames to receive surface applied hardware.
    - a. 9 gauge at hinges and closures.
    - b. 12 gauge at locksets.

## 2.03 STANDARD STEEL DOOR FRAMES AND FRAMING

- A. Frames shall be combination buck, frame, and trim type. Hotel frames may be combination buck and frame, with detachable casings, pre-finished in colors as selected by Architect. All frames shall be of type shown or indicated on drawings and schedules.
  - 1. Designed for use with scheduled wall type as indicated.
- B. Minimum gauges shall be: 16 gauge interior, 16 gauge exterior, or heavier gauge if required to achieve fire rating of assembly.
- C. Brake form steel sheets:

1. Profiles and shapes free of warp, buckles, fractures, or other defects shall be provided.
  2. Stops shall be formed integral with frame unless otherwise shown.
- D. Corners and connections: Shall be welded with exposed welds ground flush and smooth.
- E. Provide stop/bumpers, 3 bumpers for doors to 7 ft. And 4 for doors over 7 ft. High.
- F. Doors, frames and hardware shall be as follows:
- A. Overhead Service Doors – Overhead door shall be chain operated, 22 ga. steel per ASTM A-653, mounted to the interior wall face, with factory applied powder coat finish. Doors shall come with a standard 2-year warranty from the factory. Door shall be Type FC manufactured by Cooksen Company, or approved equal.
- B. Interior and Exterior Metal Doors **(#1, #2, #5, #6, #7)**
- All Hollow Metal Doors Shall be 36" W x 7'-0" T Republic DL Series 16 gauge Extra Heavy Duty A60 Galvanized, with the following exceptions:
- a. **Door #1 -- Provide 12" x 18" bottom vented opening in bottom panel. Louver shall be made of 12 ga. Steel. Include insect screen in louver.**
  - b. **Door #2 – Provide 24" W x 30" T top glazing with STC of door and glazing combination no less than 35**

All Hollow Metal Doors to shall have Republic ME Series 16 gauge A60 Welded Hollow Metal Door Frames with Mortar Guards at all cut out locations. Provide 1/16" thick bituminous coating on the back of all Hollow Metal Frames.

Exterior - Each Door opening to have:

- 3- Hinge BB5002 4.5 x 4.5 NRP 630 Bommer
- 1- Entry Lockset ML9953D LC B 630 Dorma
- 1- Emergency exit bar 8000 Series Dorma
- 1- Door Closer TS-93-1 PTHO 689 Dorma
- 1- Head Protection 428A 36" Alum Zero
- 1- Weather Strip 328AA 2/84" Alum Zero
- 1- Rain Drip 142A 40" Alum Zero
- 1- Threshold 546A 36" Alum Zero
- 1- Door Bottom 111A 36" Alum Zero
- 1- Latch Protector PMLP-111 630 Don-Jo

Interior -- Each door to have:

3- Hinge BB5002 4.5 x 4.5 630 Bommer  
1- Emergency exit bar 8000 Series Dorma  
1- Latchset ML9010 LC B 630 Dorma  
1- Overhead Stop 902S 689 Dorma  
3- Rubber Mutes 307D Gray Hager

2.04 Not Used

## 2.05 DOOR LIGHT FRAMES

Frames for light openings in doors: As detailed and in doors and of fire ratings where indicated, units shall be "Visionlite" as manufactured by Leslie Locke or approved equal.

## 2.06 PREPARATION FOR FINISH HARDWARE

Frames shall be prepared to receive hardware.

1. Hardware supplier shall furnish hollow metal manufacturer approved hardware schedule, hardware templates, and samples of physical hardware where necessary to insure correct fitting and installation.
  2. Preparation includes sinkages and cut-outs for mortise and concealed hardware.
- B. Reinforcements shall be provided for both concealed and surface applied hardware.
1. Reinforcements shall be drilled and tapped at factory using templates.
  2. Reinforcements shall be installed with concealed connections designed to develop full strength of reinforcements.

## 2.07 FINISH

- A. Frames shall be leveled and ground smooth.
- B. Mineral filler shall be applied to eliminate any weld scars or blemishes.
- C. Factory coat of rust-inhibitive metal primer shall be applied. Primer shall be not less than 1 mil dry film thickness and shall be applied right after pretreatment is completed.
- D. Finish coatings on doors shall be factory applied. Finish coatings on frames can be applied in the field if desired. All prime coatings shall be factory applied.

## 2.08 ACOUSTICAL TREATMENT



Apply sound deadening material to inside of door frame for STC requirements.

### **PART 3 - EXECUTION**

#### **3.01 INSTALLATION**

- A. Frames shall be set to maintain scheduled dimensions, hold head level, and maintain jambs plumb and square.
- B. Anchorages and connections shall be secured to adjacent construction.
- C. Frame spreader bars, wherever possible, shall be left intact until frames are set perfectly square and plumb, and anchors are securely attached.
- D. Frames shall be secured to structural steel framing concealed in hollow metalwork, and field splices made.
- E. Expansion movement shall be allowed for as required.
- F. Doors shall be adjusted to provide even gap between doors and frames.
- G. Doors and frames shall comply with Steel Door Institute/ANSI Standards.

#### **3.02 PRIME COAT TOUCH-UP**

- A. Immediately after erection, areas where prime coat has been damaged shall be sanded smooth and touched up with same primer as applied at shop.
- B. Rust shall be removed before above specified touch-up is applied.
- C. Touch-up shall not be obvious.
- D. Before job painting is started, finish on frame and doors shall comply with finish on approved sample.

#### **3.03 ADJUST AND CLEAN**

- A. Prime coat Touch-up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.
- B. Final Adjustments: Check and readjust operating finish hardware items, leaving steel doors and frames undamaged and in complete and proper operating condition.

#### **3.04 PROTECTION**

Installed hollow metal work shall be protected against damage from other construction work.

END OF SECTION

## SECTION 09800 - PROTECTIVE COATING

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide protective coatings, complete and in place, in accordance with the Contract Documents.
- B. Definitions
  - 1. The term "paint," "coatings," or "finishes" as used herein, shall include surface treatments, emulsions, enamels, paints, epoxy resins, and all other protective coatings, excepting galvanizing or anodizing, whether used as a pretreatment, primer, intermediate coat, or finish coat.
  - 2. The term "DFT" means minimum dry film thickness, without any negative tolerance.
- C. The following surfaces **shall not be protective coated**:
  - 1. Concrete, unless required by items on the concrete coating schedule below or the Drawings.
  - 2. Stainless steel
  - 3. Machined surfaces
  - 4. Grease fittings
  - 5. Glass
  - 6. Equipment nameplates
  - 7. Platform gratings, stair treads, door thresholds, and other walk surfaces, unless specifically indicated to be coated.
  - 8. Above grade galvanized steel and copper pipe
  - 9. Mechanical and piping bolts, washers, and nuts
  - 10. Factory epoxy coated valves, instruments, and fittings.
- D. The coating system schedules summarize the surfaces to be coated, the required surface preparation, and the coating systems to be applied. Coating notes on the Drawings are used to show or extend the limits of coating schedules, to show exceptions to the schedules, or to clarify or show details for application of the coating systems.
- E. Not Used.

#### 1.2 CONTRACTOR SUBMITTALS

- A. **General:** Submittals shall be furnished in accordance with Section 01300 - Contractor

Submittals, unless indicated otherwise below.

B. Submittals shall include the following information and be submitted at least 30 days prior to protective coating work:

1. Coating Materials List: Eight copies of a coating materials list showing the Manufacturer and the coating number, keyed to the coating systems herein. The list shall be submitted prior to or at the time of submittal of samples.
2. Paint Manufacturer's Information: For each coating system to be used, the following data:
  - a. Paint Manufacturer's data sheet for each product proposed, including statements on the suitability of the material for the intended use.
  - b. Technical and performance information that demonstrates compliance with the system performance and material requirements.
  - c. Paint Manufacturer's instructions and recommendations on surface preparation and application.
  - d. Colors available for each product (where applicable).
  - e. Compatibility of shop and field applied coatings (where applicable).
  - f. Material Safety Data Sheet for each product used.

C. Samples

1. Two sets of color samples to match each color selected by the ENGINEER from the Manufacturer's standard color sheets. If custom mixed colors are indicated, the color samples shall be made using color formulations prepared to match the color samples furnished by the ENGINEER. The color formula shall be shown on the back of each color sample.

### 1.3 SPECIAL CORRECTION OF DEFECTS REQUIREMENTS

- A. **Warranty Inspection:** A warranty inspection may be conducted during the eleventh month following completion of all coating and painting work. The CONTRACTOR and a representative of the coating material Manufacturer shall attend this inspection. All defective work shall be repaired in accordance with these specifications and to the satisfaction of the OWNER. The OWNER may, by written notice to the CONTRACTOR, reschedule the warranty inspection to another date within the one-year correction period, or may cancel the warranty inspection altogether. If a warranty inspection is not held, the CONTRACTOR is not relieved of its responsibilities under the Contract Documents.

## PART 2 -- PRODUCTS

### 2.1 GENERAL

- A. **Suitability:** The CONTRACTOR shall use suitable coating materials as recommended by the Manufacturer.
- B. **Compatibility:** In any coating system only compatible materials from a single Manufacturer shall be used in the work. Particular attention shall be directed to compatibility of primers and finish coats. If necessary, a barrier coat shall be applied between existing prime coat and subsequent field coats to ensure compatibility.
- C. **Containers:** Coating materials shall be sealed in containers that plainly show the designated name, formula or specification number, batch number, color, date of manufacture, and name of manufacturer, all of which shall be plainly legible at the time of use.
- D. **Colors:** All colors and shades of colors of all coats of paint shall be as indicated or selected by the ENGINEER. Each coat shall be of a slightly different shade, to facilitate inspection of surface coverage of each coat. Finish colors shall be as selected from the manufacturer's standard color samples by the ENGINEER.
- E. Substitute or "Or-Equal" Products
  - 1. To establish equality the CONTRACTOR shall furnish satisfactory documentation from the manufacturer of the proposed substitute or "or-equal" product that the material meets the indicated requirements and is equivalent or better in the following properties:
    - a. Quality
    - b. Durability
    - c. Resistance to abrasion and physical damage
    - d. Life expectancy
    - e. Ability to recoat in future
    - f. Solids content by volume
    - g. Dry film thickness per coat
    - h. Compatibility with other coatings
    - i. Suitability for the intended service
    - j. Resistance to chemical attack
    - k. Temperature limitations in service and during application
    - l. Type and quality of recommended undercoats and topcoats
    - m. Ease of application
    - n. Ease of repairing damaged areas

- o. Stability of colors
2. Protective Coating Materials shall be standard products produced by recognized manufacturers who are regularly engaged in production of such materials for essentially identical service conditions. Where requested, the CONTRACTOR shall provide the ENGINEER with the names of not less than 10 successful applications of the proposed manufacturer's products which comply with these requirements.
3. If a proposed substitution requires changes in the WORK, the CONTRACTOR shall bear all such costs involved.

## 2.2 INDUSTRIAL COATING SYSTEMS

- A. **Material Sources:** Each of the following manufacturers is capable of supplying many of the industrial coating materials indicated herein. Where manufacturers and paint numbers are listed, it is to show the type and quality of coatings that are required. Proposed substitute materials will be considered as indicated above. All industrial coating materials shall be materials that have a record of satisfactory performance in industrial plants, manufacturing facilities, and water and wastewater treatment plants.

### 1. **Tnemec Company**

- B. **System 4 - Aliphatic Polyurethane:** Two component aliphatic acrylic polyurethane coating material shall provide superior color and gloss retention, resistance to splash from acid and alkaline chemicals, resistance to chemical fumes and severe weathering and with a minimum solids content of 58 percent by volume. Primer shall be a rust inhibitive two component epoxy coating with a minimum solids content of 68 percent by volume.

1. Prime coat DFT = 4 mils, **Tnemec 69, or equal.**
2. Finish coat (one or more, DFT = 3 mils), **Tnemec 74, or equal.**
3. Total system DFT = 7 mils.
4. More than one finish coat shall be applied as necessary to produce a finish with uniform color and texture.

- C. **System 5 - Inorganic Zinc/Polyurethane:** The inorganic zinc primer shall be a water or solvent based, self-curing, zinc silicate two-component inorganic coating which contains at least 85 percent of metallic zinc by weight in the dried film, and is recommended by the coating manufacturer as a primer for this system. The intermediate coat shall be a high-build two component epoxy with a solids content of at least 70 percent by volume. Finish coats shall be a 2-component aliphatic acrylic or polyester polyurethane coating material that provides superior color and gloss retention, resistance to chemical fumes and severe weathering, and a minimum solids content of 58 percent by volume.

1. Prime coat DFT = 3 mils.
2. Intermediate coat DFT = 4 mils.

3. Finish coats (one or more, DFT = 3 mils).
  4. Total system DFT = 10 mils.
  5. Intermediate coat shall be applied in excess of 4 mils DFT or in more than one coat as necessary to completely cover the inorganic zinc primer and prevent application bubbling of the polyurethane finish coat.
  6. More than one finish coat shall be applied as necessary to produce a finish with uniform color and texture.
  7. If the inorganic zinc primer is used as a pre-construction or shop applied primer, all damaged and uncoated areas shall be spot abrasive blasted and coated after construction using the indicated material.
- D. **System 6 - Inorganic Zinc, Water Based:** Water based, self curing, zinc silicate coating material shall be a two component inorganic coating material that contains at least 85 percent of metallic zinc by weight in the dried film.
1. Prime coat and finish coat (One, DFT = 3 mils).
  2. Total system DFT = 3 mils.
- E. **System 7 - Acrylic Latex:** Single component, water based acrylic latex with a fungicide additive shall have a minimum solids content of 35 percent by volume. Prime coat shall be as recommended by manufacturer. The coating material shall be available in the ANSI safety colors.
1. Prime coat DFT = 2 mils, as recommended by manufacturer.
  2. Finish coats (2 or more, DFT = 6 mils).
  3. Total system DFT = 8 mils.
- F. **System 8 - Epoxy, Equipment:** Two component, rust inhibitive polyamide cured epoxy coating material shall provide a recoatable finish that is available in a wide selection of colors. The coating material shall have a minimum solids content of 66 percent by volume and be resistant to service conditions of condensing moisture, splash and spillage of lubricating oils, and frequent washdown and cleaning.
1. Prime coat DFT = 3 mils.
  2. Prime coat, where shop applied. (DFT = 3 mils), universal primer.
  3. Finish coats (2 or more, DFT = 6 mils).
  4. Total system DFT = 9 mils.
- G. **System 9 - Inorganic Zinc/Epoxy, Equipment:** The inorganic zinc primer shall be a water or solvent based, self curing, zinc silicate, two-component inorganic coating that contains at least 85 percent of metallic zinc by weight in the dried film, and is recommended by the coating manufacturer as a primer for this system. The finish coats

shall be a polyamide cured epoxy material with a minimum solids content of at least 80 percent by volume, and available in a large selection of colors.

1. Prime coat DFT = 3 mils.
2. Finish coats (2 or more, DFT = 9 mils).
3. Total system DFT = 12 mils.

H. **System 10 - Acrylic, Concrete:** The acrylic coating material shall be a single component, industrial grade, high molecular weight, waterborne acrylic material with a solids content of at least 35 percent by volume. The filler-sealer shall be a two component epoxy masonry sealer for wet and exterior exposure, with a solids content of at least 64 percent by volume. A 100 percent solids epoxy surfacer shall be used to fill holes and patch the concrete surface after abrasive blasting.

1. Prime coat (filler-sealer), applied in two coats to the entire surface and worked into the surface with a squeegee to achieve a smooth, void-free surface, **Tnemec 54-660**.
2. Finish coats (2 or more, DFT = 6 mils), **Tnemec 6**,

I. **System 11 - Aliphatic Polyurethane, Concrete:** Two component aliphatic polyurethane coating material shall provide superior color and gloss retention, resistance to splash from acid and alkaline chemicals, resistance to chemical fumes and severe weathering, and contain a minimum solids content of 65 percent by volume. Filler-sealer compound shall be a two component epoxy material used to provide a smooth surface for the epoxy intermediate coat. The filler-sealer is applied to the entire concrete surface and worked into the concrete surface with a wide blade putty knife or squeegee. The intermediate coat shall be a high-build epoxy coating with a minimum solids content of 70 percent by volume.

1. Prime coat (Filler-sealer), **Tnemec 54-660, or equal**.
2. Intermediate coat DFT = 4 mils, , **Tnemec 104 HS, or equal**.
3. Finish coats (2 or more, DFT = 3 mils), **Tnemec 74, or equal**.

J. **System 12 - Aliphatic Polyurethane, Fiber Glass:** Two-component aliphatic polyurethane coating material shall provide superior color and gloss retention, resistance to splash from acid and alkaline chemicals, and resistance to chemical fumes and severe weathering. A primer, tie coat, or mist coat shall be used as recommended by the manufacturer.

1. Prime coat (Tie coat), , **Tnemec 66, or equal**.
2. Finish coats (2 or more, DFT = 3 mils), , **Tnemec 74, or equal**.

## 2.3 SUBMERGED AND SEVERE SERVICE COATING SYSTEMS

A. **Materials Sources:** The manufacturers' products listed in this paragraph are materials which satisfy the material descriptions of this paragraph and have a documented



successful record for long term submerged or severe service conditions. Proposed substitute products will be considered as indicated above.

- B. **System 100 - Amine Cured Epoxy:** High build, amine cured, epoxy resin shall have a solids content of at least 80 percent by volume, and shall be suitable for long-term immersion service in potable water and municipal wastewater. For potable water service, the coating material shall be listed by the NSF International as in compliance with NSF Standard 61 - Drinking Water System Components - Health Effects.
1. Prime coat and finish coats (3 or more, DFT = 16 mils), , **Tnemec 139, or equal.**
  2. For coating of valves and non-submerged equipment, DFT = 12 mils.
- C. **System 101 - Cold-Applied Tape:** Tape coating materials and procedures shall be in accordance with ANSI/AWWA C209. Prefabricated tape shall be Type II. The system shall consist of a primer layer, inner layer tape (35 mils), and an outer layer tape (35 mils). Total system DFT = 70 mils.
- D. **System 102 - Polyamide Cured Epoxy:** High build, polyamide epoxy resin shall have a solids content of at least 56 percent by volume, and shall be suitable for long-term immersion in potable water and municipal wastewater. For potable water service, the coating material shall be listed by the NSF International as in compliance with NSF Standard 61.
1. Prime coat and finish coats (3 or more, DFT = 12 mils), **Tnemec 20, or equal.**
- E. **System 103 - Not Used**
- F. **System 104 - Not Used**
- G. **System 106 - Fusion Bonded Epoxy:** The coating material shall be a 100 percent powder epoxy, certified as compliant with NSF Standard 61, applied in accordance with the ANSI/AWWA C213 - Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines, except that the surface preparation shall be as specified in the coating system schedule of this Section. The coating shall be applied using the fluidized bed or electrostatic spray process.
1. Coating DFT = 16 mils, **Scotchkote 134 or 206N, or equal.**
  2. For coating of valves, DFT - 12 mils.
  3. Liquid Epoxy: For field repairs, the use of a liquid epoxy will be permitted, applied in not less than 3 coats to provide a DFT of 15 mils. The liquid epoxy shall be a 100 percent solids epoxy recommended by the powder epoxy manufacturer.
  4. Coating color per Owner. Provide factory testing results of coating and lining thickness testing.
- H. **System 108 - Epoxy, Concrete:** The coating material shall be an amino cured epoxy material suitable for long-term immersion in water and wastewater and for service where subjected to occasional splash and spillage of water and wastewater

treatment chemicals. The finish coating material shall have a minimum solids content of 80 percent by volume. If used for potable water service the finish coating material shall be listed by the NSF International as in compliance with NSF Standard 61, and shall conform with state and local health regulations and policies for service in potable water. The filler-sealer shall be a 100 percent solids amine-cured epoxy material with silica and inert fillers. A 100 percent solids epoxy surfacer shall be used to fill holes and patch the concrete surface after abrasive blasting.

1. Filler-sealer: **Tnemec 69-1211** (6-8 mils) followed by **Tnemec 63-1500 (two coats)** or equal.
2. Finish coats (2 or more, DFT = 12 mils): **Tnemec 69**. On walking surfaces use a non-skid additive such as **Ameron 886** in the final coat.

## 2.4 SPECIAL COATING SYSTEMS

- A. **System 200 - PVC Tape:** Prior to wrapping the pipe with PVC tape, the pipe and fittings first shall be primed using a primer recommended by the PVC tape manufacturer. After being primed, the pipe shall be wrapped with a 20-mil adhesive PVC tape, half-lapped, to a total thickness of 40 mils.
- B. **System 201 - Rich Portland Cement Mortar:** Rich portland cement mortar coating shall have a minimum thickness of 1/8-inch, followed by enclosure in an 8-mil thick polyethylene sheet with all joints and edges lapped and sealed with tape.
- C. **System 203 - Epoxy Surfacing:** Two-component epoxy floor surfacing shall be formulated to resist many acids, alkalies, and solvents. Material shall be resistant to liquid alum, sodium hydroxide, and 50 percent sulfuric acid. Products shall be as follows, or equal:
- D. **System 204 - Water-Retardant:**
  1. Two coats (or single coat if manufacturer recommends in writing) of a clear, non-staining, silane-modified-siloxane masonry water-retardant material. The water-retardant system after application shall be provided with not less than a five-year warranty on the performance of the product.
  2. Surfaces shall be cleaned with a chemical cleaner approved by the manufacturer and power wash. Surfaces shall be clean and dry before application of the material. Method and rate of application shall be in accordance with manufacturer's published instructions. A manufacturer's representative shall be present during applications if necessary for warranty.
- E. **System 205 - Polyethylene Encasement:** Application of polyethylene encasement shall be in accordance with ANSI/AWWA C105 using Method C.
- F. **System 206 - Cement Mortar Coating:** A 1-1/2-inch minimum thickness mortar coating reinforced with 3/4-inch galvanized welded wire fabric shall be provided. The cement mortar shall contain no less than one part Type V cement to 3 parts sand. The cement mortar shall be cured by a curing compound meeting the requirements of "Liquid

Membrane Forming Compounds for Curing Concrete," ASTM C 309, Type II, white pigmented, or by enclosure in an 8-mil thick polyethylene sheet with all edges and joints lapped by at least 6 inches.

G. **System 207 - Not Used**

H. **System 208 - Aluminum Metal Isolation:** Two coats of a high build polyamide epoxy paint, such as **Tnemec 66, or equal** (8 mils). Total thickness of system DFT = 8.0 mils.

I. **System 209 - Alkyd-Wood:** Industrial quality, gloss or semi-gloss, medium long oil alkyd coating material with a minimum solids content of 49 percent by volume. Primer shall be an alkyd primer as recommended by the manufacturer.

1. Prime coat DFT = 3 mils.
2. Finish coats (two or more, DFT = 3 mils), **Tnemec 2H, or equal**.
3. Total system DFT = 6 mils.

J. **System 210 - Acrylic-wood:** Single component, water-based acrylic latex coating material with a fungicide additive and a minimum solids content of 35 percent by volume. Primer shall be an alkyd primer as recommended by the manufacturer.

1. Prime coat DFT = 2 mils.
2. Finish coats (two or more, DFT = 6 mils), , **Tnemec 6, or equal**.
3. Total system DFT = 8 mils.

K. **System 211 - Acrylic-Drywall:** Single component, water-based acrylic latex coating material with a fungicide additive and a minimum solids content of 35 percent by volume. Primer shall be a PVA sealer as recommended by the manufacturer.

1. Prime coat DFT = 1.5 mils.
2. Finish coats (two or more, DFT = 6 mils), **Tnemec 6, or equal**.
3. Total system DFT = 7.5 mils.

L. **Concrete Water Storage Tank:** A decorative coating shall be applied to the above grade

exterior wall surfaces using two coats of a non-cementitious, high build, 100% acrylic resin polymer such as "Tammscoat Smooth" textured protective coating, "Tnemec Envirocrete 156" or equal. For below grade (to 1'-0" above highest finish grade point), apply polyamidoamine epoxy, Tnemec V69.

## PART 3 -- EXECUTION

### 3.1 MANUFACTURER'S SERVICES

- A. The CONTRACTOR shall require the protective coating manufacturer to furnish a qualified technical representative to visit the project site for technical support as may be necessary to resolve field problems attributable or associated with the manufacturer's products.
- B. For submerged and severe service coating systems, the CONTRACTOR shall require the paint manufacturer to furnish the following services:
  - 1. The manufacturer's representative shall provide at least 6 hours of on-site instruction in the proper surface preparation, use, mixing, application, and curing of the coating systems.
  - 2. The manufacturer's representative shall observe the start of surface preparation, mixing, and application of the coating materials for each coating system.

### 3.2 WORKMANSHIP

- A. Skilled craftsmen and experienced supervision shall be used on all WORK.
- B. Coating shall be done in a workmanlike manner so as to produce an even film of uniform thickness. Edges, corners, crevices, and joints shall receive special attention to insure thorough cleaning and an adequate thickness of coating material. The finished surfaces shall be free from runs, drops, ridges, waves, laps, brush marks, and variations in color, texture, and finish. The hiding shall be so complete that the addition of another coat would not increase the hiding. Special attention shall be given to insure that edges, corners, crevices, welds, and similar areas receive a film thickness equivalent to adjacent areas, and installations shall be protected by the use of drop cloths or other precautionary measures.
- C. All damage to surfaces resulting from the WORK shall be cleaned, repaired, and refinished to original condition.

### 3.3 STORAGE, MIXING, AND THINNING OF MATERIALS

- A. **Manufacturer's Recommendations:** Unless otherwise indicated, the coating manufacturer's printed recommendations and instructions for thinning, mixing, handling, applying, and protecting its coating materials, for preparation of surfaces for coating, and for all other procedures relative to coating shall be strictly observed.
- B. All protective coating materials shall be used within the manufacturer's recommended shelf life.
- C. **Storage and Mixing:** Coating materials shall be stored under the conditions recommended by the Material Safety Data Sheets, and shall be thoroughly stirred, strained, and kept at a uniform consistency during application. Coatings of different manufacturers shall not be mixed together.

### 3.4 PREPARATION FOR COATING

- A. **General:** All surfaces to receive protective coatings shall be cleaned as indicated prior to application of coatings. The CONTRACTOR shall examine all surfaces to be coated, and shall correct all surface defects before application of any coating material. All marred or abraded spots on shop-primed and on factory-finished surfaces shall receive touch-up

restoration prior to any coating application. Surfaces to be coated shall be dry and free of visible dust.

- B. **Protection of Surfaces Not to be Coated:** Surfaces which are not to receive protective coatings shall be protected during surface preparation, cleaning, and coating operations.
- C. All hardware, lighting fixtures, switchplates, machined surfaces, couplings, shafts, bearings, nameplates on machinery, and other surfaces not to be painted shall be removed, masked or otherwise protected. Drop cloths shall be provided to prevent coating materials from falling on or marring adjacent surfaces. The working parts of all mechanical and electrical equipment shall be protected from damage during surface preparation and coating operations. Openings in motors shall be masked to prevent entry of coating or other materials.
- D. Care shall be exercised not to damage adjacent work during blast cleaning operations. Spray painting shall be conducted under carefully controlled conditions. The CONTRACTOR shall be fully responsible for and shall promptly repair any and all damage to adjacent work or adjoining property occurring from blast cleaning or coating operations.
- E. **Protection of Painted Surfaces:** Cleaning and coating shall be coordinated so that dust and other contaminants from the cleaning process will not fall on wet, newly-coated surfaces.

### 3.5 SURFACE PREPARATION STANDARDS

- A. The following referenced surface preparation specifications of the Steel Structures Painting Council shall form a part of this specification:
  - 1. Solvent Cleaning (SSPC-SP1): Removal of oil, grease, soil, salts, and other soluble contaminants by cleaning with solvent, vapor, alkali, emulsion, or steam.
  - 2. Hand Tool Cleaning (SSPC-SP2): Removal of loose rust, loose mill scale, loose paint, and other loose detrimental foreign matter, by hand chipping, scraping, sanding, and wire brushing.
  - 3. Power Tool Cleaning (SSPC-SP3): Removal of loose rust, loose mill scale, loose paint, and other loose detrimental foreign matter, by power tool chipping, descaling, sanding, wire brushing, and grinding.
  - 4. White Metal Blast Cleaning (SSPC-SP5): Removal of all visible rust, oil, grease, soil, dust, mill scale, paint, oxides, corrosion products and foreign matter by blast cleaning.
  - 5. Commercial Blast Cleaning (SSPC-SP6): Removal of all visible oil, grease, soil, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except that staining shall be limited to no more than 33 percent of each square inch of surface area.
  - 6. Brush-Off Blast Cleaning (SSPC-SP7): Removal of all visible oil, grease, soil, dust, loose mill scale, loose rust, and loose paint.
  - 7. Near-White Blast Cleaning (SSPC-SP10): Removal of all visible oil, grease, soil,

dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except that staining shall be limited to no more than 5 percent of each square inch of surface area.

### 3.6 METAL SURFACE PREPARATION (UNGALVANIZED)

- A. The minimum abrasive blasting surface preparation shall be as indicated in the coating system schedules included at the end of this Section. Where there is a conflict between these specifications and the coating manufacturer's printed recommendations for the intended service, the higher degree of cleaning shall apply.
- B. Workmanship for metal surface preparation shall be in conformance with the current SSPC Standards and this Section. Blast cleaned surfaces shall match the standard samples available from the National Association of Corrosion Engineers, NACE Standard TM-01-70 - Visual Standard for Surfaces of New Steel Airblast Cleaned with Sand Abrasive and TM-01-75 - Visual Standard for Surfaces of New Steel Centrifugally Blast Cleaned with Steel Grit.
- C. All oil, grease, welding fluxes, and other surface contaminants shall be removed by solvent cleaning per SSPC-SP1 - Solvent Cleaning prior to blast cleaning.
- D. All sharp edges shall be rounded or chamfered and all burrs, and surface defects and weld splatter shall be ground smooth prior to blast cleaning.
- E. The type and size of abrasive shall be selected to produce a surface profile that meets the coating manufacturer's recommendation for the particular coating and service conditions. Abrasives for submerged and severe service coating systems shall be clean, hard, sharp cutting crushed slag. Automated blasting systems shall not be used for surfaces that will be in submerged service. Metal shot or grit shall not be used for surfaces that will be in submerged service, even if subsequent abrasive blasting is planned to be one with hard, sharp cutting crushed slag.
- F. The abrasive shall not be reused unless an automated blasting system is used for surfaces that will be in non-submerged service. For automated blasting systems, clean oil-free abrasives shall be maintained. The abrasive mix shall include at least 50 percent grit.
- G. The CONTRACTOR shall comply with the applicable federal, state, and local air pollution control regulations for blast cleaning.
- H. Compressed air for air blast cleaning shall be supplied at adequate pressure from well maintained compressors equipped with oil and moisture separators which remove at least 95 percent of the contaminants.
- I. Surfaces shall be cleaned of all dust and residual particles of the cleaning operation by dry air blast cleaning, vacuuming, or another approved method prior to painting.
- J. Enclosed areas and other areas where dust settling is a problem shall be vacuum cleaned and wiped with a tack cloth.
- K. Damaged or defective coating shall be removed by the specified blast cleaning to meet the clean surface requirements before recoating.

- L. If the specified abrasive blast cleaning will damage adjacent work, the area to be cleaned is less than 100 square feet, and the coated surface will not be submerged in service, then SSPC-SP2 or SSPC-SP3 be used.
- M. Shop applied coatings of unknown composition shall be completely removed before the indicated coatings are applied. Valves, castings, ductile or cast iron pipe, and fabricated pipe or equipment shall be examined for the presence of shop-applied temporary coatings. Temporary coatings shall be completely removed by solvent cleaning per SSPC-SP1 before the abrasive blast cleaning work has been started.
- N. Shop primed equipment shall be solvent cleaned in the field before finish coats are applied.

### 3.7 SURFACE PREPARATION FOR GALVANIZED FERROUS METAL

- A. Galvanized ferrous metal shall be alkaline cleaned per SSPC-SP1 to remove oil, grease, and other contaminants detrimental to adhesion of the protective coating system to be used, followed by brush off blast cleaning per SSPC-SP7.
- B. Pretreatment coatings of surfaces shall be in accordance with the printed recommendations of the coating manufacturer.

### 3.8 SURFACE PREPARATION OF FERROUS SURFACES WITH EXISTING COATINGS, EXCLUDING STEEL RESERVOIR INTERIORS

- A. **General:** All grease, oil, heavy chalk, dirt, or other contaminants shall be removed by solvent or detergent cleaning prior to abrasive blast cleaning. The generic type of the existing coatings shall be determined by laboratory testing.
- B. **Abrasive Blast Cleaning:** The CONTRACTOR shall provide the degree of cleaning specified in the coating system schedule for the entire surface to be coated. If the degree of cleaning is not indicated in the schedule, deteriorated coatings shall be removed by abrasive blast cleaning to SSPC-SP6. Areas of tightly adhering coatings shall be cleaned to SSPC-SP7, with the remaining thickness of existing coating not to exceed 3 mils.
- C. **Incompatible Coatings:** If coatings to be applied are not compatible with existing coatings the CONTRACTOR shall apply intermediate coatings per the paint manufacturer's recommendation for the indicated coating system or shall completely remove the existing coating prior to abrasive blast cleaning. A small trial application shall be conducted for compatibility prior to painting large areas.
- D. **Unknown Coatings:** Coatings of unknown composition shall be completely removed prior to application of new coatings.
- E. **Water Abrasive or Wet Abrasive Blast Cleaning:** Where specified or where job site conditions do not permit dry abrasive blasting for industrial coating systems due to dust or air pollution considerations, water abrasive blasting or wet abrasive blasting may be used. In both methods, paint-compatible corrosion inhibitors shall be used, and coating application shall begin as soon as the surfaces are dry. Water abrasive blasting shall be done using high pressure water with sand injection. In both methods, the equipment used shall be commercially produced equipment with a successful service record. Wet blasting

methods shall not be used for submerged and severe service coating systems unless indicated.

### 3.9 CONCRETE AND CONCRETE BLOCK MASONRY SURFACE PREPARATION

- A. Surface preparation shall not begin until at least 30 days after the concrete or masonry has been placed.
- B. All oil, grease, and form release and curing compounds shall be removed by detergent cleaning per SSPC-SP1 before abrasive blast cleaning.
- C. Concrete, concrete block masonry surfaces and deteriorated concrete surfaces to be coated shall be abrasive blast cleaned to remove existing coatings, laitance, deteriorated concrete, and to roughen the surface equivalent to the surface of the No. 80 grit flint sandpaper.
- D. If acid etching is required by the coating application instructions, the treatment shall be made after abrasive blasting. After etching, rinse surfaces with water and test the pH. The pH shall be between neutral and 8.
- E. Surfaces shall be clean and as recommended by the coating manufacturer before coating is started.
- F. Unless required for proper adhesion, surfaces shall be dry prior to coating. The presence of moisture shall be determined with a moisture detection device such as **Delmhorst Model DB, or equal**.

### 3.10 PLASTIC, FIBER GLASS AND NONFERROUS METALS SURFACE PREPARATION

- A. Plastic and fiber glass surfaces shall be sanded or brush off blast cleaned prior to solvent cleaning with a chemical compatible with the coating system primer.
- B. Non-ferrous metal surfaces shall be solvent-cleaned SSPC-SP1 followed by sanding or brush-off blast cleaning SSPC-SP7.
- C. All surfaces shall be clean and dry prior to coating application.

### 3.11 ARCHITECTURAL CONCRETE BLOCK MASONRY SURFACE PREPARATION

- A. The mortar surfaces shall be cured at least 14 days before surface preparation work is started.
- B. Dust, dirt, grease, and other foreign matter shall be removed prior to abrasive blasting.
- C. The masonry surfaces shall be prepared in accordance with the material manufacturer's printed instructions.

### 3.12 SHOP COATING REQUIREMENTS

- A. Unless otherwise indicated, all items of equipment, or parts of equipment which are not submerged in service, shall be shop primed and then finish coated in the field after installation with the indicated or selected color. The methods, materials, application



equipment and all other details of shop painting shall comply with this section. If the shop primer requires topcoating within a specified period of time, the equipment shall be finish coated in the shop and then touch-up painted after installation.

- B. All items of equipment, or parts and surfaces of equipment which are submerged or inside an enclosed hydraulic structure when in service, with the exception of pumps and valves, shall have all surface preparation and coating work performed in the field.
- C. The interior surfaces of steel water reservoirs, except for Part A surfaces, shall have all surface preparation and coating work performed in the field.
- D. For certain pieces of equipment it may be undesirable or impractical to apply finish coatings in the field. Such equipment may include engine generator sets, equipment such as electrical control panels, switchgear or main control boards, submerged parts of pumps, ferrous metal passages in valves, or other items where it is not possible to obtain the indicated quality in the field. Such equipment shall be primed and finish coated in the shop and touched up in the field with the identical material after installation. The CONTRACTOR shall require the manufacturer of each such piece of equipment to certify as part of its shop drawings that the surface preparation is in accordance with these specifications. The coating material data sheet shall be submitted with the shop drawings for the equipment.
- E. For certain small pieces of equipment the manufacturer may have a standard coating system which is suitable for the intended service conditions. In such cases, the final determination of suitability will be made during review of the shop drawing submittals. Equipment of this type generally includes only indoor equipment such as instruments, small compressors, and chemical metering pumps.
- F. Shop painted surfaces shall be protected during shipment and handling by suitable provisions including padding, blocking, and the use of canvas or nylon slings. Primed surfaces shall not be exposed to the weather for more than 2 months before being topcoated, or less time if recommended by the coating manufacturer.
- G. Damage to shop-applied coatings shall be repaired in accordance with this Section and the coating manufacturer's printed instructions.
- H. The CONTRACTOR shall make certain that the shop primers and field topcoats are compatible and meet the requirements of this Section. Copies of applicable coating manufacturer's data sheets shall be submitted with equipment shop drawings.

### 3.13 APPLICATION OF COATINGS

- A. The application of protective coatings to steel substrates shall be in accordance with SSPC-PA1 - Paint Application Specification No. 1.
- B. Cleaned surfaces and all coats shall be inspected prior to each succeeding coat. The CONTRACTOR shall schedule such inspection with the ENGINEER in advance.
- C. Blast cleaned ferrous metal surfaces shall be painted before any rusting or other deterioration of the surface occurs. Blast cleaning shall be limited to only those surfaces that can be coated in the same working day.

- D. Coatings shall be applied in accordance with the manufacturer's instructions and recommendations, and this Section, whichever has the most stringent requirements.
- E. Special attention shall be given to edges, angles, weld seams, flanges, nuts and bolts, and other places where insufficient film thicknesses are likely to be present. Use stripe painting for these areas.
- F. Special attention shall be given to materials which will be joined so closely that proper surface preparation and application are not possible. Such contact surfaces shall be coated prior to assembly or installation.
- G. Finish coats, including touch-up and damage repair coats shall be applied in a manner which will present a uniform texture and color matched appearance.
- H. Coatings shall not be applied under the following conditions:
  - 1. Temperature exceeding the manufacturer's recommended maximum and minimum allowable.
  - 2. Dust or smoke laden atmosphere.
  - 3. Damp or humid weather.
  - 4. When the substrate or air temperature is less than 5 degrees F above dewpoint.
  - 5. When air temperature is expected to drop below 40 degrees F or less than 5 degrees F above the dewpoint within 8 hours after application of coating.
  - 6. When wind conditions are not calm.
- I. Dewpoint shall be determined by use of a sling psychrometer in conjunction with U.S. Dept. of Commerce, Weather Bureau psychrometric tables.
- J. Unburied steel piping shall be abrasive blast cleaned and primed before installation.
- K. The finish coat on all work shall be applied after all concrete, masonry, and equipment installation is complete and the work areas are clean and dust free.

### 3.14 CURING OF COATINGS

- A. The CONTRACTOR shall maintain curing conditions in accordance with the conditions recommended by the coating material manufacturer or by this Section, whichever is the most stringent, prior to placing the completed coating system into service.
- B. In the case of enclosed areas, forced air ventilation, using heated air if necessary, may be required until the coatings have fully cured.

### 3.15 IDENTIFICATION OF PIPING

- A. Identification of piping shall be in accordance with Section 9900 - Piping Identification Systems.

- B. Every valve or connection, where it may be possible for a worker to be exposed to a hazardous substance, shall be labeled per OSHA Occupational Safety and Health Standards 29CFR1910.1200.

### 3.16 SHOP AND FIELD INSPECTION AND TESTING

- A. General: The CONTRACTOR shall give the ENGINEER a minimum of 3 days advance notice of the start of any field surface preparation work or coating application work, and a minimum of 7 days advance notice of the start of any shop surface preparation work.
- B. All such work shall be performed only in the presence of the ENGINEER, unless the ENGINEER has granted prior approval to perform such work in its absence.
- C. Inspection by the ENGINEER, or the waiver of inspection of any particular portion of the WORK, shall not relieve the CONTRACTOR of its responsibility to perform the work in accordance with these Specifications.
- D. Scaffolding shall be erected and moved to locations where requested by the ENGINEER to facilitate inspection. Additional illumination shall be furnished to cover all areas to be inspected.
- E. **Inspection Devices:** The CONTRACTOR shall furnish, until final acceptance of such coatings, inspection devices in good working condition for the detection of holidays and measurement of dry-film thicknesses of protective coatings. Dry-film thickness gages shall be made available for the ENGINEER'S use at all times while coating is being done, until final acceptance of such coatings. The CONTRACTOR shall furnish the services of a trained operator of the holiday detection devices until the final acceptance of such coatings. Holiday detection devices shall be operated only in the presence of the ENGINEER.
- F. **Holiday Testing:** The CONTRACTOR shall holiday test all coated ferrous surfaces inside a steel reservoir, other surfaces which will be submerged in water or other liquids, or surfaces which are enclosed in a vapor space in such structures and surfaces coated with any of the submerged and severe service coating systems. Areas which contain holidays shall be marked and repaired or recoated in accordance with the coating manufacturer's printed instructions and then retested.
- G. **Film Thickness Testing:** On ferrous metals, the dry film coating thickness shall be measured in accordance with the SSPC "Paint Application Specification No. 2" using a magnetic-type dry film thickness gage. Each coat shall be tested for the correct thickness. No measurements shall be made until at least 8 hours after application of the coating. On non-ferrous metals and other substrates, the coating thicknesses shall be measured at the time of application using a wet film gage.
- H. **Surface Preparation:** Evaluation of blast cleaned surface preparation work will be based upon comparison of the blasted surfaces with the standard samples available from the NACE, using NACE standards TM-01-70 and TM-01-75.

### 3.17 COATING SYSTEM SCHEDULES - FERROUS METALS

**A. Coating System Schedule, Ferrous Metal - Not Galvanized:**

|      | <b>Item</b>   | <b>Surface Prep.</b>                      | <b>System No.</b>                  |
|------|---|---|------------------------------------|
| FM-1 | All surfaces indoors and outdoors, exposed or covered, except those included below.   | Commercial blast cleaning SSPC-SP6        | (1)<br>alkyd enamel                |
| FM-1 | All surfaces indoors and outdoors, exposed or covered, except those included below.   | Commercial blast cleaning SSPC-SP6        | (4)<br>aliphatic polyurethane      |
| FM-1 | All surfaces indoors and outdoors, exposed or covered, except those included below.   | Near white metal blast cleaning SSPC-SP10 | (5)<br>inorganic zinc/polyurethane |
| FM-2 | Surfaces in chlorination room, chlorine storage room.   | Commercial blast cleaning SSPC-SP6        | (100)<br>amine-cured epoxy         |
| FM-3 | Surfaces of equipment and ferrous surfaces submerged or intermittently submerged in potable water, utility water, and wastewater including all surfaces lower than 2 feet above high water level in hydraulic structures, and all surfaces inside enclosed hydraulic structures and vents (excluding shop-coated valves, couplings, pumps). | White metal blast cleaning SSPC-SP5       | (100)<br>amine-cured epoxy         |
| FM-4 | Surfaces exposed to high temperature (between 150 and 600 degrees F).   | Near white metal blast cleaning SSPC-SP10 | (6)<br>inorganic zinc, water-based |
| FM-5 | Surfaces exposed to high temperature (between 600 and 1000 degrees F).  | Near white metal blast cleaning SSPC-SP10 | (3)<br>aluminum silicone resin     |
| FM-6 | Buried small steel pipe.  | Removal of dirt, grease, oil              | (200)<br>PVC tape                  |
| FM-7 | Where indicated, ferrous surfaces in water passages of all valves 4-  | White metal blast cleaning SSPC-SP5       | (102)<br>polyamide-cured epoxy     |

|       |  |  |   |  |
|-------|--|--|---|--|
|       | inch size and larger,<br>exterior surfaces of<br>submerged valves.   |  |   |  |
| FM-8  | Where indicated, ferrous<br>surfaces in water<br>passages and<br>submerged surfaces of all<br>pumps which have<br>discharge size of 4<br>inches or larger. | White metal blast cleaning<br>SSPC-SP5   | (100)<br>amine-cured epoxy                  |  |
| FM-9  | Ferrous surfaces of<br>sleeve-couplings.   | Solvent cleaning SSPC-<br>SP1, followed by white<br>metal blast cleaning SSPC-<br>SP10 | (106)<br>fusion-bonded epoxy                |  |
| FM-10 | All ferrous surfaces of<br>sluice gates, flap gates,<br>and shear gates,<br>including wall thimbles.   | White metal blast cleaning<br>SSPC-SP5   | (102)<br>polyamide-cured epoxy              |  |
| FM-11 | Buried surfaces that are<br>not indicated to be coated<br>elsewhere.   | Near white metal blast<br>cleaning SSPC-SP10   | (100)<br>amine-cured epoxy                  |  |
| FM-12 | Interior surfaces of all<br>chemical tanks, including<br>tank nozzles, manholes,<br>nozzle necks, flange<br>faces.   | White metal blast cleaning<br>SSPC-SP5   | (107)<br>chemical-resistant sheet<br>lining |  |
| FM-13 | External surfaces of<br>buried steel tanks.  | White Metal blast cleaning<br>SSPC-SP5   | (100)<br>amine-cured epoxy                  |  |
| FM-14 | Structural steel,<br>miscellaneous metalwork,<br>and supports for<br>prefabricated metal<br>buildings.   | Specifier enter  | Specifier enter                             |  |
| FM-15 | Structural steel,<br>miscellaneous metalwork,<br>and supports for roof and<br>facia support systems<br>for buildings.                                      | Specifier enter  | Specifier enter                             |  |
| FM-16 | Surfaces of indoor<br>equipment, not<br>submerged  | Commercial blast cleaning<br>SSPC-SP6  | (8)<br>epoxy, equipment                     |  |
| FM-17 | Specifier list of existing   | Specifier enter  | Specifier enter                             |  |

ferrous equipment or surfaces which are required to be re-coated as part of this WORK.

|       |  |   |                                      |
|-------|--|---|--------------------------------------|
| FM-18 | Buried pipe couplings, valves, fittings, and flanged joints (where piping is plastic).   | Removal of dirt, grease, oil            | (201)<br>rich portland cement mortar |
| FM-19 | Buried pipe couplings, valves, and flanged joints (where piping is ductile or cast iron, not tape-coated), including epoxy-coated surfaces.      | As specified by reference specification | (205)<br>polyethylene encasement     |
| FM-20 | Buried pipe couplings, valves, and flanged joints (where piping is mortar-coated steel or reinforced concrete), including epoxy-coated surfaces. | Removal of dirt, grease, oil            | (206)<br>cement-mortar coating       |

B. **Coating System Schedule, Ferrous Metal - Galvanized:** Pretreatment coatings, barrier coatings, or washes shall be applied as recommended by the coating manufacturer.

|       | Item  | Surface Prep.   | System No.                    |
|-------|---|---|-------------------------------|
| FMG-1 | All exposed surfaces indoors and outdoors, except those included below.   | Solvent cleaning SSPC-SP1   | (1)<br>alkyd enamel           |
| FMG-1 | All exposed surfaces indoors and outdoors, except those included below.   | Solvent cleaning SSPC-SP1   | (4)<br>aliphatic polyurethane |
| FMG-2 | Surfaces in chlorinator room, chlorine storage room.  | Solvent cleaning SSPC-SP1   | (100)<br>amine-cured epoxy    |
| FMG-3 | Buried small steel pipe.  | Removal of dirt, grease, oil  | (200)<br>PVC tape             |
| FMG-4 | Surfaces buried or submerged in water or wastewater, including all surfaces lower than two feet above high water level and all surfaces | Solvent cleaning SSPC-SP1 followed by brush-off grade blast cleaning SSPC-SP7 | (100)<br>amine-cured epoxy    |

inside enclosed  
hydraulic structures and  
vents.

### 3.18 COATING SYSTEM SCHEDULE, NON-FERROUS METAL, PLASTIC, FIBER GLASS

- A. Where isolated non-ferrous parts are associated with equipment or piping, the CONTRACTOR shall use the coating system for the adjacent connected surfaces. Do not coat handrails, gratings, frames or hatches. Only primers recommended by the coating manufacturer shall be used.

|       | <b>Item</b>  | <b>Surface Prep.</b>         | <b>System No.</b>                             |
|-------|--|------------------------------|---|
| NFM-1 | All exposed surfaces, indoors and outdoors, except those included below.                                 | Solvent cleaned SSPC-SP1     | (1)<br>alkyd enamel                           |
| NFM-1 | All exposed surfaces, indoors and outdoors, except those included below.                                 | Solvent cleaned SSPC-SP1     | (4)<br>aliphatic polyurethane                 |
| NFM-2 | Chlorination room, chlorine storage room.  | Solvent cleaned SSPC-SP1     | (100)<br>amine-cured epoxy                    |
| NFM-3 | Aluminum surfaces in contact with concrete, or with any other metal except galvanized ferrous metal.     | Solvent cleaned SSPC-SP1     | (208)<br>aluminum metal isolation             |
| NFM-4 | Polyvinyl chloride plastic piping, indoors and outdoors, or in structures, not submerged.                | Solvent cleaned SSPC-SP1     | (7)<br>acrylic latex                          |
| NFM-5 | Fiber glass surfaces.  | Per paragraph 3.10           | (12)<br>aliphatic polyurethane<br>fiber glass |
| NFM-6 | Buried non-ferrous metal pipe.   | Removal of dirt, grease, oil | (200)<br>PVC tape                             |
| NFM-7 | Specifier list of existing equipment or surfaces which are required to be recoated as part of this WORK. | Specifier enter              | Specifier enter                               |

### 3.19 COATING SYSTEM SCHEDULE-CONCRETE

| <b>Item</b> | <b>Surface Prep.</b> | <b>System No.</b> |
|-------------|----------------------|-------------------|
|-------------|----------------------|-------------------|

|     |   |                   |  |
|-----|---|-------------------|--|
| C-1 | All surfaces indoors and outdoors, where indicated.                   | Per paragraph 3.9 | (10)<br>acrylic, concrete                |
| C-1 | All surfaces indoors and outdoors, where indicated.                   | Per paragraph 3.9 | (11)<br>aliphatic polyurethane, concrete |
| C-3 | Floor slab and walls, exposure to chemicals, where indicated.         | Per paragraph 3.9 | (108)<br>epoxy, concrete                 |
| C-4 | Walls, floors, exposure to chemical splash, washdown, where indicated | Per paragraph 3.9 | (11)<br>aliphatic polyurethane, concrete |

### 3.20 COATING SYSTEM SCHEDULE-CONCRETE BLOCK MASONRY

|       | <b>Item</b>  | <b>Surface Prep.</b> | <b>System No.</b>                        |
|-------|--|----------------------|--|
| CBM-1 | All surfaces, indoors and outdoors, where indicated.   | Per paragraph 3.9    | (10)<br>acrylic, concrete                |
| CBM-1 | All surfaces, indoors and outdoors, where indicated.   | Per paragraph 3.9    | (11)<br>aliphatic polyurethane, concrete |
| CBM-2 | Submerged in wastewater, including all vertical masonry surfaces above waterline where indicated.  | Per paragraph 3.9    | (108)<br>epoxy, concrete                 |
| CBM-3 | Exterior surfaces, above grade, where indicated.   | Per paragraph 3.11   | (204)<br>water-retardant                 |
| CBM-4 | Specifier list of existing masonry surfaces which are required to be recoated as part of this WORK | Specifier enter      | Specifier enter                          |

### 3.21 COATING SYSTEM SCHEDULE - MISCELLANEOUS SURFACES

|      | <b>Item</b>                 | <b>Surface Prep.</b>                    | <b>System No.</b>   |
|------|-----------------------------|---|---------------------|
| MS-1 | Wood, indoors and outdoors. | Per manufacturer's printed instructions | (209)<br>alkyd-wood |



|      |                             |   |                          |
|------|-----------------------------|---|--------------------------|
| MS-1 | Wood, indoors and outdoors. | Per manufacturer's printed instructions | (210)<br>alkyd-wood      |
| MS-2 | Drywall                     | Per manufacturer's printed instructions | (211)<br>acrylic-drywall |

### 3.23 COATING SYSTEM FOR CONCRETE WATER TANK

1. All above grade exterior walls shall be given a two-coat finish consisting of "Tnemec Envirocrete 156", or approved equal. Each coating shall be no less than 7 mil DFT, with a total system DFT of no less than 15 mil. Apply first coat either with spray and backroll, or with a roller. Second coat may be sprayed if desired. Coatings shall be applied in strict accordance with the manufacturer's recommendations.
2. All below grade exterior walls (to 1'-0" above highest grade elevation) shall be given a two-coat finish consisting of "TnemecV69", or approved equal. Each coating shall be no less than 4 mil DFT, with a total system DFT of no less than 10 mil. Apply first coat either with spray and backroll, or with a roller. Second coat may be sprayed if desired. Coatings shall be applied in strict accordance with the manufacturer's recommendations.
3. The Owner shall select three (3) colors from the manufacturer's color chart provided in the submittals. CONTRACTOR shall apply each of the three colors as a 10' x 10' "patch sample" area on the tank wall. OWNER will select the color based on viewing of the sample patches. CONTRACTOR will coat the entire tank using the approved color.
4. All Work shall be performed by workmen skilled in the application of these types of products. The Manufacturer's application instructions shall be submitted to the Engineer for approval. The Contractor shall confer with the Manufacturer's representatives regarding application techniques and shall follow the Manufacturer's instructions implicitly.
5. The concrete surface to be coated shall be clean, free of all laitance, dirt, grease, or other foreign materials. All defective surfaces shall be filled and/or repaired. Application shall be in full accordance with the manufacturer's instructions or as amended by the Engineer.
6. The exterior coating for below grade wall surfaces shall be applied by brush, spray or roller to completely cover the underground wall at a maximum usage rate coverage of 80 sqft per gallon in accordance with the Manufacturer's recommendations except for the above usage rate of the paint.

- END OF SECTION -

## **SECTION 09900 – IDENTIFICATION OF SYSTEMS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section Includes:
  - 1. Equipment nameplates.
  - 2. Warning signs and labels.
  - 3. Pipe markers.
  - 4. Duct labels.
  - 5. Stencils.
  - 6. Valve tags.
  - 7. Warning tags.

#### **1.3 ACTION SUBMITTALS**

- A. Product Data: For each type of product, provide manufacturer's standard product data sheets. Data sheets must detail compliance with applicable standards for color and size and clearly define durability of no less than 4 years.
- B. Samples: For color, letter style, and graphic representation required for each identification material and device.
- C. Equipment Nameplate Schedule: Include a listing of all equipment to be labeled with the proposed content for each nameplate.
- D. Valve numbering scheme: Provide a list of acceptable abbreviations to be used on each service to be identified and the numbering scheme to be used.
- E. Valve Schedules: For each piping system to include in maintenance manuals.

### **PART 2 - PRODUCTS**

#### **2.1 EQUIPMENT NAMEPLATES**

- A. Metal Nameplates for Equipment:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Brimar Industries, Inc. or approved equal; AANP (Anodized Aluminum Nameplates), LESS (Laser Etched Stainless Steel Nameplates), LEBR (Laser Etched Brass Nameplates) or a comparable product by one of the following:
2. Material and Thickness: **Brass, 0.032-inch (0.8-mm), stainless steel, 0.032-inch (0.8-mm), aluminum, 0.032-inch (0.8-mm), or anodized aluminum, 0.032-inch (0.8-mm)** minimum thickness, and having predrilled or stamped holes for attachment hardware of same material. Use only aluminum in areas that store or use corrosive chemicals.
3. Minimum Label Size: Length and width vary for required label content, but not less than 3 by 1 inch (76 by 26 mm).
4. Minimum Letter Size: 1/4 inch (6.4 mm) for name of units if viewing distance is less than 24 inches (600 mm), 1/2 inch (13 mm) for viewing distances up to 72 inches (1830 mm), and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-quarters the size of principal lettering.
5. Fasteners: Stainless-steel or brass **rivets or self-tapping screws**.
6. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

B. Plastic Nameplates for Equipment:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Brimar Industries, Inc.; Engraved Briply EPNP Plastic Nameplates or a comparable product.
2. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, **1/8 inch (3.2 mm)** thick, and having predrilled holes for attachment hardware.
3. Letter Color: **Black**.
4. Background Color: **Blue**.
5. Maximum Temperature: Able to withstand temperatures up to 200 deg F (93 deg C).
6. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch (64 by 19 mm).
7. Minimum Letter Size: 1/4 inch (6.4 mm) for name of units if viewing distance is less than 24 inches (600 mm), 1/2 inch (13 mm) for viewing distances up to 72 inches (1830 mm), and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-quarters the size of principal lettering.
8. Fasteners: Stainless-steel or brass **rivets or self-tapping screws**.
9. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

C. Equipment Nameplate Content: Each nameplate shall include equipment's Drawing designation or unique equipment number, consistent with Drawings.

D. Equipment Label Schedule: List each item of equipment to be labeled, on 8-1/2-by-11-inch (A4) bond paper. Tabulate equipment identification number, and identify Drawing numbers where equipment is indicated (plans, details, and schedules) and the Specification Section number and title where equipment is specified. Equipment schedule shall be included in operation and maintenance data.

## 2.2 WARNING SIGNS AND LABELS

A. Basis-of-Design Product: Subject to compliance with requirements, provide Brimar Industries, Inc.; Safety Signs and Decals or a comparable product.

- B. General Requirements for Warning Signs and Labels: Comply with ANSI Z535.2 and Z535.4, and with requirements below.
- C. Material and Thickness: **Aluminum 0.040 inch (1.02 mm).**
- D. Letter Color: **Red.**
- E. Background Color: **White.**
- F. Maximum Temperature: Able to withstand temperatures up to 160 deg F (71 deg C).
- G. Minimum Label Size: Length and width vary for required label content, but not less than 5 by 3-1/2 inch (125 by 90 mm).
- H. Minimum Letter Size: 1/4 inch (6.4 mm) for name of units if viewing distance is less than 24 inches (600 mm), 1/2 inch (13 mm) for viewing distances up to 72 inches (1830 mm), and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-quarters the size of principal lettering.
- I. Fasteners: **Adhesive strip or Self-tapping screws.**
- J. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
- K. Label Content: Each warning sign or label shall clearly identify the hazard, the method of avoiding the hazard, and the specific consequences of not avoiding the hazard. The sign format and content shall comply with the most current and applicable ANSI Z535 standard and OSHA requirements. If appropriate, emergency notification instructions shall be included on the signs.
- L. The sign type and locations shall be as follows:

| Type | Message   |
|------|---|
| I    | CAUTION—AUTOMATIC EQUIPMENT MAY START AT ANY TIME |
| II   | DANGER—480 VOLTS                                  |
| III  | CAUTION—CORROSIVE CHEMICALS                       |
| IV   | EXIT  |

| Location                       | Number | Type | Mount |
|--------------------------------|--------|------|-------|
| All 480V Switchgear            | 2      | II   | Wall  |
| All 480V Motor Control Centers | 2      | II   | Wall  |
| PLC Controlled Pumps           | 4      | I    | Post  |
| Chemical Storage Tanks         | 2      | III  | Wall  |
| Exterior Doors                 | 1      | IV   | Door  |

## 2.3 PIPE MARKERS

- A. General Requirements for Manufactured Pipe Labels: Identify the content and directional flow of piping systems. Whenever possible select manufacturers standard preprinted, color-coded, pipe markers. Pipe marker sizes and colors shall comply with ANSI / ASME A13.1.
- B. Pretensioned Pipe Markers:
  1. Basis-of-Design Product: Subject to compliance with requirements, provide Brimar Industries, Inc.; System #1 Markers or comparable product.
  2. For Pipe Sizes NPS 6 (DN 150) and Smaller, including Pipe Covering: Semi-rigid plastic wrap around pipe marker that extends 360 degrees around the pipe at each marker location. Include legend (pipe content) and arrows to indicate direction of flow. Equip pretensioned markers with an adhesive strip, 1/2-inch (13-mm) wide on the inside for applications on vertical locations.
  3. For Pipe Sizes Larger than NPS 6 (DN 150), including Pipe Covering: Semi-rigid plastic strap-on pipe marker with a height no less than 3 times the letter height. Include legend (pipe content) and arrows to indicate direction of flow. Include at least two nylon straps to secure the marker in place.
- C. Self-Adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.
  1. Basis-of-Design Product: Subject to compliance with requirements, provide Brimar Industries, Inc.; EZ Pipe Markers or comparable product.
  2. Description: Adhesive backed flexible vinyl pipe markers with a minimum 1.0 mil. (0.02 mm) coating of acrylic adhesive. Include legend (pipe content) and a separate and adjacent arrow marker or arrow banding tape to indicate direction of flow.

2.4 Not Used

## 2.5 STENCILS

- A. General Requirements: Mark all interior doors, hatches, and other access points, in accordance with the Owner's directions.
- B. Not Used
- C. Stencils for Access Panels and Door Labels, Equipment Labels, and Similar Operational Instructions:
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Brimar Industries, Inc.; Reusable Stencils or a comparable product.
  - 2. General Requirements for Stencils: Comply with ASME A13.1 for size and color of background and size and color of lettering.
  - 3. Legend: Match terminology used on Drawings.
  - 4. Stencil Material: **Polyester or Oil board.**
  - 5. Stencil Paint: Exterior, gloss, water-based black. Paint may be in pressurized spray-can form.
  - 6. Stencil Ink: Interior stencil ink shall be compatible with interior surfaces and finishes.

## 2.6 VALVE TAGS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Brimar Industries, Inc.; RBVT Stock or Custom 1-1/2 Inch Brass Valve Tags or RAVT Custom Aluminum Valve Tags or SSVT Custom Stainless Steel Valve Tags or a comparable product.
- B. The content of each tag shall include a 1/4-inch (6-mm) top-line abbreviation identifying the system. Terminology shall match Drawings. Content, second line shall include a unique sequential 1/2-inch (13-mm) number to identify the valve.
  - 1. Tag Material: **Brass, 0.032-inch (0.8-mm), stainless steel, 0.032-inch (0.8-mm), aluminum, 0.032-inch (0.8-mm), or anodized aluminum, 0.032-inch (0.8-mm)** minimum thickness, and having predrilled or stamped holes for attachment hardware.
  - 2. Fasteners: Brass or stainless steel **beaded chain of same material.**
- C. Valve Schedules: List each valve in the piping system, on 8-1/2-by-11-inch (A4) bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or space), normal-operating position (open, closed, or modulating), and variations for identification. Mark valves for emergency shutoff and similar special uses.
  - 1. Valve Charts: In each equipment room where plumbing system valve are installed, provide a valve schedule as described above containing only the valves within that room. Mount the schedule in an aluminum valve chart frame with a plastic protector to the wall as close to the entrance as possible.
  - 2. Valve-tag schedule shall be included in operation and maintenance data.

## 2.7 WARNING TAGS

- A. n Product: Subject to compliance with requirements, provide Brimar Industries, Inc.; Accident Prevention Safety Tags or a comparable product.
- B. Description: Preprinted or partially preprinted accident-prevention tags when a hazard or detailed instruction are required. Tags will comply with ANSI Z535, and be constructed of plasticized card stock with matte finish suitable for writing.
  - 1. Size: 3 by 5-1/4 inches (75 by 133 mm) minimum.
  - 2. Fasteners: **Brass grommet and wire.**
  - 3. Nomenclature: Large-size primary caption such as "DANGER," "CAUTION," or "DO NOT OPERATE."
  - 4. Color:
    - a. Caution: Yellow background with black lettering.
    - b. Warning: Orange background with black lettering.
    - c. Danger: Red background with white lettering.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Clean piping and equipment surfaces of substances that could impair bond of identification devices, including dirt, oil, grease, release agents, and incompatible primers, paints, and encapsulants.

### 3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- B. Coordinate installation of identifying devices with locations of access panels and doors.
- C. Install identifying devices before installing acoustical ceilings and similar concealment.

### 3.3 EQUIPMENT NAMEPLATE INSTALLATION

- A. General Requirements for Equipment nameplates: Identify equipment on the Project with a metal or plastic nameplate permanently mounted in a visible location directly on or adjacent to the equipment.
- B. Install or permanently fasten labels on each major item of mechanical equipment.
- C. Locate equipment labels where accessible and visible.

### 3.4 WARNING SIGN INSTALLATION

- A. General Requirements for Warning Signs and Labels: Identify hazards to personnel and equipment with a warning sign or label. Permanently install labels as close to the hazard as possible while providing sufficient advanced notice for avoiding the hazard.
- B. Install or permanently fasten labels on each major item of mechanical equipment.
- C. Locate equipment labels where accessible and visible.
- D. Provide warning signs or labels in accordance with Cal OSHA and local fire marshal. As a minimum, warning signs shall be posted on all doors leading to areas that store, mix, or inject corrosive, flammable, or potentially toxic chemicals, and areas that have high voltage (480V+) equipment.

### 3.5 PIPE LABEL INSTALLATION

- A. Piping Color Coding: Painting of piping is specified in Section 9800.
- B. For pipes with an overall diameter including pipe covering of NPS 6 (DN 150) or less identify pipes with pretensioned pipe markers.
- C. For pipe with an overall diameter including pipe covering larger than NPS 6 (DN 150) identify pipes with strap on type pipe markers. Straps shall be UV treated nylon and there shall be at least two per pipe marker.
- D. Pipe Markers should not be used on bare pipes with temperatures that exceed 160 deg F (71 deg C).
- E. Stenciled Pipe Label Option: Stenciling pipes instead of installing manufactured pipe markers may be done on concealed piping only at Installer's option. Stenciling pipes with painted, color-coded bands or rectangles, complying with ASME A13.1, on each piping system.
  - 1. Identification Paint: Use for contrasting background.
  - 2. Stencil Paint: Use for pipe marking.
- F. Pipe Label Locations: Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:
  - 1. Near each valve and control device.
  - 2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
  - 3. Near penetrations and on both sides of through walls, floors, ceilings, and inaccessible enclosures.
  - 4. At access doors, manholes, and similar access points that permit view of concealed piping.
  - 5. Near major equipment items and other points of origination and termination.



6. Spaced at maximum intervals of 20 **feet** along each run. Reduce intervals to **5 feet** in areas of congested piping and equipment.
  7. On piping above removable acoustical ceilings. Omit intermediately spaced labels.
- G. Directional Flow Arrows: Arrows shall be used to indicate direction of flow in pipes, including pipes where flow is allowed in both directions.
- H. Not Used

3.6 Not Used

### 3.7 VALVE-TAG INSTALLATION

- A. Install tags on valves and control devices in piping systems, except check valves, valves within factory-fabricated equipment units, control valves, isolation valves, shutoff valves, faucets, convenience and lawn-watering hose connections, and HVAC terminal devices and similar roughing-in connections of end-use fixtures and units. List tagged valves in a valve schedule.

### 3.8 WARNING-TAG INSTALLATION

- A. Write required message on, and attach warning tags to, equipment and other items where required.

END OF SECTION 9900

## SECTION 11100 – VERTICAL TURBINE PUMPS, GENERAL

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide all pumps and pumping appurtenances, complete and operable, in accordance with the Contract Documents.
- B. The provisions of this Section shall apply to all pumps and pumping equipment except where otherwise indicated in the Contract Documents.
- C. **Unit Responsibility:** A single manufacturer shall be made responsible for furnishing the WORK and for coordination of design, assembly, testing, and installation of the WORK of each pump Section; however, the CONTRACTOR shall be responsible to the OWNER for compliance with the requirements of each pump Section. Unless otherwise indicated, the single Manufacturer shall be the Manufacturer of the pump.
- D. **Single Manufacturer:** Where two or more pump systems of the same type or size are required, the pumps shall all be produced by the same Manufacturer. All products shall be provided by FlowServe.

#### 1.2 CONTRACTOR SUBMITTALS

- A. **General:** Submittals shall be furnished in accordance with Section 01300 - Contractor Submittals.
- B. **Shop Drawings:** Shop Drawings shall contain the following information:
  - 1. Pump name, identification number, and specification Section number.
  - 2. Performance data curves showing head, capacity, horsepower demand, NPSH required, and pump efficiency over the entire operating range of the pump. The equipment Manufacturer shall indicate separately the head, capacity, horsepower demand, overall efficiency, and minimum submergence required at the design flow conditions and the maximum and minimum flow conditions.
  - 3. The CONTRACTOR shall require the Manufacturer to indicate the limits on the performance curves recommended for stable operation without surge, cavitation, or excessive vibration. The stable operating range shall be as wide as possible based on actual hydraulic and mechanical tests.
  - 4. Assembly and installation drawings including shaft size, seal, coupling, bearings, anchor bolt plan, part nomenclature, material list, outline dimensions, and shipping weights.
  - 5. Data for the electric motor proposed for each pump.
  - 6. Elevation of proposed Local Control Panel showing panel-mounted devices, details of enclosure type, single line diagram of power distribution, and current draw of panel, and list of all terminals required to receive inputs or to transmit outputs from

the Local Control Panel.

7. Wiring diagram of field connections with identification of terminations between Local Control Panels, junction terminal boxes, and equipment items.
  8. Complete electrical schematic diagram.
  9. Fabrication drawings for pump barrel, inlet pipe, and discharge head, including materials, dimensions, coatings and linings, anchor and connection bolts, gaskets, etc.
- B. **Technical Manual:** The Technical Manual shall contain the required information for each pump Section, including installation instructions.
- C. **Spare Parts List:** A Spare Parts List shall contain the required information for each pump Section.
- D. **Factory Test Data:** Signed, dated, and certified factory test data for each pump system which requires factory testing, submitted before shipment of equipment.
- E. **Certifications:**
1. Manufacturer's certification of factory test data and proper field installation.
  2. CONTRACTOR'S certification of satisfactory field testing.
- G. **Structural Calculations:** Provide dynamic load calculations for anchoring of pump base to pump pedestal. Provide anchor bolt diameter, length, type, material, installation method, and embedded length requirements.

## PART 2 -- PRODUCTS

### 2.1 GENERAL

- A. Compliance with the requirements of the individual pump Sections may necessitate modifications to the Manufacturer's standard equipment.
- B. **Performance Curves:** All centrifugal pumps shall have a continuously rising curve. In no case shall the required horsepower at any point on the performance curve exceed the rated horsepower of the motor or engine, or encroach on the service factor.
- C. All components of each pump system provided under the pump Sections shall be entirely compatible. Each unit of pumping equipment shall incorporate all basic mechanisms, couplings, electric motors or engine drives, variable speed controls, necessary mountings, and appurtenances.

### 2.2 MATERIALS

- A. All materials shall be suitable for the intended application; materials not specified shall be high-grade, standard commercial quality, free from all defects and imperfection that might affect the serviceability of the product for the purpose for which it is intended, and shall

conform to the following requirements:

1. Cast iron pump casings and bowls shall be of close-grained gray cast iron, conforming to ASTM A 48 - Gray Iron Castings, Class 30, or equal.
2. Bronze pump impellers shall conform to ASTM B 62 - Composition Bronze or Ounce Metal Castings, or B 584 - Copper Alloy Sand Castings for General Applications, where dezincification does not exist.
3. Anchor bolts, washers, and nuts in Standard Service (Non-Corrosive Application) shall be galvanized steel.

## 2.3 PUMP COMPONENTS - GENERAL

- A. **Flanges:** Suction and discharge flanges shall conform to ANSI/ASME B16.1 - Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800 or B16.5 - Pipe Flanges and Flanged Fittings dimensions.
- B. **Lubrication:** Deep-well pumps shall have water-lubricated bearings and seals.
- C. **Handholes:** Handholes on pump casings shall be shaped to follow the contours of the casing to avoid any obstructions in the water passage.
- D. **Drains:** All gland seals, air valves, cooling water drains, and drains from variable speed drive equipment shall be piped to the nearest floor sink, or drain, with rigged copper pipe or copper tube, properly supported with brackets.

## 2.4 PUMP APPURTENANCES

- A. **Nameplates:** Each pump shall be equipped with a stainless steel nameplate indicating serial numbers, rated head and flow, impeller size, pump speed, and Manufacturer's name and model number.
- B. **Seal and Bearing Lubrication:** Provide API Plan 13 – “Single Seals - Flush Thru Seal Chamber Thru Orifice To Suction” for lubrication of mechanical seals in accordance with API 682/ISO 21049 standards, or as indicated on the plans. All solenoid valves associated with lubrication of seals and bearings shall be designed to fail in the open position.
- C. **Gauges**
  1. All pumps (except sample pumps, sump pumps, and hot water circulating pumps) shall be equipped with pressure gages installed at pump discharge lines. Gages shall be located in a representative location, where not subject to shock or vibrations, in order to achieve true and accurate readings.
  2. Where subject to shock or vibrations, the gages shall be wall-mounted or attached to galvanized channel floor stands and connected by means of flexible connectors.
  3. Pump barrels shall be equipped with welded/threaded orifices and piping to allow for measuring pump barrel absolute pressure (i.e. suction head), and provide for venting through an air-vacuum valve mounted on or near the pump discharge head.

## 2.5 FACTORY TESTING

A. The following tests shall be conducted on each indicated pump system:

1. **Motors:** Electric motors shall be tested at the factory to confirm efficiency ratings.
2. **Pump Systems:** All centrifugal pump systems 10 hp and larger shall be tested at the pump factory in accordance with the American National Standard for Centrifugal Pump Tests (ANSI/HI 1.6) acceptance Level "A" or the American National Standard for Vertical Pump Tests (ANSI/HI 2.6) as approved by ANSI and published by the Hydraulic Institute. Tests shall be performed using the bowl assembly only with calibrated motor. For motors smaller than 15 hp, the Manufacturer's certified test motor shall be acceptable. Testing of prototype models will not be acceptable. The following minimum test results shall be submitted:
  - a. Hydrostatic test results
  - b. At maximum speed, a minimum of five hydraulic test readings between shutoff head and 25 percent beyond the maximum indicated capacity, recorded on data sheets as defined by the Hydraulic Institute.
  - c. Pump curves showing head, flow, bhp, and efficiency requirements. NPSH required test curve if required in each pumps specification otherwise, calculated NPSH required curve may be submitted.
  - d. Certification that the pump horsepower demand did not exceed the rated motor horsepower beyond the 1.0 service rating at any point on the curve.
3. **Acceptance:** In the event of failure of any pump to meet any of the requirements, the CONTRACTOR shall make all necessary modifications, repairs, or replacements to conform to the requirements of the Contract Documents and the pump shall be re-tested until found satisfactory.

## 2.6 DRIVERS/MOTORS

A. Drivers for vertical pumps shall be TEFC, premium efficiency, 460V/3ph with Class F insulation and S.F. of 1.15. Provide stray-current shaft protection or grounding rings on motors with VFD's. All motors shall have separate winding heaters or a winding heater feature on the drive. Drivers shall be manufactured by U.S. Motors, G.E., or equal.

## PART 3 -- EXECUTION

### 3.1 SERVICES OF MANUFACTURER

- A. **Inspection, Startup, and Field Adjustment:** Where required by the individual pump Sections, an authorized service representative of the Manufacturer shall visit the site for the number of days indicated in those Sections to witness the following and to certify in writing that the equipment and controls have been properly installed, aligned, lubricated, adjusted, and readied for operation.

1. Installation of the equipment
2. Inspection, checking, and adjusting the equipment
3. Startup and field testing for proper operation
4. Performing field adjustments to ensure that the equipment installation and operation comply with requirements

**B. Instruction of the Owner's Personnel:**

1. Where required by the individual pump Sections, an authorized training representative of the Manufacturer shall visit the site for the number of days indicated in those Sections to instruct the OWNER'S personnel in the operation and maintenance of the equipment, including step-by-step troubleshooting with necessary test equipment. Instruction shall be specific to the models of equipment provided.
2. The representative shall have at least two year's experience in training. A resume for the representative shall be submitted.
3. Training shall be scheduled a minimum of three weeks in advance of the first session.
4. Proposed training material and a detailed outline of each lesson shall be submitted for review. Comments shall be incorporated into the material.
5. The training materials shall remain with the trainees.
6. The OWNER may videotape the training for later use with the OWNER'S personnel.

**3.2 INSTALLATION**

- A. **General:** Pumping equipment shall be installed in accordance with the Manufacturer's written recommendations. Consult manufacturer for horizontal and vertical tolerances of pump enclosure installation. CONTRACTOR shall provide post installation machining of pump base as required and recommended by the pump manufacturer.
- B. **Alignment:** All equipment shall be field tested to verify proper alignment, operation as specified, and freedom from binding, scraping, vibration, shaft runout, or other defects. Pump drive shafts shall be measured just prior to assembly to ensure correct alignment without forcing. Equipment shall be secure in position and neat in appearance. Provide testing results to indicate Hydraulic Institute Standards for vibration are met.
- C. **Lubricants:** The CONTRACTOR shall provide the necessary oil and grease for initial operation.

**3.3 PROTECTIVE COATING**

- A. Materials and equipment shall be coated as required in Section 09800 - Protective Coating.

### 3.4 FIELD TESTS

- A. Where required by the individual pump Sections, each pump system shall be field tested after installation to demonstrate satisfactory operation without excessive noise, vibration, damaging cavitation, or overheating of bearings and to demonstrate the indicated head, flow, and efficiency at the design point.
- B. The following field testing shall be conducted:
  - 1. Startup, check, and operate the pump system over its entire speed range if variable speed at 100 RPM increment or at max RPM if constant speed. Vibration shall be within the amplitude limits recommended by the Hydraulic Institute Standards at a minimum of four pumping conditions defined by the ENGINEER.
  - 2. Obtain concurrent readings of motor voltage, amperage, pump suction head, and pump discharge head for at least four pumping conditions at each pump rotational speed if variable speed at 100 RPM increment or at max RPM if constant speed. Check each power lead to the motor for proper current balance.
  - 3. Electrical and instrumentation tests shall conform to the requirements of the Sections under which that equipment is specified.
- C. Field testing will be witnessed by the ENGINEER. The CONTRACTOR shall furnish three days advance notice of field testing.
- D. In the event any pumping system fails to meet the indicated requirements, the pump shall be modified or replaced and retested as above until it satisfies the requirements.
- E. After each pumping system has satisfied the requirements, the CONTRACTOR shall certify in writing that it has been satisfactorily tested and that all final adjustments have been made. Certification shall include the date of the field tests, a listing of all persons present during the tests, and the test data.
- F. The CONTRACTOR shall bear all costs of field tests, including related services of the Manufacturer's representative, except for power and water which the OWNER will bear. If available, the OWNER'S operating personnel will provide assistance in field testing.

- END OF SECTION -

## SECTION 11100 – VERTICAL TURBINE PUMPS, GENERAL

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide all pumps and pumping appurtenances, complete and operable, in accordance with the Contract Documents.
- B. The provisions of this Section shall apply to all pumps and pumping equipment except where otherwise indicated in the Contract Documents.
- C. **Unit Responsibility:** A single manufacturer shall be made responsible for furnishing the WORK and for coordination of design, assembly, testing, and installation of the WORK of each pump Section; however, the CONTRACTOR shall be responsible to the OWNER for compliance with the requirements of each pump Section. Unless otherwise indicated, the single Manufacturer shall be the Manufacturer of the pump.
- D. **Single Manufacturer:** Where two or more pump systems of the same type or size are required, the pumps shall all be produced by the same Manufacturer. All products shall be provided by FlowServe, Floway, or Goulds.

#### 1.2 CONTRACTOR SUBMITTALS

- A. **General:** Submittals shall be furnished in accordance with Section 01300 - Contractor Submittals.
- B. **Shop Drawings:** Shop Drawings shall contain the following information:
  - 1. Pump name, identification number, and specification Section number.
  - 2. Performance data curves showing head, capacity, horsepower demand, NPSH required, and pump efficiency over the entire operating range of the pump. The equipment Manufacturer shall indicate separately the head, capacity, horsepower demand, overall efficiency, and minimum submergence required at the design flow conditions and the maximum and minimum flow conditions.
  - 3. The CONTRACTOR shall require the Manufacturer to indicate the limits on the performance curves recommended for stable operation without surge, cavitation, or excessive vibration. The stable operating range shall be as wide as possible based on actual hydraulic and mechanical tests.
  - 4. Assembly and installation drawings including shaft size, seal, coupling, bearings, anchor bolt plan, part nomenclature, material list, outline dimensions, and shipping weights.
  - 5. Data for the electric motor proposed for each pump.
  - 6. Elevation of proposed Local Control Panel showing panel-mounted devices, details of enclosure type, single line diagram of power distribution, and current draw of panel, and list of all terminals required to receive inputs or to transmit outputs from



the Local Control Panel.

7. Wiring diagram of field connections with identification of terminations between Local Control Panels, junction terminal boxes, and equipment items.
  8. Complete electrical schematic diagram.
  9. Fabrication drawings for pump barrel, inlet pipe, and discharge head, including materials, dimensions, coatings and linings, anchor and connection bolts, gaskets, etc.
- B. **Technical Manual:** The Technical Manual shall contain the required information for each pump Section, including installation instructions.
- C. **Spare Parts List:** A Spare Parts List shall contain the required information for each pump Section.
- D. **Factory Test Data:** Signed, dated, and certified factory test data for each pump system which requires factory testing, submitted before shipment of equipment.
- E. **Certifications:**
1. Manufacturer's certification of factory test data and proper field installation.
  2. CONTRACTOR'S certification of satisfactory field testing.
  3. Pump and pump barrel manufacturer certification that pump barrels, inlet, discharge head, and pump equipment collectively and individually meet all applicable Hydraulic Institute Standards.
- G. **Structural Calculations:** Provide dynamic load calculations for anchoring of pump base to pump pedestal. Provide anchor bolt diameter, length, type, material, installation method, and embedded length requirements.

## PART 2 -- PRODUCTS

### 2.1 GENERAL

- A. Compliance with the requirements of the individual pump Sections may necessitate modifications to the Manufacturer's standard equipment.
- B. **Performance Curves:** All centrifugal pumps shall have a continuously rising curve. In no case shall the required horsepower at any point on the performance curve exceed the rated horsepower of the motor or engine, or encroach on the service factor.
- C. All components of each pump system provided under the pump Sections shall be entirely compatible. Each unit of pumping equipment shall incorporate all basic mechanisms, couplings, electric motors or engine drives, variable speed controls, necessary mountings, and appurtenances.

## 2.2 MATERIALS

- A. All materials shall be suitable for the intended application; materials not specified shall be high-grade, standard commercial quality, free from all defects and imperfection that might affect the serviceability of the product for the purpose for which it is intended, and shall conform to the following requirements:
  - 1. Cast iron pump casings and bowls shall be of close-grained gray cast iron, conforming to ASTM A 48 - Gray Iron Castings, Class 30, or equal.
  - 2. Bronze pump impellers shall conform to ASTM B 62 - Composition Bronze or Ounce Metal Castings, or B 584 - Copper Alloy Sand Castings for General Applications, where dezincification does not exist.
  - 3. Anchor bolts, washers, and nuts in Standard Service (Non-Corrosive Application) shall be galvanized steel.
  - 4. All pump materials, coatings, and components that will be in contact with water shall comply with NSF 61.

## 2.3 PUMP COMPONENTS - GENERAL

- A. **Flanges:** Suction and discharge flanges shall conform to ANSI/ASME B16.1 - Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800 or B16.5 - Pipe Flanges and Flanged Fittings dimensions.
- B. **Lubrication:** Deep-well pumps and pumps with dry barrels shall have oil-lubricated bearings and seals and enclosed line shafts.
- C. **Handholes:** Handholes on pump casings shall be shaped to follow the contours of the casing to avoid any obstructions in the water passage.
- D. **Drains:** All gland seals, air valves, cooling water drains, and drains from variable speed drive equipment shall be piped to the nearest floor sink, or drain, with rigged copper pipe or copper tube, properly supported with brackets.

## 2.4 PUMP APPURTENANCES

- A. **Nameplates:** Each pump shall be equipped with a stainless steel nameplate indicating serial numbers, rated head and flow, impeller size, pump speed, and Manufacturer's name and model number.
- B. **Seal Lubrication:** Provide API Plan 13 – “Single Seals - Flush Thru Seal Chamber Thru Orifice To Suction” for lubrication of mechanical seals in accordance with API 682/ISO 21049 standards.
- C. **Gauges**
  - 1. All pumps (except sample pumps, sump pumps, and hot water circulating pumps)

shall be equipped with pressure gages installed at pump discharge lines. Gages shall be located in a representative location, where not subject to shock or vibrations, in order to achieve true and accurate readings.

2. Where subject to shock or vibrations, the gages shall be wall-mounted or attached to galvanized channel floor stands and connected by means of flexible connectors.
3. Pump barrels shall be equipped with welded/threaded orifices and piping to allow for measuring pump barrel pressure (i.e. suction head), and provide for venting through an air-vacuum valve mounted on or near the pump discharge head.

## 2.5 FACTORY TESTING

A. The following tests shall be conducted on each indicated pump system:

1. **Motors:** Electric motors shall be tested at the factory to confirm efficiency ratings.
2. **Pump Systems:** All centrifugal pump systems 10 hp and larger shall be tested at the pump factory in accordance with the American National Standard for Centrifugal Pump Tests (ANSI/HI 1.6) acceptance Level "A" or the American National Standard for Vertical Pump Tests (ANSI/HI 2.6) as approved by ANSI and published by the Hydraulic Institute. Tests shall be performed using the bowl assembly only with calibrated motor. For motors smaller than 15 hp, the Manufacturer's certified test motor shall be acceptable. Testing of prototype models will not be acceptable. The following minimum test results shall be submitted:
  - a. Hydrostatic test results
  - b. At maximum speed, a minimum of five hydraulic test readings between shutoff head and 25 percent beyond the maximum indicated capacity, recorded on data sheets as defined by the Hydraulic Institute.
  - c. Pump curves showing head, flow, bhp, and efficiency requirements. NPSH required test curve if required in each pumps specification otherwise, calculated NPSH required curve may be submitted.
  - d. Certification that the pump horsepower demand did not exceed the rated motor horsepower beyond the 1.0 service rating at any point on the curve.
3. **Acceptance:** In the event of failure of any pump to meet any of the requirements, the CONTRACTOR shall make all necessary modifications, repairs, or replacements to conform to the requirements of the Contract Documents and the pump shall be re-tested until found satisfactory.

## 2.6 DRIVERS/MOTORS

- A. Drivers for vertical pumps shall be TEFC, premium efficiency, 460V/3ph induction, solid shaft, high thrust, inverter duty, with Class F insulation and S.F. of 1.15. Provide stray-current shaft protection or grounding rings, and winding heaters. Drivers shall be manufactured by U.S. Motors or GE.

## PART 3 -- EXECUTION

### 3.1 SERVICES OF MANUFACTURER

A. **Inspection, Startup, and Field Adjustment:** Where required by the individual pump Sections, an authorized service representative of the Manufacturer shall visit the site for the number of days indicated in those Sections to witness the following and to certify in writing that the equipment and controls have been properly installed, aligned, lubricated, adjusted, and readied for operation.

1. Installation of the equipment
2. Inspection, checking, and adjusting the equipment
3. Startup and field testing for proper operation
4. Performing field adjustments to ensure that the equipment installation and operation comply with requirements

B. **Instruction of the Owner's Personnel:**

1. Where required by the individual pump Sections, an authorized training representative of the Manufacturer shall visit the site for the number of days indicated in those Sections to instruct the OWNER'S personnel in the operation and maintenance of the equipment, including step-by-step troubleshooting with necessary test equipment. Instruction shall be specific to the models of equipment provided.
2. The representative shall have at least two year's experience in training. A resume for the representative shall be submitted.
3. Training shall be scheduled a minimum of three weeks in advance of the first session.
4. Proposed training material and a detailed outline of each lesson shall be submitted for review. Comments shall be incorporated into the material.
5. The training materials shall remain with the trainees.
6. The OWNER may videotape the training for later use with the OWNER'S personnel.

### 3.2 INSTALLATION

A. **General:** Pumping equipment shall be installed in accordance with the Manufacturer's written recommendations. Consult manufacturer for horizontal and vertical tolerances of pump enclosure installation. CONTRACTOR shall provide post installation machining of pump base as required and recommended by the pump manufacturer.

B. **Alignment:** All equipment shall be field tested to verify proper alignment, operation as specified, and freedom from binding, scraping, vibration, shaft runout, or other defects.

Pump drive shafts shall be measured just prior to assembly to ensure correct alignment without forcing. Equipment shall be secure in position and neat in appearance.

- C. **Lubricants:** The CONTRACTOR shall provide the necessary oil and grease for initial operation.

### 3.3 PROTECTIVE COATING

- A. Materials and equipment shall be coated as required in Section 09800 - Protective Coating.

### 3.4 FIELD TESTS

- A. Where required by the individual pump Sections, each pump system shall be field tested after installation to demonstrate satisfactory operation without excessive noise, vibration, damaging cavitation, or overheating of bearings and to demonstrate the indicated head, flow, and efficiency at the design point.
- B. The following field testing shall be conducted:
1. Startup, check, and operate the pump system over its entire speed range if variable speed at 100 RPM increment or at max RPM if constant speed. Vibration shall be within the amplitude limits recommended by the Hydraulic Institute Standards at a minimum of four pumping conditions defined by the ENGINEER.
  2. Obtain concurrent readings of motor voltage, amperage, pump suction head, and pump discharge head for at least four pumping conditions at each pump rotational speed if variable speed at 100 RPM increment or at max RPM if constant speed. Check each power lead to the motor for proper current balance.
  3. Electrical and instrumentation tests shall conform to the requirements of the Sections under which that equipment is specified.
- C. Field testing will be witnessed by the ENGINEER. The CONTRACTOR shall furnish three days advance notice of field testing.
- D. In the event any pumping system fails to meet the indicated requirements, the pump shall be modified or replaced and retested as above until it satisfies the requirements.
- E. After each pumping system has satisfied the requirements, the CONTRACTOR shall certify in writing that it has been satisfactorily tested and that all final adjustments have been made. Certification shall include the date of the field tests, a listing of all persons present during the tests, and the test data.
- F. The CONTRACTOR shall bear all costs of field tests, including related services of the Manufacturer's representative, except for power and water which the OWNER will bear. If available, the OWNER'S operating personnel will provide assistance in field testing.

- END OF SECTION -

## SECTION 11103 – DEEP WELL VERTICAL TURBINE PUMPS

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide deep well vertical turbine pumps and drives with associated piping, controls, wiring, and appurtenances, complete and operable, in accordance with the Contract Documents.
- B. The requirements of Section 11100 - Pumps, General apply to this Section.
- C. The Supplier shall examine the site conditions, intended application, and operation of the pump system and recommend the pump which will best satisfy the indicated requirements.

### PART 2 -- PRODUCTS

#### 2.1 GENERAL DESCRIPTION

##### A. Identification:

- |                     |   |                    |
|---------------------|---|--------------------|
| 1. Pump Name        | - | Well 9 and Well 10 |
| 2. Equipment Number | - | NA                 |
| 3. Quantity         | - | 1 (each well)      |
| 4. Location         | - | Deep Well          |

- B. **Operating Conditions:** The WORK of this Section shall be suitable for long term operation under the following conditions:

- |   |   |                |
|---|---|----------------|
| 1. Duty                                   | - | Intermittent   |
| 2. Drive                                  | - | Constant speed |
| 3. Ambient environment                    | - | Outdoors       |
| 4. Ambient temperature,<br>(degrees F)    | - | 20 to 110      |
| 5. Ambient relative humidity<br>(percent) | - | 0 to 100       |
| 6. Fluid service                          | - | Potable water  |
| 7. Fluid temperature,<br>(degrees F)      | - | 40 to 60       |
| 8. Project site elevation                 | - | 150'           |

(m.s.l)

- |     |                                |   |     |
|-----|--------------------------------|---|-----|
| 9.  | Minimum available NPSH (ft)    | - | 15' |
| 10. | Maximum suction pressure (psi) | - | 50  |

**C. Performance Requirements:**

- |     |   |   |       |
|-----|---|---|-------|
| 1.  | Maximum shutoff head (ft)   | - | 450   |
| 2.  | Design flow capacity (gpm)  | - | 1,500 |
| 3.  | Design flow bowl head TDH (ft)  | - | 230   |
| 4.  | Design flow minimum bowl efficiency (percent)                         | - | 80    |
| 5.  | Maximum flow capacity at maximum speed (gpm)                          | - | NA    |
| 6.  | Maximum flow pump head TDH (ft) plus and minus 5 feet                 | - | NA    |
| 7.  | Maximum flow minimum bowl efficiency (percent)                        | - | NA    |
| 8.  | Maximum flow NPSH required (ft)                                       | - | NA    |
| 9.  | Minimum flow capacity at maximum speed (gpm)                          | - | NA    |
| 10. | Minimum flow pump head, TDH at maximum speed (ft) plus and minus 5 ft | - | NA    |
| 11. | Minimum flow bowl efficiency (percent)                                | - | NA    |
| 12. | Maximum pump speed (rpm)  | - | 1770  |
| 13. | Minimum motor size (hp)   | - | 125   |

**D. Pump Dimensions:**

- |    |   |   |     |
|----|---|---|-----|
| 1. | Length from base plate to suction bell (ft) | - | 215 |
| 2. | Minimum column diameter (in)                | - | 10  |

- |    |                                    |   |                                 |
|----|------------------------------------|---|---------------------------------|
| 3. | Minimum discharge diameter (in)    | - | 10                              |
| 4. | Discharge flange rating ANSI (psi) | - | 150                             |
| 5. | Minimum column shaft diameter (in) | - | 1 <sup>11</sup> / <sub>16</sub> |
| 6. | Maximum bowl diameter (in)         | - | 12                              |

## 2.2 PUMP REQUIREMENTS

A. **Pump Construction:** Construction of vertical turbine pumps shall conform to the following requirements:

- |     |                                     |   |  |
|-----|-------------------------------------|---|--|
| 1.  | Bowls                               | - | Cast-iron, vitreous-enameled for sizes 18 inches in diameter and smaller; larger sizes lined with 3 coats of epoxy having a total thickness of 25 mils. The exterior surfaces of the bowl units shall be coated with 8 mils of epoxy in accordance with Section 09800 - Protective Coating |
| 2.  | Impeller                            | - | Bronze statically and dynamically balanced   |
| 3.  | Impeller shaft method of connection | - | Type 316 Stainless Steel impeller lock collet  |
| 4.  | Wear rings                          | - | Bronze, replaceable  |
| 5.  | Bowl shaft                          | - | Stainless Steel, Type 410, 416, or 316   |
| 6.  | Suction bell                        | - | Cast iron bell, with bottom bearing and streamlined ribs, lining and coating   |
| 7.  | Column                              | - | Steel pipe, not less than Schedule 30, epoxy-lined and coated, in maximum 10-ft lengths, threaded or flanged   |
| 8.  | Line shaft and couplings            | - | 416 Stainless steel shaft in maximum 10-ft lengths, sized for a critical speed of min 20 percent above max operating speed, open. Shaft coupling shall be Type 316 Stainless Steel, threaded or keyed to the shaft.  |
| 9.  | Shaft lubrication                   | - | Product water lubricated, with solenoid valve normally open  |
| 10. | Shaft enclosing tube                | - | Not Used   |
| 11. | Shaft seal                          | - | Mechanical   |



- |                                    |   |
|------------------------------------|---|
| 12. Line shaft bearings            | - Rubber with bronze integral bearing retainers at each joint for open lineshaft  |
| 13. Discharge head                 | - Fabricated steel, reinforced to withstand pipe thrust, epoxy-lined with flange drilled for mounting to base (sole) plate, and minimum 1-1/4-inch, 3000 lb forged steel half-couplings for drain connection. Provide 3/16 neoprene gasket between discharge head and sole plate.                       |
| 14. Motor shaft coupling           | - Shaft adjusting nut for hollow shaft motors.  |
| 15. Bottom bearing                 | - Close tolerance sleeve type with length min 2-1/2 times shaft diameter, permanently grease lubricated for suction bell with non-soluble grease, or bronze sleeve with Type 316 stainless steel grease tube and fitting, extended to base plate  |
| 16. Bowl and suction case bearings | - Product-lubricated bronze sleeves   |
| 17. Sole plate                     | - Extra-heavy (1.5" min.), epoxy coated carbon steel sole plate, drilled and tapped to match discharge head. California P.E. seismic calculations for sole plate anchor bolts shall be submitted to the ENGINEER for review by motor manufacturer. Anchor bolts shall not have less than 18" embedment. |

**B. Drive:**

1. Each pump shall be provided with a 125 h.p., vertical, hollow shaft, high efficiency, high thrust open, drip proof (WP1) or TEFC, 480 volt, 3-phase, 60 Hertz, premium efficiency, electric motor in accordance with Section 16460 - Electric Motors. Each electric motor shall be designed to accept the total, unbalanced thrust imposed by the pump. Where rotating parts are joined by threaded connections, a non-reverse-type ratchet mechanism shall be provided to lock the shaft against reverse rotation.

## 2.3 PUMP CONTROLS

- A. Pumps shall be controlled in accordance with Section 17100 - Process Control and Instrumentation System.

## 2.4 SPARE PARTS: Furnish the following spare parts for each pump:

- A. [One] suction bell bearing assembly

- B. [One] set of all bowl and discharge case bearings

- C. [One] set of impellers
- D. [One] sets of all wear rings
- E. [One] set of all pump shaft bearings
- F. [One] [packing assembly] [mechanical seal]
- G. [Two] sets of all gaskets and o-rings

## 2.5 MANUFACTURERS, OR EQUAL

- A. **Byron Jackson (BW/IP International, Inc.)**
- B. **Goulds Pumps, Inc.**
- C. **Peerless Pumps**
- D. **Worthington (Ingersoll-Dresser Pump Company)**
- E. **Floway**
- F. **Johnston Pump Company (Paco)**
- G. **FlowServe**

## PART 3 -- EXECUTION

### 3.1 SERVICES OF MANUFACTURER

- A. **Inspection, Startup, and Field Adjustment:** The service representative of the Manufacturer shall be present at the Site for 1 work day, to furnish the services required by Section 11100. Motor shall be tested for vibration in accordance with Hydraulic Institute Standards.
- B. **Instruction of OWNER'S Personnel:** The training representative of the Manufacturer shall be present at the Site for 1 work day to furnish the services required by Section 11100.
- C. For the purposes of this paragraph, a work day is defined as an eight hour period at the Site, excluding travel time.
- D. The ENGINEER may require that the inspection, startup, and field adjustment services above be furnished in three separate trips.

- END OF SECTION -

## SECTION 11105 – CLOSE COUPLED VERTICAL TURBINE SERVICE PUMPS

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide close coupled vertical turbine service pumps and drives with associated piping, controls, wiring, and appurtenances, complete and operable, in accordance with the Contract Documents.
- B. The requirements of Section 11100 - Pumps, General apply to this Section.
- C. The Supplier shall examine the site conditions, intended application, and operation of the pump system and recommend the pump which will best satisfy the indicated requirements.

### PART 2 -- PRODUCTS

#### 2.1 GENERAL DESCRIPTION

##### A. Identification:

- |                     |   |                     |
|---------------------|---|---------------------|
| 1. Pump Name        | - | Booster Pumps 1 - 5 |
| 2. Equipment Number | - | NA                  |
| 3. Quantity         | - | 5                   |
| 4. Location         | - | Well 9 Site         |

- B. **Operating Conditions:** The WORK of this Section shall be suitable for long term operation under the following conditions:

- |   |   |                      |
|---|---|----------------------|
| 1. Duty                                   | - | Intermittent         |
| 2. Drive                                  | - | Variable Speed (VFD) |
| 3. Ambient environment                    | - | Outdoors             |
| 4. Ambient temperature,<br>(degrees F)    | - | 20 to 110            |
| 5. Ambient relative humidity<br>(percent) | - | 0 to 100             |
| 6. Fluid service                          | - | Potable water        |
| 7. Fluid temperature,<br>(degrees F)      | - | 40 to 60             |
| 8. Project site elevation                 | - | 150' MSL             |

- |     |                                |   |     |
|-----|--------------------------------|---|-----|
| 9.  | Minimum available NPSH (ft)    | - | 10' |
| 10. | Maximum suction pressure (psi) | - | 50  |

**C. Performance Requirements:**

- |     |   |   |   |
|-----|---|---|---|
| 1.  | Maximum shutoff head (ft)   | - | 250   |
| 2.  | Design flow capacity (gpm)  | - | 1,200   |
| 3.  | Design flow bowl head TDH (ft)  | - | 125   |
| 4.  | Design flow minimum bowl efficiency (percent)                         | - | 80 (design operating point must be to the right of the highest efficiency - 82) |
| 5.  | Maximum flow capacity at maximum speed (gpm)                          | - | 1,400   |
| 6.  | Maximum flow pump head TDH (ft) plus and minus 5 feet                 | - | 100   |
| 7.  | Maximum flow minimum bowl efficiency (percent)                        | - | 70  |
| 8.  | Maximum flow NPSH required (ft)                                       | - | 25  |
| 9.  | Minimum flow capacity at maximum speed (gpm)                          | - | NA  |
| 10. | Minimum flow pump head, TDH at maximum speed (ft) plus and minus 5 ft | - | NA  |
| 11. | Minimum flow bowl efficiency (percent)                                | - | NA  |
| 12. | Maximum pump speed (rpm)  | - | 1770  |
| 13. | Minimum motor size (hp)   | - | 60  |

**D. Pump Dimensions:**

- |    |   |   |   |
|----|---|---|---|
| 1. | Length from base plate to suction bell (ft) | - | Approximately 10' – Per pump manufacturer as required for proper pump barrel hydraulic design |
| 2. | Minimum column diameter (in)                | - | 10  |

- |    |                                    |   |     |
|----|------------------------------------|---|-----|
| 3. | Minimum discharge diameter (in)    | - | 10  |
| 4. | Discharge flange rating ANSI (psi) | - | 150 |
| 5. | Minimum column shaft diameter (in) | - | 1.5 |
| 6. | Maximum bowl diameter (in)         | - | 12  |

## 2.2 PUMP REQUIREMENTS

A. **Pump Construction:** Construction of vertical turbine pumps shall conform to the following requirements:

- |     |                                     |   |  |
|-----|-------------------------------------|---|--|
| 1.  | Bowls                               | - | Cast-iron, vitreous-enameled for sizes 18 inches in diameter and smaller; larger sizes lined with 3 coats of epoxy having a total thickness of 25 mils. The exterior surfaces of the bowl units shall be coated with 8 mils of epoxy in accordance with Section 09800 - Protective Coating |
| 2.  | Impeller                            | - | Bronze statically and dynamically balanced   |
| 3.  | Impeller shaft method of connection | - | Type 316 Stainless Steel impeller lock collet  |
| 4.  | Wear rings                          | - | Bronze, replaceable  |
| 5.  | Bowl shaft                          | - | Stainless Steel, Type 410, or 416  |
| 6.  | Suction bell                        | - | Cast iron bell, with bottom bearing and streamlined ribs, vortex suppressor, lining and coating  |
| 7.  | Column                              | - | Steel pipe, not less than Schedule 30, epoxy-lined and coated, flanged   |
| 8.  | Line shaft and couplings            | - | 416 Stainless steel shaft in maximum 10-ft lengths, sized for a critical speed of min 20 percent above max operating speed, open. Shaft coupling shall be Type 316 Stainless Steel, threaded or keyed to the shaft.  |
| 9.  | Shaft lubrication                   | - | Product water lubricated, with solenoid valve normally open  |
| 10. | Shaft enclosing tube                | - | Not Used   |
| 11. | Shaft seal                          | - | Mechanical   |

- |                                    |   |
|------------------------------------|---|
| 12. Line shaft bearings            | - Rubber with bronze integral bearing retainers at each joint for open lineshaft  |
| 13. Discharge head                 | - Fabricated steel, reinforced to withstand pipe thrust, epoxy-lined with flange drilled for mounting to base (sole) plate, and minimum 1-1/4-inch, 3000 lb forged steel half-couplings for drain connection. Provide 3/16 neoprene gasket between discharge head and sole plate.                       |
| 14. Motor shaft coupling           | - NA  |
| 15. Bottom bearing                 | - Close tolerance sleeve type with length min 2-1/2 times shaft diameter, permanently grease lubricated for suction bell with non-soluble grease, or bronze sleeve with Type 316 stainless steel grease tube and fitting, extended to base plate  |
| 16. Bowl and suction case bearings | - Product-lubricated bronze sleeves   |
| 17. Sole plate                     | - Extra-heavy (1.5" min.), epoxy coated carbon steel sole plate, drilled and tapped to match discharge head. California P.E. seismic calculations for sole plate anchor bolts shall be submitted to the ENGINEER for review by motor manufacturer. Anchor bolts shall not have less than 18" embedment. |

**B. Drive:**

1. Each pump shall be provided with a 60 h.p., vertical, solid shaft, high efficiency, TEFC, 480 volt, 3-phase, 60 Hertz, inverter duty, premium efficiency, electric motor in accordance with Section 11100. Each electric motor shall be designed to accept the total, unbalanced thrust imposed by the pump. Provide stray current rings.

**2.3 PUMP CONTROLS**

- A. Pumps shall be controlled in accordance with Section 17100 - Process Control and Instrumentation System.

**2.4 SPARE PARTS: Furnish the following spare parts for each pump:**

- A. [One] suction bell bearing assembly
- B. [One] set of all bowl and discharge case bearings
- C. [One] set of impellers

D. [One] sets of all wear rings

E. [One] set of all pump shaft bearings

F. [One] [packing assembly] [mechanical seal]

G. [Two] sets of all gaskets and o-rings

## 2.5 MANUFACTURERS, OR EQUAL

A. **Byron Jackson (BW/IP International, Inc.)**

B. **Floway**

C. **FlowServe**

## PART 3 -- EXECUTION

### 3.1 SERVICES OF MANUFACTURER

- A. **Inspection, Startup, and Field Adjustment:** The service representative of the Manufacturer shall be present at the Site for 1 work day, to furnish the services required by Section 11100. Motor shall be tested for vibration in accordance with Hydraulic Institute Standards.
- B. **Instruction of OWNER'S Personnel:** The training representative of the Manufacturer shall be present at the Site for 1 work day to furnish the services required by Section 11100.
- C. For the purposes of this paragraph, a work day is defined as an eight hour period at the Site, excluding travel time.
- D. The ENGINEER may require that the inspection, startup, and field adjustment services above be furnished in three separate trips.

- END OF SECTION -

## SECTION 11500 - BLOWERS, COMPRESSORS, AND VACUUM PUMPS, GENERAL

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide blowers, compressors, and vacuum pumps and appurtenances, complete and operable, in accordance with the Contract Documents.
- B. The provisions of this Section shall apply to all blowers, compressors, and vacuum pumps, except where otherwise indicated.
- C. All equipment shall be installed in strict accordance with the manufacturer's recommendations and installation guides. Provide proper mounting base and hardware compatible with the surface. Provide mounting hardware and additional appurtenance as needed to resist loads associated with the weight of the unit, electrical connections, seismic loads, vibration, etc.
- D. The CONTRACTOR shall assign to a single manufacturer full responsibility for the furnishing and functional operation of the blower, compressor, or vacuum pump unit(s) including drives, drive motors, speed control equipment (where variable speed drives are required), and accessories. The designated single Manufacturer, however, need not manufacture more than one part of the unit(s) (blower, or motor and drive), but shall coordinate the design, assembly, testing, and erection of the unit(s).

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

##### A. **Commercial Standards:**

|                  |  |
|------------------|--|
| ANSI B16.1       | Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800       |
| ANSI B16.5       | Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and Other Special Alloys |
| ANSI/ASME PTC 9  | Performance Test Code - Displacement Compressors, Vacuum Pumps and Blowers     |
| ANSI/ASME PTC 10 | Performance Test Code - Compressors and Exhausters                             |
| ANSI/ASME B31.1  | Power Piping   |
| ANSI/IEEE 112    | Test Procedure for Polyphase Induction Motors and Generators                   |
| ASTM A 48        | Gray Iron Castings.  |

#### 1.3 CONTRACTOR SUBMITTALS



- A. Furnish submittals in accordance with Section 01300 - Contractor Submittals.
- B. **Shop Drawings:** Shop Drawings shall contain the following information:
  - 1. Equipment name, identification number and specification number.
  - 2. Performance curve and data.
  - 3. The CONTRACTOR shall require the manufacturer to indicate points on the H/Q curves, and the limits recommended for stable operation between which the blowers may be operated without surge and vibration. The stable operating range shall be as wide as possible based on actual tests, performed at the factory in accordance with the ANSI/ASME PTC 9 and 10 test codes.
  - 4. Equipment detailed description and specification.
  - 5. Electrical data including control and wiring diagrams.
  - 6. Assembly and installation drawings including shaft size, seal, coupling, anchor bolt plan, part nomenclature, material list, outline dimensions and shipping weights.
  - 7. Equipment drive and motor in accordance with Division 17 of the contract specifications.
- C. **Certification:** The CONTRACTOR shall obtain written certification from the designated single manufacturer, addressed to the OWNER, stating that the equipment will efficiently and thoroughly perform the required functions and that the designated single manufacturer accepts the CONTRACTOR'S assignment of full responsibility for coordination of all equipment, including motors, variable speed drives, controls, and services required for proper installation and operation of the completely assembled and installed unit(s). The CONTRACTOR shall submit all such certificates to the ENGINEER.
- D. **O & M Manuals:** Prior to start-up, furnish complete operations and maintenance manuals in accordance with Section 01300. Printed instructions relating to proper maintenance, including lubrication, and parts lists indicating the various parts by name, number, and diagram where necessary, shall be furnished in duplicate with each unit or set of identical units in each station. A recommended spare parts list shall be included. Instructions for field procedures for erection, adjustments, inspection, and testing shall be provided prior to installation of each piece of equipment.

#### 1.4 QUALITY ASSURANCE

- A. Not Used.
- B. **Field Tests:** Units shall be field tested after installation, in accordance with the Contract Documents, to demonstrate satisfactory operation, without causing excessive noise, vibration, and overheating of the bearings. The field testing shall be performed by the CONTRACTOR in the presence of a factory-trained, experienced field representative of

the manufacturer, who shall supervise the following tasks and shall certify in writing that the equipment and controls have been properly installed, aligned, lubricated, adjusted, and readied for operation:

1. Start-up, check, and operate the equipment over the entire speed range. The vibration shall be within acceptable limits.
2. Equipment performance shall be documented by obtaining concurrent readings, showing motor voltage, amperage, and discharge head. Each power lead to the motor shall be checked for proper current balance.
3. Bearing temperatures shall be determined by a contact-type thermometer. A running time of at least 20 minutes shall be maintained for this test.
4. Electrical and instrumentation testing shall conform to other applicable Sections of the Specifications.
5. The field testing will be witnessed by the OWNER or its representative. In the event any of the equipment fails to meet the above test requirements, it shall be modified and retested in accordance with the requirements of this Section. The CONTRACTOR shall then certify in writing that the equipment has been satisfactorily tested, and that final adjustments thereto have been made. Certification shall include date of final acceptance test, as well as a listing of all persons present during tests, and resulting test data. The costs of all work by factory-trained representatives shall be borne by the CONTRACTOR. The OWNER will pay for power costs. When available, the OWNER'S operating personnel will provide assistance in the field testing.

#### 1.5 MANUFACTURER'S SERVICE REPRESENTATIVE

- A. **Erection and Startup Assistance:** Service and instruction assistance by the manufacturer's service representative for each blower and compressor unit shall be provided by the CONTRACTOR during the following periods:
  1. One day (minimum) during erection.
  2. One day (minimum) during startup.
- B. **Instruction of OWNER's Personnel:** The CONTRACTOR shall provide for the services of a factory service representative to instruct the OWNER's personnel in the operation and maintenance of the equipment.

#### 1.6 GUARANTEES, WARRANTIES

- A. After completion, the CONTRACTOR shall furnish to the OWNER the manufacturer's written guarantees, that the equipment will operate with the published efficiencies, heads, and flow ranges and meet these specifications. The CONTRACTOR shall also furnish the manufacturer's warranties as published in its literature.

## PART 2 -- PRODUCTS

### 2.1 GENERAL

- A. Wherever it is required that a single designated manufacturer shall be responsible for the compatible and successful operation of the various components of any equipment, it shall be understood to mean that the CONTRACTOR shall provide only such equipment as the manufacturer will certify is compatible with its equipment and with the further understanding that this in no way constitutes a waiver of any requirements.
- B. All manufactured items provided under this Section shall be new, current models, and the products of reputable companies specializing in the manufacture of such products, with previous experience in such manufacture. The CONTRACTOR shall, upon request of the ENGINEER, furnish the names of not less than 5 successful installations of its equipment of comparable nature to that offered under this Contract.
- C. Where 2 or more units of the same type and/or size of equipment are required, such units shall be from the same manufacturer.

### 2.2 MATERIALS

- A. Materials employed in the blower, compressor, and vacuum pump equipment shall be suitable for the intended application; material not indicated shall be high-grade, standard commercial quality, free from any defects and imperfections that might affect the serviceability of the product for the purpose for which it is intended, and shall conform to the following requirements:
  - 1. Cast iron casings shall be of close-grained gray cast iron, conforming to ASTM A 48, or equal.
  - 2. Stainless steel shafts shall be of Type 400, Series. Miscellaneous stainless steel parts shall be Type 316.
  - 3. Anchor bolts, nuts, and washers shall be hot-dip galvanized, unless otherwise indicated in individual equipment specifications.

### 2.3 APPURTENANCES

- A. **Nameplates:** Each blower, compressor, vacuum pump, and motor shall be equipped with a stainless steel nameplate indicating rated head and capacity, impeller size, speed, and manufacturer's name, serial, and model number.
- B. **Solenoid Valves:** Solenoid valves shall be provided on the water or oil lubrication and cooling lines. Solenoid valve electrical rating shall be compatible with the motor control voltage and shall be provided complete with all necessary conduit and wiring installation from control panel to solenoid.
- C. **Gauges:** Blowers, compressors, and vacuum pumps shall be equipped with pressure or vacuum gauges, respectively, installed in the discharge lines. Pressure gauges shall be located in a representative location, where not subject to shock or vibrations, in order to

achieve true and accurate readings. Where subject to shock or vibrations, the pressure gauges shall be wall-mounted or attached to galvanized channel floor stands and connected by means of flexible connectors.

- D. **Variable Speed Drives:** Variable speed drives, drive motors, speed control equipment, and accessories shall be in accordance with Division 17 of the contract specifications.
- E. **Controls:** Controls shall be in accordance with Division 17 of the contract specifications.
- F. **Electric Motors:** Electric motors shall comply with the requirements of Division 17 of the contract specifications.
- G. **Flanges:** Suction and discharge flanges shall conform to ANSI B16.1 or B16.5 dimensions.
- H. **Lubrication:** Blowers, compressors, vacuum pumps, and motors shall be oil- or-grease-lubricated per individual specifications.
- I. **Drains:** Cooling water drains and drains from variable speed drive equipment shall be piped to the nearest floor sink or drain with galvanized steel pipe or copper tube, properly supported with brackets.

## 2.4 TOOLS AND SPARE PARTS

- A. **Tools:** Special tools necessary for maintenance and repair of the equipment and one pressure grease gun for each type of grease required for blowers, compressors, and motors shall be furnished as a part of the WORK hereunder; such tools shall be suitably stored in metal tool boxes, and identified with the equipment number by means of stainless steel or solid plastic name tags attached to the box.
- B. **Spare Parts:** The CONTRACTOR shall furnish spare parts subject to wear, such as seals, packing, gaskets, nuts, bolts, washers, wear rings, etc., as well as a set of spare bearings, and one year's supply of filter elements. Furnish parts suitably packaged and labelled in a box as described above for tools.

## PART 3 -- EXECUTION

### 3.1 INSTALLATION

- A. **General:** Blowers, compressors, and vacuum pump equipment shall be installed in accordance with the Shop Drawings, as indicated on the plans, and in accordance with the manufacturer's recommendations. CONTRACTOR shall coordinate with the roofing contractor to ensure the blower and fan penetrations and supports are compatible with the roofing system and flashing. Roofing submittals shall indicate how methods used for roof penetrations, and any special mechanical construction requirements needed.
- B. **Alignment:** Equipment shall be field tested to verify proper alignment and operation as specified, and freedom from binding, scraping, excessive noise, overheating, vibration, shaft runout, or other defects. Drive shafts shall be measured just prior to assembly to

ensure correct alignment without forcing. Equipment shall be secure in position and neat in appearance.

- C. **Piping and Mounting:** Piping shall be provided with sufficient expansion joints, guides, and anchors and be supported so as to preclude the possibility of exerting undue forces and moments on the equipment flanges. Suitable flexible connectors shall be provided to isolate the equipment from the piping system. Each unit shall be mounted on a flat and level concrete pad capable of supporting the dead weight of the unit, by means of restrained vibration isolators or resilient pads of suitable design.
- D. **Lubricants:** The installation work shall include furnishing the necessary oil and grease for initial operation and for one year's operation.

- END OF SECTION -

## SECTION 13675 - POLYETHYLENE TANKS FOR CHEMICAL STORAGE

### PART 1 -- GENERAL

#### 1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide cross-linked, high density polyethylene tanks and accessories, complete and in place, in accordance with the Contract Documents.
- B. The CONTRACTOR shall assign responsibility for furnishing the tank system as indicated to the tank fabricator. CONTRACTOR shall coordinate with tank fabricator to ensure proper location and size of tank orifices, such as overflow, vent, drain, fill, level measuring device, etc.
- C. CONTRACTOR shall have tank fabricator provide seismic restraint calculations for all tanks, and provide a proper restraint design or system, and any appurtenances necessary for meeting IBC seismic load requirements.
- D. Tank fabricator shall provide an affidavit with submittals stating that the tank and appurtenances are compatible with the chemicals to be used, as stated herein.

#### 1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

##### A. Commercial Standards

- |    |             |  |
|----|-------------|--|
| 1. | ASTM C 177  | Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus |
| 2. | ASTM C 273  | Standard Test Method for Shear Properties of Sandwich Core Materials   |
| 3. | ASTM D 638  | Standard Test Method for Tensile Properties of Plastics  |
| 4. | ASTM D 746  | Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact  |
| 5. | ASTM D 790  | Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials                    |
| 6. | ASTM D 1505 | Standard Test Methods for Density of Plastics by the Density-Gradient Technique  |
| 7. | ASTM D 1525 | Standard Test Method for Vicat Softening Temperature Plastics  |
| 8. | ASTM D 1998 | Polyethylene Upright Storage Tanks   |

- |     |             |   |
|-----|-------------|---|
| 9.  | ASTM D 1621 | Standard Test Method for Compressive Properties of Rigid Cellular Plastics                  |
| 10. | ASTM D 1622 | Standard Test Method for Apparent Density of Rigid Cellular Plastics                        |
| 11. | ASTM D 1623 | Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics |
| 12. | ASTM D 1693 | Standard Test Method for Environmental Stress-Cracking of Ethylene Plastics                 |
| 13. | ASTM D 2126 | Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging     |
| 14. | ASTM D 2842 | Standard Test Method for Water Absorption of Rigid Cellular Plastics]                       |
| 15. | ASTM D 2856 | Standard Test Method for Open Cell Content of Rigid Cellular Plastics by the Air Pycnometer |
| 16. | ASTM E 84   | Standard Test Method for Surface Burning Characteristics of Building Materials              |

### 1.3 CONTRACTOR SUBMITTALS

- A. Submit the following in compliance with Section 01300 - Contractor Submittals.
- B. Shop Drawings
  - 1. Tank manufacturer's data and dimensions showing locations of openings, level indicators, tank accessories, and seismic support structure and anchoring system details.
  - 2. Details on inlet and outlet fittings, manways, flexible connections, vents and level indicators.
  - 3. Tank pad requirements such as pads and blockouts.
- C. Technical Manual shall include the following:
  - 1. Manufacturer's recommendations for installation.
  - 2. Fitting installation and adjustment procedures.
  - 3. Repair procedures for typical situations including small holes, pinholes, and minor cracks in the tank.
- C. Documentation

1. Certification signed by the manufacturer that the tanks have meet the requirements indicated.
2. Seismic restraint plans and instructions as specified in paragraph 2.7.
3. Calculations used to determine wall thickness. Hoop stress shall be indicated.
4. A representative of the manufacturer shall certify in writing that the tank has been installed in accordance with the manufacturer's recommendations. Certification shall be submitted.

1.4 Not Used.

1.5 Not Used.

## PART 2 -- PRODUCTS

### 2.1 GENERAL

- A. Tanks shall be circular in cross-section, vertical, complete with piping inlets and outlets, drains, overflows, and anchoring system. Covered tanks shall be vented to building exterior, and where indicated, tanks shall be provided with entrance manways, level indicators, overflow, and other outlets. Tanks shall be marked to identify the manufacturer, date of manufacture, serial number, and capacity. Tank walls (or sections) shall be translucent for level viewing and equipped with gallon indicators. Tanks shall meet the requirements of ASTM D 1998 unless otherwise indicated.
- B. Tank materials and other appurtenance that will be in contact with potable water chemicals shall be NSF 61 certified.
- C. Tanks and systems shall be compatible with the intended chemical use, as follows:
  - a. **1,200 gallon tank – Ferric Chloride (FeCl<sub>3</sub>)**
  - b. **6,000 gallon tank – Sodium Hypochlorite (NaOCl)**
- D. All materials shall be corrosion resistant. Metallic materials shall be 316 stainless steel, titanium, or other as required or recommended by tank manufacturer.

### 2.2 TANKS

- A. **Materials:** Polyethylene shall be the cross-linked, high density type meeting or exceeding the following:

| <u>Parameter</u> | <u>ASTM<br/>Test Method</u> | <u>Value</u>   |
|------------------|-----------------------------|----------------|
| Density, gm/cc   | D 1505                      | 0.937 to 0.945 |



|  |        |         |
|--|--------|---------|
| Tensile strength at yield, psi minimum                 | D 638  | 2600    |
| Elongation at break, min percent                       | D 638  | 400     |
| Stress-crack resistance, min hours for F <sub>50</sub> | D 1693 | 1000    |
| Vicat softening temperature, deg. F                    | D 1525 | 230     |
| Brittleness temperature, deg. F, maximum               | D 746  | -180    |
| Flexural modulus, psi                                  | D 790  | 100,000 |

B. Not Used.

C. **Operating Conditions:** Chemical storage tanks shall be suitable for the following operating conditions:

|   |                    |                     |
|---|--------------------|---------------------|
| Chemical stored                         | - Ammonium Sulfate | Sodium Hypochlorite |
| Concentration, percent                  | - up to 45%        | up to 15%           |
| Maximum fluid temperature, deg. F       | - ambient          | ambient             |
| Minimum fluid temperature, deg. F       | - 40               | 40                  |
| Minimum ambient air temperature, deg. F | - 30               | 30                  |

D. **Construction:** Tanks shall be constructed using a rotationally molded fabrication process. Wall thickness of the tank shall be designed by the manufacturer with a hoop stress no greater than 600 psi using 1.5 times the specific gravity indicated. Stress shall be calculated using the Barlow formula.

E. Tanks shall have the following characteristics:

|                                    |           |          |
|------------------------------------|-----------|----------|
| 1. Tank Use                        | - Ammonia | Chlorine |
| 2. Type (see Note 1)               | - CD      | CD       |
| 3. Nominal diameter, ft            | - < 4     | < 5      |
| 4. Nominal height, ft (see Note 2) | - 0.75 D  | 0.75 D   |
| 5. Nominal capacity, gallons       | - 250     | 500      |
| 6. Manway (see Note 3)             |           |          |
| Mounting                           | - TM      | TM       |

- |             |            |          |
|-------------|------------|----------|
| 6. Exposure | - Interior | Interior |
| 7. Color    | - White    | White    |

Note 1: CD = closed, domed top; CF = closed, flat top; OIF = open, internal flange; OEF = open, external flange; FLR = flat lid removable; FLH = flat lid hinged.

Note 2: Nominal height of domed top tanks is the dimension measured along the straight cylindrical portion of the tank and does not include the rounded end.

Note 3: TM = top mount; TSM = top and side mount  
Unless otherwise indicated, manways shall be integrally molded with the tank.

## 2.3 TANK FITTINGS

- A. Tank fittings shall be according to the contract documents. Gasket material shall be compatible with chemical used. Fittings shall be CPVC compression type Schedule 80 long shank high-torque design with minimum of 85 percent threaded contact. Any screwed fittings shall use American Standard Pipe Threads. No metals shall be exposed to tank contents.

## 2.4 LEVEL INDICATION

- A. Not Used.
- B. Level indication shall be by ultrasonic level transmitter as indicated in Divisions 16 and 17.

## 2.5 Not Used.

## 2.6 Not Used.

## 2.7 TANK STANDS, SEISMIC AND WIND RESTRAINT SYSTEM

- A. The tank shall be freestanding.
- B. The tanks shall be provided with seismic restraint systems manufactured in conformance with plans and instructions prepared by an engineer. The lateral restraint assembly shall be designed for local conditions in accordance with the IBC, I = 1.5.
- C. Not Used.

## 2.8 SAFETY SIGNS

- A. Each tank inlet and tank outlet shall be clearly marked with hazardous material warning signs, 10 inches by 14 inches in size. Each sign shall have the word "DANGER" and the name of the chemical stored, printed in large block letters and mounted directly adjacent to the tank outlet and tank inlet. Each entry manway shall be provided with a sign ("DANGER--CONFINED SPACE--HAZARDOUS ATMOSPHERE"). Signs shall comply with Section 9900 and the requirements herein.

## **PART 3 -- EXECUTION**

### **3.1 INSTALLATION**

- A. Installation shall be in accordance with the manufacturer's recommendations. Provide seismic restraints as required by tank fabrication engineering calculations and recommendations.

### **3.2 FIELD TESTING**

- A. After installation of tank and all fittings, the tank shall be water tested by filling the entire tank with water and monitoring the tank as well as all fitting connections for at least 24 hours. Leaks shall be corrected prior to acceptance. Following successful field testing, the tank shall be completely emptied and allowed to dry before filling with chemical.

**\*\* END OF SECTION \*\***

**SECTION 15036 - COPPER PIPE  
(ASTM B 42, MODIFIED)**

**PART 1 -- GENERAL**

1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide copper pipe, complete and in place, in accordance with the Contract Documents
- B. The requirements of Section 15000 - Piping, General apply to the WORK of this Section.

**PART 2 -- PRODUCTS**

2.1 PIPE MATERIAL

- A. Copper pipe shall be hard drawn and shall conform to the requirements of ASTM B 42 - Specification for Seamless Copper Pipe, Standard Sizes, with regular or extra strong wall thickness, as indicated in the Piping Schedule.

2.2 PIPE JOINTS

- A. Copper pipe shall have screwed ends for NPT fittings or brazed joints. Screwed joints shall be made up with Teflon tape. Brazed or screwed joints may be used in connection with flanges and flanged fittings.
- B. All connections to mild steel or ductile iron pipe shall incorporate an insulated, dielectric coupling to prevent electrolysis. Tape all buried copper pipe as described in Part 3.

2.3 FITTINGS

- A. **Threaded Fittings:** Threaded cast bronze fittings for copper pipe shall be in accordance with ANSI/ASME B 16.15 - Cast Bronze Threaded Fittings, Classes 125 and 250, as indicated in the Piping Schedule.
- B. **Flanged Fittings:** Cast copper alloy flanges and flanged fittings shall be in accordance with ANSI/ASME B 16.24 - Cast Copper Alloy Pipe Flanges and Flanged Fittings, and ASTM B 62 - Composition Bronze or Ounce Metal Castings, with 150 lb rating, or as indicated.

**PART 3 -- EXECUTION**

3.1 INSTALLATION

- A. **General:** All copper pipes shall be installed in a neat and workmanlike manner, properly aligned, and cut from measurements taken at the site to avoid interferences with structural members, architectural features, openings, and equipment. Exposed pipes shall afford maximum headroom and access to equipment, and where necessary, all piping shall be installed with sufficient slopes for venting or drainage of liquids and condensate to low points. All installations shall be acceptable to the ENGINEER.

- B. **Supports and Anchors:** All piping shall be firmly supported with fabricated or commercial hangers or supports in accordance with the pipe manufacturer's recommendations, local building code and standards, and contract documents. Where necessary to avoid stress on equipment or structural members, the pipes shall be anchored or harnessed. Expansion joints and guides shall compensate for pipe expansion due to temperature differences.
- C. **Valves and Unions:** Unless otherwise indicated, piping to fixtures, groups of fixtures, and equipment shall be provided with a shutoff valve and union, unless the valve has flanged ends. Low points in water systems and driplegs in steam, gas, and air systems shall have drainage valves. Unions shall be provided at threaded valves, equipment, and other devices requiring occasional removal or disconnection.
- D. **Branch Connections:** Branch connections in horizontal runs of air and gas piping shall be made from the top of the pipe to avoid drainage of condensate into the equipment.
- E. **Buried Pipe:** All buried copper pipe shall be encased in plastic wrapping or sleeve, as acceptable to the ENGINEER. Provide minimum 4" sand bedding and 6" sand backfill above pipe. Test pipe for leakage prior to backfill.

### 3.2 PIPE PREPARATION

- A. Prior to installation, each pipe length shall be carefully inspected, flushed clean of any debris or dust, and be straightened, if not true. Ends of threaded pipes shall be reamed and filed smooth. All pipe fittings shall be equally cleaned before assembly.

### 3.3 PIPE JOINTS

- A. **Threaded Joints:** Pipe threads shall conform to ANSI/ASME B 1.20.1 - Pipe Threads, General Purpose (inch), and shall be full and cleanly cut with sharp dies and friction tools. Not more than three threads shall remain exposed after installation.
- B. **Brazed Joints:** Brazed joints shall conform to the specifications and recommendations of ANSI/ASME B 31.1 - Power Piping. All welding shall be done by skilled and qualified welders per Section 15000 - Piping, General.

### 3.4 INSPECTION AND FIELD TESTING

- A. **Inspection:** All finished installations shall be carefully inspected for proper supports, anchoring, interferences, and damage to pipe, fittings, and coating. Damage shall be repaired to the satisfaction of the ENGINEER.
- B. **Field Testing:** Prior to enclosure or burying, all piping systems shall be pressure tested as required in the Piping Schedule, for a period of not less than one hour at 150 psi, and in accordance with local building code. The CONTRACTOR shall furnish all test equipment, labor, materials, and devices at no extra cost to the OWNER.
  - 1. Leakage may be determined by loss of pressure, soap solution, chemical indicator, or other positive and accurate method. All fixtures, devices, or other accessories which are to be connected to the lines and which would be damaged if subjected to the test pressure shall be disconnected and ends of the branch lines be plugged or

capped as required during the testing procedures.

2. Leaks shall be repaired to the satisfaction of the ENGINEER, and the system shall be re-tested until no leaks are found.

- END OF SECTION -